

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

England & Wales · Charity number 1017777

Details

Status Registered

Legal form Other

Registered 1993-03-01

Register [View on the Charity Commission register](#)

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Activities

Objects: THE OBJECTS OF THE INSTITUTE SHALL BE:-(I) TO ADVANCE MATHEMATICS AND ITS APPLICATIONS IN ALL AREAS INCLUDING COMMERCE,ENGINEERING, FINANCE, HEALTH, INDUSTRY, SCIENTIFIC AND OTHER ACADEMIC DISCIPLINES AND THE PUBLIC SECTOR AND TO PROMOTE AND FOSTER RESEARCH AND OTHER ENQUIRIES DIRECTED TO THE ADVANCEMENT, TEACHING AND APPLICATION OF MATHEMATICS FOR THE PUBLIC BENEFIT;(II) TO SEEK TO ESTABLISH AND MAINTAIN HIGH STANDARDS OF PROFESSIONAL CONDUCT FOR CORPORATE MEMBERS;(III) TO SEEK TO PROMOTE, ENCOURAGE AND GUIDE IN THE DEVELOPMENT OF EDUCATION AND TRAINING IN ALL MATTERS RELEVANT TO THE ADVANCEMENT OF MATHEMATICS AND ITS APPLICATIONS FOR MEMBERS AND ALL OTHER PERSONS WHO ARE ENGAGED IN OR LIKELY TO BE ENGAGED IN MATHEMATICS OR ITS APPLICATIONS.

Activities: The Institute promotes and supports understanding, teaching, research and applications of mathematics.

Classification

- **How:** Makes Grants To Individuals, Makes Grants To Organisations, Provides Human Resources, Provides Services, Provides Advocacy/advice/information, Sponsors Or Undertakes Research
- **What:** Education/training
- **Who:** Children/young People, Other Charities Or Voluntary Bodies, Other Defined Groups, The General Public/mankind

Geography

- Throughout England And Wales

Finances

Period end	Income	Expenditure	Assets	Employees
2024-12-31	£1,297,882	£1,285,568	£1,537,515	19
2023-12-31	£1,267,610	£1,197,017	£1,525,202	19
2022-12-31	£1,099,463	£1,123,006	£1,454,608	18
2021-12-31	£1,065,067	£999,160	£1,478,154	19
2020-12-31	£1,166,642	£935,408	£1,412,247	18

Trustees

Name	Role	Appointed
Dr Heather Tewkesbury	Chair	2026-01-01
Claire Baldwin		2023-07-01
Dr Anastasia Sofroniou		2024-01-01
Dr Andrew Stephen Harrison		2025-01-01
Dr Eduard Campillo Funollet		2022-06-29
Dr Howard Phillip Haughton		2024-06-30
Dr Keith Briggs		2024-06-30
Dr Nira Cyril Chamberlain OBE		2020-01-01
Dr Richard Gilmour Eric Pinch		2024-07-01
Dr Sophie Carr		2024-06-30
Emma Louise Bowley		2023-01-01
Mia Sarah Lilly Beard		2025-07-01
Nathan Turner		2024-01-01
PROFESSOR CATHERINE ANN HOBBS		2023-01-01
Professor Alexander Charles Richard Belton		2024-07-01
Professor Andrew Harold Osbaldestin		2018-06-27
Professor Anthony Charles Croft		2023-07-01
Professor Hannah Fry		2024-01-01
Professor Paul Alexander Glendinning FRSE		2022-01-01
Professor Paul Glaister		2021-01-01
Professor Stephen Lynch		2025-01-01
Professor Timothy Nigel Phillips		2022-06-01
Professor Veronica Elizabeth Bowman OBE		2025-07-01
Simon Paul Johnson		2026-05-01

Accounts

Trustees' Annual Report

2024

Incorporating

- Impact of Activities
- Financial Review, Statements and Notes to the Accounts
- External Links and Partnerships



INSTITUTE OF
**MATHEMATICS &
ITS APPLICATIONS**

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About the Institute of Mathematics And Its Applications

This is the Annual Report of the Trustees of 'The Institute of Mathematics and its Applications' (IMA) for the year 2024. The Institute is governed according to a Royal Charter and Byelaws granted in 1990 and revised in 1997, 1999, 2002, 2008 and 2015. The governance and control of the Institute is vested in its Council (Council Members are also the Trustees). The IMA is a charity for public benefit and our charity registration number is 1017777. The Companies House registration number is RC000714.

The Royal Charter sets the IMA's Object(ive)s as:

- to advance mathematics and its applications in all areas including commerce, engineering, finance, health, industry, scientific and other academic disciplines and the public sector and to promote and foster research and other enquiries directed to the advancement, teaching and application of mathematics for the public benefit;
- to seek to establish and maintain high standards of professional conduct for Corporate Members;
- to seek to promote, encourage and guide in the development of education and training in all matters relevant to the advancement of mathematics and its applications for members and all other persons who are engaged in or likely to be engaged in mathematics or its applications.

Our activities in support of our Mission are set out within the IMA Strategy 2023-2028 approved by Council in November 2023, following a consultation period across our community in 2022-3. The 2023-28 plan is mapped across three broad strategic priority areas:

1. Advancing the Mathematics Profession And Achieving our Mission

The IMA will play a major role in advancing mathematics and its applications and maintaining high standards of professional conduct. We will promote and guide education and training standards and support activities to attract and retain today's and tomorrow's mathematical scientists. We will develop our EDI strategy to create an inclusive culture within the IMA and across the mathematics and its applications community.

2. Securing a Sustainable IMA Future

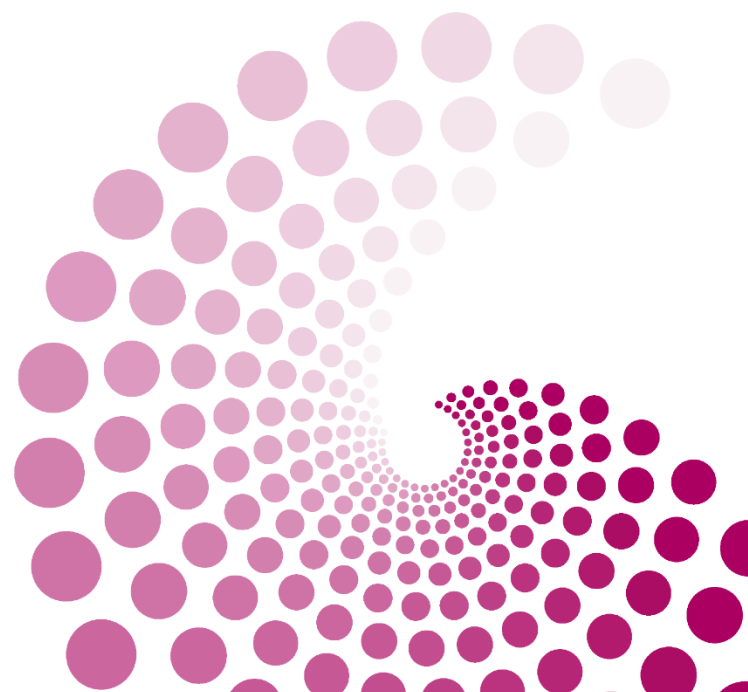
We will modernise the governance model and infrastructure which underpin our services to the mathematics community to ensure they are fit for the future. We will monitor existing, and create new, revenue streams and encourage a collaborative working culture. We will develop policies around environmental sustainability and social inclusivity while ensuring we have the right digital tools and systems to deliver our services safely and securely. Our activities will ensure the IMA remains a natural home for all those interested in mathematics and its applications, providing both local support through the branches, and targeted expertise through mentoring and special interest groups.

3. Showcase and Develop Mathematics for Societal Challenges

The IMA will foster and facilitate debate, discussion and learned output on key topics which affect society and the mathematical sciences community. This includes thought leadership and knowledge sharing on grand challenges where mathematical sciences will play a major role in shaping solutions, such as Climate Change, Artificial Intelligence and Disease Modelling. We will convene Special Interest Groups to develop these activities, building on our successful conference programme, journals and publications, and through new engagement opportunities including training, workshops, podcasts and digital content.

Examples of how we deliver our strategic aims include:

- Providing the Chartered Mathematician and Chartered Mathematics Teacher designations and promoting professional competence and CPD for registrants.
- Increasing local engagement through the branches, and targeted expertise through the introduction of peer-based mentoring.
- Creating new opportunities for public understanding through lectures, conferences, workshops, seminars, podcasts, videos and events.
- Demonstrating the ability of mathematics and mathematicians to support decision making, business and public policy.
- Harnessing and expanding our links with universities, research institutes and mathematical organisations in UK and overseas, providing opportunities to share good practice, deliver joint events and enhance reciprocal agreements.
- Inspiring the next generation through targeted activities and events which robustly challenge maths stereotypes and share the experiences of our members with new audiences.



President's Foreword

2024 was a landmark year for the IMA and I was delighted to be part of it. We celebrated three key milestones in our history: our 60th Anniversary, the 100th birthday of our first President, Sir James Lighthill FRS, and the 20th Anniversary of our Early Career Mathematicians Group. Huge credit must go to the Organising Committee and the staff of the IMA who did an amazing job arranging and running the celebration event in London on 16 October, a fantastic day uniting members and partners from the IMA's past, present and future.

The IMA has made enormous progress in the delivery of our [2023 to 2028 Strategy](#). Our first strategic priority area is the *advancement of the mathematics profession and achieving our mission*. I am very proud to support the launch of the IMA's EDI Strategy, which shows our commitment to creating a diverse and inclusive mathematics community in which all can thrive. I would like to thank Dr Howard Haughton CMath FIMA, the IMA's EDI Champion and Chair of the EDI Committee, in all his efforts in putting this strategy together.

We also committed to our members that we would focus on *securing a sustainable IMA future*. [The IMA Foundation](#) was launched as part of our anniversary, underlining our strategic objective to *create legacy*. The Foundation aims to attract funding from donors large and small to provide support to our community and continue to meet our charitable objectives. Meanwhile, following the launch of the IMA [Exponential Mentoring Scheme](#) which seeks to match mentors with mentees across our membership, the programme has exceeded our expectations in terms of member engagement. I would encourage you to check out our YouTube channel to watch an [interview](#) with our VP Communications Nathan Turner CMath FIMA, mentor Dr Dan Tilley CMath FIMA and mentee Adrian Bell AMIMA, launched as part of National Mentoring Day.

Finally, our Research Committee has commenced the development of a series of special interest groups (SIGs) *to showcase and develop mathematics for societal changes*. The Climate, Environment and Sustainability SIG and the Mathematics of Artificial Intelligence SIG are the furthest advanced, with plans to kick start SIGs on Maths Education and Defence and Security in 2025. Keep an eye out for the calls for membership in *Mathematics Today*, our newsletter and social media.

2025 promises to be as busy as 2024, as members and the professional staff build on their work to date. The *development of our digital tools and infrastructure* is key to this and work has already started on the IMA's IT Roadmap. This includes identifying a new Client Relationship Management system and the member portal *myIMA* for which the review process is already underway. The IMA staff are also looking forward to moving to new premises in early 2025. Whilst we will be sad to say goodbye to Catherine Richards House, the new offices will provide staff with a more sustainable, collaborative working environment and means we can invest more in our services to the mathematics community and charitable activities. Work will also continue to *create a new modern look and feel* to our digital identity, including our e-newsletters and *Mathematics Today*.

We are also looking forward to taking a leading role in the *Levelling Up: Mathematics* education programme, including the roll-out of a new Engineering pathway to support A Level students hoping to go on to engineering study or apprenticeships.

I would like to thank the members, officers, volunteers and staff of the IMA for their truly amazing achievements. Particularly our Executive Director, Rosalind Azouzi who has been a driving force behind this effort, and whose boundless enthusiasm and energy has been key to our achievements.

If you would like to get more involved in the IMA as we move through this exciting transformation, please contact the team at post@ima.org.uk.

Finally, I wish you a happy and healthy 2025.

Professor Hannah Fry HonFREng FIMA



Introduction – 2024 Report

The IMA's Trustees' Report 2024 merges our Annual Report, Trustees' Report and Financial Statements into one reference document.

- **Part One** focuses on direct impact of the IMA's activities in support of mathematics and our public benefit objectives.
- **Part Two** provides Finance, Governance and Risk information, the Financial Review 2024, the 2024 Financial Statements and Notes to the Accounts.
- **Part Three** summarises our external links and partnerships with other bodies in support of our Mission.

During our 60th anniversary celebrations over 2024, we announced our intention to start fundraising to develop an IMA Foundation, a new designated fund to support grants, awards and educational projects. We hope this will enable us to increase our community engagement over time, all the while easing pressure on our operational costs, maintaining our professional services and investing in digital technologies to transform our delivery model.

Following the launch of the IMA 2023-2028 Strategy, we began project delivery in earnest. A major development was the launch of a new, peer-peer mentoring platform, *IMA Exponential*, in early 2024 which has seen fantastic take-up across our membership. We also continued to look for opportunities to increase engagement through our events including filming lectures where possible to include on our YouTube channel. We added another new event to our calendar, a talk from the 2024 David Youdan Medal winner, Professor Alan Champneys CMATH FIMA, in November. Meanwhile, we were delighted to establish a new conference on mathematics, Artificial Intelligence and Machine Learning, held in September in Birmingham.

Another notable milestone was the 20th year of our dedicated Early Career Mathematicians group. We celebrated with a special 'Evening with the ECMs' in March, again recording the talks. The ECMs organised a dedicated panel session at our major celebration event in October, focussing on professional development and career progression.

Our outreach activities reached even greater numbers of young people this year. Staff and volunteers again returned to the Big Bang at the NEC, and RAF Museums' Forces in STEM events in London and Cosford. For the first time we took part in the Royal International Air Tattoo STEMZone thanks to the generosity of the IET and Dstl, a fitting tribute to our first President, Sir James Lighthill, pioneer of aeroacoustics. The University of Greenwich hosted the IMA Festival of Mathematics on our behalf, with events at their London and Medway campuses reaching many local school children. Meanwhile we helped facilitate an Engineering pathway for the Levelling Up: Mathematics programme, which aims to help provide tuition for Maths A Level students from underserved backgrounds.

Another major project has been our office relocation plans, accepting an offer for Catherine Richards House in October and an extensive search to secure brighter, modern and more collaborative workspace for the staff team nearby in Southend, with plans to move in early 2025.

As always, our efforts are only possible with the tireless dedication and support of our volunteers and hard-working staff. Our gratitude to all our volunteers and supporters over 2024.

Rosalind Azouzi | Executive Director

PART ONE:

Impact of IMA Activities

60 Years Supporting Mathematics and Its Applications

23 April 2024 marked a major milestone in the IMA's history: our 60th anniversary. We organised a special Celebration Event on 16 October at Savoy Place in London, themed *Mark our past, shape the future*. Here, our President, Professor Hannah Fry, welcomed over 150 distinguished guests, including Past Presidents, Honorary Fellows, and senior representatives from the mathematics community. The next generation of mathematicians also joined us to celebrate the ECMs' 20th anniversary, organising special panel sessions on career progression and professional development, embodying our commitment to inspire and develop future leaders.

Another highlight of the day was a special presentation to the Institute's second President, Professor Sir Bryan Thwaites Hon FIMA, in honour of his 100th birthday in 2023, who attended in person, while our youngest guest was 15, a true indication of the IMA's relevance to generations past, present and future.

We also took this opportunity to announce our intention to establish a new IMA Foundation which aims to raise funds to provide further to support the mathematics community - such as through new grants and awards and/or widening our education, outreach and careers projects - as a legacy of our 60th year.



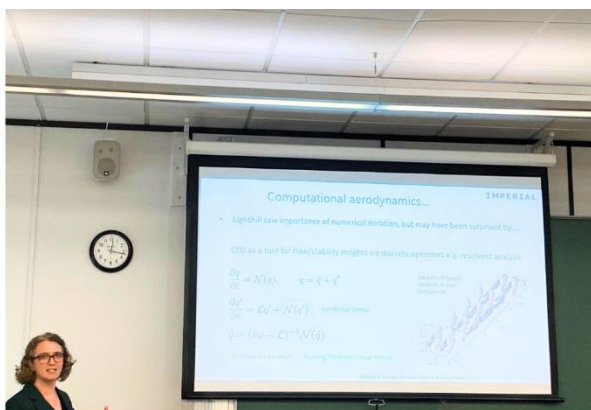
Past presidents, speakers and guests at the IMA 60th Anniversary event in October 2024

Lighthill100 Meeting

The IMA was also delighted to support a special Lighthill100 conference organised by the University of Manchester in September. This event comprised of talks from former friends, students and colleagues of the first IMA President Sir James Lighthill, who was born in 1924, reflecting on his significant contributions to mathematical research and development along with artefacts, personal anecdotes and video footage. This reminded us all of his inimitable teaching style and a pioneer of fields such as Aeroacoustics, Biological Fluid Mechanics, Geophysical Fluid Mechanics, Aerodynamics and Waves.

Early Career Mathematicians' 20th Anniversary

The Early Career Mathematicians (ECM) committee also celebrated its 20th anniversary in 2024, underscoring two decades of dedicated activities to support, develop and retain the next generation of professionals working in mathematical fields. In March we held a special '*Evening with the IMA ECM Community*' in London to showcase their work and opportunities to get involved. The presentations were also filmed and are now available to view on the IMA Youtube channel.



L: ECMs convene for 20th Anniversary celebrations, R: Prof Aimee Morgans delivers her talk for the Lighthill100 event

Mathematics Today Archive Project

We also delved into our rich archive of articles published in *Mathematics Today*, first published as the IMA Bulletin in 1965, to make a selection of interesting articles available online, chosen and introduced by IMA members and MT readers, who explain why they are important to them.

These nine articles continue to be relevant to today's mathematicians. They span 1971 to 2016 and include a broad range of topics, such as numerical analysis, education, animal flight, Stokes phenomenon, Rubik's cubes, the Enigma machine, Kalman filters and Bayesian statistics in the courtroom.

The selection is available on our website, and we hope to provide further access to archive materials in the future.



Education and Outreach

The IMA's education and outreach activities are led by the Honorary Secretary Education, with two committees covering secondary, tertiary and higher education, a dedicated Education Manager and one funded post. The IMA actively promotes the engagement of our members in mathematics education including work to share communications online and through our flagship publication *Mathematics Today*.

For instance:

- notification of the publication of key reports;
- invitations to participate in events and / or contribute to external initiatives;
- opportunity to provide feedback on specific issues;
- invitations to contribute to Institute responses to consultations;
- publication of the Institute's submissions to consultation exercises.

The IMA also provides direct support to a number of programmes to support mathematics education, teaching and learning across the UK and for all levels of education. We attend major STEM events to showcase mathematics 'in action' to young people, teachers, parents and other key influencers, aiming to overturn stereotypes surrounding mathematics and signpost visitors to further resources such as [MathsCareers.org](https://www.mathscareers.org).

The IMA also delivers the Mathematics Teacher Training Scholarships, on behalf of the Department for Education (DfE), working with partners including the London Mathematical Society (LMS), Royal Statistical Society (RSS), The Mathematical Association (MA), STEM Learning and MEI.

During 2024, our contribution to mathematics education was led by Professor Catherine Hobbs CMath FIMA (Honorary Secretary with responsibility for Education). Professor Noel-Ann Bradshaw CMath FIMA (Chair, Higher Education Committee), Dr Gordon Laing CMath CMathTeach FIMA (Chair, Schools & Further Education Committee) and Vanessa Thorogood (Education Manager) together with all our education committee members. Professor Nigel Steele CMath Hon FIMA continued to support the IMA in the role of Mathematics Teacher Training Scholarships Advisor.

Throughout 2024, we actively engaged in key educational discussions and consultations to support the development of mathematics education in the UK.

- Royal Society Mathematical Futures Programme. We provided a positive response to the discussion paper consultation, contributing to the ongoing dialogue on the future of mathematical education.
- A World-Class Education System: The Advanced British Standard Consultation. In collaboration with the LMS, we submitted a joint response, ensuring a strong mathematical perspective was represented.
- Proposed Changes to GCSE Assessments. We responded to the consultation on modifications to the assessment of mathematics for 2025–2027.
- Curriculum and Assessment Review. The government is reviewing England's national curriculum and assessment system to ensure effectiveness and relevance. We submitted a response to the call for evidence, contributing our expertise to shape future improvements.



- Strategy Review. Our Education Committees continue to align educational initiatives with the objectives set out in our Royal Charter, ensuring a strategic and impactful approach to mathematics education.

Both education committees continue to actively support key IMA education initiatives, including the *Mathematics Teacher Training Scholarships* and *Levelling Up: Maths*.

The IMA's Education Grants were paused in 2024 to allow for a strategic review by the Grants and Prizes review group. Both committees provided input on ensuring a more impactful approach, emphasising the need for measurable outcomes, an opportunity to collaborate with other organisations, have curriculum relevance, and sustainability. Moving forward, a shift towards targeted grants rather than reactive funding may better support the IMA's aims and align with the IMA Foundation to fund a broader range of activities.

Higher Education Committee (HEC)

HEC welcomed Professor Layal Hakim FIMA (University of Exeter) and Dr Ioanna Papatsouma FIMA (Imperial) as new committee members.

In collaboration with the LMS, the IMA conducted a survey on teaching-focused career pathways in UK mathematics departments. With input from over half the departments/sub-departments of mathematics in UK universities, via HoDoMS, the report found that approximately 14% of academics follow this route. More details are available in the *Teaching-Focused Academic Staff Report*.

HEC continues to actively support membership development activities.

Course Accreditation

The Institute's Course Accreditation scheme accredits university degree courses from which all its graduates will meet the educational requirements for the CMath designation. A total of 70 universities currently have degrees accredited by the Institute. A list of accredited degree courses can be found on our [website](#).

In 2024, the *IMA Course Accreditation Review Group*, established by HEC, started a comprehensive review of the accreditation process. Following wide consultation, proposed revisions were approved in principle by Council, with draft documentation now under review by HEC.

Key enhancements to the Course Accreditation Scheme include:

- Introducing a new 'Recognition for Membership of the IMA' category for degrees with 50–66% mathematical content, broadening eligibility for IMA membership.
- Providing structured feedback to departments following accreditation visits.
- Highlighting good practice case studies

HE Teaching and Learning Series

The *Higher Education Teaching and Learning Series*, provides an opportunity for higher education mathematical sciences departments to request supporting funds for facilitating a teaching and learning related workshop.

During 2024, the following workshops from the 2023/24 HE Teaching and Learning Workshop Series took place:

- University of Manchester: *Mathematics Education that Better Develops Problem-Solving Skills*
- UEA: *Augmenting Chalk and Talk: Helping Early Career Mathematicians to Diversify their Teaching Repertoire*
- University of Greenwich: *Designing assessment to promote students' wellbeing*
- University of Glasgow: *Rethinking Assessment in The Mathematical Sciences in Times of Generative AI*

Workshop reports are available on our website.

The sixth call for the Higher Education Teaching and Learning Series is due in January 2025, in conjunction with the RSS and LMS.

Induction Course for New Lecturers in the Mathematical Sciences

Around 40 attendees participated in this workshop which took place in September 2024 at the Isaac Newton Institute for Mathematical Sciences, Cambridge. Through a community initiative supported by the IMA, INI and HoDoMS, and endorsed by the RSS and the LMS, The Induction Course for New Lecturers in the Mathematical Sciences has been designed by the mathematics community so that it is ideally suited for anyone who is new to or has limited experience teaching mathematics or statistics within UK higher education.

IMA John Blake University Teaching Medal

This prestigious award honours excellence and innovation in higher education teaching and learning. Named in memory of Professor John Blake, the medal recognises those who have made a significant and lasting impact on the teaching of mathematical sciences at university level.

Nominations for the award of the 2025 IMA John Blake University Teaching Medal opened on 1 October 2024.



Schools and Further Education Committee (S&FE)

The S&FE Committee welcomed Dr Camilla Kerr AMIMA to the committee.

During 2024, the S&FE Committee noted a significant rise in students resitting GCSE maths in recent years, with a new government mandate requiring full-time resit students to study at least four hours of maths per week from September 2024 or the risk of schools and colleges losing funding. This policy is expected to create staffing shortages and timetabling challenges. Ofqual's review of reformed Functional Skills qualifications (FSQs) in English and Maths highlighted areas for improvement but found no need for major assessment changes. In Maths, awarding organisations must address issues identified in the FSQ review, with further research underway on effective problem-solving assessment.

The S&FE Committee continues to monitor the work of the Maths Hubs, which marked its 10th anniversary in 2024 and has impacted 4.7 million children. Teaching for mastery remains instrumental in supporting sustained student progression, particularly in primary schools. In secondary education, the Targeted Support programme continues, reinforced by new KS4 mastery PD materials. Maths Hubs have also extended their mastery specialist support into FE. With an increase in Core Maths funding, the Maths Hubs are collaborating with Advanced Mathematics Support Programme (AMSP) to support Core Maths teachers. Additionally, the Maths Hubs Designation has been extended to 2025, pending further government review.

Mathematics Teacher Training Scholarships

The IMA, working with LMS, MA, MEI, STEM Learning and RSS, delivered the twelfth year of the Mathematics Teacher Training Scholarships on behalf of the DfE. The overall aim of the Maths Scholarships is to improve the quality, and widen the pool, of applicants for secondary teacher training by attracting highly qualified graduates and career-changers who might not normally consider teaching as a career.

The 2023/24 year opened for applications in January 2024, with a target of awarding 270 Scholarships to those who commence secondary mathematics teacher training in the 2024/25 academic year. The number of applications was significantly up from the previous year; however, the number of awards was similar in comparison to the previous year.

The IMA once again led the development of a dedicated CPD programme to this year's Maths Scholars, drawing on our network of mathematics education experts as follows:

- Maths Scholars Celebration Event 2023
 - *Teaching Mathematics Outside the Box* - Alison Kiddle (Maths Educator and Communicator)
 - *Ten Top tips for making the most of NRICH in your Classroom* - Dr Ems Lord FIMA (NRICH)
 - *Maths isn't the problem. We are* - Aidan Gollaglee (London South East Plus Maths Hub)
- Inspiring students with real-life contexts and Core Maths (webinar) - Elizabeth Hopker-Blunt (MEI)
- Encouraging participation in maths beyond GCSE (webinar)* - Rachel Beddoes (MEI)
- Bletchley Park Super Visit 2024
- Maths Scholars Resources Workshop 2024
 - *Applying Mathematics beyond the curriculum* - Michael Anderson (STEM Learning)
 - *Hands on Maths* - Dr Katie Chicot (MathsWorldUK)
 - *STEM Ambassador session* – STEM Ambassador
- Maths Scholars CPD Workshop 2024*
 - *Exploring the global heritage of mathematics* – Simon Clay (MEI)
 - *Teaching Statistics - How to Do Better Than Average* – Dr Craig Anderson (University of Glasgow)
 - *Recreating Islamic Geometric Patterns* - Samira Mian (Freelance Artist & Educator)

Members of the Maths Scholarships Alumni were also invited to the events in the list above marked with a *.

The thirteenth year (2024/25) of the Mathematics Teacher Training Scholarships was announced in October 2024 and applications opened in January 2025. DfE will offer a £31K tax-free bursary to successful applicants. Again, there are 270 Maths Scholarships available for individuals commencing secondary mathematics teacher training in the 2025/26 academic year.

Mathematics
Teacher
Training
Scholarships



Top images: Maths Scholars Celebration Event, Bottom images: Super visit to Bletchley Park

Levelling Up: Mathematics education programme

In 2024, The IMA continued its role as a partner in the *Levelling Up: Mathematics* programme, working together with the London Mathematical Society and the project founder, Tony Hill. The programme provides A Level Maths students who have little or no access to additional learning support, such as private tuition, with access to undergraduates from local university Maths departments who provide guidance and support, using dedicated materials to complement the curriculum, developed by LMS.

The IMA have been working in partnership with experts at Warwick, Bath and Bristol Universities to develop a series of new modules for 2024 - *Levelling Up: Mathematics for Engineering*. A small team of IMA members who are working in engineering fields and/or with expertise in teaching Maths for Engineering volunteered to help develop the materials.

This pathway is being delivered with the support of the Royal Academy of Engineering (RAEng) and is proving to be of great interest to both new and existing members of the Maths cohorts. This partnership will encourage and support university Engineering departments to deliver the programme, enhancing engineering education and broadening participation with three goals:

1. Raise awareness of engineering in STEM based job opportunities
2. Raise the maths capabilities of those interested in engineering careers
3. Help students appreciate the maths in practical engineering

At December 2024 there were 11 universities delivering the programme to students in under-served groups across the UK.



The IMA continues to support the *Levelling Up: Maths Black Heritage* associated project, backed by Past President Professor Nira Chamberlain OBE CMath CSci FIMA, to provide a programme specifically designed by and for students and tutors of black heritage. Other developments include regional hubs to run the programme in Scotland and Wales.

In late 2024, the IMA agreed to take on the lead partner role for the Mathematics and Maths for Engineering programmes from 2025.

Maths Enrichment

The IMA again took to the road in 2024 to exhibit at key outreach events across the UK with interactive maths activities and impartial information, advice and guidance on routes into mathematics to visitors, which included young people, teachers and parents.

The Big Bang Fair 2024

The Big Bang Fair took place from 19–21 June at The Birmingham NEC, where the IMA run its Maths in Action stand. This interactive space provided a fun, hands-on experience, highlighting the real-world applications of mathematics. The IMA Outreach team, along with volunteers Dr John Meeson FIMA, Tom Briggs AMIMA (Communications Committee), and university students,

engaged pupils, teachers, and parents from across the UK through a range of activities, including *Can You Beat the Cube?*, Galton Board, Soap Bubbles, Aerofoil and Bernoulli Blower. The stand successfully demonstrated the excitement and relevance of mathematics in everyday life.

IMA Festival of Mathematics and its Applications

The University of Greenwich hosted this year's *IMA Festival of Mathematics and Its Applications*, showcasing the impact of mathematics in industry, education, and the media. Highlights included talks by Professor Nira Chamberlain OBE CMath CSci FIMA, Dr Aoife Hunt MBE, and Bobby Seagull, as well as the IMA Presidential Address by Professor Hannah Fry HonFREng FIMA. The Festival also featured Greenwich Maths Time, offering hands-on activities for school students across both the Greenwich and Medway campuses.

The IMA Outreach Team also ran the popular *Can You Beat the Cube?* challenge at both Greenwich Maths Time events, engaging students with a hands-on mathematical activity.

Royal International Air Tattoo (RIAT)

The IMA partnered with DSTL to participate in the *Royal International Air Tattoo (RIAT) 2024*, held from 19 – 21 July, with a dedicated space on the IET stand in the TechnoZone. This was the Institute's inaugural STEM participation at an air show, and as many as 40,000 children were offered the chance to experience the TechnoZone exhibits over the weekend.

The collaboration with Dstl apprentices whose numeracy game, curated by the apprentices, made its public debut and proved incredibly popular alongside aerospace-themed mathematics activities which complemented those on offer from other volunteers from the IET. The engagement with children and their families was fantastic throughout the event, and the TechnoZone offered a fantastic opportunity to engage with like-minded STEM volunteers from other exhibitors.



IMA members Ed Rothead and Neil Harris of Dstl trying out the maths game at RIAT.

Forces in STEM

Forces in STEM is run by the RAF Museum, in partnership with the Royal Air Force Youth STEM team. The event brings together companies from across both aerospace and local industries to provide exciting hands-on activities for upper Key Stage 2 (Years 5 & 6) pupils.

The IMA attended this event at both their museum sites, RAF Museum London (April) and the RAF Museum Cosford (September) running the following activities: aerofoil, Bernoulli Blower and *Can you Beat the Cube?*

Event organisers praised the IMA stands for being consistently busy and engaging, with one London student sharing that the Bernoulli Blower was their favourite activity of the entire event.

Grants

The IMA provided grant funds in 2024 via the *Small Grants Scheme*. We also provided occasional support through our special Grants without Portfolio scheme for applications which do not meet the eligibility criteria for the above but demonstrate clear objectives which are aligned to those of the IMA.



We also provide administrative support on behalf of the QJMAM fund for Applied Mathematics which exists to support UK research in the broad area of applied mathematics and theoretical mechanics. The fund is administered by the Institute of Mathematics and its Applications, but decisions on the award of grants are made by a panel appointed by the Trustees, chaired by Professor Andrew Norris. Details of these awards can be found on our website.

Small Grants

The IMA's Small Grants Scheme is designed to be flexible, so that it can be used to facilitate any research activity within the scope of mathematics and its applications. Grants are available up to a value of £600 for individuals and up to £1,200 when enabling an event to take place. Applications are limited to IMA members only.

The budget for 2024 was £16,000.00. The Scheme received 55 applications during 2024. 21 requests were awarded in full, 23 were partial awards and 11 were declined. A list of 2024 grants made can be found on the IMA website.

Other IMA Grants 2024

One grant was made by the Executive Board from the IMA's Grants Without Portfolio (GWP) fund. This was to Dr Rehan Shah MIMA of Queen Mary University of London. The grant was in support of focus groups for empowering students through the co-creation of inclusive STEM curricula for mathematics courses. This project aims to design teaching toolkit materials that could be used by academic staff to embed and incorporate as part of the diversification of undergraduate mathematics-based modules across UK universities, following a wider dissemination of these resources from late 2024.



Grant Case Study

Making Diversity 'Count': empowering students through co-creation of inclusive STEM curricula

Project Leads: Dr Rehan Shah - Lecturer (Assistant Professor) in Mathematics and Engineering Education, Queen Mary University of London (QMUL); Dr Brigitte Stenhouse – Lecturer in History of Mathematics, The Open University (OU)

GWP funding was provided for a one-day focus group workshop led by Dr Shah and Dr Stenhouse at QMUL in November 2024 whose aim was to empower QMUL and OU undergraduate students through exposure to student co-created inclusive mathematics curricula resources for STEM disciplines.

The focus groups were motivated by the limited emphasis traditionally placed within university curricula on the historical and current contributions of diverse pioneering individuals from under-represented backgrounds within STEM disciplines. This consequently contributes to a stigma among students that studying mathematics is esoteric and inaccessible due to a lack of role models.

The workshop, featuring 10 QMUL and OU second and third-year undergraduates, consisted of students critiquing and providing their insights on co-created inclusive resources such as posters and biographies through written feedback questionnaires and audio-recorded focus group discussions. Key findings evident from the student discussions included:

- The dire need to introduce such material within lectures and professional STEM skills courses at university in a relevance-focused manner, not only through developed resources, but also through greater conversation
- The presentation of diversity within these materials should focus on highlighting both the achievements and the challenges faced by the individuals in a celebratory, yet realistic manner to enable more students to relate
- Students emphasised the importance of raising awareness about inclusivity, sexism and religious tolerance among their peers at university due to its importance in group dynamics and teamwork
- Engagement with such resources can be improved through formative (interactive quizzes and games) rather than summative assessments (exams, coursework) to ensure the topic continues remaining an 'ongoing discussion' rather than a 'one-time task'.

Following the overall success of the workshop and the positive feedback received from the students, who highlighted the need for having more engaging and therapeutic discussion of such pertinent issues at university, the team aims to complete the formal analysis of our findings and collate them for submission as a journal research paper. We will also iterate the toolkits created by both QMUL and the OU based on the feedback received and disseminate our materials to other UK universities and the wider mathematical community.

Dr. Rehan Shah | Queen Mary University of London

Knowledge and Learned Society

The IMA's learned activities include the work of our Research Committee which leads the Institute's efforts to support and recognise mathematics research, and our prestigious, peer-reviewed suite of scholarly publications which are overseen by the Journals Board of Management. This work is underpinned by our flagship publication, *Mathematics Today*, which provides members in-depth articles on applications of mathematics, as well as the latest news from the IMA and its members, led by Editor Rob Ashmore CMath CSci FIMA. The IMA also provides learned conferences, workshops and talks, steered by the Conference Committee and individual organising committees, providing fora for knowledge sharing, discussion and debate.

Research Committee

The Research Committee led the IMA's discussions with the research funding councils and policy makers and worked to promote the benefits of fundamental and applied mathematical research to the economy and society. It also oversees assessments of Small Grant applications.



The Research Committee met three times in 2024 to discuss their usual agenda, with particular focus on their delivery of certain strategic objectives. Throughout the year they maintained their commitment to representing the mathematical community; to follow are some of the 2024 highlights:

Vice President with responsibility for Learned Society

Dr Martine Barons CMath FIMA, Vice President, Learned Society commenced her final year as Chair of this Committee in 2024, and the process to identify her successor began at the start of the year. A role profile, terms of reference and call for nominations was published in *Mathematics Today* and on our website. This led to the announcement in the summer, that Dr Eduard Campillo-Funollet MIMA would take up the role on 1 January 2025.

Special Interest Groups

The new [IMA Strategy 2023-8](#) includes an intention to re-establish Special Interest Groups (SIGs) as a key part in delivering our objectives in Strategic Priority Area 3: "the importance of Mathematics in solving societal challenges." Dr Martine Barons' article in the August edition of *Mathematics Today* detailed the areas under consideration and invited members to register their interest in joining or leading one of the groups, and there was an overwhelming response.

The committee for Climate, Environment and Sustainability has been selected and the IMA/LMS joint meeting on Mathematics for the Environment (see below) saw its launch. Following 'Unlocking the Potential: The IMA AI/ML Congress 2024', held on 4 September in London, we have been working with members in industry and academia to formalise our Artificial Intelligence SIG, which is being led by the Chair of the event, Dr Anjulika Salhan CMath CSci FIMA.

LMS / IMA Joint Meeting 2024 - Mathematics for the Environment

This event took place on the 20 September 2024 and was hosted at De Morgan House by the LMS and via Zoom. The speakers were:

- Dr Rebecca Killick (Lancaster University);
- Vera Melinda Galfi (Vrije Universiteit Amsterdam);
- Professor Christina Cobbold (University of Glasgow);
- Professor Onno Bokhove (University of Leeds)

A full list of speakers and abstracts can be found [here](#).

As with previous events, it was well attended both in person and virtually, and guests were complimentary about the format of the event and the engagement of the attendees.

European Mathematical Society Council / ECM 2028 Bid

During 2024, the IMA and the LMS submitted a joint bid to host the July 2028 EMS Conference in London. This work was led by Professor Helen Wilson FIMA and Richard Thomas (co-chair of the Scientific Committee alongside Helen). The other city submitting a bid was Bologna. The incoming Vice President, with responsibility for Learned Society, Eduard Campillo-Funollet MIMA represented the IMA at the EMS Council meeting in Grenada, Spain, where sadly, the UK were not successful. The event will take place in Bologna. However, the committee intend to submit for a future bid.

IMA Hedy Lamarr Prize

Nominations opened for the Hedy Lamarr Prize for Knowledge Exchange in Mathematics on 1 October 2024. The winner will be announced following the June 2025 meeting of Council.

External nominations

The committee also provided nominations for external programme and scientific committee/boards led by the INI and ICIAM.

Journals

The IMA's eight academic journals are published by the Oxford University Press (OUP).



Two of these are traditional hybrid print journals:

- IMA Journal of Applied Mathematics
Editors: Professor Alan Champneys CMath FIMA, (Bristol), Professor Demetrios Papageorgiou FIMA, (Imperial); and Darren Crowdy FIMA (Imperial).
- IMA Journal of Numerical Analysis
Editors: Arie Iserles FIMA, (Cambridge), Endre Süli FRS FIMA, (Oxford), Charles Elliott FIMA (Warwick) and Alexandre Ern, CERMICS, Ecole des Ponts (ENPC).

Five are online only hybrid journals:

- Teaching Mathematics and its Applications: an International Journal of the IMA
Editors: Professor Duncan Lawson MBE CMath FIMA, (Coventry); Professor Christopher Sangwin FIMA, (Edinburgh) and Dr Cathy Smith AMIMA (OU).
- IMA Journal of Mathematical Control and Information
Editors: Professor Christophe Prieur FIMA (Grenoble), Professor Sarah Spurgeon OBE FEng CMath FIMA, (UCL) and Professor Dr Joachim Rudolph FIMA (Saarland University);
- Mathematical Medicine and Biology: A Journal of the IMA
Editors: Professor Oliver Jensen CMath FIMA, (Manchester); Professor John King CMath FIMA, (Nottingham), Professor James Keener CMath FIMA, (Utah) and Professor Bob Guy (University of California Davis);

- Information and Inference: A Journal of the IMA
Editors: Professor Robert Calderbank, (Duke); Professor David Donoho MIMA, (Stanford); Professor John Shawe-Taylor CMATH FIMA, (UCL) and Professor Jared Tanner MIMA, (Oxford);
- IMA Journal of Management Mathematics
Editor: Professor Aris Syntetos FIMA (Cardiff).

One is an open access only online journal:

- Transactions of Mathematics and its Applications: A Journal of the IMA
Editor in Chief: Professor Dominic Vella FIMA (Oxford) and Professor Chris Budd OBE CMATH FIMA (Bath)

The journals portfolio is overseen by the Journals Board of Management. Our thanks to the current Journals Board of Management Chair, Demetrios Papageorgiou, previous JBM chair Professor Iain Duff CMATH CSci FIMA who stepped down in 2024 after two decades' service, our Journal Editors and Associate Editors, and Publishing Partner Martha Bailes, for steering the journals.

During 2024 the IMA Journal of Management Mathematics awarded its 2023 best paper prize to Xiaoshi Guo and Sarah M Ryan for *Portfolio rebalancing based on time series momentum and downside risk*.

Impact Factors (IF) for 2023 were released by Clarivate in June 2024:

Journal	2022	2023
IMAJNA	2.1	2.3
IMAMAT	1.2	1.4
IMAMMB	1.1	0.8
IMAMAN	1.7	1.9
IMAIAI	1.6	1.4
IMAMCI	1.5	1.6

There are still fluctuations in IF due to Clarivate changing the way the figure is calculated. It is hoped that this will stabilise with the release of the 2024 figures in 2025.

The growth of Open Access publishing continues to have an inevitable impact on the IMA journals. Open Access publishing is where an article is made immediately available to the public upon publication, as opposed to the traditional subscription model. The impact on journal revenue because of this change has been ameliorated by Oxford University Press negotiating 'Read and Publish' deals with libraries. These allow authors to utilise funding to publish their articles via Open Access. The most significant UK deal is with JISC, this covers many UK institutions. Various similar deals have been made with other groups worldwide. Traditional subscriptions also held up better than expected over 2023, positively impacting our 2024 revenue.

During 2024 work was completed to provide free online access to IMA members to our suite of journals. An article was published in *Mathematics Today* to raise awareness among authors of the Read and Publish funding that is available for them to publish work under an Open Access licence. This has allowed IMA research to be shared more widely among those who might not otherwise see it, for example, members in the industrial, health, and business sectors. Below are the top read / visited articles for 2024.

Top Read Journal Articles 2024

IMAJNA: [Accurately computing the log-sum-exp and softmax functions](#) | IMA Journal of Numerical Analysis | Oxford Academic (2,020)

IMAMAT: [Can physics-informed neural networks beat the finite element method?](#) | IMA Journal of Applied Mathematics | Oxford Academic (6,169 views)

IMAMAN: [Last mile logistics: Research trends and needs](#) | IMA Journal of Management Mathematics | Oxford Academic (4,497)

IMAMCI: [Zero-order hold discretization of general state space systems with input delay](#) | IMA Journal of Mathematical Control and Information | Oxford Academic (1,609 views)

IMAIAI: [Simple, direct and efficient multi-way spectral clustering](#) | Information and Inference: A Journal of the IMA | Oxford Academic (1,335 views)

IMAMMB: [Model of Individual BMI Trajectories](#) | Mathematical Medicine and Biology: A Journal of the IMA | Oxford Academic (837 views)

TEAMAT: [Understanding mathematics anxiety: loss aversion and student engagement](#) | Teaching Mathematics and its Applications: An International Journal of the IMA | Oxford Academic (2,577 views)

Transactions: [Error estimates for DeepONets: a deep learning framework in infinite dimensions](#) | Transactions of Mathematics and Its Applications | Oxford Academic (1,967 views)

Conferences Committee

The Conferences Committee met in July 2024 and was co-chaired throughout the year by Dr Dan Tilley CMath FIMA and Professor Corina Constantinescu FIMA who worked closely with the IMA conference and events staff team.

A full list of members of the committee can be found at <https://ima.org.uk/roles/conferences-committee/>

2024 review

We registered around 900 delegates for IMA Conferences and events in 2024, offering a range of in-person and online conferences to again encourage more diverse attendance.

The programme for 2024 demonstrated the breadth of our activity, from education and early careers support, to showcasing the latest applied mathematics research in different fields and included a new addition to our conference programme: the IMA Artificial Intelligence and Machine Learning Congress.

2024 Calendar

January	Python for A-Level Mathematics and Beyond	Online
March	Where can Mathematics take you?	Online
March	AmplifyfIME Quantitative Finance Simulation	Online
April	ECM Networking Icebreaker at the BAMC 2024	Newcastle
April	Inaugural CMath Workshop	Online
May	Early career mathematicians and statisticians teaching in Higher Education Ideas Exchange: Knowing the Landscape	Online
June	Python for A-Level Mathematics and Beyond -Summer 2024	Online

September	Unlocking the potential: The IMA AI/ML Congress 2024	Birmingham
November	Management Mathematics in the age of AI (in partnership with IMAMAN Journal)	Online
November	2nd CMath Workshop	Online

In addition to the above, the IMA 60th anniversary event in October was a tremendous success, with 156 delegates registered and a diverse and highly engaging programme of talks, seminars and networking.

The events team also provided administrative support to the Tomorrow's Mathematicians' Today conference organised by the University of Greenwich in March, the Induction Course for New Lecturers in the Mathematical Sciences 2024 held in Cambridge on 16-17 September, the IMA Early Career Mathematicians online career development events and the IMA Virtual Maths Teas held throughout the year (see pages 22 and 29 respectively).

We would like to thank every mathematical organising committee for making these events possible, filling them with great invited speakers and delegates! We look forward to delivering a strong 2025 event programme.



Images top left, top right, bottom right: Inverse Problems Conference, Bottom left: New Lecturers Event

Mathematics Today

The IMA continued to publish six issues annually of our flagship membership magazine, *Mathematics Today* in 2024. The magazine provides refreshing insights into mathematics, applied mathematics topics, reflections on mathematical achievements, articles from IMA medal winners, updates on activities, and news on events and projects led by the IMA and our partners.

Online access to *Mathematics Today* introduced in 2022 provides IMA members with greater and more flexible access to their magazine via the myIMA platform. This is a more sustainable way to access *Mathematics Today*, with over 450 readers opting for an online-only version, an increase on 2023.

The Graham Hoare Prize for Early Career Mathematicians (ECM) was awarded to [Ramón Nartallo-Kaluarachchi AMIMA](#) for his article 'Mathematical Memory Machines' which was published in the December 2024 issue as part of an ECM Special Issue. This edition of MT celebrated the IMA's ECM members, with [guest editor Dr Jack Reid AMIMA](#), and it included articles from the IMA's first National Celebration of Mathematics Projects and other features from those early in their careers. We also celebrated the [IMA's 60th anniversary](#), with special focus on the ECMs at the celebration in October 2024.

The Catherine Richards Prize continues to select the best article published each year and this was awarded to Professor Adrian Rice for the article [Abel Answers the Question of the Quintic](#).



Communications and Community Engagement

The IMA seeks to work closely with the community it represents drawing on expertise from across our networks. Nathan Turner CMath FIMA, VP – Communications, chaired the Institute's Communications Committee in 2024 which is made up of maths communication experts and advises IMA staff throughout the year on related matters.

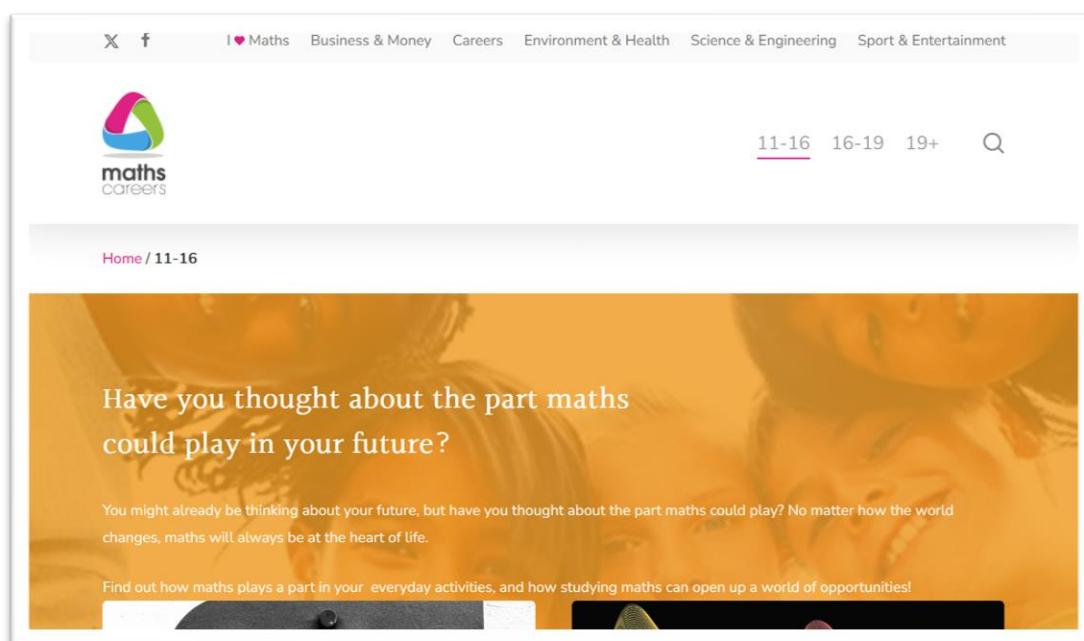
The MathsCareers Steering Group provides advice on content, topics and competition themes for our dedicated information, advice and guidance website which runs separately to the IMA's corporate site. The IMA also benefits from Branches across the UK, delivering regional and online engagement opportunities for the local community and beyond. Our Early Career Mathematicians Group provide activities targeted to the needs of the next generation of mathematical professionals. The Academic Liaison Group comprises representatives from university departments advising on university engagement and student support. Meanwhile, IMA staff representatives regularly provide talks to students and other key audiences.

MathsCareers Website

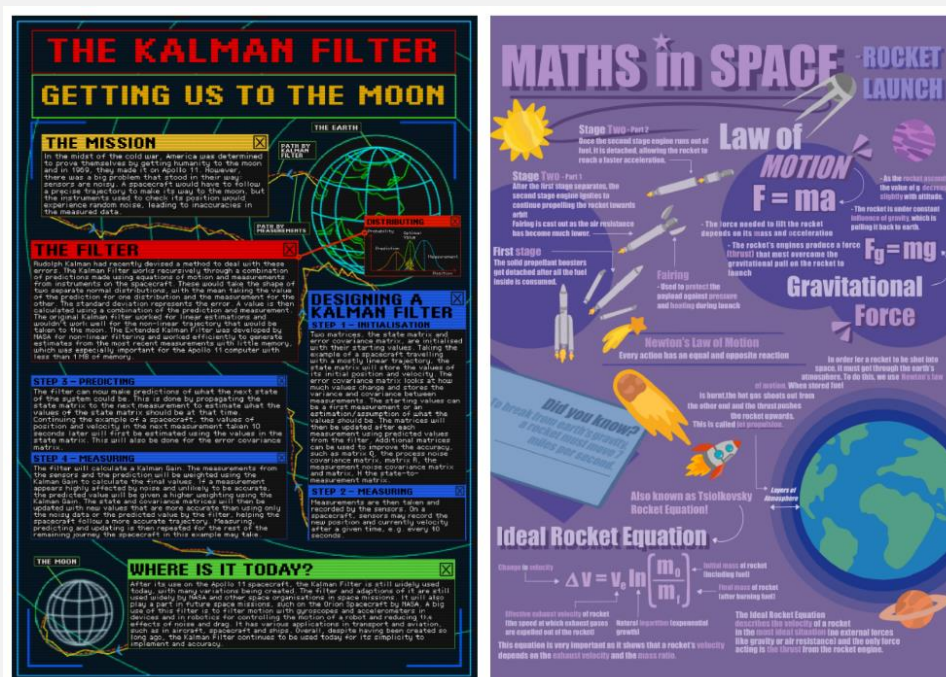
[MathsCareers.org](https://mathscareers.org) is a dedicated website which provides impartial information, advice and guidance on mathematics pathways as well as inspirational case studies from role models from a wide range of profession, and competitions for schools, working with experts from maths education and communication, industry and academia.



During 2024 MathsCareers received 187,787 sessions and continued to be one of the top websites of its kind within the STEM community, popular among undergraduates seeking career advice as well as school audiences. Highlights from content posted in 2024 include *Uses of Negative Numbers in the Real World* and *You Don't Need an A or A* To Study Mathematics at University*.



MathsCareers ran two contests during 2024. The spring contest had the theme of 'Design and create your own unique Board Game.' and the Autumn contest asked entrants to create a poster about the use of maths in space exploration. Competitions are aimed at ages 11-18 with age groups based on school year (Years 7- 9, and 10 - 13). MathsCareers poster contests frequently attract between 200 – 300 entries.



L: years 10 – 13 winner, Nithika, Newstead Wood School, R: years 7 – 9 winner Sheryl, Woodbridge School

Our career profiles continue to highlight diversity among those working in mathematics-based professions, as well as demonstrating the wide variety of roles available to maths graduates. The website also showcases how maths and numeracy is vital in other areas, from space exploration to computer game design, music and climate science.

Social media is used to raise the profile of IMA MathsCareers, and it now has 7698 followers on X / Twitter. The profile of the site, as well as mathematics generally, is raised via the distribution of eye-catching classroom posters to schools.

IMA e16plus Newsletter

The e16plus Newsletter published six full editions in 2024. It is designed to inspire and raise interest in mathematics amongst 16–19-year-olds and has 1621 subscribers. The regular puzzle feature continues to be popular with readers, and the links in the newsletter are designed to encourage engagement with MathsCareers and the IMA websites.

IMA Website and Social Media

The good work the IMA does is reflected across our social media channels, website and our member exclusive eBulletin. We have a collective of 56,000 followers across our four main social channels Twitter, Facebook, LinkedIn and Instagram, consisting of those interested in the services and work of the IMA and those interested in Mathematics in the wider sense. This is an increase of 12% from 2023.

We continue to celebrate the successes of our members and the wider mathematics community. In particular, raising the profile of Mathematics across a multitude of celebratory and awareness days promoting inclusivity. We continue to see particularly high engagement and popularity with our campaigns during LGBTQ+ History Month, Women's History Month and Black History Month where we share people's stories, resources and celebrate the successes and triumphs of those who have overcome challenges and biases. We engage in many mathematical days such as Fibonacci Day, International Day of Mathematics, Maths Weeks to name a few as well as other STEM related days and National Numeracy day, which is helping raise low levels of numeracy among both adults and children in the UK and promoting the importance of everyday maths skills to the wider public, challenging negative attitudes towards mathematics.

Publicly available sources indicate that the website receives approximately 90K visitors per year, with an average visit time of 3.56 minutes. 28% of visitors are from the UK. 38.9% of visitors access the website via referral (e.g. social media etc.) and 40% through search engines.

Enhancing our digital newsletters for members and the community

In 2024, significant improvements were made to the members' digital newsletter. An external platform was implemented to track analytics, enabling more tailored content based on member engagement. The newsletter has doubled in frequency and features an updated design and structure. Additionally, a new Community newsletter for non-members was introduced and will be further developed.

The newsletter's performance is exceptional, with a 59% open rate and a 12% click rate. When compared to other societies at the Science Council Marketing and Communications Forum in October 2024, the IMA's statistics demonstrated an open rate that is on average 25% higher and a superior click rate.

Virtual Maths Teas

Our Virtual Maths Tea series is a collection of online events where members can come together for an informal discussion, much like a coffee morning. Each individual event has its own topic of focus and hosts are hand-picked for their expertise and experience in each topic area. The Virtual Maths Teas (VMTs) began during lockdown in 2020, to keep our members connected when in-person networking and events weren't possible and were continued post-lockdown due to their popularity.



Many attendees have commented that the VMTs are their first opportunity to engage in an IMA event, or indeed any mathematical event due to their individual access challenges. Each VMT lasts for one hour, attendees can log in from anywhere in the world (and international attendees regularly participate). The VMTs are inclusive events, open to all IMA members of all grades, genders, backgrounds, and interests and popular themes include career development, ethics and diversity and inclusion. The Early Career Mathematician committee were again greatly involved this year, chairing three out of six Virtual Maths Teas.

In 2024 we hosted the following Virtual Maths Teas with 221 registrations in total:

- February – Imposter Syndrome
- February – Progressing from your PhD into your early career as an academic
- March – Inspire Inclusion: Women in Mathematics
- April – AI in Assessment
- June – Interviewing for a role in Industry
- December – Lifelong Mathematics Learning in Industry

Academic Representatives

The Academic Representatives partnership, established by the Institute in 2017, continues to grow and evolve, strengthening our engagement with the academic community. We currently have 62 Representatives across 67 universities, who play a key role in promoting the work of the IMA to their colleagues and students, as well as providing valuable feedback on the priorities of academic members.

In 2024, we saw significant progress in the scheme's development. The return of in-person engagement was a major highlight, including the successful Academic Representatives Forum. Mathematicians from across the country gathered at De Morgan House in London for the IMA Academic Representatives' Forum June 2024, marking its return after six years with a hybrid format.



Academic Representatives convene at the Annual Forum

IMA President Professor Hannah Fry HonFREng FIMA sent her best wishes via a pre-recorded message, while Dr Howard Haughton CMath FIMA opened with a powerful talk on the role of Maths and AI. Rosalind Azouzi, the IMA Executive Director, shared updates on digital provisions, including a mentoring scheme and new career development tools. Paul Glaister CBE CMath CSci FIMA discussed accreditation developments, while Chris Breward FIMA from the KE Hub highlighted knowledge exchange initiatives. Martine Barons CMath FIMA championed local branches, and James Van Yperen AMIMA encouraged Early Career Mathematicians to engage

with IMA activities. Rachel Bearon FIMA introduced the Academy for the Mathematical Sciences and its funding efforts, noting Professor Dame Alison Etheridge DBE OBE FRS FIMA as its first president. Jenny May Roberts, IMA Membership Development & Marketing Executive, finished with outlining support for university departments, to enhance engagement.

The event concluded with valuable networking, leaving attendees inspired to further promote the IMA.

To enhance communication and engagement, we launched a bi-monthly Academic Representatives newsletter, providing updates, resources, and opportunities to contribute to IMA initiatives and further to feedback, in 2025, we will run both online and in-person meetings. This blended approach allows for greater accessibility and participation from representatives across the UK.

Additionally, Jenny May Roberts (IMA Membership Development & Marketing Executive) now delivers IMA early careers and professional membership talks both in person and online at universities throughout the UK, further supporting academic engagement and student outreach. The Academic Representatives partnership remains a vital part of our mission to connect with academia and the mathematics community, ensuring that the voices of academics and students continue to shape the work of the IMA.

Branches

IMA Branch committees are led by local IMA members and volunteers across the UK, offering free talks on mathematics topics to members and non-members.

The Branches are:

- East Midlands
- London
- North West
- Scottish
- West Midlands
- South West and Wales

We were delighted to approve a new Branch for the Yorkshire area and also begin discussions with representatives in Northern Ireland and Eire about the possible revival of Branch activities there.



During 2024, our Branches delivered free talks covering an array of current and interesting topics:

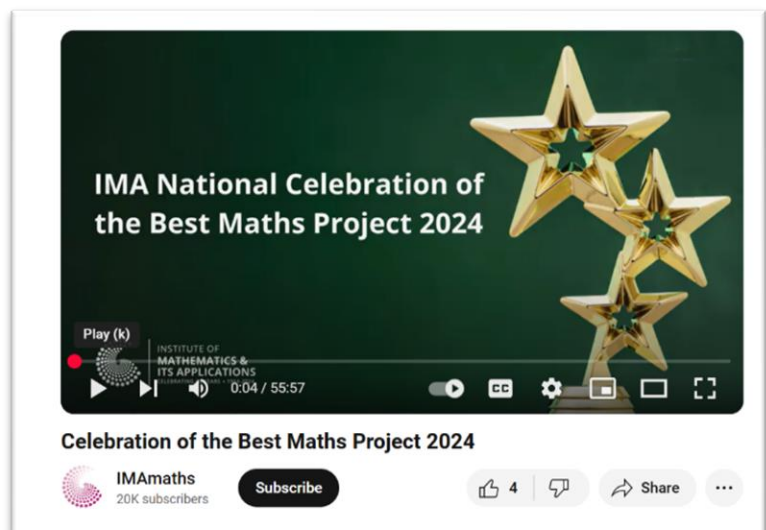
Branch	Speaker	Theme	Location	Date
West Midlands	Professor Alan Champneys CMath FIMA	Synchronisation and the Wisdom of the Crowd	Aston University, Birmingham	08/02/2024
North West	Professor Stephen Lynch FIMA	Online Workshop: Python for A-Level Mathematics and Beyond - Summer 2024 (workshop - Friday)	Online	28/06/2024
North West	Professor Stephen Lynch FIMA	Online Workshop: Python for A-Level Mathematics and Beyond - Summer 2024 (workshop - Saturday)	Online	29/06/2024
West Midlands / North West	Dr Snezana Lawrence FIMA, Prof Serafina Cuomo, Prof Jon Agar	What Do Mathematics and Society Owe Each Other? A Panel Session chaired by Dr Michael Barany of the University of Edinburgh	Online and satellite venues	10/09/2024
East Midlands	Dr Bethany Wollacott	Through the Lens: Insights into Mathematical Textbooks and Mathematical Reading	Online	30/09/2024
West Midlands	Dr Rowland Seymour	Scale of Harm: Estimating the Prevalence of Trafficking to Facilitate Online Child Sexual Exploitation in the Philippines – in partnership with the Royal Statistical Society	University of Birmingham	02/10/2024
SW & Wales	Professor Chris Budd OBE CMath FIMA and Xavier Bertrand FRAeS	AI in Aerospace – in partnership with the Royal Aeronautical Society	Aerospace Bristol	10/10/2024
AWE Branch	Professor Ian Hall OBE	Challenges in Modelling Infectious Disease Outbreaks – in partnership with the Institute of Physics	Aldermaston Recreational Society	16/10/2024
East Midlands	Professor Nira Chamberlain OBE CMath CSci FIMA	The Mathematics That Can Stop an AI Apocalypse	Nottingham Trent University	31/10/2024
Yorkshire	Robyn Goldsmith	Breaking the (Mathematician) Mould: Removing Barriers to Mathematical Belonging through Maths Outreach	Sheffield Hallam University	13/11/2024
ECM/All Branches	Will Barnfield and Maria Esteban Casadevall	IMA National Celebration of the Best Maths Project 2024	Online	11/12/2024
West Midlands	Aysar Ghassan	Christmas Lecture: Art-Design in the Automotive Industry (joint IET/BCS/IMA West Midlands event)	Online	11/12/2024

Where permission was granted, talks are available on the [IMA YouTube Channel](#).



Top: IMA SW & Wales Branch and RAeS Reps at the AI in Aerospace event, Bottom: Through the Lens, Bottom Right: Dr Bethany Wollacott and Professor Nira Chamberlain deliver talks for the East Midlands Branch.

Below: Anjulika Salhan speaking at the AI/ML Conference, Screenshot of the IMA Best Maths Project 2024 – now available on the [IMA's YouTube Channel](#).



Early Career Mathematicians

The Early Career Mathematicians (ECM) Group provides early career professionals from industry, academia, and government with opportunities to develop their skills, network with peers, and engage with the wider mathematical community. In 2024, the committee was chaired by Ms Robyn Louise Goldsmith and successfully delivered a range of events, including Virtual Maths Teas, online conferences, and seminars, offering valuable professional development and networking opportunities.

2024 marked the 20th anniversary of the ECM Group, coinciding with the IMA's 60th anniversary, a milestone year for both. To celebrate, the IMA hosted a special anniversary event in London, attended by current President Hannah Fry HonFREng FIMA alongside several past presidents. This was an opportunity to reflect on the ECM Group's impact over two decades, supporting early career mathematicians in building networks and advancing their careers.

We also held a special 'Evening with the ECMS' following the March Council meeting in London. Here the committee leads presented their current plans and engagement opportunities, and the evening was filmed for the IMA's YouTube channel.



Attendees at the Evening with the ECMS event

The ECM Group continues to adapt and evolve, offering hybrid engagement opportunities. Virtual Maths Teas remain a popular online space for discussions for this audience, and a new 'What is ...' series introduced by the committee this year showcasing maths careers pathways from professionals such as data scientists and operational researchers, but may also cover topics as wide as good programming practices. Additionally, the expansion of online seminars allows researchers to share their work more widely, further enhancing connectivity between early career mathematicians across different sectors.

As we move forward, the ECM Group remains committed to providing a welcoming and dynamic platform for early career mathematicians to learn, collaborate, and grow within the IMA community.

The ECM Group continues to help recruit student members and is also active on social networking sites.

2024 ECM Events:

Speakers	Theme	Location	Date
ECM Group	An Evening with the IMA's ECM Community	De Morgan House	27/03/2024
Maria Esteban Casadevall and Veronica Bitonti AMIMA	ECM Seminar: Tomorrow's Mathematicians Today 2023 Winners	Online	11/06/2024
Ziyang Yang	Lunch and Learn: Smarter, Safer and More Sustainable Internet of Things Monitoring	Online	25/06/2024
Mingjia Yan AMIMA and Andi Hani	ECM Seminar: Tomorrow's Mathematicians Today 2024 Winners	Online	15/08/2024
ECM Group	Panel Sessions – IMA Celebration Event	Savoy Place	16/10/2024
Adél Drew FIA (Milliman UK), Christopher Grassick (Government Actuary's Department) and Joshua Molloy (Lane Clark & Peacock LLP)	What is an Actuarial Analyst?	Online	28/10/2024
Stella Robinson AMIMA (Civil Service), Lucy Gullon (Industry), Arshia Kaul (Academia) and Frederique van Leeuwen (Consultancy)	What is an Operational Researcher?	Online	19/11/2024
VMT	ECM VMT: Lifelong Mathematics Learning in Industry	Online	09/12/2024

Reaching and supporting our community

University Engagement

The IMA continues to work closely with universities to raise awareness of the Institute and promote membership, and encourage participation among undergraduate and postgraduate students, as well as the wider academic community. We support the development of student mathematical societies by providing grants, careers talks, and engagement at student conferences and careers events.

In 2024, we provided grants to mathematical student societies across the UK, including IMA-SIAM Joint Student Chapters, and awarded Undergraduate Prizes to societies at some of the UK's leading universities. The IMA also played an active role in supporting Maths Society activities, conferences, competitions, and talks, as well as participating in key IMA-led conferences to further strengthen our connections with students and academics.

Undergraduate talks delivered over 2024:

- Imperial College London
- University of Greenwich
- University of Plymouth
- University of Lincoln
- University of Essex
- Nottingham Trent University
- University of Liverpool – provided video
- Heriot-Watt University
- Lancaster University
- Northumbria University
- Aston University
- Middlesex University
- Newcastle University
- University of Salford
- University of Southampton

Membership Development

This evolving role continues to build on relationships established by the past work of our University Liaison Officer (ULO), with an increased focus on supporting members across the mathematical community. Our aim is to expand opportunities, promote the value of IMA membership, and improve engagement within both academic and industrial sectors.

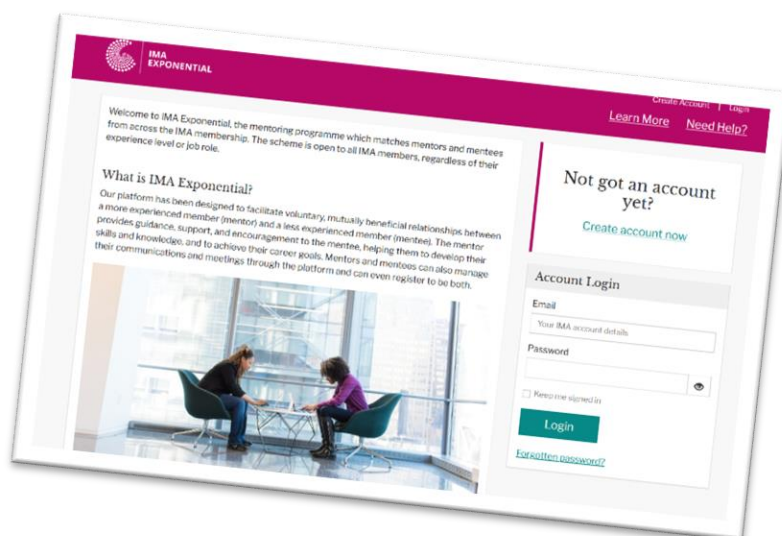
We are continuously reviewing ways to recruit, retain, and engage members at all career stages, ensuring that the IMA remains relevant and beneficial throughout their professional journey. This includes promoting IMA membership to graduates at industry events and exploring and developing new membership benefits that cater to the diverse needs of our community.

By strengthening these connections, we aim to create a thriving, engaged membership base that supports mathematicians at every stage of their career.

Mentoring

In 2024, a major achievement was the launch of the IMA Exponential Mentoring Scheme, an online platform to enable mentoring relationships between members, which has exceeded our expectations in uptake.

In November, we produced a video “Exploring Opportunities Through Mentoring with Dan Tilley & Adrian Bell”. In this Interview Jenny May Roberts, IMA Membership Development Executive and Nathan Turner CMath FIMA, IMA VP Communications meet with IMA members Daniel Tilley CMath FIMA and his mentee Adrian Bell AMIMA to discuss their professional mentoring journey. We unpick the intricate details of the opportunities and personal development it can bring to both mentee and the mentor.



Other Key Engagement Activities

Event	Date
Retreat for Women in Applied Mathematics Online Event	January
Innovating Interchange STEM Futures Partner Event - London	March
IMA overview at Tomorrow's Mathematicians Today Conference online	March
Maths Summit - London Science Museum	March
NTU Nottingham Trent University - Mathematics Degree Showcase	March
BAMC Conference 2024 – Newcastle	April
Memberwise - Member Solutions Day	October
Maths Parliamentary Expo Event, Westminster	November
Memberwise Conference	November
AWE Graduate Professions Day	November



Top Left: The IMA stand, set up for an outreach event. Top Right and Below: Attendees gather for the 2024 Memberwise Conference

Equity, Diversity and Inclusion in Mathematics

The IMA is a signatory of the Science Council Declaration on Equity, Diversity and Inclusion (EDI). Dr Howard Haughton CMath FIMA is the IMA's EDI Champion. In this role he advises the Executive Board and Council on EDI-related matters and is chair of the IMA's EDI Committee.

The Committee met regularly throughout 2024 with a focus on developing an EDI specific strategy for the IMA, with actionable steps and associated metrics to measure progress, following the recommendations the Committee made during our strategic review in 2023. The Strategy was presented to Council and approved in 2024.

"This strategy reflects the IMA's steadfast commitment to fostering an environment where all individuals in the mathematical sciences feel valued, respected, and empowered to achieve their full potential.

We recognise that EDI is a journey requiring continuous learning and improvement. Our strategy is a living document, with clear metrics to track progress, ensuring that our intentions translate into tangible impact.

I encourage all members to explore the strategy and join us in our mission to make the mathematical sciences more inclusive, equitable, and reflective of the diverse world we serve."

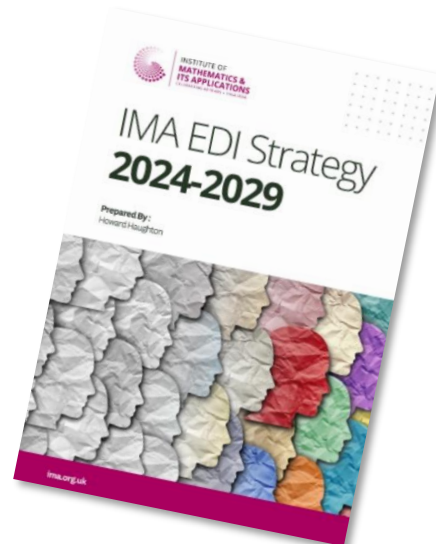
Dr Howard Haughton CMath FIMA

The IMA continues to provide or support a number of events which support and showcase the achievements of underrepresented groups in mathematical fields. 2024 highlights include:

- Online Retreat for Women in Applied Mathematics Online Event in January;
- International Women's Day Virtual Maths Tea event in March;
- EDI Panel session at the IMA 60th Celebration in London in October;
- Black Heroes of Mathematics 2024 Conference in October;
- Continued commitment to increasing engagement from underrepresented groups through the e16plus Newsletter, MathsCareers website and social media activities;
- Continuing our partnership with the Levelling Up: Mathematics programme to support A Level tuition for underserved communities, developing a new pathway for A Level Maths students aiming to go on to study or an apprenticeship in Engineering.

Dr Haughton maintained his role promoting mathematics and associated career opportunities within the London International Youth Science Forum (LIYSF) which invites STEM students from around the world to participate in a two-week programme of learning in the UK each July.

The Executive Director continued to represent the IMA on the Science Council/Royal Academy of Engineering Progression Framework Implementation Group. This year's work focused on updating the Framework for a new benchmarking activity in 2025.



Professional Affairs and Industry

Mathematicians play a vital role across business, industry and government. Chaired during 2024 by VP Professional Affairs Dr Jennifer Macey CMath CSci FIMA, the IMA's Professional Affairs Committee (PAC) brings together representatives from IMA Corporate Affiliates and those with expertise in applied mathematics in a variety of industrial and commercial settings.

The committee is also responsible for the IMA's Chartered Mathematician (CMath) designation and the IMA professional Codes of Conduct. PAC also oversees the IMA's requirements to the Science Council as a licensed body to assess Chartered Scientist (CSci) applications, including meeting external quality assurance requirements and CPD compliance. PAC also supports the IMA's contribution to the Data Science Professional recognition framework.

Details of our Corporate Affiliate members can be found at: <https://ima.org.uk/affiliates/corporate-affiliates/>

Professional Affairs Committee

The Committee met several times during 2024 via remote conference facilities and also in person in London. PAC also have communicated throughout the year via Basecamp, with a particular focus on

- Delivering the IMA 2023-2028 Strategy
- AI and Mathematics
- Data Science Certification
- The IMA's proposed EDI Strategy
- Encouraging take-up of the IMA Exponential Mentoring scheme
- IMA support to employer engagement programmes such as STEM Futures

During the course of the year Jenny Macey announced that she would be stepping down as VP and Chair of PAC at the end of her two-year term in December (but would remain as a member of the committee). The committee decided to seek expressions of interest for the role via a notice in *Mathematics Today* which garnered significant interest from members. After assessing the applications, the Nominating Committee of the IMA decided to appoint Dr Andrew Harrison FIMA who took up the role of Vice-President and Chair of the newly named Business, Industry and Government (BIG) Committee on 1 January 2025.

The Committee wishes to note and thank Jenny Macey for her exceptional contribution to the work of the committee, not only as Chair but also over a number of years as a committee member. In particular, her leadership during the strategic review and then the implementation phase in 2024 has re-focused the committee's priorities, leading amongst other things to the renaming as mentioned above and ensuring an inclusive approach in decision-making.

Strategy Review and Implementation

The committee agreed to set up Task and Finish groups around three initial projects in support of delivering the 2023-2028 Strategy:

1. Terms of Reference

Examine PAC values and responsibilities and ensure the new Terms of Reference accurately reflect the evolution of PAC (including potentially renaming the Committee towards Business, Industry and Government). Review committee's role and areas of strategic support to the IMA,

maintaining advisory role for professional standards but exploring options for oversight within Membership function.

2. Value Proposition and Industry Offer

Review the Institute's Corporate Affiliate offer, including accreditation of graduate and other training programmes for charterships, looking at ways to increase recognition of mathematics in industry settings and creating a network of industry representatives similar to the success of the Academic Representatives scheme.

3. Activities and Partnerships

Reviewing use of terminology, representation of BIG within IMA awards (e.g. opportunities to recognise achievement by mathematicians in business, industry and government settings) and developing further events to support those working in industry.

Data Science Professional Standards



In 2024 the Alliance for Data Science Professionals (AfDSP) appointed a new chair, former IMA Council member Professor Edward Rothead CMath FIMA. Two new organisations joined the Alliance: The American Statistical Association and Wellcome Sanger Institute. The new members and new chair joined a meeting in January at the Alan Turing Institute, and the Governing Board met online in April 2024. The IMA only has a few ADSP applicants at present, the Charter application (through RSS) is in progress awaiting Privy Council feedback.

PAC members also volunteered to join the IMA's ADSP application review group, chaired by Professor Paul Glaister CBE CMath CSci FIMA, to begin awarding certification to qualifying existing Advanced Members.



Members of the Alliance for Data Science Professionals attended the British Data Awards in May 2024, Where AfDSP were named as one of the finalists.

Recognition and Professional Standards



IMA membership grades are designed to suit every level of mathematical interest, from current students to professional and experienced mathematicians. Advanced Membership offers two grades to recognise professional achievement: Member and Fellow. Applications are overseen by the Membership Committee. This Committee also oversees applications for the Chartered Mathematician, Chartered Scientist and Chartered Mathematics Teacher designations.

The IMA, both independently and in partnership with others, also offers a number of medals and prizes which recognise mathematical achievement across a diverse spectrum. The Institute's Gold Medal is awarded in recognition of outstanding contributions to mathematics and its applications over a period of years, with medals being awarded every two years.

Professional Registration and Membership

The Membership Committee is delegated by Council to assess individual membership application and in 2024 was chaired by the Honorary Secretary – Membership, Professor Paul Glaister CBE CMath CSci FIMA. The Membership Committee is made up of Chartered Mathematicians and Scientists who are Fellows of the Institute. They have a background in at least one of the following major areas of employment for mathematicians: academic research and teaching, schools and further education, industry, commerce, finance and IT.

In 2024 we have had the privilege to welcome 677 new members and assist 115 existing members in transferring to a higher grade.

Membership at 31 December 2024:

Honorary Fellow	18
Fellow	1371
Member	1235
Associate Member	1685
Affiliate	422
Student	414
Total	5145

Of the above memberships, 1,320 are registered as Chartered Mathematicians and 177 as Chartered Scientists.

The Chartered Mathematician (CMath) designation represents high levels of professionalism and competence in mathematics. It is awarded by the Institute of Mathematics and its Applications to practising professional mathematicians who demonstrate, as well as their professional status and competence, a commitment to keep pace with advancing knowledge in mathematics and its applications.

The Institute has continued to support UK University Mathematics Departments by offering over 100 IMA Graduate Prize Memberships in 2024.

Chartered Mathematics Teachers

The Chartered Mathematics Teacher Registration Authority consists of representatives from IMA, Association of Teachers of Mathematics, Mathematical Association, and National Association of Numeracy and Mathematics in Colleges. Professor Paul Glaister CBE CMath CSci FIMA, the chair of the Institute's Membership Committee, also chairs the Chartered Mathematics Teacher Registration Authority. At 31 December 2024, we have 41 registered Chartered Mathematics Teachers.

Medals and Awards

2024 Presidential Address

The 2024 Presidential Address was held at the University of Greenwich, where Professor Hannah Fry HonFREng FIMA gave her Presidential Address, 'Making Sense of Cancer; Communicating Difficult Statistics to the Public'. The event was a huge success.



The following Certificates of Service were awarded at the IMA Presidential Address, held in June 2024.

Academic Representatives since 2020

- Dr Chris Antonopoulos MIMA
- Dr Joseph Bailey MIMA
- Dr Thomas Waters MIMA

ECM Members > 3 years' service

Nicholas Brusby CMath MIMA – For over 3 years dedicated service to the ECM and IMA Branches in a variety of roles, and more recently his service to the IMA as a Council Member and a member of the Communications Committee.

Branch Representatives > 3 years' service

Russell Thersby CMath CSci FIMA, for dedicated service to the North West Branch since 2020

Special Recognition Awards

Dr Ellen Brooks-Pollock OBE FIMA – Long service award.

Ellen has been a member of the *Mathematics Today* Board since Sept 2017.

Professor Paul Glaister CBE CMath CSci FIMA – Long Service award.

Paul has been the Honorary Secretary - Membership for 3 years (with another 3 to serve), the duties for this role means he is the Chair of the Membership Committee, Membership Committee Qualification sub-group and CMath Registration Authority. Plus being a member of the Professional Affairs Committee, Council, EB and Nominating Committee. Prior to being on Council as the Honorary Secretary, Paul also served 6 years as an elected member. Paul has been on Schools and FE committee for almost 9 years and is involved with programme accreditation. Paul has also been heavily involved with the launch of the Advanced Data Scientist Professional scheme.

Catherine Richards Prize

Matthew Cotton AMIMA & Brady Metherall AMIMA were awarded the Catherine Richards Prize for the best article published in *Mathematics Today* "Settling Scores and Gambling on Goals."

Honorary Fellowship

Professor Dame Celia Hoyles DBE CMath FIMA, was presented with an Honorary Fellowship of the IMA. Dame Celia has made outstanding contributions to the improvement of the teaching of mathematics throughout her distinguished career. She served with distinction as IMA President for the 2014 – 2015 term, during which time, she was made a Dame Commander of the Order of the British Empire in 2014 for services to Education.

IMA/LMS David Crighton Award Lecture and Medal Presentation 2024

Professor Dame Alison Etheridge DBE OBE FRS FIMA was awarded the David Crighton Medal in 2023, and her presentation took place on 18 April 2024 at the Royal Society. The medal is awarded jointly by the IMA and the LMS and is a biennial event. Alison's lecture, "Modelling Genes", discussed some of the ways in which apparently simplistic mathematical models can capture some of the essence of evolution and display a rich and beautiful mathematical structure.

IMA David Youdan Medal 2024

The 2024 IMA David Youdan Medal was awarded to Professor Alan Champneys CMath FIMA in recognition of his sustained and outstanding contribution to the IMA in many roles both within the IMA and with external partners. His citation, detailing some of his numerous achievements can be found [here](#).

His award was presented at an event in November, where he presented a talk on 'Breaking the rules, the role of creativity in mathematical sciences'. A recording of the lecture is available [here](#).

IMA/LMS Christopher Zeeman Medal 2024

The Councils of the IMA and the LMS were delighted to announce in August that Brady Haran the creator of Numberphile was to receive the 2024 Christopher Zeeman Medal, which has featured guests including our own President Hannah Fry HonFREng FIMA, Simon Singh MBE Hon FIMA and Matt Parker, who are all previous recipients of this prestigious award. An event to present Brady with his award will take place in May 2025. [Details can be found on our website](#).



L-R: Alan Champneys delivers his talk for the David Youdan Medal, Professor Dame Celia Hoyles receives her Honorary Fellowship at the Presidential Address, Professor Dame Alison Etheridge delivers her talk at the Royal Society.

Looking Ahead – 2025

In 2025 we will focus on building on the legacy of our 60th anniversary celebrations in 2024; and the delivery of key projects aligned to our objectives within Phase 1 of the IMA 2023-2028 strategy. Highlights include:



Developing new Special Interest Groups

With two Special Interest Groups – Climate and Sustainability and the Mathematics of AI – now attracting volunteer leads, we will work closely with each group's committees to help deliver their first outputs. We will continue to support the formation of IMA SIGs in other areas.

Delivering the EDI Strategy

The IMA EDI Champion will lead the EDI committee in developing EDI practices and activities in the IMA in pursuit of our EDI goals. We will also take part in the 2025 Progression Framework Benchmarking Report for professional bodies in sciences and engineering, led by the Royal Academy of Engineering and the Science Council.

Leading LUM and LUMEng

The IMA has agreed to become the lead partner for the Levelling Up: Mathematics programme from 2025. We will work closely with the LMS and participating Maths departments. We will also build new links with Engineering Departments across the UK for the Engineering pathway. The latter also enables participation from apprentices for the first time and we will assess the impact of this and look to further grow awareness and support for LUM and Engineering over the coming year.

Course Accreditation

Following a review led by the IMA Honorary Secretary for Education and HEC volunteers over 2024, we will launch a new Accreditation Handbook for Universities and associated improvements to the scheme.

This is notwithstanding the considerable financial pressures on universities, which are acutely felt by Maths departments at low-tariff universities, in particular. We will work closely with external partners to support those in need and demonstrate the vital role that mathematics plays in higher education, research and development, and in preparing graduates with key skills needed for the economy in an AI and data-driven world.

IMA Foundation

We will aim to create awareness and the infrastructure for the IMA Foundation, a designated fund to manage IMA grants, awards and support for education programmes and activities over time. This will include fundraising training for staff and exploring ways to enable donations of all sizes from members and supporters, including our new CRM.

Building on mentoring

Following its successful launch in 2024, promotion of the IMA Exponential mentoring platform will continue. We will facilitate ways to share mentoring stories, tips and guidance from IMA mentors and mentees based on their experiences.

Continuing our digital transformation

Our efforts to create a sense of belonging and increased community engagement through enhancing our digital offering will continue. We will launch a new online careers platform in early 2025 to provide members at all career stages with free access to a wide range of advice, career/professional development courses and CV and interview techniques.

We also begin a major digital infrastructure project to identify a new CRM and myIMA portal for the Institute which will improve the experience of those using our services, as well as streamline our internal processes and service provision and enable increased communication and engagement levels with our community.

Refreshing *Mathematics Today*

A group of experts from the MT Editorial Board, including the Editor in Chief and IMA VP Communications along with key staff have formed a project group to review *Mathematics Today* with a view to creating a new look and feel which will celebrate the role that mathematics plays in modern society, all while retaining the high quality content and insights into mathematics topics which the magazine has become known for. We hope to finalise the new design in late 2025 to include opportunities to build on digital engagement.

Developing local community links

Completing the relocation to more modern, sustainable and collaborative workspace in Southend will be a key focus for the senior leadership team. As part of our continued commitment to the area, we are planning to work with a local arts charity to create a special Mathematics & Art project, developing brand new engagement opportunities with our local community and bringing the knowledge from UK-wide mathematicians to local artists and schools.

Education Kits

Work on refreshing and updating our new Education Kits will be completed this year. Working closely with Oxford Brookes University's academic staff and students, we aim to introduce some exciting new aspects of mathematics in action to our exhibition stands to inspire new generations at the Big Bang, RIAT and other STEM events around the country.

Content creation

We will continue to record the lectures given by our prestigious prize winners and look forward to this year's IMA Gold Medal lecture, to be presented by Professor I. David Abrahams CMath FIMA in June.

Increased engagement with mathematicians in Business, Industry and Government

We will aim to deliver the outputs of the Professional Affairs Committee working groups, including a new focus for the committee, a new network for mathematicians in industry to connect with the IMA, and a review of our Corporate Affiliate offering including accreditation of graduate training and other programmes.

International Growth

We will convene a working group of experts to review the IMA's European and international links and partnerships with a view to building on interest from international members in forming new Branches and developing engagement opportunities overseas and online.

PART TWO:

Finance, Governance, Risk and Financial Statements

Finance and Governance

The Institute's Head Office is:

Catherine Richards House,
16 Nelson Street,
Southend-on-Sea,
Essex, SS1 1EF.

Its bankers are:

Lloyds Banking Group,

Business Service Centre,
Sedgemoor House,
Deangate Avenue,
Blackbrook Business Park,
Taunton, TA1 2UG.

Its auditors are:

Rickard Luckin
1st Floor
County House
100 New London Road
Chelmsford
Essex, CM2 0RG

Council

The constitution of the Council for the financial year 1 January - 31 December 2024, and subsequent period 1 January 2025 – 31 March 2025 - during which time this report was reviewed - was as follows:

PRESIDENT

Professor Hannah Fry HonFREng FIMA

VICE-PRESIDENTS

Mr Nathan Turner CMath MIMA	(from 1 January 2024)
Dr Martine Barons CMath FIMA	(to 31 December 2024)
Dr Eduard Campillo-Funollet MIMA	(from 1 January 2025*)
Dr Jennifer Macey CMath CSci FIMA	(to 31 December 2024)
Dr Andrew Harrison FIMA	(from 1 January 2025)

**Already an elected Member of Council at the time of appointment.*

HONORARY TREASURER

Professor Andrew Osbaldestin FIMA

HONORARY SECRETARIES

Professor Paul Glaister CBE CMath CSci FIMA
Professor Catherine Hobbs CMath FIMA

PAST PRESIDENTS

Professor Alistair Fitt CMath CSci FIMA
Professor Nira C Chamberlain OBE CMath CSci FIMA
Professor Paul Glendinning FRSE FIMA

OTHER MEMBERS OF THE COUNCIL

Elected Members

Ms Claire Baldwin CMathTeach MIMA

Mr Declan Bays MIMA

Professor Alexander Belton CMath CSci FIMA

Ms Emma Bowley CMath MIMA

Dr Keith Briggs FIMA

Professor Christopher Budd OBE CMath FIMA

Dr Eduard Campillo-Funollet MIMA (also appointed Vice President effective 1 January 2025)

Dr Sophie Carr CMath CSci FIMA

Professor Anthony Croft FIMA

Dr Howard Haughton CMath FIMA (from July 2024)

Professor Timothy Phillips FIMA

Dr Richard Pinch CMath CSci HonFIMA

Co-opted Members

Mr Nicholas Brusby CMath MIMA (until 31 December 2024)

Ms Robyn Goldsmith (term ends on 31 January 2025)

Dr Rosalyn Porter FIMA

Professor Stephen Lynch FIMA (from 1 January 2025)

Dr Maciej Matsuzewski MIMA (until 26 June 2024)

Professor Anastasia Sofroniou FIMA

The following completed their term of office as Councillor and Trustee at the AGM on 26 June 2024:

Mr Chris Chipperton CMath CMathTeach FIMA

Dr Francisco de Melo Viríssimo AMIMA

Dr Snezana Lawrence FIMA

Professor Graham Niblo FIMA

The following completed their term of office as Councillors and Trustees on 31 December 2024:

Dr Martine J Barons CMath FIMA, Vice President with responsibility for Learned Society

Dr Jennifer Macey CMath CSci FIMA, Vice President with responsibility for Professional Affairs

Professor Hannah Fry HonFREng FIMA, who became President on 1 January 2024 chaired Council as it considered the content of this report.

In 2024, Councillor nominations exceeded vacancies, so a ballot was held. Following the ballot, Council was pleased to welcome the following to serve as members of Council and Trustees effective from the close of the AGM held on 26 June 2024:

Professor Alexander Belton CMath CSci FIMA

Dr Keith Briggs FIMA

Dr Richard Pinch CMath CSci HonFIMA

Dr Howard Haughton CMath FIMA (was co-opted Councillor until 27 June 2024)

Dr Sophie Carr CMath CSci FIMA was re-elected (byelaw 38A)

The members of Council are also the Trustees.

Appointment of Trustees

The appointment of Trustees is governed by the Royal Charter byelaws 35 to 43.

No person or external body is entitled to make such appointments.

Past Presidents

Royal Charter byelaw 36. The immediate three Past Presidents who are able and willing to serve and are Advanced Members of the Institute shall be ex-officio members of Council.

It is customary for there to be three past presidents to sit on Council. Should Past Presidents choose to remain on Council for all or part of this time, they will remain Trustees.

Elected Members

The election of members begins with an open call for nominations. The Notice advises our members how many places are available for election that year. The process begins with a call for nominations at least ten weeks before the annual general meeting. In previous years, the call for nominations was aligned with the publication schedule of *Mathematics Today*. However, in 2024, the IMA transitioned to a digital nominations and elections process, eliminating the need to coordinate with publication dates, with provisions in place for those members who prefer postal communications.

The Royal Charter states: "39. Election of the elected members of the Council shall take place in the following manner: -

- (A) Not less than ten weeks before each Annual General Meeting the Council shall cause to be addressed to all Corporate Members of the Institute a notice inviting nominations.
- (B) Nominations may be sent in writing to reach the Chief Executive at the Office not less than eight weeks before the date of the Annual General Meeting. ..."

If the number of nominations exceed the number of places, an election is held. Elected Members become Trustees with effect from the day after the AGM (normally 1 July or very close to that date).

Honorary Officers

It is usually the case that nominations for Honorary Officers are considered by the Nominating Committee and proposed to Council for approval / ratification. In 2024, open calls for nominations were introduced in support of increasing transparency and encouraging interest from the wider membership.

Co-Opted Members

Byelaw 40: The Council may co-opt any Corporate Member to be a member of the Council, provided that at any time the total number of co-opted members shall not exceed six, of whom not more than one shall be an Associate Member, not more than one shall be a Student Member, and not more than one shall be an Affiliate Member.

Byelaw 41. The Council may at any time appoint or co-opt any eligible person to be an Honorary Officer or member of the Council to fill a casual vacancy. In event of the vacancy resulting from an elected member ceasing membership of Council the co-option will cover the period of office outstanding.

The Chair of the ECM is a co-opted member, and they are normally encouraged to stand for election in the year following their co-option to Council.

Responsibilities of the Trustees

The Trustees (Council members) are responsible for preparing the Trustees' Annual Report and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The Royal Charter of Incorporation and the law applicable to charities in England & Wales requires the Trustees' (Council members) to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Institute and of the incoming resources and application of resources of the Institute for that period. In preparing these financial statements, the Trustees (Council members) are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements and;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Institute will continue in business.

The Trustees (Council members) are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Institute and to enable them to ensure that the financial statements comply with the Charities Act 2011, the Charity (Accounts and Reports) Regulations 2008 and the provisions of the Royal Charter of Incorporation. They are also responsible for safeguarding the assets of the Institute and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Byelaw 34 of the Royal Charter states that The Honorary Treasurer, who is a member of Council and the Executive Board and also chairs the Finance Committee, shall be responsible to the Council for the administration of the financial affairs of the Institute and for ensuring that proper accounts are kept in accordance with these Byelaws but may delegate such responsibility to the Chief Executive [Executive Director] who may be assisted by the other salaried staff in the discharge of such responsibility.

The Finance Committee (FC) reviews the IMA budgets and end of financial year accounts and provides reports and recommendations to Council which also approves the accounts at its March meeting following the audit.

The Finance Committee reviews the executive staff's remuneration and pay on an annual basis as part of the budget setting process. In doing so, the committee takes account of the Consumer Price Index (CPI), and benchmarks against other similar sized professional bodies in the UK.

Trustee Expenses

Trustees may claim expenses to cover standard class travel, essential overnight accommodation and subsistence, all of which are set with recommended maximum limits. Private car mileage may be claimed at 0.45p per mile.

Executive Board

The Executive Board is the advisory committee to Council on operational matters and activities which relate to our mission. It consists of all Honorary Officers of Council together with the Equity, Diversity and Inclusion Champion and the senior leadership team of the Secretariat. Selected staff members from the Secretariat are invited to attend as required.

Volunteers

In addition to the Trustees and Honorary Officers, we are fortunate to have volunteers who represent diverse aspects of our membership and the mathematical community, and play an essential role in delivering IMA activities: for example, reviewing membership and professional registration criteria and applications, including professional experience and mathematics-related qualifications; reviewing Journal submissions and abstracts and proposals for IMA scientific conferences; producing mathematical content for *Mathematics Today*, our website and other channels; providing MathCareers website content and judging competition entries; making accreditation assessments, and leading local Branches.

IMA Secretariat

At 31 December 2024, the IMA employed a total of 19 members of staff, including five part-time employees. One post remained vacant. The Secretariat is led by the Executive Director and provides a number of functions in support of the IMA's aims and objectives. The Institute's staff team in 2024 is listed below.

Executive Director – Rosalind Azouzi;

Operations Director – Alan Peacock;

Administration Assistant – Debbie Sullivan;

Administration Officer – Karen Hedderley;

Administration Officer – Emma Emmerton;

Conference and Administration Assistant – Ella Dixon (until July. Position vacant);

Conference and Administration Officer – Pamela Bye;

Conference and Events Executive – Maya Everson;

Editorial Executive – Rebecca Waters;

Education Manager and Project Manager, Scholarships – Vanessa Thorogood;

Education and EDI Officer – Sandra Lieberman (from March to August. New position created);

Governance Manager – Emma-Jane Wheal;

Governance Officer – Stacie Lang;

IT & Systems Executive – Eugene Kidwell;

Marketing Officer – Nikki Barnes;

Membership Assistant – Sabeen Hansraj;

Membership Development and Marketing Executive – Jenny May Roberts;

Membership Officer – Puk Sand-Kristensen (from February);

Membership Manager – Caroline Irwin;

Scholarships Project Officer – Jaydene Merry (until March. Helena Richardson from October);

Special Projects Officer – Joanna Baldacci.

Financial Review 2024

The financial results for 2024 are an unrestricted surplus of £23,900 against a budgeted deficit of £9,616.

The Trustees are happy with the tight cost controls that have kept the performance close to budget, with unexpected income from publications being the driver of the surplus.

At the end of 2024 the total reserves are £1,537,515 of which £127,815 is in relation to restricted reserves. In 2023 the equivalent figure was £1,525,502 of which £139,401 was in relation to restricted reserves.

Funds were used to deliver our charitable aims and objectives. The Trustees have taken into account the Charity Commission's public benefit guidance when carrying out and reporting on activities to which it is relevant. There is clear public benefit in our activities which:

- provide the Chartered Mathematician and Chartered Mathematics Teacher designations and promote professional competence and CPD for registrants;
- set standards for mathematics higher education courses;
- provide local engagement opportunities through our branches;
- facilitate mentoring and peer support;
- create opportunities for public understanding through journals, lectures, conferences, workshops, seminars, podcasts, videos and events;
- demonstrate the ability of mathematics and mathematicians to support decision making, business and public policy;
- inspire the next generation and reverse stereotypes through targeted activities to showcase mathematics and associated career pathways.

A detailed account of our activities is provided in Part One of this report.

Finance Committee, which reports to Council, sets the pay and remuneration of the charity's personnel.

Reserves Policy

The Institute is a charitable organisation that promotes mathematics and its applications. It is a learned society and a professional body where income is principally based on subscriptions, and revenue from conferences and publications. The Institute requires adequate reserves to provide for any shortfall in immediate income and to allow remedial action in event of any long-term adverse change in circumstances. The Institute also requires financial reserves in order to respond to any major opportunities to develop and promote its objectives.

Council considers that reserves equivalent to one year's standard expenditure (excluding large projects which are not part of standard long-term activities) would be an appropriate level.

When Restricted Funds exist, for example the IMA Leslie Fox Fund, those funds will be used for the purpose for which they are restricted. Restricted reserves will not be counted when calculating the amount of reserves for general purposes.

Two months' operating expenses should be held as liquid reserves.

At the end of 2024 the total reserves are £1,537,515 of which £127,815 is in relation to restricted reserves. Therefore, the useable reserve is £1,490,700 which is close to one year's standard expenditure and is therefore deemed to meet this policy.

Sources of funding

Key unrestricted revenue streams were:

Publications	£649,271
Membership Subscriptions	£370,668
Conference Income	£52,763

Some of our most significant expenditure on charitable activities during the year were:

Promoting Maths	£458,737
Education	£31,773

Maths Today	£187,386
Conference Expenditure	£185,010
Grants	£58,675

The expenditure of our incoming resources on these charitable activities was fully in line with our charitable objectives.

The non-current reserves of the Institute on 31/12/2024 were held with the following Finance Organisations: £110,115 is held at the Charity Bank, £220,459 at the Clydesdale Bank, £318,741 at Shawbrook Bank, and £1,109,707 at Lloyds; and £109,815 at Lloyds held on behalf of the Leslie Fox Prize and QJMAM.

Free reserves

At the end of 2024, free reserves were £1,312,856 (2023: £1,290,253).

Management of Risks

Council has delegated the oversight of risk to the Finance Committee in the first instance.

The Finance Committee assesses risk annually at a minimum, or more frequently in periods of economic or other uncertainties. Operationally, risks are under constant scrutiny by the senior management team, and any risk 'events' are reported via established processes.

The Risk Register is managed by the Governance Manager with input from the senior leadership team and other subject matter experts. The Risk Register is divided into the following categories:

- People, Leadership and Culture
- Financial
- Governance & Risk (including Data/GDPR)
- Operational Risk (including IT Resilience, Change Management & Procurement)

Risks are assessed on both an inherent and residual basis, and based on risk appetite, the top risks are reported at a senior level, along with the control environment that they operate in.

In 2024, the key areas of risks under scrutiny could be summarised as follows:

- IT Risk – Cybersecurity
The protection of member and staff data is of utmost importance to the IMA. Due to the prevalence of cybersecurity risk across all sectors, and the impact a breach of our security may have, we foresee this risk remaining a focus for some time.
- Governance – Regulatory Compliance
Compliance with our Royal Charter, Charity Commission requirements such as Conflicts of Interest, GDPR and other external regulations is core to our culture; the oversight and reporting of all aspects of this risk is kept under constant scrutiny.
- Financial Sustainability
Compliance with our Royal Charter, the Charity Commission requirements and IMA Accounting and Investment policies, including meeting reserves and 'going concern' obligations.
- Reputational Risk
The materialisation of any risk has the potential to damage the IMA's reputation, and this drives our focus on risk management. Further to that, we have our codes of professional conduct for all members which is made by the Council in line with the Royal Charter.

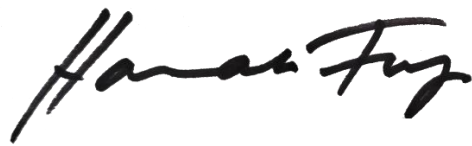
There were no material risk events reported within the accounting period 1 January – 31 December 2024.

Notes to the Financial Statements for the year ended 31 December 2024

The accounts given on pages 47-54 provide the IMA's full, formal financial statements and accounting policies.

This Trustees' Report 2024, incorporating the IMA's annual report to members, was approved by the Trustees at the Council meeting of March 2025.

On behalf of the Trustees

A handwritten signature in black ink, appearing to read 'Hannah Fry', with a stylized, cursive script.

President Professor Hannah Fry FREng FIMA

INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

INDEPENDENT AUDITOR'S REPORT

TO THE TRUSTEES OF THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

Opinion

We have audited the financial statements of Institute of Mathematics and Its Applications (the 'charity') for the year ended 31 December 2024 which comprise the statement of financial activities, the balance sheet, the statement of cash flows and notes to the financial statements, including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 *The Financial Reporting Standard applicable in the UK and Republic of Ireland* (United Kingdom Generally Accepted Accounting Practice).

In our opinion, the financial statements:

give a true and fair view of the state of the charity's affairs as at 31 December 2024 and of its incoming resources and application of resources, for the year then ended;

have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and

have been prepared in accordance with the requirements of the Charities Act 2011.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the charity in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

In auditing the financial statements, we have concluded that the use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

Other information

The other information comprises the information included in the annual report other than the financial statements and our auditor's report thereon. The trustees are responsible for the other information contained within the annual report. Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. Our responsibility is to read the other information and, in doing so, consider whether

the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters in relation to which the Charities (Accounts and Reports) Regulations 2008 require us to report to you if, in our opinion:

- the information given in the Trustees' annual report is inconsistent in any material respect with the report; or

INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

INDEPENDENT AUDITOR'S REPORT

TO THE TRUSTEES OF THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

- the financial statements are not in agreement with the accounting records; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of trustees

As explained more fully in the statement of trustees' responsibilities, the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the financial statements, the trustees are responsible for assessing the charity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

We have been appointed as auditor under section 144 of the Charities Act 2011 and report in accordance with the Act and relevant regulations made or having effect thereunder.

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

We identified areas of laws and regulations that could reasonably be expected to have a material effect on the financial statements from our: general commercial and sector experience; through verbal and written communications with those charged with governance and other management; through communications with legal counsel, and via inspection of the charity's regulatory and legal correspondence.

We discussed with those charged with governance and other management the policies and procedures regarding compliance with laws and regulations.

We communicated identified laws and regulations to our team and remained alert to any indicators of non-compliance throughout the audit, we also specifically considered where and how fraud may occur within the charitable company.

The potential effect of these laws and regulations on the financial statements varies considerably.

Firstly, the charity is subject to laws and regulations that directly affect the financial statements, including: the charity's constitution; relevant financial reporting standards; company law; the Statement of Recommended Practice applicable to charities preparing their accounts in accordance with FRS 102 (effective from 1 January 2019); and we assess the extent of compliance with these laws and regulations as part of our procedures on the related financial statement items.

Secondly the charity is subject to many other laws and regulations where the consequences of non-compliance could have a material effect on the amounts or disclosures in the financial statements, for instance through the imposition of fines and penalties, or through losses arising from litigations. We identified the following areas as those most likely to have such an affect: legislation directly applicable to charities sector such as the Charities Act 2011, employment legislation; health and safety legislation; the regulatory requirements of the Charity Commission; data protection legislation; anti-bribery and anti-corruption legislation.

International Auditing Standards (UK) limit the required procedures to identify non-compliance with these laws and regulations to the procedures, and no procedures over and above those already noted are required. These limited procedures did not identify any actual or suspected non-compliance with laws and regulations that could have a material impact on the financial statements.

INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

INDEPENDENT AUDITOR'S REPORT

TO THE TRUSTEES OF THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

In relation to fraud, we performed the following specific procedures in addition to those already noted:

- Challenging assumptions made by management in its significant accounting estimates in particular: depreciation and accrued income;
- Identifying and testing journal entries, in particular any entries posted with unusual nominal ledger account combinations, journal entries posted by senior management, journal entries crediting cash or any revenue account and large year end journals;
- Performing analytical procedures to identify unexpected movements in account balances which may be indicative of fraud;
- Ensuring that testing undertaken on both the Statement of Financial Activity (SoFA) and the Balance Sheet includes a number of items selected on a random basis;

These procedures did not identify any actual or suspected fraudulent irregularity that could have a material impact on the financial statements.

Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with International Auditing Standards (UK). For example, the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely the procedures that we are required to undertake would identify it. In addition, as with any audit, there remains a high risk of non-detection of irregularities, as these might involve collusion, forgery, intentional omissions, misrepresentation, or the override of internal controls. We are not responsible for preventing non-compliance with laws and regulations or fraud, and cannot be expected to detect non-compliance with all laws and regulations or every incidence of fraud.

A further description of our responsibilities is available on the Financial Reporting Council's website at: <https://www.frc.org.uk/auditorsresponsibilities>. This description forms part of our auditor's report.

Use of our report

This report is made solely to the charity's trustees, as a body, in accordance with part 4 of the Charities (Accounts and Reports) Regulations 2008. Our audit work has been undertaken so that we might state to the charity's trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and the charity's trustees as a body, for our audit work, for this report, or for the opinions we have formed.

Rickard Luckin Limited

Chartered Accountants

1st Floor

Statutory Auditor

County House
100 New London Road
Chelmsford
Essex
CM2 0RG

FINANCIAL STATEMENTS

Financial Statement of Activities 31 December 2024

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

STATEMENT OF FINANCIAL ACTIVITIES INCLUDING THE INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2024

	Unrestricted Funds 2024 £	Restricted Funds 2024 £	Total Funds 2024 £	Unrestricted Funds 2023 £	Restricted Funds 2023 £	Total Funds 2023 £	Notes
Income and endowments from:							
<i>Donations and legacies</i>							
Appeal Fund, Donations and Bequests	1,155	23,000	24,155	38	0	38	
<i>Charitable activities</i>							
Member Entrance fees	8,420	0	8,420	2,545	0	2,545	
C. Math/C Math Teacher Member Entrance fees	0	0	0	580	0	580	
Member Subscription fees	370,668	0	370,668	351,722	0	351,722	
Conference and symposium fees	52,763	0	52,763	96,629	0	96,629	
Publications income and Institutional subscriptions	649,271	0	649,271	548,405	100,000	648,405	
Donations	0	0	0	12,135	0	12,135	
Scholarships	0	167,167	167,167	0	145,098	145,098	14
<i>Investment Income</i>	23,452	1,986	25,438	9,584	874	10,458	16
Total	1,105,729	192,153	1,297,882	1,021,638	245,972	1,267,610	
Expenditure on:							
<i>Charitable Activities</i>							
Branches and groups	5,377	0	5,377	4,746	0	4,746	
Conferences	185,010	0	185,010	195,587	0	195,587	
Education	31,773	0	31,773	29,225	0	29,225	
Grants/Donations	58,675	0	58,675	66,932	0	66,932	
Promoting Mathematics (including Scholarships)	286,570	172,167	458,737	238,071	145,098	383,169	1c
Mathematics Today	187,386	0	187,386	165,197	0	165,197	
Membership	144,071	0	144,071	123,187	0	123,187	
Professional development	66,624	0	66,624	57,015	0	57,015	
Other publications	32,346	31,572	63,918	39,766	35,021	74,787	
<i>Governance</i>	83,998	0	83,998	97,172	0	97,172	1d
Total	1,081,829	203,739	1,285,568	1,016,898	180,119	1,197,017	1a
Net movement in funds	23,900	(11,586)	12,314	4,740	65,853	70,593	
Reconciliation of funds							
Total Funds brought forward at 1 January 2024	1,385,801	139,401	1,525,202	1,381,061	73,548	1,454,609	
Total Funds carried forward at 31 December 2024	1,409,700	127,815	1,537,515	1,385,801	139,401	1,525,202	

The net movement in funds arises from the charity's continuing operations.

FINANCIAL STATEMENTS

Balance Sheet

BALANCE SHEET AS AT 31 DECEMBER 2024

	2024 £	2023 £	Notes
FIXED ASSETS			
Tangible assets	96,844	95,548	2
	<u>96,844</u>	<u>95,548</u>	
CURRENT ASSETS			
Stock	858	4,842	3
Debtors	60,952	35,799	4
Current asset investments	672,192		17
Cash at bank and in hand	1,196,644	1,838,960	17
	<u>1,930,647</u>	<u>1,879,601</u>	
LIABILITIES			
Creditors: amounts falling due within one year	489,977	449,947	
	<u>489,977</u>	<u>449,947</u>	5
NET CURRENT ASSETS	<u>1,440,671</u>	<u>1,429,654</u>	
TOTAL ASSETS LESS CURRENT LIABILITIES	<u>1,537,515</u>	<u>1,525,202</u>	
Creditors: amounts falling due after one year	0	0	
TOTAL NET ASSETS	<u>1,537,515</u>	<u>1,525,202</u>	8
FUNDS			
Restricted income funds	127,815	139,401	
Unrestricted income funds:			
General funds	1,406,472	1,385,801	
Designated Funds	3,227		
TOTAL CHARITY FUNDS	<u>1,537,515</u>	<u>1,525,202</u>	7

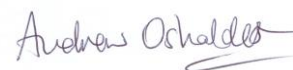
The Financial Statements together with the Trustees' Annual Report (2024) were approved and authorised for issue by the Council on 26 March 2025 and signed on their behalf by

PROFESSOR ANDREW OSBALDESTIN

Honorary Treasurer

PROFESSOR HANNAH FRY

President




FINANCIAL STATEMENTS

Cash Flows

STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2024			Notes
	2024 £	2023 £	
Net Cash (used in)/provided by:			
Operating activities	<u>15,367</u>	<u>108,175</u>	15
Investing activities	25,438	10,458	16
Financing activities	(10,928)	(10,842)	
Cash flow for the period	<u>29,877</u>	<u>107,791</u>	
Opening cash and cash equivalents;	1,838,960	1,731,169	
Closing cash and cash equivalents	<u><u>1,868,837</u></u>	<u><u>1,838,960</u></u>	
	0	0	

The Institute of Mathematics and its Applications

Financial Statements for the Year Ended 31 December 2024

ACCOUNTING POLICIES

Basis Of Accounting

The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard in the UK and Republic of Ireland (FRS102) (Charities SORP (FRS102)) as updated by the Charities SORP (FRS 102).

The charity has elected to apply the provisions of Section 11 'Basic Financial Instruments' and Section 12 'Other Financial Instruments Issues' of FRS 102 to all of its financial instruments. Financial instruments are recognised in the charity's balance sheet when the charity becomes party to the contractual provisions of the instrument.

Financial assets and liabilities are offset, with the net amounts presented in the financial statements, when there is a legally enforceable right to set off the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously.

Incoming Resources

All incoming resources are included in the Statement of Financial Activities when the charity is legally entitled to the income and the amounts can be quantified with reasonable accuracy. The following specific policies are applied to particular categories of income:

- Investment income is included on receipt;
- Incoming resources from publications and conferences are accounted in the period in which services are provided;
- Subscriptions are recognised over the period to which the fees relate;
- Scholarship income is recognised on a performance basis.
- Income from donations or grants is recognised when there is evidence of entitlement to the gift, receipt is probable and its amount can be measured reliably.

To the extent that reliable estimations are available with regard to the final settlement of each accounting year's publication income and expenditure, provision is made for the final settlement figure. Where reliable estimations are not available, no provision is made.

Funds Structure

Unrestricted funds comprise those funds which the Trustees are free to use in accordance with the charitable objects. Restricted funds are funds which have been given for particular purposes and projects (see note 7).

Designated funds are unrestricted funds earmarked by the Trustees for particular purposes.

Resources Expended

Resources expended are recognised in the period in which they are incurred and include attributable Input VAT that cannot be recovered. Resources expended are allocated to the particular activity where the cost relates directly to that activity.

Governance costs include the costs of governance arrangements that relate to the general running of the charity. These activities provide the governance infrastructure that allows the charity to operate and to generate the information required for public accountability. They include the strategic planning processes that contribute to the future development of the charity.

Direct expenditure is allocated to categories of activity. Where expenditure cannot be directly allocated it represents support costs and is apportioned on a basis consistent with the use of resources, by reference to the % allocation of staff working on each activity.

The Institute makes grants and donations to members of the mathematics community. The purpose of the grants and donations is to facilitate research activity in all areas of mathematics.

Government Grants

Government grants are recognised at the fair value of the asset received or receivable when there is reasonable assurance that the grant conditions will be met and the grants will be received. A grant that specifies performance conditions is recognised in income when the performance conditions are met. Where a grant does not specify performance conditions it is recognised in income when the proceeds are received or receivable. A grant received before the recognition criteria are satisfied is recognised as a liability.

Branches

The Statement of Financial Activities represents the results of the charity only. The Institute has seven current branches and these are not consolidated on the basis they are not material to the charity.

Tangible Fixed Assets

Depreciation is provided on all tangible fixed assets other than freehold land at rates calculated to write each asset down to its estimated residual value evenly over its expected useful life, as follows: -

Freehold buildings 2%

Fixtures, fittings and equipment 15%

Computer equipment 33%

Following the implementation of FRS 102, the charity has followed the transitional provisions to retain the book value of freehold buildings re-valued on 31 December 1991, but not to adopt a policy of revaluation in the future.

Stock

Stocks are stated at the lower of cost and estimated selling price less costs to complete and sell. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the stocks to their present location and condition. Items held for distribution at no or nominal consideration are measured the lower of replacement cost and cost.

Basic Financial Assets

Basic financial assets, which include debtors and cash and bank balances, are initially measured at transaction price including transaction costs and are subsequently carried at amortised cost using the effective interest method unless the arrangement constitutes a financing transaction, where the transaction is measured at the present value of the future receipts discounted at a market rate of interest. Financial assets classified as receivable within one year are not amortised.

Cash at Bank

Current asset investments are investments which a charity holds for resale or pending their sale and cash or cash equivalents with a maturity date of less than one year. This heading includes cash on deposit and cash equivalents with a maturity of less than one year held for investment purposes rather than to meet short-term cash commitments as they fall due.

Basic Financial Liabilities

Basic financial liabilities, including creditors, are initially recognised at transaction price unless the arrangement constitutes a financing transaction, where the debt instrument is measured at the present value of the future payments discounted at a market rate of interest. Financial liabilities classified as payable within one year are not amortised.

Debt instruments are subsequently carried at amortised cost, using the effective interest rate method.

Trade creditors are obligated to pay for goods or services that have been acquired in the ordinary course of operations from suppliers. Amounts payable are classified as current liabilities if payment is due within one year or less. If not, they are presented as non-current liabilities. Trade creditors are recognised initially at transaction price and subsequently measured at amortised cost using the effective interest method.

Pensions

The Institute operates a defined contribution scheme. The amount charged to the Statement of Financial Activities in respect of pension costs and other post retirement benefits are the contributions incurred in the year.

Judgements and Estimates

In preparing financial statements it is necessary to make certain judgements, estimates and assumptions that affect the amounts recognised in the financial statements. The following judgements and estimates are considered by the Trustees to have the most significant effect on amounts recognised in the financial statements:

- Depreciation and amortisation charges are based on the estimated useful life of the assets held.
- Publication income is based on the budgeted royalty commission from the OUP.

Notes to the Financial Statements

The Institute of Mathematics and its Applications

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2024

1.Expenditure on:	2024				2023				Notes
a) Analysis of expenditure on	Support	Direct	Staff	Total	Support	Direct	Staff	Total	
	Costs	Costs	Costs		Costs	Costs	Costs		
<u>Unrestricted funds</u>	£	£	£	£				£	
Operating activities in furtherance of Charity's objectives									
Branches and groups	951	1,238	3,187	5,377	622	1,279	2,845	4,746	
Conferences	32,135	45,212	107,663	185,010	20,998	78,491	96,098	195,587	
Education	6,871	1,719	23,183	31,773	4,490	4,188	20,547	29,225	
Grants/donations	5,819	41,169	11,687	58,675	2,279	54,221	10,432	66,932	1e
Promoting Mathematics	59,830	26,288	200,451	286,570	35,051	24,101	178,919	238,071	1c
Mathematics Today	26,955	70,121	90,309	187,386	17,614	66,975	80,608	165,197	
Membership	31,289	7,952	104,830	144,071	20,446	9,172	93,569	123,187	
Professional development	14,482	3,623	48,519	66,624	9,463	4,245	43,307	57,015	
Other publications	5,180	9,812	17,354	32,346	3,385	20,892	15,489	39,766	
Governance	8,139	48,589	27,270	83,998	5,319	67,512	24,341	97,172	1d
Total unrestricted resources expended	191,652	255,723	634,454	1,081,829	119,667	331,076	566,155	1,016,898	1b

Restricted funds

Operating activities in furtherance of Charity's objectives									
QJMAM	0	31,572	0	31,572	0	33,400	0	33,400	
Scholarships	22,093	71,219	73,855	167,167	18,481	60,550	66,067	145,098	
Mathematics Today (Leslie Fox Prize Fund award)	0	0	0	0	0	1,621	0	1,621	
Levelling up	0	5,000	0	5,000					
Total resources expended	213,745	363,514	708,309	1,285,568	138,148	426,647	632,222	1,197,017	

b) Analysis of Total Support Costs	Conferences	Education	Maths	Membership	Governance	Other	Total
			Today				
<u>Unrestricted funds</u>	£	£	£	£	£	£	£
DMH premises\18 Nelson Street	833	178	698	811	211	2,747	5,477
Communications & IT	7,856	1,680	6,590	7,649	1,990	25,920	51,685
Postage & printing	991	212	832	965	251	3,271	6,522
Financial costs	20,991	6,819	17,607	20,439	5,317	69,256	140,429
Depreciation	1,464	313	1,228	1,426	371	4,830	9,632
Total unrestricted	32,135	9,202	26,955	31,289	8,139	106,024	213,745

	2024	2023
	£	
Conferences	32,135	20,999
Education	9,202	4,490
Mathematics Today	26,955	17,614
Membership	31,289	20,446
Governance	8,139	5,319
Other	106,024	69,281
	<u>213,745</u>	<u>138,148</u>

Notes to the Financial Statements

The Institute of Mathematics and its Applications

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2024

c) Analysis of promoting mathematics costs

	2024					2023			
	Support Costs	Direct Costs	Staff Costs	Total		Support Costs	Direct Costs	Staff Costs	Total
	£	£	£	£		£	£	£	£
Maths Careers	5,391	7,868	18,062	31,321		3,523	6,366	16,122	26,011
Other (including Levelling up)	54,439	23,420	182,390	260,249		31,529	17,735	162,797	212,061
Total promoting mathematics costs	59,830	31,288	200,451	291,570		35,052	24,101	178,919	238,072
Scholarships	22,093	71,219	73,855	167,167		18,481	60,550	66,067	145,098
	<u>81,923</u>	<u>102,507</u>	<u>274,307</u>	<u>458,736</u>		<u>53,533</u>	<u>84,651</u>	<u>244,986</u>	<u>383,170</u>

Maths Careers is only supported by the Institute of Mathematics and its Applications.

d) Analysis of governance costs

	2024					2023			
	Support Costs	Direct Costs	Staff Costs	Total		Support Costs	Direct Costs	Staff Costs	Total
	£	£	£	£		£	£	£	£
Audit fees - Audit of Financial Statements	0	16,150	0	16,150		0	14,500	0	14,500
Legal and professional	0	-3,358	0	-3,358		0	2,386	0	2,386
Irrecoverable VAT	0	0	0	0		0	0	0	0
Strategy Review Weekend	0	0	0	0		0	18,912	0	18,912
Cost of AGM and Trustee travel etc.	0	35,797	0	35,797		0	31,714	0	31,714
Apportionment of staff costs	0	0	27,270	27,270		0	0	24,341	24,341
General overhead costs	8,139	0	0	8,139		5,319	0	0	5,319
Total governance costs	<u>8,139</u>	<u>48,589</u>	<u>27,270</u>	<u>83,998</u>		<u>5,319</u>	<u>67,512</u>	<u>24,341</u>	<u>97,172</u>

e) Analysis of grants expended

	2024	2023
	Total	Total
	£	£
Educational Grants	0	2,174
Small Grants	17,799	14,282
University Liaison Officer Grants	3,790	3,568
CMS	<u>19,579</u>	<u>19,510</u>
	<u>41,169</u>	<u>39,533</u>
	<u>0</u>	<u>0</u>
	<u>41,169</u>	<u>39,533</u>

See in the Trustees Annual Report where details are given for Educational Grants, Small Grants & University Liaison Officer Grants.
The grants are payable to individuals £0 and institutions £21,589 and £19,579 to CMS

Notes to the Financial Statements

The Institute of Mathematics and its Applications

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2024

2. TANGIBLE FIXED ASSETS

	Freehold property & land	Fixtures fittings & equipment	TOTAL
Cost or valuation:	£	£	£
Property 1 January 2024	236,200	172,903	409,103
Additions	0	10,928	10,928
Disposals	0	(12,037)	(12,037)
31 December 2024	<u>236,200</u>	<u>171,794</u>	<u>407,994</u>
Depreciation			
1 January 2024	147,231	166,324	313,555
Charged in the year	4,363	5,269	9,632
Disposals	0	(12,037)	(12,037)
31 December 2024	<u>151,594</u>	<u>159,557</u>	<u>311,150</u>
Net book value:			
31 December 2024	<u>84,606</u>	<u>12,237</u>	<u>96,844</u>
31 December 2023	<u>88,969</u>	<u>6,579</u>	<u>95,548</u>

Notes to the Financial Statements

The Institute of Mathematics and its Applications

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2024

3. STOCKS	2024	2023
	£	£
Goods for resale	<u>858</u>	<u>4,842</u>

4. DEBTORS	2024	2023
	£	£
Due within one year:		
Trade debtors	0	546
Prepayments and accrued income	<u>60,952</u>	<u>35,253</u>
	<u>60,952</u>	<u>35,799</u>

5. CREDITORS	2024	2023
	£	£
Amounts falling due within one year:		
Trade creditors	17,991	3,986
Other taxation and social security costs	110,963	60,073
Accruals and Deferred Income	<u>361,023</u>	<u>385,888</u>
	<u>489,977</u>	<u>449,947</u>

6. Deferred Income	2024	2023
	£	£
Deferred income b/fwd.	358,461	312,408
Amounts released	(358,461)	(312,408)
Deferred in year	<u>337,371</u>	<u>358,461</u>
Deferred income c/fwd	<u>337,371</u>	<u>358,461</u>

Deferred income mainly consists of publishing and membership income relating to 2025 and will therefore be released next year.

7. MOVEMENTS IN FUNDS

	2024				2023
		Incoming resources	Resources expended	Transfer between funds	
	£	£	£	£	£
Restricted reserves					
Scholarships	0	167,167	(167,167)	0	0
Leslie Fox Prize Fund	3,438	1,986	0	0	1,452
Levelling Up	18,000	23,000	(5,000)	0	0
QJMAM	<u>106,377</u>	<u>0</u>	<u>(31,572)</u>	<u>0</u>	<u>137,949</u>
	<u>127,815</u>	<u>192,153</u>	<u>(203,739)</u>	<u>0</u>	<u>139,401</u>
Unrestricted funds					
Unrestricted Reserves	1,406,474	1,105,729	(1,081,829)	(3,227)	1,385,801
Designated Funds					
IMA Foundation	<u>3,227</u>	<u>0</u>	<u>0</u>	<u>3,227</u>	<u>0</u>
	<u>1,409,701</u>	<u>1,105,729</u>	<u>(1,081,829)</u>	<u>0</u>	<u>1,385,801</u>
Total restricted and unrestricted funds	<u>1,537,515</u>	<u>1,297,882</u>	<u>(1,285,568)</u>	<u>0</u>	<u>1,525,202</u>

QJMAM funds are held to provide grant awards to applicants that are successful in submitting papers included in the QJMAM journal

The Scholarships funds are spent on the administration and events surrounding the DFE maths teacher scholarships scheme

The Leslie Fox Prize Fund may be used to award biennially for best submission in Numerical Analysis.

The Levelling Up funds consist of donations received in 2024 which the IMA to spend on Levelling Up projects in 2025

The proceeds made from the IMA 60th Anniversary event have been ringfenced by IMA to support the foundation. More details on the foundation can be found in the annual report.

Notes to the Financial Statements

The Institute of Mathematics and its Applications

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2024

8. ANALYSIS OF NET ASSETS BETWEEN FUNDS

	Tangible fixed assets	Net current assets	Fund balance balance
	£	£	£
Unrestricted funds	96,844	1,312,857	1,409,700
Restricted funds	0	127,815	127,815
	<u>96,844</u>	<u>1,440,672</u>	<u>1,537,515</u>

9. PENSION COSTS

The Institute makes payments to personal pension funds set up by individual members of staff. Contributions payable by the Institute amounted to £59,729 (2023: £48,746).

10. EMPLOYEES

The following number of employees received employee benefits (excluding employer pension costs) during the year between:

	2024	2023
£70,001 - £80,000	0	1
£80,001 - £90,000	1	0

The total employee benefits including pension contributions of the key management personnel were £153,383 (2023 - £149,612).

11. STAFF NUMBERS

The average weekly number of persons employed by the Institute regardless of whether they are part time or full time during the year was:

Administration:	15	15
Management:	2	2
Scholarships	2	2
	<u>19</u>	<u>19</u>
	2024	2023
Staff costs for the above persons:	£	£
Salaries	589,037	524,569
Pension contributions	58,516	54,082
Social security costs	51,103	44,202
Other costs	9,653	9,369
	<u>708,309</u>	<u>632,222</u>

Notes to the Financial Statements

The Institute of Mathematics and its Applications

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2024

12. TAXATION

The Institute is accepted by HM Revenue & Customs as an educational charity and as such is not subject to corporate taxation for activities within its charitable objects.

13. RELATED PARTY TRANSACTIONS

During the year £617 was paid to Dr Snezana Lawrence in relation to services were provided to the institute (2023 £434 relating to services provided by Dr Snezana Lawrence). No trustees received any remuneration from employment with the charity.

In addition, re-imbursed expenses for travel and subsistence to Council Members amounted to £6,233, 12 members re-imbursed (2023: £6,266, 13 members re-imbursed).

14. SCHOLARSHIPS

In 2012 the Teaching Agency approached the IMA to run a Mathematics Initial Teacher Training Scholarship Scheme.

Under such a scheme the institute would be paid by the DFE (for England only) to run the Scheme. In 2012 costs associated with the negotiation were borne by the IMA. In addition DFE paid for a small grant to develop the submission.

DFE announced on 21st December 2012 that the Scheme would be run. The amounts awarded by the DFE were as follows:

Year	Award
2020	128,053
2021	119,920
2022	103,579
2023	143,028
2024	167,167

15. Reconciliation of net movement in funds to net cash flow from operating activities

	2024	2023
	Total	Total
	£	£
Net movement in funds	12,314	70,593
Add back depreciation	9,632	8,831
Deduct investment income	(25,438)	(10,458)
Decrease/(increase) in stock	3,984	(0)
Decrease/(increase) in debtors	(25,153)	5,121
(Decrease)/increase in creditors	40,030	34,087
Net cash provided by/(used in) operating activities	<u>15,367</u>	<u>108,175</u>

16. INVESTMENT INCOME

	2024	2023
	Total	Total
	£	£
Interest on cash deposits	25,438	10,458

Investment income includes £1,986 (2023 £874) in respect of restricted funds.

17. ANALYSIS OF CHANGES IN NET DEBT

	As at 1 Jan 2024	Cash flows	other non- cash changes	As at 31 Dec 2024
Cash	1,838,960	29,877	-	1,868,837
Loans falling due within one year	0	-	-	-
Loans falling due after one year	0	-	-	-
Balance at the end of the year	<u>1,838,960</u>	<u>29,877</u>	<u>0</u>	<u>1,868,837</u>

PART THREE:

External Links and Partnerships

External Links and Partnerships

Representatives from the IMA's membership and/or staff team work closely with a number of external bodies at UK, European and International level, in support of our charitable objectives: to raise public awareness and understanding of mathematics, STEM and its impact on society, advising on issues such as mathematics teaching and learning and the applications of mathematics to societal challenges.

Academy for the Mathematical Sciences

The Academy for the Mathematical Sciences (AcadMathSci) was established by the mathematical community in response to the 2018 Bond Review and follow-on consultation activities across the community and aims to provide a single voice for mathematics.

AcadMathSci formalised its governance arrangements over 2023-4. DSIT opened a consultation process regarding Government funding for a national academy for mathematical sciences. The IMA provided a comprehensive response to the consultation and members attended roundtable sessions. A tender process was subsequently opened but unfortunately due to the UK General Election, DSIT funding was withdrawn in the Autumn. However the Academy has since continued to work with the IMA and other learned societies through CMS to develop its plans and secure alternative sources of funding to achieve its aims.

Professor Dame Alison Etheridge DBE OBE FRS FIMA was appointed inaugural President of the Academy in 2024.

Alliance for Data Science Professionals

The IMA joined the AfDSP in 2020 to support the development of professional frameworks for those working in data standards fields. Other Alliance members are the RSS, ORS and BCS, National Physical Laboratory (NPL) and the Alan Turing Institute. The Alliance is committed to:

Defining the standards of professional competence and behaviour expected of people who work with data which impacts lives and livelihoods. These currently include data scientists, data engineers, data analysts and data stewards.

Delivering these standards as data science certifications offered by the Alliance members to their professional members, with processes to hold certified members accountable for their professional status in this area.

Using these standards as criteria for Alliance members to accredit data science degrees, and data science modules of associated degrees, as contributing to certification.

2024 saw further applications via the IMA to achieve Data Science Professional status. An additional framework to accredit data science related degrees was approved and trialled with universities. The RSS submitted an application to the Privy Council to make the Advanced Data Professional and Data Science Professional standards a Chartered and Registered designation respectively. Privy Council decision is anticipated in 2025.

IMA representatives: Professor Paul Glaister CBE CMath CSci FIMA (IMA Honorary Secretary – Membership, University of Reading); Rosalind Azouzi (Executive Director); Caroline Irwin (Membership Manager); Emma Emmerton (Corporate Services Executive)

Campaign for Mathematical Sciences

The IMA is a member of the Campaign for Mathematical Sciences (CaMS), founded in 2021 as Protect Pure Maths (PPM), whose mission is to advance the mathematical sciences for discovery, innovation and the economy, achieved by supporting engagement and providing specialist advice in maths policy.

CaMS represents the whole mathematical sciences community and is managed by the London Mathematical Society. The membership includes representation from all the UK's mathematical societies, as well as the new Academy for the Mathematical Sciences.

The Campaign's Mathematical Degrees for the Future (MDF) programmes has recently awarded grants of up to £500,000 each to universities who have been successful in bidding for projects to develop undergraduate programmes to provide the mathematical knowledge and skills students will need over the next 10 years, for the benefit of academia, industry and/or teaching.

Professor Paul Glaister CBE CMath CSci FIMA is the IMA's member of the Advisory Group and Steering Group of CaMS, and a member of the Selection and Awarding Panel for the Mathematical Degrees for the Future Programme.

Council for the Mathematical Sciences (CMS)

Professor Dame Alison Etheridge DBE OBE FRS FIMA chaired CMS in 2024 until becoming President of AcadMathSci later in the year. Composed of IMA, LMS, RSS, EdMS, and ORS, there were important discussions between CMS member societies and the proto-Academy team to identify objectives and support for an academy for Mathematical Sciences. As well as directly responding to the DSIT consultation, the learned societies worked closely together to provide responses via CMS.

The Learned Societies jointly exhibited at the Campaign for Mathematical Sciences' inaugural Maths Summit held at the Science Museum in March 2024 and IMA members were part of the programme committee. The event highlighted the contribution of mathematics to policy and decision-making and was well attended by policymakers.

CMS members again agreed to jointly fund the Mathematics Competition at STEM for Britain finals, March 2024 in Westminster. In late 2024 it was agreed to subsume CMS activities to the Academy for Mathematical Sciences which would establish a Forum for the Learned Societies to maintain opportunities for discussion and collaboration.

IMA 2024 representatives: Dr Martine Barons CMath FIMA (IMA Vice President – Learned Society, University of Warwick); Rosalind Azouzi (Executive Director)

ICIAM

The IMA has continued its membership and support of the International Council for Industrial and Applied Mathematics and our representatives attended board meetings throughout the year.

IMA 2024 representatives: Professor I. David Abrahams CMath FIMA (University of Cambridge) and Professor Iain Duff CMath CSci FIMA (STFC).

London Mathematical Society (LMS)

Throughout 2024 we continued to work with the LMS in many areas including research, MTTS and mathematics education. Together we award the David Crighton Medal for Services to Mathematics and the Mathematics Community, and the Christopher Zeeman Medal for Mathematics Promotion.

We held a joint event at the Royal Society in May 2024 to present the 2023 David Crighton Medal to Professor Dame Alison Etheridge DBE OBE FRS FIMA and the IMA arranged a recording of the public lecture for our YouTube channel.

As documented in the Research Committee section of this report, the sixth scientific meeting of the current IMA-LMS series, titled 'Mathematics for the Environment' took place in person in London and online in September with IMA contributions led by Dr Martine Barons CMath FIMA, VP Learned Society.

Dr Gordon Laing CMath CMathTeach FIMA (Edge Hill University) represented the IMA on the LMS TEAMAC committee which focuses on teaching of mathematics in higher education.

Science Council

The IMA is a member and licence holder of the Science Council, attending its CEO and Leaders meetings throughout the year and maintaining our Chartered Scientist licence.

SIAM

Becoming a member of SIAM/IMA chapter is free and open to any student in the final year of a BSc or MMath degree programme, Masters and PhD candidates, postdoctoral researchers, and faculty members who are engaged or interested in mathematics or scientific computing and their applications.

Other IMA members who live in the UK may receive a discounted SIAM membership fee under our reciprocity agreement. (A reciprocal arrangement exists for SIAM members who live in the US). We have joint promotional campaigns and co-operative activities with SIAM and SIAM UKIE.

There are many SIAM/IMA student chapters nationally who come together to form a society of students and faculty members who are interested in mathematics or scientific computing and their real-world applications.

Some objectives for these thriving chapters:

- To promote the application of mathematics and computational techniques to problems of interest in science and industry.
- To further fundamental research in applied mathematics and scientific computing leading to new methods and techniques useful to industry and science.
- To facilitate effective interactions between researchers and students from across the University and between University members and industry by creating a forum for the exchange of scientific ideas in an inspiring and supportive environment.

Other UK and international links

The IMA also continues to work with many organisations in Mathematics, Science, Engineering and Education. These include the European Mathematical Society (EMS), offering IMA members access to discounted subscriptions, and the Association of Teachers of Mathematics, the Mathematical Association and NANAMIC in the management of the Chartered Mathematics Teacher Registration Authority.

We also work with external organisations such as the Royal Society ACME, NCETM, and the Joint Mathematical Council to promote and support mathematics whenever possible.

The Institute's representatives over 2024:

ACME

Professor Paul Glaister CBE CMath CSci FIMA (IMA Honorary Secretary – Membership, University of Reading)

EMS

Dr Eduard Campillo-Funollet MIMA

Heads of Departments of Mathematical Sciences (HoDoMS)

Professor Michael Grove FIMA (University of Birmingham)

Joint Mathematical Council (JMC)

Professor Paul Glaister CBE CMath CSci FIMA (IMA Honorary Secretary – Membership, University of Reading)

Sigma

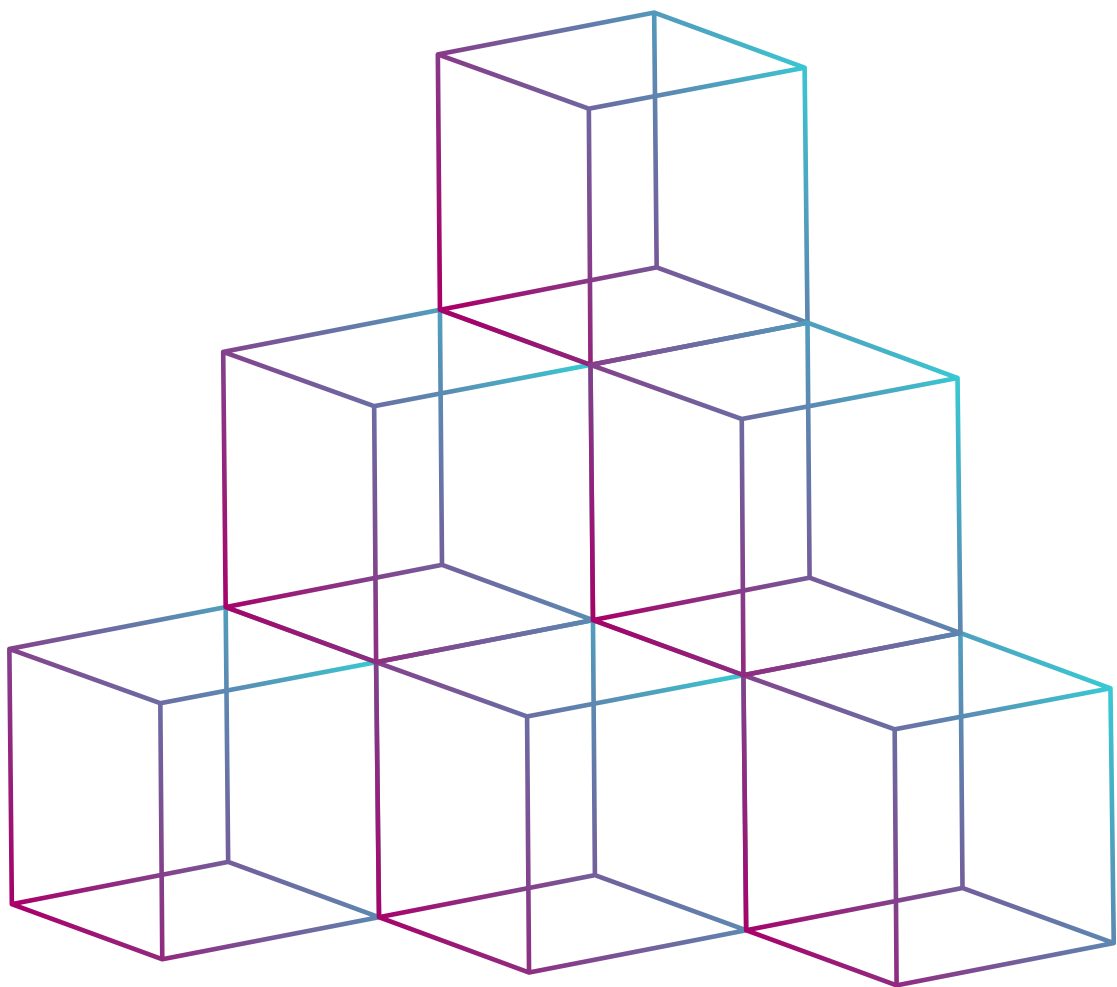
Professor Duncan Lawson MBE CMath FIMA (Coventry University)

ACME — Advisory Committee on Mathematics Education
 AcadMathSci – Academy for the Mathematical Sciences
 AfDSP – Alliance for Data Science Professionals
 AMSP – Advanced Mathematics Support Programme
 AI- Artificial Intelligence
 BCS – British Computing Society, the Chartered Institute for IT
 BIG – Business, Industry and Government
 CBE – Commander of the British Empire
 CMath — Chartered Mathematician
 CMS — Council for the Mathematical Sciences
 CPD – Continuing Professional Development
 DfE — Department for Education
 DSIT – Department for Science, Innovation and Technology
 ECM(s) — Early Career Mathematician(s)
 ED – Executive Director
 EdMS — Edinburgh Mathematical Society
 EPSRC — Engineering and Physical Sciences Research Council
 EMS — European Mathematical Society
 FE — Further Education
 FRS – Fellow of the Royal Society
 HE – Higher Education
 HEC – Higher Education Committee
 HEIs — Higher Education Institutions
 HoDoMS — Heads of Departments of Mathematical Sciences
 ICIAM – International Council for Industrial and Applied Mathematics
 IF – Impact Factor
 IMA — Institute of Mathematics and its Applications
 INI — Isaac Newton Institute for Mathematical Sciences
 KE – Knowledge Exchange
 KS2 – Key Stage 2
 KS3 – Key Stage 3
 LMS — London Mathematical Society
 MA — The Mathematical Association
 MEI — Mathematics in Education and Industry
 ML – Machine Learning
 NANAMIC — National Association of Numeracy and Mathematics in Colleges
 NCETM — National Centre for Excellence in the Teaching of Mathematics
 OBE – Order of the British Empire
 OR – Operational Research
 ORS — Operational Research Society
 OU – Open University
 OUP — Oxford University Press
 PAC – Professional Affairs Committee
 QAA – The Quality Assurance Agency for Higher Education
 RSS – Royal Statistical Society
 S&FE — Schools and Further Education
 SIAM — Society for Industrial and Applied Mathematics
 SIAM UKIE — UK and Republic of Ireland Section of SIAM
 STEM — Science, Technology, Engineering and Mathematics
 STFC – Science and Technology Facilities Council
 UKRI – UK Research and Innovation

Accounts

Annual Trustees' Report and Financial Statements

20
23



Institute of
mathematics
& its applications

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The Institute of Mathematics and its Applications

This is the Annual Report of the Trustees of 'The Institute of Mathematics and its Applications' (IMA) for the year 2023. The Institute is governed according to a Royal Charter and Byelaws granted in 1990 and revised in 1997, 1999, 2002, 2008 and 2015. The governance and control of the Institute is vested in its Council (Council Members are also the Trustees). The charity registration number is 1017777. The Companies House registration number is RC000714.

Meeting our objectives and activities for the public benefit

The Royal Charter sets the IMA's Object(ive)s as:

- to advance mathematics and its applications in all areas including commerce, engineering, finance, health, industry, scientific and other academic disciplines and the public sector and to promote and foster research and other enquiries directed to the advancement, teaching and application of mathematics for the public benefit;
- to seek to establish and maintain high standards of professional conduct for Corporate Members;
- to seek to promote, encourage and guide in the development of education and training in all matters relevant to the advancement of mathematics and its applications for members and all other persons who are engaged in or likely to be engaged in mathematics or its applications.

The activities for the Public Benefit are as set out as Mission and Goals in the Council approved Strategic Review (2018-2023). In particular the Mission is to benefit society through:

- Providing a suite of member focused services commensurate with its position as the principal professional and learned body for mathematics and its applications in the United Kingdom;
- Being a driving force for the use of mathematics in industry and commerce;
- Ensuring that the importance of mathematics is well represented to Government; a major contributor to the promotion of mathematics within the education systems of the United Kingdom, and helping further improve the quality of mathematics teaching, and the supply and support of mathematics teachers;
- Being a major contributor to the promotion of mathematics within the education systems of the United Kingdom, and helping further improve the quality of mathematics teaching, and the supply and support of mathematics teachers;
- Being an influencing voice for the use of mathematics in science, technology, engineering, economics and other fields of endeavour;
- Advancing its reputation as a major contributor to mathematics research initiatives;
- Engaging proactively at all levels with the full spectrum of the media and society for the promotion of mathematics in the UK;
- Adding value to the worldwide mathematics community by providing a range of services, conferences, publications and events that are fulfilling and beneficial for its membership and for mathematics;
- Promoting high standards of professional conduct for members;
- Regulating the Chartered Mathematician and Chartered Mathematics Teacher designations;
- Working with other mathematical organisations to develop a unified voice for mathematics in the UK;
- Collaborating with organisations in other countries to promote mathematics at an international level.

Foreword

I am delighted and honoured to be President of the IMA because it provides such an amazing opportunity to interact with and share my passion for maths as part of this immensely talented and engaged community.

2024 marks the 100th anniversary of IMA first President Sir James Lighthill's birth, 20 years since the Early Career Mathematicians group were formed and, most importantly, the 60th anniversary of the IMA itself this April. It is not just an exciting time, but a critical one as well – for maths and all its applications.

Maths underpins the foundations of so many things we are facing as a global community – AI, ethics, climate change, healthcare, and so much more. More than ever, a massively diverse range of people are open and eager for trusted sources to help them navigate the nuances of the modern mathematical world and I believe the IMA is wonderfully placed to guide and encourage that curiosity and drive.

Additionally, the Government's announcement that it will fund the development of a national Academy for mathematical sciences will raise the profile of maths at the government level and we hope to see more funding for mathematical sciences research, greater awareness of the impact mathematics has on society, greater support for mathematics teachers, and increased efforts to reverse harmful maths stereotypes.

The IMA will play a key role in this. We are so lucky to have diverse membership working in all kinds of sectors, across academia, research, to industry, business and government. Our new strategy includes formalising special interest groups in areas which can play a significant role, Climate and Sustainability, AI and even EDI, looking at innovative solutions which maths can provide.

I'd like to take this opportunity to thank Immediate Past President Professor Paul Glendinning FRSE FIMA for his dedication to the IMA throughout his term.

I'm so looking forward to celebrating this 60th year with you and playing my part to help shape the next 60 years of the IMA.

Professor Hannah Fry HonFREng FIMA



Introduction

The IMA's Annual Report for Trustees and Members for 2023 merges our two previous annual reports into one document, retaining the new style and format introduced in 2022 to better illustrate and celebrate the key achievements of the Institute over the last year which are, as always, due to the tireless efforts of our volunteers and staff.

2023 was a significant year for the Institute as we prepared for our Strategy Weekend in July. Following an incredible response from our boards, committees, Branches and ECMs, we appointed an external expert facilitating team to lead our weekend. There, we focused on gaining collective agreement of the IMA's key strategic objectives to shape our new strategy. See page 35 for more details.

New activities are well underway. This includes development work on a new online mentoring platform, IMA Exponential, which will be launched in early 2024, highlighting our commitment to increasing our digital offering and supporting members. We also created a new post in the team to support our membership retention and growth, with Jenny May Roberts joining us in September to deliver our university and industry liaison activities and help identify other ways to support members and the mathematics community.

2022 Gold Medal winner Philip Maini FRS FIMA gave a wonderful lecture at the IMA 2023 Summer Reception in June. We also added a new event to our calendar, a joint lecture evening with talks by the 2023 winners of the Hedy Lamarr and John Blake Teaching Medal prizes, Julia Gog and Chris Sangwin, filmed for on-demand access via our YouTube channel. Another highlight was the joint 2020 and 2022 Christopher Zeeman Medal winners' event; Matt Parker and Simon Singh drew a huge audience to central London and inspired and impressed in equal measure.

IMA representatives remained actively engaged in externally-led work to support wider mathematics aims, notably providing advice, guidance and support to the proto-Academy for the Mathematical Sciences, CMS and the Alliance for Data Science Professionals. And not forgetting the next generation of mathematical scientists, staff and volunteers again returned to the Big Bang at the NEC and exhibited for the first time at the Greenwich Maths Time and RAF Cosford Museum; public engagement events to highlight maths and put the M back in STEM.

Nonetheless, significant external factors affecting many charitable organisations remained omnipresent so we continued to focus on our costs. Following our reduction in leased office space over 2022, attention now turned to Catherine Richards House (CRH). We commissioned an independent options report from third sector property advisory service, Ethical Property Foundation. Their report highlighted a combination of factors, such as the impact of blended working patterns for staff, achieving our sustainability goals and the dilapidated state of CRH. After reviewing the report Council agreed that the executive team could look for new, leased premises in 2024 and undertake a disposal plan for CRH with a view to re-investing funds raised to ensure suitable and sustainable financial returns to underpin the Institute's charitable goals.

2024 will be an even more exciting year as we mark our 60th anniversary, the 100th anniversary of Sir James Lighthill's birth and the 20th anniversary of the ECMs. We do hope you can join in the celebrations and mark this exciting time in the Institute's history!

Rosalind Azouzi
Executive Director

<http://ima.org.uk>

Education and Outreach

The IMA's education and outreach activities are led by the Honorary Secretary Education, with two committees covering Schools, FE and HE and a dedicated Education Manager and one funded post. The IMA actively promotes the engagement of the Institute's members in mathematics education, including work to share communications online and through our flagship publication *Mathematics Today*. For instance:

- notification of the publication of key reports;
- invitations to participate in events and / or contribute to external initiatives;
- opportunity to provide feedback on specific issues;
- invitations to contribute to Institute responses to consultations;
- publication of the Institute's submissions to consultation exercises.

The IMA also provides direct support to a number of programmes to support mathematics education, teaching and learning across the UK and for all levels of education. We attend major STEM events to showcase mathematics 'in action' to young people, teachers, parents and other key influencers, aiming to overturn stereotypes surrounding mathematics and signpost visitors to further resources such as [MathsCareers.org.uk](https://www.mathscareers.org.uk).

The IMA also delivers the Mathematics Teacher Training Scholarship Programme, on behalf of DfE, working with partners including LMS, RSS, STEM Learning and MEI.

During 2023, our contribution to mathematics education was led by Professor Catherine Hobbs CMath FIMA (Honorary Secretary with responsibility for Education). Professor Andrew Osbaldestin FIMA (Chair, HEdSA), Professor Noel-Ann Bradshaw CMath FIMA (Chair, Higher Education Committee), Dr Gordon Laing CMathTeach CMath FIMA (Chair, S&FE) and Vanessa Thorogood (Education Manager) together with all our education committee members. Jaydene Merry joined the team as Scholarships Officer. After many years supporting the IMA's education work as Deputy Honorary Secretary Education, Professor Nigel Steele CMath HonFIMA stepped back from this role but continued to support the IMA as MTTTS Scholarships Advisor.

Both Education Committees discussed their aims for the IMA's strategy review. They worked collaboratively to ensure that the educational aspects of the strategy are well-aligned and fulfil the key objectives outlined in our Royal Charter. In addition, both education committees reviewed their Terms of Reference, essential in defining the scope, responsibilities, and objectives of each committee.

Other highlights including responding to the discussion paper for the Royal Society's Mathematical Futures programme and Ofqual's consultation on the proposed alterations in the assessment of mathematics, physics, and combined science GCSEs scheduled for 2024.

Higher Education

1

In 2023, the HEdSA Committee warmly welcomed Professor Noel-Ann Bradshaw as the new Chair, succeeding Professor Andrew Osbaldestin, who completed his second three-year term in the position.

During 2023, the committee was renamed to the Higher Education Committee to ensure clarity of its role within the IMA governance structure. HEC continued to monitor the quality of the IMA's degree accreditation programme. Other topics of oversight were the HE Teaching and Learning Series and Induction Course for New Lecturers. The Committee also oversaw the IMA's University Liaison work and progress of the IMA's participation in the Levelling Up: Mathematics programmes.

Other consideration was given to a special report, “Mathematical Sciences recruitment and graduate outcomes – A diversity perspective of the landscape of Mathematical Sciences in UK”. Commissioned by the Heads of Departments of Mathematical Sciences (HoDoMS), the report examines the landscape regarding recruitment to mathematical sciences first degree subjects across the UK and outcomes achieved by graduates from these degrees and the announced closures of some low-tariff entry Mathematics Departments.

Course Accreditation

The Institute’s Course Accreditation scheme accredits university degree courses from which all its graduates will meet the educational requirements for the CMath designation. A total of 70 universities currently have degrees accredited by the Institute.

A list of accredited degree courses can be found on the Course Accreditation page of the Institute’s website.

In the ongoing strategy review, IMA is presently reassessing the Course Accreditation scheme. As part of this evaluation, a survey was conducted among HoDoMS members to gather insights on their utilisation of accreditation, assess the perceived utility of the accreditation process, and solicit suggestions on how to disseminate best practices identified by external assessors.

HE Teaching and Learning Series

The HE Teaching and Learning Series consists of a call for a series of teaching and learning-related workshops and induction course for new lecturers.

HE Teaching and Learning Workshops Series

The Higher Education Teaching and Learning Series, led by the IMA, is a joint activity with the LMS and RSS, and provides an opportunity for higher education mathematical sciences departments to request supporting funds for facilitating a teaching and learning related workshop.

During 2023, the following workshops from the 2019/20 (marked with a *) and 2022/23 HE Teaching and Learning Workshop Series took place:

- University of Nottingham - Project-based and synoptic modules*
- University of Sheffield - Effectively teaching small classes as a postgraduate demonstrator*
- University of Edinburgh - A Manifesto for Higher Education in Mathematical Sciences 2023+
- University of Glasgow - Outreach and widening participation in mathematical sciences
- University of Greenwich - Assessment in mathematics and mental health

Workshop reports are available on our website.

In December 2023, the fifth call for the Higher Education Teaching and Learning Series was released.



Induction Course for New Lecturers in the Mathematical Sciences

The Induction Course for New Lecturers took place on 18-19 September 2023 at the Isaac Newton Institute for Mathematical Sciences, Cambridge.

Through a community initiative supported by the IMA, INI and HoDoMS, and endorsed by the RSS and the LMS, The Induction Course for New Lecturers in the Mathematical Sciences has been designed by the mathematics community so that it is ideally suited for anyone who is new to or has limited experience teaching mathematics or statistics within UK higher education.

IMA John Blake University Teaching Medal

The 2023 IMA John Blake University Teaching Medal was awarded to Professor Chris Sangwin FIMA of the University of Edinburgh. A new event saw Chris give a wonderful presentation at De Morgan House on Wednesday 29 November 2023.

The video is now available to view at the IMA's YouTube channel.



Chris Sangwin receiving the John Blake University Teaching Medal from IMA President Paul Glendinning

University and Early Career Liaison

The IMA works closely with universities to increase membership, awareness of and participation with the IMA amongst undergraduate and postgraduate students, and the university community. We provide grants to postgraduate and undergraduate student mathematical societies, careers talks for mathematics undergraduates and support careers events and student conferences.

In 2023, the IMA's long-serving University Liaison Officer, Erica Tyson, entered retirement but not before delivering 12 careers talks and returning to help with the handover to her successor.

The Tomorrow's Mathematicians Today (TMT) conference was hosted online in March by the University of Greenwich, with over 100 delegates registered across the two days, and 33 student presentations.

During the year we provided £2,400 in grants to Mathematical student societies in the UK and Ireland and to the IMA-SIAM Joint Student Chapters. We made Undergraduate awards to societies at the universities of Warwick, UCL, Manchester, Nottingham Trent and Cardiff; and to the IMA-SIAM Joint Student Chapter at Warwick. We supported Society activities and conferences, competitions, talks and participated in IMA conferences. We supported the SIAM UKIE Student Annual Conference with a grant of £450.

Membership Development

We created a new role to build on the relationships built by the outgoing ULO and increase our focus on supporting members across our Mathematical community with the aim of increasing opportunities and promotion of our community and improving member engagement to build our relationships with academia and industry. The new Membership Development Executive is reviewing opportunities to recruit, retain and engage members at all stages of their journey. This includes promoting the IMA to graduates at industry events and developing new membership benefits to support our members at all career stages.

Details of Membership Development Activities from Sept 2023

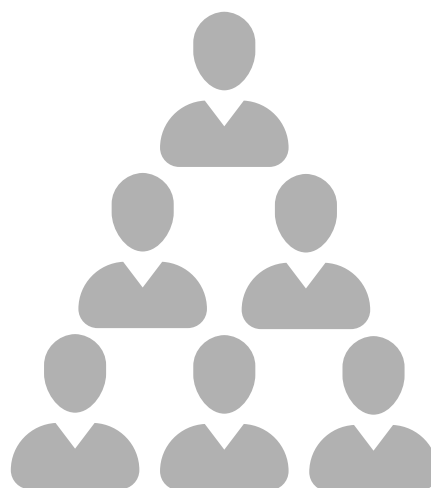
Grants Applied for and in pipeline

Undergraduate:

- UCL
- Nottingham Trent University
- Southampton University
- Newcastle University
- Durham University
- Essex University

Joint Chapters:

- SIAM/IMA - Durham chapter



University Engagement – Undergraduate Careers Talks

- 19 September – University of Bristol
- 22 September – University of Lincoln
- 27 September - Nottingham Trent University
- 27 September - Oxford Brookes University
- 24 October – Aston University
- 1 November – Lancaster University (Online)
- 8 November – Loughborough University (Online)
- 9 November – University of Portsmouth (Online)
- 9 November – Northumbria University (Online)
- 22 November – Newcastle University (Online)
- 28 November – University of Salford (Online)

Engagement Activities from Sept 2023 include:

- 20th Sept - IMA Employers Forum – University of Warwick
- 3rd Oct – Black Heroes Conference – Online
- 13th Oct - LMS/IMA joint meeting on 'The Mathematical Foundations of Artificial Intelligence'
- 19th Oct - MemberWise Conference 2023 'Membership Growth Accelerator'
- 7th Nov - AWE 'Meet the Institutes'

2024 events in the pipeline:

- 10th Jan Retreat for Women in Applied Maths – Edinburgh online talk overview of IMA & Benefits of Membership
- 17th Feb - Oxford – Women in Maths – In person
- 7th March - AWE 'Meet the Institutes' – In person
- 22nd March - SIAM/IMA annual meeting – University of Manchester
- BAMC/ECM event – 8th – 11th April – In person
- May - Early Career Mathematicians Conference
- June/July - Keele MEI Teachers' Conference
- July - Wolverhampton STEM Festival

Levelling Up: Mathematics education programme

The IMA continued its role as a partner in the Levelling Up: Mathematics programme, working closely with the London Mathematical Society and the project founder. The programme provides A Level maths students who have little or no access to additional learning support, such as private tuition, with access to tutors recruited from local university maths undergraduate cohorts and dedicated materials to complement the curriculum, developed by LMS.

With five universities on board at the beginning of 2023, the IMA welcomed University of Exeter as an additional new university partner in September, bringing the total to six.

Over 2023, the IMA and the LMS have worked with an educational specialist to produce an evaluation framework to assist participating universities to determine the impact of the programme. The framework includes key common metrics that universities can collect whilst allowing for individual differences in delivery model and cohort. The framework has been approved by the universities and will be available for them to use at the end of the current cohort.

The IMA have been exploring ways to support and assist with the development of Levelling Up: Mathematics for Engineering. A team of IMA members working in engineering fields and/or with expertise in teaching Maths for Engineering have been in discussions with IMA secretariat and the programme founder to help develop and adapt new materials with a view to launching in Autumn 2024.

The IMA continues to support the Levelling Up: Maths Black Heritage associated project, backed by Past President Professor Nira Chamberlain OBE CMath CSci FIMA, to provide a programme specifically designed by and for students and tutors of black heritage. Other developments include regional hubs to run the programme in Scotland and Wales.

Schools and Further Education Committee (S&FE)

In 2023, the S&FEC discussed key topics in relation to the national curriculum, including:

- the utilisation of scientific calculators in exams
- A Level Mechanics
- the Labour Party announcement proposing to establish a 'maths equivalent to phonics,'
- the AQA timetable for digital GCSE exams
- the proposed Advanced British Standard.

The Honorary Secretary for Education also responded in support of the exam regulator Ofqual's proposal to allow 2024 GCSE Year 11 Maths students, among others, to be allowed access to formulae sheet in their exams, following the ongoing impact resulting from disruption to their learning during the pandemic.

The committee also met with the lead writer of the IMA's MathsCareers website for updates and to provide input into the website.

Mathematics Teacher Training Scholarships

The IMA, working with LMS, MA, MEI, STEM Learning and RSS, delivered the eleventh year of the Mathematics Teacher Training Scholarships on behalf of the Department for Education. The overall aim of the Scholarships scheme is to improve the quality, and widen the pool, of applicants for secondary teacher training by attracting highly qualified graduates and career-changers who might not normally consider teaching as a career.

The 2022/23 cohort opened for applications in January 2023, with a target of awarding 270 Scholarships to those who commence secondary mathematics teacher training in the 2023/24 academic year. The number of applications and awards were up in comparison to the previous year, reflecting overall applications to mathematics initial teacher training 2022/23.

The IMA once again led the development of a dedicated CPD programme to this year's Maths Scholars, drawing on our network of mathematics education experts as follows:

- Welcome Webinar, including the NRICH webinar with Dr Ems Lord FIMA
- Common Room (online networking)
- Developing positive classroom culture in mathematics (webinar) - Ed Southall*
- Bletchley Park Super Visit 2023
- Maths Scholars Resources Workshop 2023
 - Applying Mathematics – Steve Lyon (STEM Learning)
 - Hands on Maths - Dr Katie Chicot (CEO, MathsWorldUK)
 - Maths beyond the curriculum - Michael Anderson (STEM Learning)
- Common Room (online networking)
- Maths Scholars CPD Workshop 2023*:
 - Trigonometry the Right (Angled) Way - Aidan Gollaglee (Maths Hub Lead, London South East Plus)
 - How do you problem solve? - Bernard Murphy (MEI)
 - Taking the dry out of Maths & Computing! – Tig Williams



Members of our MTTS Alumni were also invited to the events in the list above marked with a *.

The twelfth year (2023/24) of the Mathematics Teacher Training Scholarships was announced in October 2023 and applications opened in January 2024. The Maths Scholarship will offer a £30k tax-free bursary to successful applicants. Again, there are 270 Maths Scholarships available for individuals commencing secondary mathematics teacher training in the 2024/25 academic year.

Maths Enrichment

The IMA again took to the road in 2023 to exhibit at key outreach events across the UK with interactive maths activities and impartial information, advice and guidance on routes into mathematics to visitors, which included young people, teachers and parents.

The Big Bang Fair 2023

The Big Bang Fair took place on 21-23 June at The NEC Birmingham. With a 30m² 'Maths in Action' space, volunteers, including the incoming VP Communications Nathan Turner CMath FIMA, Dr John Meeson FIMA and university students, along with the IMA's Education team ran an interactive stand with fun and engaging STEM activities to pupils, teachers and parents who came from schools from across the UK.

- Can you beat the Cube?
- Galton Board
- Soap Bubbles
- Aerofoil
- Bernoulli Blower



Greenwich Maths Time

We were delighted to join this event for the first time on 4 July 2023, an outreach event run by the University of Greenwich Maths Centre and Advanced Maths Support Programme. The event is aimed at pupils from local schools with a selection of mathematical talks, workshops and hands-on activities for year 9 and 10 students.

The IMA made a financial contribution to the event, and also run our Can you beat the Cube? activity.

Forces in STEM

Forces in STEM is run by the RAF Air Force Museum Midlands and in partnership with the RAF. Exhibitors such as Raytheon, Collins Aerospace, Team Tempest, Dyson attend the event to run drop-in activities. Around 1200 KS2 students attend on the day.

Eduard Campillo-Funollet MIMA, ECM and IMA Councillor attended on behalf of the IMA, and demonstrated the aerofoil and Bernoulli Blower to hundreds of local school children.

Knowledge and Learned Society

The IMA's learned activities include the work of our Research Committee, which leads the IMA's efforts to support and recognise mathematics research, and our prestigious, peer-reviewed suite of scholarly publications which are overseen by the Journals Board of Management. This work is underpinned by our flagship publication, *Mathematics Today*, which provides our members with the latest news from the IMA and its members, as well as in-depth articles on applied mathematics topics, led by Editor Rob Ashmore CMath CSci FIMA. The IMA also provides a number of learned conferences, workshops and talks, steered by the Conference Committee and individual organising committees, providing fora for knowledge sharing, discussion and debate.

Research Committee

The Research Committee meets three times per year, and is responsible for (among other things) the IMA Hedy Lamarr Prize for Knowledge Exchange.

Dr Martine Barons CMath FIMA, Vice President, Learned Society commenced her second term as Committee Chair in 2023. The full membership of the Research Committee can be viewed on the IMA website: <https://ima.org.uk/roles/research-committee/>

The Research Committee met three times in 2023 to discuss their usual agenda, and two additional meetings were held to focus specifically on their contribution to the Strategic Review.

The Research Committee contribute to the IMA's discussions with the research funding councils and policy makers, and work to promote the benefits of fundamental and applied mathematical research to the economy and society. They also oversee assessments of Small Grant applications. Throughout the year the Research Committee maintained their commitment to representing the mathematical community; to follow are just two of the 2023 highlights:

LMS / IMA Joint Conference on the Mathematical Foundations of AI

This hybrid event took place on the 13th October 2023, hosted at De Morgan House in London. Its purpose, to bring together top mathematicians and computer scientists working in both academic and the private sectors to highlight key developments in the field. Speakers at the event included:

- David Saad FIMA – The Space of Functions Computed by Deep-learning Networks
- Gitta Kutyniok – Reliable AI: Successes, Challenges, and Limitations
- Lisa Kreusser – Differential equations for machine learning
- Michael Bronstein – Physics-inspired graph neural networks
- Petar Velickovic – Capturing Computation with Algorithmic Alignment

Abstracts can be found on the following webpage: <https://ima.org.uk/22377/ima-lms-joint-conference-on-the-mathematical-foundations-of-ai/>

The event was a great success with 'in-person' attendance sold out and a very good online audience, with excellent facilities to support hybrid attendance.

2023 IMA Hedy Lamarr Prize

We were delighted to award the 2023 Hedy Lamarr Prize for Knowledge Exchange in Mathematics and its Applications to Professor Julia Gog OBE. Julia has shown consistently strong interest in raising public awareness about the usefulness of mathematics in our everyday lives. It was during the pandemic that Julia truly showed her mathematical greatness, as a member of SPI-M and SAGE making an active contribution towards the Covid-19 response at the highest level, and frequently appearing on television explaining the maths behind Covid.

Julia received her award at a joint ceremony with Chris Sangwin, recipient of the IMA John Blake University Teaching Medal, on the 29th November, where she delivered an interesting and entertaining lecture on her career journey through mathematics and zoology and key role in the Covid-19 pandemic.

External nominations

The committee also provided nominations for external programme and scientific committee/boards led by the INI and ICIAM.



Julia Gog receiving the Hedy Lamarr prize from IMA President Paul Glendinning

Journals

The Institute's eight academic journals are published by Oxford University Press (OUP). Three of these are traditional hybrid print journals:

IMA Journal of Applied Mathematics

Editors: Professor Alan Champneys CMath FIMA, (Bristol), and Professor Demetrios Papageorgiou FIMA, (Imperial);

IMA Journal of Numerical Analysis

Editors: Professor Arieh Iserles FIMA, (Cambridge), Professor Endre Süli FRS FIMA, (Oxford) and Professor Charles Elliot FIMA (Warwick);

Teaching Mathematics and its Applications: an International Journal of the IMA

Editors: Professor Duncan Lawson MBE CMath FIMA, (Coventry); Professor Christopher Sangwin FIMA, (Edinburgh) and Dr Cathy Smith AMIMA (OU).

Four are online only hybrid journals:

IMA Journal of Mathematical Control and Information

Editors: Professor Christophe Prieur FIMA (Grenoble), Professor Sarah Spurgeon OBE FREng CMath FIMA, (UCL) and Professor Joachim Rudolph FIMA (Saarland University);

Mathematical Medicine and Biology: A Journal of the IMA

Editors: Professor Oliver Jensen CMath FIMA, (Manchester); Professor John King CMath FIMA, (Nottingham), Professor James Keener CMath FIMA, (Utah) and Professor Bob Guy (University of California Davis);

Information and Inference: A Journal of the IMA

Editors: Professor Robert Calderbank, (Duke); Professor David Donoho MIMA, (Stanford); Professor John Shawe-Taylor CMath FIMA, (UCL) and Professor Jared Tanner MIMA, (Oxford);

IMA Journal of Management Mathematics

Editor: Aris Syntetos, (Cardiff).

One is an open access only online journal:

Transactions of Mathematics and its Applications: A Journal of the IMA

Editor in Chief: Professor Arieh Iserles FIMA (Cambridge) and Professor Dominic Vella FIMA (Oxford);

Several of the journals awarded prizes in 2023. The IMA Journal of Numerical Analysis awarded the 21st IMA Leslie Fox Prize to Alice Cortinovis (Stanford) and Melanie Weber (Harvard) on Monday 26th June 2023 at the Fox Prize event at the University of Strathclyde. This was held in conjunction with the Alan Turing Institute. The IMA Journal of Applied Mathematics awarded the Lighthill Thwaites Prize at the 2023 BAMC to Clare Rees-Zimmerman (Oxford).

The IMA journals have had a successful year. Six journals currently have Impact Factors (IF). While these figures declined over 2023, this was mainly due to the introduction of a different method for IF calculation by Clarivate. However, it was positive to see that each remained greater than 1.

- IMAIAI 1.6
- IMAJNA 2.1
- IMAMAN 1.7
- IMAMAT 1.2
- IMAMCI 1.5
- IMAMMB 1.1

IMAMAN continued to create webinars to promote their special issues; the 2023 'Last Mile Logistics' is now available to view on the OUP Youtube Channel. Online use of all of the IMA journals has increased over the last year.

The growth of Open Access publishing continues to have an inevitable impact on the IMA journals. Open Access publishing is where an article is made immediately available to the public upon publication, as opposed to the traditional subscription model. The impact on journal revenue as a result of this change has been ameliorated by Oxford University Press negotiating 'Read and Publish' deals with libraries. These allow authors to utilise funding to publish their articles via Open Access. The most significant UK deal is with JISC, this covers a large number of UK institutions. Various similar deals have been made with other groups worldwide. Traditional subscriptions also help up better than expected over 2023. Our thanks to the Journals Board of Management Chair, Professor Iain Duff CSci FIMA, our Journal Editors and Associate Editors for steering the journals over this transitional period.

Work is ongoing to provide free online access to IMA members to our suite of journals and raise awareness among authors of the Read and Publish funding that is available for them to publish work under an Open Access licence.

Conferences and Events

Conferences Committee

The Conferences Committee met twice in 2024 and at its first meeting welcomed Dr Dan Tilley CMath FIMA and Professor Corina Constantinescu FIMA as the new Committee Co-Chairs. Dan has been involved with the IMA since 1996 and has served on Council, as well as chairing the Early Career Mathematicians group. He has also been involved with organising several conferences over the years taking on roles including chair and programme chair. Corina is an academic based at the University of Liverpool with extensive experience in organising learned conferences and events.

The committee has been focused on planning for the Institute's 60th anniversary year with an emphasis on marketing and sponsorship opportunities. The committee is also keen to increase engagement on social media platforms and use technology to encourage delegate feedback.

The committee wishes to thank Dr Richard Pinch CMath CSci FIMA for chairing the committee over the past few years. A full list of members of the committee can be found at <https://ima.org.uk/roles/conferences-committee/>

2023 review

IMA Conferences attracted around 500 delegates in 2023, offering a range of in-person and online conferences to again encourage more diverse attendance.

The programme for 2023 demonstrated the breadth of our activity, from education and early careers support, to showcasing the latest applied mathematics research in different fields.

2023 Calendar

- Python for A-Level Mathematics and Beyond – Online 20 & 21 January 2023
- Post-modern cryptography - How quantum computers are already changing the world – Online 24 January 2023
- Future of last-mile logistics – Online 27 January 2023
- From transport to energy, a tour of lessons learnt applying mathematics to industrial problems – Online 7 February 2023
- The Role of Applied Mathematics in Military Intelligence – Online 23 February 2023
- Levelling Up: Python School Workshop – Online 23 March 2023
- ECM Networking Icebreaker at the BAMC 2023 – Online 2 April 2023
- 4th IMA and OR Society Conference on Mathematics of Operational Research – 27 April 2023
- Idea exchange: early career mathematicians and statisticians teaching in Higher Education - Online 31 May 2023
- 12th IMA International Conference on Modelling in Industrial Maintenance and Reliability (MIMAR) - 4 July 2023
- 7th IMA Conference on Mathematics in Defence and Security: Mathematics Adapting to a Changing World - 7 September 2023
- Induction Course for New Lecturers in the Mathematical Sciences 2023 – 18 September 2023
- Employers Forum - AI, automation and mathematics in supporting business decisions – 20 September 2023
- Online Workshop: Python for A-Level Mathematics and Beyond - Autumn 2023 – 22 & 23 September 2023
- Equity, Diversity and Inclusion Event – Sponsored by the Early Career Mathematicians Committee (ECM) - Online 13 October 2023
- 19th IMA International Conference on Cryptography and Coding – 12 December 2023

We would like to thank every mathematical organising committee for making these events possible, filling them with great invited speakers and delegates! We look forward to delivering a strong 2024 event programme.



Attendees at the 19th IMA International Conference on Cryptography and Coding, December 2023

Mathematics Today

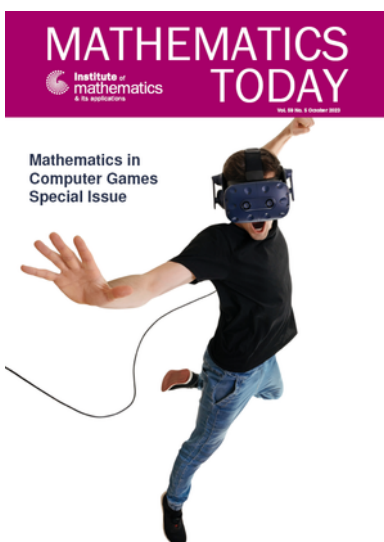
The IMA continued to publish six issues annually of our flagship membership magazine, Mathematics Today in 2023. The magazine provides refreshing insights into mathematics, applied mathematics topics, reflections on mathematical achievements, articles from IMA medal winners, updates on activities, and news on events and projects led by the IMA and our partners.

Online access to Mathematics Today introduced in 2022 provides IMA members with greater and more flexible access to their magazine via the myIMA platform. This is a more sustainable way to access Mathematics Today, with over 350 readers opting for an online-only version.

We celebrated the use of Mathematics in Computer Games in the October special issue, guest edited by Richard Lissaman, which emphasised using gaming to 'increase participation in, and appreciation of, our amazing subject'.

We ended the year, with the Mathematics Today version of the 'IMA Presidential Address – A Mathematical Eye' from outgoing President Professor Paul Glendinning FRSE FIMA, who highlights the mathematics in a myriad of subjects, from knitting to art.

The Graham Hoare Prize for Early Career Mathematicians was awarded to Matthew Cotton AMIMA and Brady Metherrall AMIMA for their article 'Settling Scores and Gambling on Goals' which was published in the December 2023 issue. The Catherine Richards Prize continues to select the best article published each year and this is also awarded to Matthew and Brady for their brilliant article.



Grants

The IMA provided two grant funds in 2023, the Small Grants Scheme and the Education Grants scheme. We also provided occasional support through our special Grants without Portfolio scheme for applications which do not meet the eligibility criteria for the above but demonstrate clear objectives which are aligned to those of the IMA.

We also provide administration support on behalf of the QJMAM fund for Applied Mathematics which exists to support UK research in the broad area of applied mathematics and theoretical mechanics. The fund is administered by the Institute of Mathematics and its Applications, but decisions on the award of grants are made by a panel appointed by the Trustees, chaired by Professor Andrew Norris. Details of these awards can be found on our website.

Small Grants

The IMA's Small Grants Scheme is designed to be flexible, so that it can be used to facilitate any research activity within the scope of mathematics and its applications. Grants are available up to a value of £600 for individuals and up to £1,200 when enabling an event to take place. Applications are limited to IMA members only.

The budget for 2022 was £13,100, reflecting increased interest over the year. The Scheme received 27 applications during 2023, requesting a total amount of £22,052. 13 requests were awarded in full, eight were partial awards and six were declined. Awards for 2023 are shown on the IMA site and include support from helping early career researchers participate in international conferences and workshops to academic research visits and mathematical modelling research.



Education Grants

The Education Grants Judging Panel consists of the Institute's Honorary Secretary Education and the Chairs of the education committees.

During 2023, the Education Grants scheme received 14 applications; of which four were awarded a grant for the full amount requested, and 10 were declined with awards totalling £2,173 for the following activities:

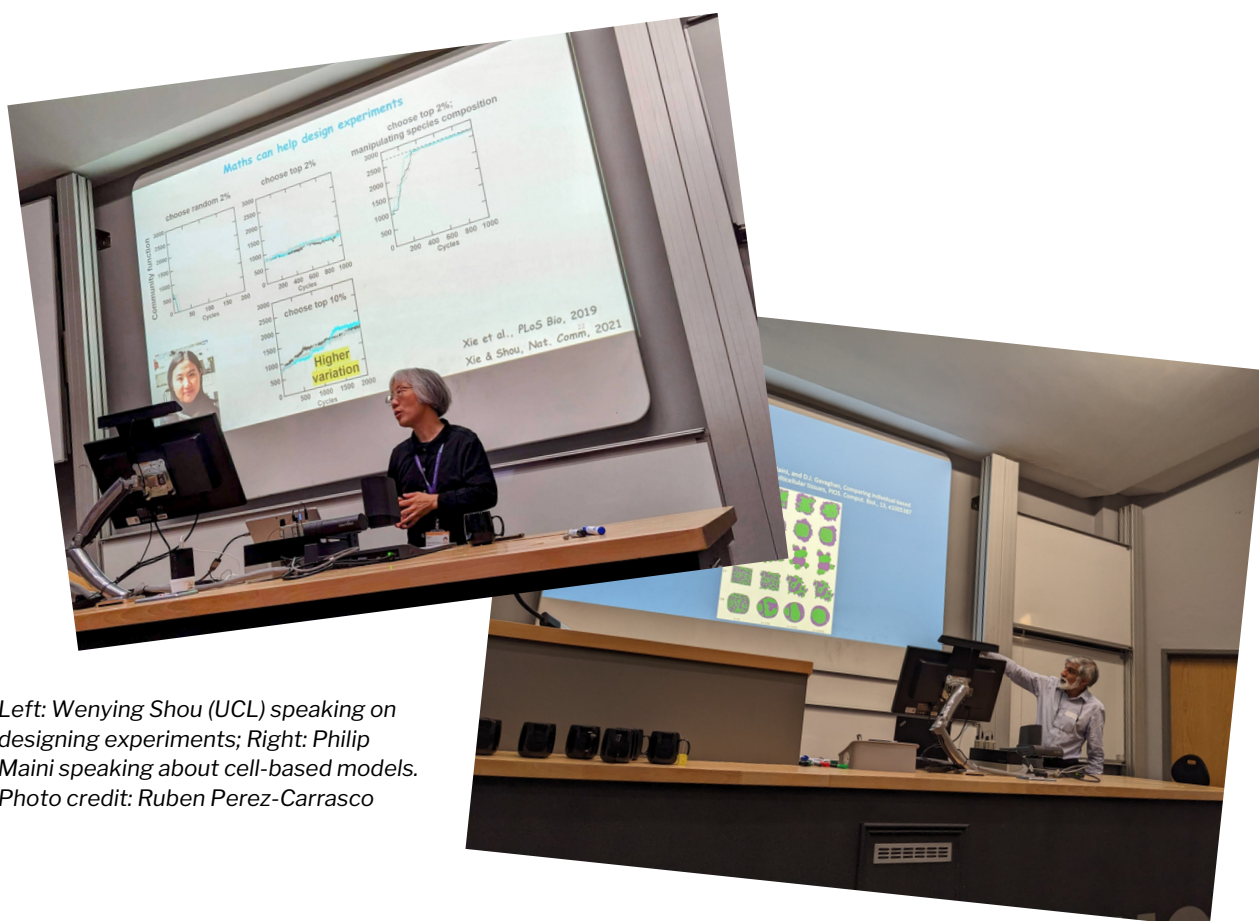
- A project to present mathematical-based statistical questions to children, through games, at the Cheltenham Science Festival, 4th-9th of June 2024 including a booth with games that the attendees can get involved with in order to learn about statistical concepts in an exciting way.
- A project to bring together the mathematical community to understand the limitations and to improve accessibility for visually impaired people with aim of alleviating gaps in accessibility for visually impaired people which can deter them from pursuing mathematical sciences with administration, culture and curricula among the highest-rated obstacles for visually impaired people studying mathematics.
- Support towards the Manchester Interdisciplinary Mathematics Undergraduate Conference (MIMUC) which will be held in April 2024. MIMUC simulates the experience of an academic conference for undergraduates. Organised jointly by staff and students, it includes talks by visiting academics, industry professionals, and students, fostering interdisciplinary discussions and showcasing mathematics applications across disciplines.
- The STEM Challenge, a competition-based schools' outreach programme aimed at year 9 and 10 students, run by a group of Civil Servants. This will provide students with three hypothetical real-world problems that STEM can tackle and ask them to provide possible solutions via a report or poster.

Other Grants

Two grants were made by the Executive Board from the IMA's Grants Without Portfolio (GWP) fund. The first was to Dr Maciej Matuszewski MIMA of Durham University to support the inaugural meeting of the Northern Mathematics Education Research Network on 4 September 2023.

The second was made to Professor Michael Grove FIMA of Birmingham University, to enable attendance at the 2023 Induction Course for New Lecturers by refugee mathematicians who are part of the joint INI-LMS Solidarity for Mathematics Programme.

More details about the IMA's support to university student societies can be found in our University and Early Career Liaison section.



Left: Wenying Shou (UCL) speaking on designing experiments; Right: Philip Maini speaking about cell-based models.
Photo credit: Ruben Perez-Carrasco

Communications and Community Engagement

The IMA seeks to work closely with the community it represents drawing on expertise from across our networks, as well as through external partnerships and relationships. Dr Peter Rowlett CMath FIMA, VP – Communications, chaired the Institute's Communications Committee in 2023 which is made up of maths communication experts, and advises IMA staff throughout the year on communications-related matters. The MathsCareers Steering Group provides advice on content, topics and competitions for our dedicated careers website which runs separately to the IMA's corporate site.

The IMA also benefits from seven Branches located across the UK, delivering regional engagement opportunities for the local community and beyond following the introduction of hybrid events. Our Early Career Mathematicians Committee leads on activities targeted to the needs of the next generation of mathematical talent, contributing to our event programme with themes relating to career progression and personal development. The Institute's Academic Liaison group advise the IMA on university engagement and student support.

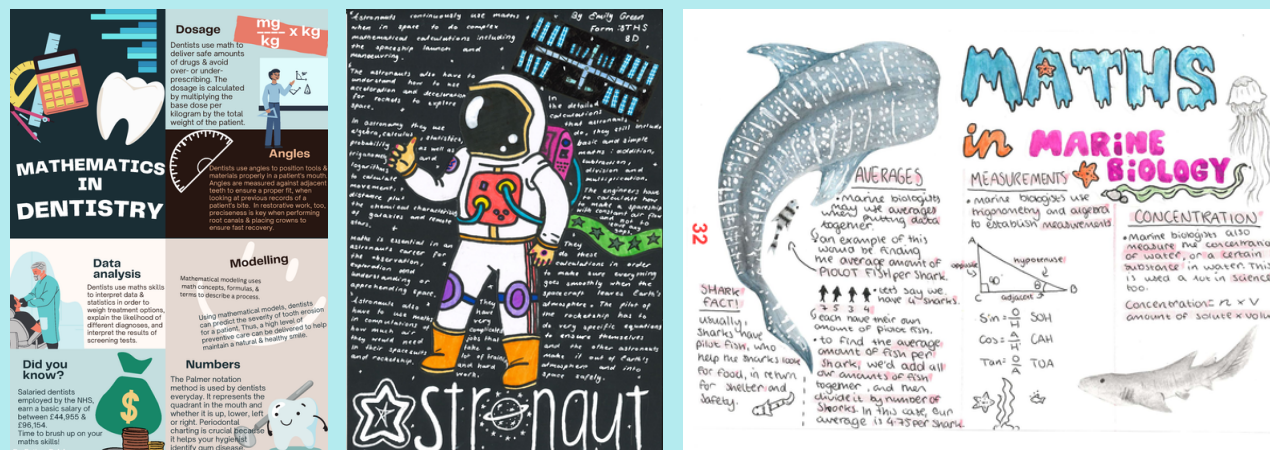


MathsCareers Website

MathsCareers.org.uk is a dedicated website which provides impartial information, advice and guidance on mathematics pathways as well as inspirational case studies from role models from a wide range of profession, and competitions for schools, working with experts from maths education and communication, industry and academia.

During 2023 MathsCareers received 314,877 views and continued to be one of the top websites of its kind within the STEM community, popular among undergraduates seeking career advice as well as school audiences. Highlights from content posted in 2023 include The Maths of Music by Professor Sarah Hart and Climate Change - Using Maths in Antarctica by Dr Sammie Buzzard.

MathsCareers ran two contests during 2023. The spring contest had the theme of 'an exciting career which uses maths' and the Autumn contest asked entrants to create a short video about mathematics. Competitions are aimed at ages 11-18 with three age groups based on school year (Years 7-8, 9-11, 12-13). MathsCareers poster contests frequently attract between 200 – 300 entries.



Our career profiles continue to highlight diversity among those working in mathematics-based professions, as well as demonstrating the wide variety of roles available to maths graduates. The website also showcases how maths and numeracy is vital in other areas, from space exploration to computer game design, music and climate science.

Social Media is used to raise the profile of IMA MathsCareers, and it now has 7,840 followers on X (previously Twitter). The profile of the site, as well as mathematics generally, is raised via the distribution of eye-catching classroom posters to schools.

IMA e16plus Newsletter

The e16plus Newsletter published six full editions in 2022. It is designed to inspire and raise interest in mathematics amongst 16-19 year-olds and has 1577 subscribers. The regular puzzle feature continues to be popular with readers, and the links in the newsletter are designed to encourage engagement with MathsCareers and the IMA websites.

Virtual Maths Teas

Our Virtual Maths Tea series is a collection of online events where members can come together for an informal discussion, much like a coffee morning. Each individual event has its own topic of focus and hosts are hand-picked for their expertise and experience in each topic area. The Virtual Maths Teas (VMTs) began during lockdown in 2020, to keep our members connected when in-person networking and events weren't possible.



Due to their popularity, the positive feedback and high demand, we decided to continue them long after lockdown. Many attendees have said the VMTs have provided them with the first opportunity they've had to engage in an IMA event, or mathematical event due to their individual access challenges. Each event is an hour long, attendees can log in from anywhere in the world (and we often do have international attendees). The VMTs are inclusive events, open to all IMA members of all grades, genders, backgrounds, and interests and popular themes include career development, ethics and diversity and inclusion. The Early Career Mathematicians Committee were greatly involved this year, chairing four out of five Virtual Maths Teas.

In 2023 we hosted five Virtual Maths Teas with 219 registrations in total:

- March – Embrace Equity, Celebrating Women in Maths
- April – Skills in industry for Early Career Mathematicians
- June – Interviewing for a job in industry
- September - Programming practices: the good, the bug and the undefined
- October – Coding as a vehicle for outreach and engagement

IMA Website and Social Media

The good work the IMA does is reflected across our social media channels, website and our member exclusive eBulletin. We have a collective of 72,000 followers across our four main social channels Twitter, Facebook, LinkedIn, YouTube and Instagram, consisting of those interested in the services and work of the IMA and those interested in Mathematics in the wider sense. This is an increase of 6% from 2022.



We continue to celebrate the successes of our Members and the community, raising the profile of Mathematics across a multitude of celebratory and awareness days promoting inclusivity. We continue to see particularly high engagement and popularity with our campaigns during LGBTQ+ History Month, Women's History Month and Black History Month where we share people's stories, resources and celebrate the successes and triumphs of those who have overcome challenges and biases. We engage in many mathematical days such as Fibonacci Day, International Day of Mathematics, Maths Weeks to name a few as well as other STEM related days and National Numeracy day, which is helping raise low levels of numeracy among both adults and children in the UK and promoting the importance of everyday maths skills to the wider public, challenging negative attitudes towards mathematics

Demographic information provided by Google Analytics of the visitors to the IMA website has been informative: in 2023 more than half of the visitors to the IMA site have been under 34 years of age (54.74%); and the gender distribution of total visitors is around 57/43 split of male to female (in comparison to the current total IMA member split of 74/24/2 male/female/all others^[1]).

Sessions to the IMA website in 2023 are at an all-time high. Sessions in 2023 to the IMA website are up versus 2022 (+8.3%) and remain up versus the particularly busy year of 2021 (+2.3%).

[1] IMA membership data at time of writing: currently 74% male, 24% female, 2% all others which includes those who opt for 'Other', 'prefer not to say' or not set.

Academic Representatives

The Academic Representatives scheme was established by the Institute in 2017, and we currently have 60 Representatives at 57 universities. Representatives are members of academic staff and they support the Institute by highlighting the work of the IMA in the community and beyond, to their students and colleagues, as well as providing feedback on the priorities of academic members.

Members joined the IMA to contribute to our Strategy Review providing vital insights into current student experiences.



Branches

IMA Branch committees are led by local IMA members and volunteers across the UK, offering free talks on mathematics topics to members and non-members. The Branches are:

- East Midlands
- London
- North West
- Scottish
- West Midlands
- South West and Wales



During 2023, our Branches delivered free talks covering an array of current and interesting topics:

North West	Dr Richard Pinch	Post-modern cryptography – How quantum computers are already changing the world and how mathematics, old and new, is meeting the challenge	24/01/2023
West Midlands	Kieran Kalair	From transport to energy, a tour of lessons learnt applying mathematics to industrial problems	07/02/2023
North West	LCpl Pollock	The Role of Applied Mathematics in Military Intelligence	23/02/2023
London	Helmuth R. Malonek	Arshak Tonyan (1888-1942) and the rise of Mathematics in the 1919 founded University of Yerevan	28/02/2023
West Midlands	Katerina Kouri	Modelling across scales and disciplines: from fertilization and embryogenesis to disease transmission	14/03/2023
Scottish	David Sirl	Peer assessment via comparative judgement	26/04/2023
London	Dr Madhav Vempali	Mathematics in the Management of Eye Care	30/05/2023
North West	Dr Ems Lord	Ten Ways to Maximise the Potential of NRICH in the Secondary Mathematics Classroom	05/06/2023
North West	Dr Dawn Geatches	Knowledge Exchange, Transfer and Funding Opportunities for Mathematical Sciences	17/11/2023
West Midlands	Derrick Willer MBE	Sums. They're Math Magic	06/12/2023
North West	Jean Al Ani and Rachel Campbell	A Celebration of the Best Maths Projects in the North West 2023	13/12/2023

Where permission was granted, talks are available on the [IMA YouTube Channel](#).

In addition to the programme of talks, Professor Paul Glendinning toured the UK to deliver the Presidential Address: A Mathematical Eye, to each Branch:

North West	Hybrid (University of Manchester)	15/03/2023
West Midlands	Hybrid (University of Birmingham)	27/04/2023
Scottish	Hybrid (University of Glasgow)	04/05/2023
East Midlands	University of Nottingham	12/10/2023
SW & Wales	Kingswood School, Bath	07/11/2023

Early Career Mathematicians Group

The Early Career Mathematicians (ECM) Group aims to provide those starting out in the profession with opportunities to develop their skills and network with peers and is made up of early career professionals from industry, academia and government. In 2023 the committee was chaired by Dr Maciej Matuszewski MIMA.

Over 2023 the group organised ten events across a varied selection formats such as the IMA Virtual Maths Teas, online conferences, and seminars providing fantastic networking opportunities. This included two ECM seminar talks and three conference events:

- 13 July - **How Maths Helped Me to Annoy My Insurance Company**
- 20 September - **Mathematics & modelling: better than watching paint dry**
- 13 October - **Equity, Diversity and Inclusion Event** – Sponsored by the Early Career Mathematicians Committee (ECM)
- 31 May - **Idea exchange: early career mathematicians and statisticians teaching in Higher Education**
- 2 April - **ECM Networking Icebreaker at the BAMC 2023**

The ECM Group continues to help recruit student members and is also active on social networking sites.



Professional Affairs and Industry

Mathematicians play a vital role across business, industry and government. Chaired over 2023 by VP Professional Affairs Dr Jennifer Macey CMath CSci FIMA, the IMA's Professional Affairs Committee (PAC) brings together representatives from IMA Corporate Affiliates and those with expertise in applied mathematics in a variety of industrial and commercial settings. The committee is also responsible for the IMA's Chartered Mathematician (CMath) designation and the IMA professional Codes of Conduct. PAC also oversees the IMA's requirements to the Science Council as a licensed body to assess Chartered Scientist (CSci) applications, including meeting external quality assurance requirements and CPD compliance. PAC also supports the IMA's contribution to the Data Science Professional recognition framework.

Details of our Corporate Affiliate members can be found at:

<https://ima.org.uk/affiliates/corporate-affiliates/>

Professional Affairs Committee

The Committee met several times during 2023 via remote conference facilities and once in person in London. PAC also have communicated throughout the year via Basecamp, with a particular focus on AI.

In addition to regular provision of industry expertise to support the IMA's objectives, key agenda items have been to provide SME guidance for AI and machine learning in response to feedback from the British Chambers of Commerce, and leading the programme for the IMA Employers' Forum which returned in 2023. PAC also ensured industry representation and recognition within the proto-Academy for the Mathematical Sciences (AcadMathsSci), and supported the continuing work of the Alliance for Data Science Professionals (AfDSP). Advice for the IMA's new mentoring platform development, IMA Exponential, was also provided.

Strategy Review

In addition to the three regular meetings, PAC provided extensive contributions to the Strategy Review, holding a special meeting in April and extending the regular meeting in May to allow the Committee time to focus specifically on providing industry feedback for the Strategic Review. Dr Macey also convened a special meeting in May for SME representatives to present their specific needs from the IMA. These activities made a significant contribution to the IMA's new strategy.

Data Science Professional Standards

The IMA's Executive Director and Admin Support Officer continued to attend weekly AfDSP meetings throughout the year which focused on the development of a new governance model to be launched in 2024. The IMA Honorary Officer for Membership, Professor Paul Glaister CBE CMath CSci FIMA also led the Alliance's work to develop accreditation models for degree programmes.

PAC members also volunteered to join the IMA's ADSP application review group, chaired by Paul Glaister, to begin awarding certification to qualifying existing Advanced Members. In June 2023, IMA Past President Professor Nira Chamberlain OBE CMath CSci FIMA received the first IMA-awarded Advanced Data Science Professional Certificate at our 2023 Gold Medal event.

Employers' Forum

The first IMA's Employers' Forum to take place after the pandemic was held in September 2023 at the University of Warwick, with the generous support of VP Learned Society, Dr Martine Barons CMath FIMA. Not only did the university's support include a fantastic venue and catering contribution, but also a team of videographers came along to film the talks to share across the mathematics community after the event.

Not only were the talks excellent, but also provided an opportunity for IMA members and fellows in industry to come together and provide suggestions for future events, including the new AI Congress in September 2024.

The talks can be viewed on the [IMA YouTube channel](#).



Dr Howard Haughton speaking on AI and Machine Learning Policy Guidance at the Employers' Forum, 2023

Artificial Intelligence/Machine Learning Policy Guidance for SMEs

A policy guidance document for SMEs was independently written by Dr Howard Haughton CMath FIMA, launched at the Employer Forum and published on our website in September.

The document provides impartial guidance on a framework for an AI policy which can be adapted to meet the specific requirements of an organisation. The policy was shared with SMEs at our Employers' Forum where interest in the IMA delivering future workshops and guidance on this topic to help the SME community was welcomed by attendees.

STEM Futures

The IMA was delighted to sign a new agreement as a supporter of STEM Futures, a programme led by the UK Government's Department for Science, Innovation and Technology (DSIT). The programme aims to establish a network of employers and create knowledge exchange opportunities and professional development programmes to develop skills and expertise in UK STEM employment.

Case Study



IMA Employer Forum 2023 | AI, automation and mathematics in supporting business decisions

20 September 2023 saw the long-awaited return of the IMA's Employers' Forum which brings together experts from across academia, business, industry and government to share knowledge and build networks. The University of Warwick kindly agreed to provide sponsorship in kind to the event, including venue, videographer and photography and a contribution to catering.

With AI dominating the media and policy discussions in the UK and around the world, this year's theme aimed to provide an opportunity for businesses, including SMEs, to explore how AI and mathematics can impact business in the widest sense.

We were joined by high calibre speakers who gave thought-provoking talks on topics such as AI and mathematical modelling in finance, decision-making, risk, archiving, digital twin development, sustainability and efficiencies and empowering the next generation.

- **Howard Houghton CMath FIMA, Holistic Risk Solutions Ltd/King's College London** - The application of model driven engineering for validating financial models
- **Martine Barons CMath FIMA, University of Warwick** - Combining mathematical sciences, data and human expertise for decision support – an example from digital archiving.
- **Veronica (Ronni) Bowman OBE CMath FIMA, DSTL** – Real World Digital Twins with applications in Defence
- **Karrie Liu CMath FIMA, Maths in the workplace** – Empower the next generation
- **Mark Round, QinetiQ** - Text-generative AI – anticipating the transformation that will be enabled by ChatGPT-like technologies
- **Kieran Kalair, Smith Institute** – How consultancy on machine learning, mathematical modelling and analytics provides clarity and decision intelligence to solve complex challenges.

Guests included mathematicians and data scientists working in a wide range of fields, from national security to the hospitality sector. The Q&A discussion themes included: the need for ethical data sets and use of AI models; securing the talented pipeline of skilled professionals; and, how mathematics can unlock many solutions which organisations across the private and public sector - large and small - are facing, particularly as recent technology growth has outpaced regulation and ethical considerations.

The IMA also launched the AI/ML Policy for SMEs' and guidance at the event and there was strong interest in running follow-on training sessions which we will be pursuing in the coming year.

View the talks (where permissions have been granted) via the IMA YouTube channel.

Look out for the IMA's inaugural AI Congress in September 2024 which will bring together members, stakeholders, featuring expert speakers on key AI and mathematics topics, and mini symposia on a range of areas including legal and medical applications.

External affairs

Alliance for Data Science Professionals



The IMA joined the AfDSP in 2020 to support the development of professional frameworks for those working in data standards fields. Other Alliance members are the RSS, ORS and BCS, National Physical Laboratory (NPL) and the Alan Turing Institute.

The Alliance is committed to:

- Defining the standards of professional competence and behaviour expected of people who work with data which impacts lives and livelihoods. These currently include data scientists, data engineers, data analysts and data stewards.
- Delivering these standards as data science certifications offered by the Alliance members to their professional members, with processes to hold certified members accountable for their professional status in this area.
- Using these standards as criteria for Alliance members to accredit data science degrees, and data science modules of associated degrees, as contributing to certification.

2023 saw the first applicants via the IMA to achieve Data Science Professional status.

Professor Rachel Hilliam CMath MIMA, FRSS stepped down as chair in 2023 with Vice-Chair Paul Martynenko leading the process to identify her replacement. In December, Professor Edward Rothead CMath FIMA was appointed as the new chair following a competitive process.

The Alliance will launch the new governance structure in readiness to welcome new members in 2024. Accreditation of data science related degrees continues to be a focus and the Alliance is working towards Chartership in the future, through the RSS.

Council for the Mathematical Sciences (CMS) and the proto-Academy for the Mathematical Sciences (AcadMathsSci)



Professor Alison Etheridge OBE, FRS, FIMA chaired CMS throughout 2023. Composed of IMA, LMS, RSS, EdMS, and ORS, there were important discussions between CMS member societies and the proto-Academy team to identify objectives and support for an academy for Mathematical Sciences.

Staff and volunteers from the AcadMathSci team joined CMS meetings to provide updates, seek advice and support. This led to an announcement in the UK 2023 Autumn Statement for commitment of up to £6M over three years for an academy, subject to consultation, in 2024. CMS have agreed to work together to respond to the consultation.

CMS also continued also to liaise with UKRI and other stakeholders. In the run up to a 2024 General Election, CMS agreed to produce a joint Maths Manifesto for policymakers across parties with AcadMathSci, led by Professor Catherine Hobbs CMath FIMA.

CMS members again agreed to jointly fund the Mathematics Competition at STEM for Britain finals, March 2023 in Westminster, and supported research by HoDoMS into the negative impact of reduced student numbers on low-tariff entry mathematical science degrees and the societal impact on graduate outcomes through the report "Mathematical Sciences recruitment and graduate outcomes – A diversity perspective of the landscape of Mathematical Sciences in UK universities."

At CMS meetings, Paul Glendinning, as IMA President, played an active role, notably, ensuring that more mathematics was included in POST activities, initiating and drafting a letter to the UKRI Chief Executive on the role of mathematics in research which led to the formation of special meetings about embedding maths in the UKRI special areas. The President also argued for clear links between the Academy for the Mathematical Sciences and the learned societies, and was part of the arguments about what the Academy needed to facilitate for the Learned Societies, making sure that CMS liaison meetings with EPSRC were important and should be facilitated by the Academy.

London Mathematical Society (LMS)

Throughout 2023 we continued to work with the LMS in many areas including research, Mathematics Initial Teacher Training Scholarships and mathematics education.



Together we award the David Crighton Medal for Services to Mathematics and the Mathematics Community, and the Christopher Zeeman Medal for Mathematics Promotion. We held an event at the Royal Society in March 2023 to present the 2020 and 2022 Christopher Zeeman medals to award winners, Matt Parker and Simon Singh respectively, one of our biggest in-person events of the year, with an audience of over 200.

As documented in the Research Committee section of this report, a well-attended, fifth scientific meeting of the current IMA-LMS series, titled 'The Foundational Mathematics of AI' took place online and in person on 16 September.

Other UK Mathematics Organisations

We continue to work with the Association of Teachers of Mathematics, the Mathematical Association and NANAMIC in the management of the Chartered Mathematics Teacher Registration Authority.

We also work with external organisations such as the Royal Society ACME, NCETM, and the Joint Mathematical Council to promote and support mathematics whenever possible.

UK STEM and Global

The IMA continued membership of CaSE. We also attended the Alan Turing Institute AIUK 2023 showcase event and later in the year, a data science professional skills workshop. We continued to attend events run by the National Numeracy charity during the year which strives to improve everyday mathematical literacy among the general public.

Science Council

The IMA is a member and licence holder of the Science Council attending its CEO and Leaders meetings throughout the year and maintaining our licence.

EuMS

The IMA is a member of the EuMS offering IMA members access to discounted subscriptions which are paid directly to EuMS.

ICIAM

The IMA has continued its membership and support of the International Council for Industrial and Applied Mathematics and provided a grant to our IMA representative to attend the 2023 Congress in Tokyo.

The President attended the Board meeting of ICIAM in August in Tokyo on behalf of the IMA.

SIAM



Becoming a member of SIAM / IMA chapter is free and open to any student in the final year of a BSc or MMath degree programme, Masters and PhD candidates, postdoctoral researchers, and faculty members who are engaged or interested in mathematics or scientific computing and their applications.

Other IMA members who live in the UK may receive a discounted SIAM membership fee under our reciprocity agreement. (A reciprocal arrangement exists for SIAM members who live in the US). We have joint promotional campaigns and co-operative activities with SIAM and SIAM UKIE.

There are lots of SIAM / IMA student chapters nationally who have come together to form a society of students and faculty members who are interested in mathematics or scientific computing and their real-world applications.

Some objectives for these thriving chapters:

- To promote the application of mathematics and computational techniques to problems of interest in science and industry.
- To further fundamental research in applied mathematics and scientific computing leading to new methods and techniques useful to industry and science.
- To facilitate effective interactions between researchers and students from across the University and between University members and industry by creating a forum for the exchange of scientific ideas in an inspiring and supportive environment.

A list of members who represented the IMA to external organisations in 2023 is presented in Appendix B.

Creating a Diverse and Inclusive Culture

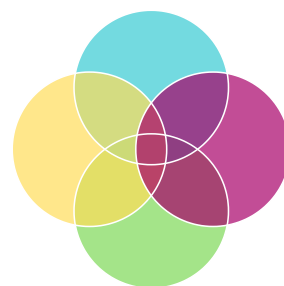
The IMA is a signatory of the Science Council Declaration on Diversity, Equality and Inclusion, and Council has appointed champions to lead the IMA in this important agenda. Dr Snezana Lawrence FIMA continued to deliver this role in 2023 but decided to step down at the end of the year. A new Champion was appointed at the November Council and we look forward to working with Howard Haughton in the coming year.

By identifying diversity as a cross-cutting theme in all IMA committee meetings many improvements have been identified and achieved. This is reflected in key events and programmes across our portfolio of activities which the IMA has led or partnered in 2023 including:

- International Women's Day Virtual Maths Tea event in March
- ECM Online Diversity Conference 2023
- Black Heroes of Mathematics 2023 Conference in October;
- Encouraging Women in STEM via Work Experience – article in Mathematics Today by VP Martine Barons
- Continued role with the Levelling Up: Mathematics programme to provide extra Mathematics tuition for disadvantaged A-Level students, including agreeing to support a new project: Mathematics for Engineering
- Continued commitment to increasing engagement from underrepresented groups through the e16plus Newsletter, MathsCareers website and social media activities;

EDI Working Group

The IMA's EDI working group formed in September 2022 met monthly throughout 2023 to identify a number of areas in which the IMA could focus its efforts. Furthermore, the group responded extensively to the IMA strategic review, ensuring that the EDI was embedded throughout our pillars of activity. In this respect it was felt the group should become a permanent committee of the IMA to support our new strategic aims and a formal request was agreed at November Council. Other activities included:



- Identify ways to address underrepresentation in mathematics, both directly and via possible partnerships with other organisations .
- Provide support and guidance to IMA boards and committees, including identifying suitable EDI training, where appropriate, guidance for Terms of Reference and other useful frameworks specific to their goals.
- Plan engagement activity with the funds generously provided by Professor Peter Clarkson FIMA.

Incoming EDI Champion Howard Haughton also gave talks at key events including the London International Youth Science Forum which invites STEM students from around the world to participate in a two-week programme of learning in the UK each July.

The Executive Director continued to represent the IMA on the Science Council/Royal Academy of Engineering Progression Framework Implementation Group which is made up of the professional scientific and engineering bodies and provides a forum to share experiences, EDI approaches and particular challenges for membership bodies. It also provides an opportunity to help develop future iterations of the Progression Framework for future benchmarking activities.

Recognition and Professional Standards

IMA membership grades are designed to suit every level of mathematical interest, from current students to professional and experienced mathematicians. Advanced Membership offers two grades to recognise professional achievement: Member and Fellow. Applications are overseen by the Membership Committee, chaired by the Honorary Secretary – Membership, Professor Paul Glaister CBE. The Committee also oversees applications for the Chartered Mathematician, Chartered Scientist and Chartered Mathematics Teacher designations.

The IMA, both independently and in partnership with others, also offers a number of medals and prizes which recognise mathematical achievement across a diverse spectrum.

The Institute's Gold Medal is awarded in recognition of outstanding contributions to mathematics and its applications over a period of years, with medals being awarded every two years.

IMA members and fellows are the beating heart of the organisation, volunteering in all areas of activity, from local Branches, delivering public engagement activities to sitting on IMA boards, committees and groups to support and deliver the IMA's objectives.

In 2023 we have had the privilege to welcome 613 new members and assist 86 existing members in transferring to a higher grade. We have also recruited 20 new Chartered Mathematicians and/or Chartered Scientists.

Membership figures at 31 December 2023:

Honorary Fellow	17
Fellow	1407
Member	1250
Associate Member	1740
Affiliate	447
Student	445
Total	5306

Of the above memberships, 1,369 are registered as Chartered Mathematicians and 191 as Chartered Scientists.

The Chartered Mathematician (CMath) designation represents high levels of professionalism and competence in mathematics. It is awarded by the Institute of Mathematics and its Applications to practising professional mathematicians who demonstrate, as well as their professional status and competence, a commitment to keep pace with advancing knowledge in mathematics and its applications.

The Institute has continued to support UK University Mathematics Departments by offering over 100 IMA Graduate Prize Memberships in 2023.

Chartered Mathematics Teachers

The Chartered Mathematics Teacher Registration Authority consists of representatives from IMA, Association of Teachers of Mathematics, Mathematical Association, and National Association of Numeracy and Mathematics in Colleges. Professor Paul Glaister CBE, the chair of the Institute's Membership Committee, also chairs the Chartered Mathematics Teacher Registration Authority. At 31 December 2023, we have 40 registered Chartered Mathematics Teachers.

Medals and Awards 2023

Hedy Lamarr Prize for Knowledge Exchange in Mathematics 2023

The Hedy Lamarr Prize is awarded to a mathematician who demonstrates meritorious knowledge exchange in mathematics and its applications.

In 2023, the panel awarded this prestigious medal to Professor Julia Gog OBE FIMA.

IMA John Blake University Teaching Medal

The John Blake University Teaching Medal, introduced in 2020, is awarded to an individual in recognition of their significant and sustained contribution to the teaching of mathematical sciences at university level.

The 2023 IMA John Blake University Teaching Medal was awarded to Professor Chris Sangwin.

Journal Prizes

The IMA Journal of Numerical Analysis awarded the 21st IMA Leslie Fox Prize to Alice Cortinovis (Stanford) and Melanie Weber (Harvard) on Monday 26th June 2023 at the Fox Prize event at the University of Strathclyde. This was held in conjunction with the Alan Turing Institute.

The IMA Journal of Applied Mathematics awarded the Lighthill Thwaites Prize at the 2023 BAMC to Clare Rees-Zimmerman (Oxford).

The 2023 IMA Journal of Management Mathematics best paper prize was awarded to Xiaoshi Guo and Sarah Ryan of Iowa State University, USA.

Gold Medal 2023 Summer Reception

In June 2023, Philip Maini, winner of the 2022 IMA Gold Medal gave a wonderful lecture at the IMA's Summer Reception, held at the Royal Society.

In addition, several other awards were presented at the event, as follows:

Certificates of Service

The following Certificates of Service were awarded at IMA Gold Medal lecture event, held in June 2023.

Academic Representatives since 2019

- Dr Thomas Woolley, MIMA
- Dr Tim Reis, FIMA
- Dr Marco Discacciati, FIMA
- Professor Simon Blackburn, FIMA
- Dr Rosalyn Porter, FIMA (since 2018 – unable to accept in 2022)

ECM Members > 3 years' service

Dr Eduard Campillo-Funollet MIMA – For over 3 years dedicated service to the ECM in a variety of roles, and more recently his service to the IMA as a Council Member.

Branch Representatives > 3 years' service

Dr John Craske AMIMA of Imperial College London, for dedicated service to the IMA London Branch since 2016.

Dr Amit Chattopadhyay FIMA of Aston University, for dedicated service to the West Midlands Branch since 2015

Special Recognition Awards

Claire Baldwin CMathTeach MIMA – Long service award. Claire has been a member of the Mathematics Today Board since May 2016.

Dr James Van Yperen AMIMA – In recognition of outstanding contribution to the Early Careers Mathematicians Committee and invaluable support to the Committee Chair.

Honorary Fellowship

At the 2023 Gold Medal Event held at the Royal Society, Dr Richard Pinch CMath CSci FIMA was presented with an Honorary Fellowship of the IMA, in recognition of his long, and distinguished service to the IMA as a Trustee and member of many strategic IMA committees.



IMA Strategy 2023-2028

The IMA published its new five-year Strategy in December 2023, following a consultation period over the last year across the organisation's boards, committees and networks.

Marking the IMA's 60th anniversary in 2024, our new strategy builds on the legacy built over the last six decades by continuing to develop new and exciting engagement opportunities to support a diverse and inclusive mathematics community and deliver public benefit.

An overwhelming sense of pride in being both a mathematical scientist and being part of the IMA, with its emphasis on mathematics and its applications, was one of the key takeaways from the consultation period. Our plan capitalises on this sense of belonging and community, allowing for us to strategically plan in order to keep pace with rapid changes across society. We will focus on change which influences, and is influenced by, mathematics in order to meet the expectations of the different generations and stakeholders we represent.

The 2023-28 plan is mapped across three broad strategic priority areas:

1 Advancing the mathematics profession and achieving our Mission

The IMA will play a major role in advancing mathematics and its applications and maintaining high standards of professional conduct. We will promote and guide education and training standards and support activities to attract and retain today's and tomorrow's mathematical scientists. We will develop our EDI strategy to create an inclusive culture within the IMA and across the mathematics and its applications community.

2 Securing a Sustainable IMA Future

We will modernise the governance model and infrastructure which underpin our services to the mathematics community to ensure they are fit for the future. We will monitor existing, and create new, revenue streams and encourage a collaborative working culture. We will develop policies around environmental sustainability and social inclusivity while ensuring we have the right digital tools and systems to deliver our services safely and securely. Our activities will ensure the IMA remains a natural home for all those interested in mathematics and its applications, providing both local support through the Branches, and targeted expertise through mentoring and Special Interest Groups.

3 Showcase and Develop Mathematics for Societal Challenges

The IMA will foster and facilitate debate, discussion and learned output on key topics which affect society and the mathematical sciences community. This includes thought leadership and knowledge sharing on grand challenges where mathematical sciences will play a major role in shaping solutions, such as Climate Change, Artificial Intelligence and Disease Modelling. We will convene Special Interest Groups to develop these activities, building on our successful conference programme, journals and publications, and through new engagement opportunities including training, workshops, podcasts and digital content.

Our plan builds on opportunities that a more hybrid and digital world can offer, as well as developing existing and new activities to support our community and generate new income.

Throughout the next five years, people and partnerships will remain at the heart of our activities. We will continue to provide successful IMA activities and services including our Branch network, MathsCareers website, conferences, events, workshops and publications whilst delivering public benefit.

Our delivery plan will also include review points for new and ongoing programmes to assess suitability for the future in line with our strategic goals and vision for the IMA for the next 60 years.



IMA staff and committee members at the Strategy Planning Weekend in 2023

Looking Ahead - 2024

2024 will be another exciting year for the IMA. The year will include a series of special events and activities to celebrate three key milestones in our history:

- The IMA's 60th anniversary
- The 100th anniversary of the birth of our founder Sir James Lighthill
- The 20th anniversary of the Early Career Mathematicians group.

We also aim to mark the IMA's legacy to mathematics over the last 60 years with a special MT Archive project, to revisit some significant articles and authors and through attendance at outreach events and online celebrations via social media to celebrate our past, present and future.

A number of new projects and working groups will be formed in support of our new strategy and we hope to launch our first Special Interest Group during the year.

We will launch our new mentoring platform in early 2024, IMA Exponential, to bring together experienced members from across our community of mathematicians in academia, business, government and the public sector, to provide advice, mentoring and support to other mathematicians seeking career development advice and/or achieve professional recognition.

We have set aside further funding to look at other ways we can provide services to our members and the mathematics community through digital sources, such as online careers support and other ways we can increase a sense of belonging and mathematical identity for members in an increasingly AI world.

Our focus on sustainability, people and wellbeing will focus on measuring our current carbon emissions to identify reductions, and relocate to office premises which provide an engaging and collaborative environment for staff, while being kinder on the planet and make best use of our financial resources.

We will continue to focus on creating an inclusive culture within the IMA through development of our EDI strategy and supporting others with support and advice.

A number of new and exciting conferences are being planned and September will see the launch of our first AI Congress in Birmingham, to complement our existing programmes.

The Alliance for Data Science Professionals, through the RSS, will be seeking approval of a Chartership application by Privy Council, following which Advanced Data Science Professionals, now and in the future, will be able to apply for Chartered status. We will continue to support DSIT on its consultation for a national academy for mathematical sciences, and the next steps.

There will be increased public engagement to promote mathematics, including our first exhibit at the Royal International Air Tattoo in July. IMA members are also supporting the development of a Levelling Up: Mathematics programme for Engineering to assist A Level Mathematics students seeking to study engineering. We hope that our Branches will hold local events and activities to showcase their activities and celebrate our anniversaries.

Finally, we hope that 2024 will see members and stakeholders across our community coming together at our celebration events and look forward to the next 60 years.

Finance and Governance

This is the Annual Report of the Trustees of 'The Institute of Mathematics and its Applications' (IMA) for the year 2023. The Institute is governed according to a Royal Charter and Byelaws granted in 1990 and revised in 1997, 1999, 2002, 2008 and 2015. The governance and control of the Institute is vested in its Council (Council Members are also the Trustees). The charity registration number is 1017777. The Companies House registration number is RC000714.

The Institute's Head Office is:

Catherine Richards House,
16 Nelson Street,
Southend-on-Sea,
Essex, SS1 1EF.

Its bankers are:

Lloyds Banking Group,
Business Service Centre,
Sedgemoor House,
Deangate Avenue,
Blackbrook Business Park,
Taunton, TA1 2UG.

Its auditors are:

Rickard Luckin
19 Clifftown Rd,
Southend-on-Sea,
Essex, SS1 1AB

Council

The constitution of the Council on 31 December 2023 was as follows:

PRESIDENT

Professor H Fry FIMA (From 1 January 2024)

VICE-PRESIDENTS

Mr N Turner CMath MIMA (From 1 January 2024)

Dr M Barons CMath FIMA

Dr J Macey FIMA

HONORARY TREASURER

Professor A. Osbaldestin FIMA

HONORARY SECRETARIES

Professor P Glaister CBE CMath CSci FIMA

Professor C Hobbs CMath FIMA

PAST PRESIDENTS

Professor A Fitt CMath CSci FIMA

Professor N C Chamberlain OBE CMath CSci FIMA

Professor P Glendinning FRSE FIMA

MEMBERS OF THE COUNCIL

Dr F de Melo Viríssimo AMIMA

Professor G Niblo FIMA

Dr E Campillo Funollet MIMA

Dr S Lawrence FIMA

Dr S Carr CMath CSci FIMA

Ms C Baldwin CMathTeach MIMA

Ms E Bowley CMath MIMA

Professor AC Croft CMath FIMA

Dr H Haughton CMath FIMA

Professor C Budd OBE CMath FIMA

Mr C Chipperton CMathTeach CMath FIMA

Professor TN Phillips FIMA

Dr M Matsuzewski MIMA

The following completed their term of office as Councillor and Trustee at the 2023 AGM:

Professor N Steele CMath Hon FIMA

Professor E Rothead CMath FIMA

Professor R Bearon FIMA

Mr N Brusby CMath MIMA

The following completed their term of office as Councillors and Trustees at the end of 2023:

Dr P Rowlett CMath FIMA, Vice President with responsibility for Communication.

Professor S Lombardo FIMA

Professor H Fry FIMA, who became President on 1 January 2024 chaired Council as it considered the content of this report. Professor Paul Glendinning's two-year term as President ended on 31 December 2023.

In 2023, Councillor nominations exceeded vacancies, so a ballot was held. Council was pleased to welcome the following members to serve as members of Council and Trustees effective from the close of the AGM held on the 28 June 2023:

Ms Claire Baldwin (elected member);

Miss Emma Bowley (elected, formerly co-opted member);

Professor Anthony Croft (elected member);

Additionally, Dr Maciej Matsuzewski, Chair of the Early Careers Mathematicians Committee, was co-opted to Council immediately following the AGM.

Finally, during 2023, Dr Snezana Lawrence advised Council of her intention to step down from her role as Diversity Champion at the end of 2023. The IMA are pleased to announce that Dr Howard Haughton has accepted Council's invitation to replace her as Equity, Diversity and Inclusion Champion in this role effective 1 January 2024.

The members of Council are also the Trustees.

Appointment of Trustees

The appointment of Trustees is governed by the Royal Charter byelaws 35 to 43.
No person or external body is entitled to make such appointments.

Past Presidents

Royal Charter byelaw 36. The immediate three Past Presidents who are able and willing to serve and are Advanced Members of the Institute shall be ex-officio members of Council.
It is customary for there to be three past presidents to sit on Council. Should Past Presidents choose to remain on Council for all or part of this time, they will remain Trustees.

Elected Members

The election of members starts in February when there is an open call for nominations. The Notice advises our members how many places are available for election that year.

The Royal Charter states: “39. Election of the elected members of the Council shall take place in the following manner:

- (A) Not less than ten weeks before each Annual General Meeting the Council shall cause to be addressed to all Corporate Members of the Institute a notice inviting nominations.
- (B) Nominations may be sent in writing to reach the Chief Executive at the Office not less than eight weeks before the date of the Annual General Meeting. ...”

If the number of nominations exceed the number of places, an election is held. Elected Members become Trustees with effect from the day after the AGM (normally 1 July or very close to that date)

Honorary Officers

It is usually the case that Honorary Officers are considered by the Nominating Committee and proposed to Council for approval / ratification.

Co-Opted Members

Byelaw 40: The Council may co-opt any Corporate Member to be a member of the Council, provided that at any time the total number of co-opted members shall not exceed six, of whom not more than one shall be an Associate Member, not more than one shall be a Student Member, and not more than one shall be an Affiliate Member.

Byelaw 41. The Council may at any time appoint or co-opt any eligible person to be an Honorary Officer or member of the Council to fill a casual vacancy. In event of the vacancy resulting from an elected member ceasing membership of Council the co-option will cover the period of office outstanding.

The Chair of the ECM is a co-opted member, and they are normally encouraged to stand for election in the year following their co-option to Council.

Responsibilities of the Trustees

The Trustees (Council members) are responsible for preparing the Trustees' Annual Report and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The Royal Charter of Incorporation and the law applicable to charities in England & Wales requires the Trustees' (Council members) to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Institute and of the incoming resources and application of resources of the Institute for that period. In preparing these financial statements, the Trustees (Council members) are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements and;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Institute will continue in business.

The Trustees (Council members) are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Institute and to enable them to ensure that the financial statements comply with the Charities Act 2011, the Charity (Accounts and Reports) Regulations 2008 and the provisions of the Royal Charter of Incorporation. They are also responsible for safeguarding the assets of the Institute and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Byelaw 34 of the Royal Charter states that The Honorary Treasurer, who is a member of Council and the Executive Board and also chairs the Finance Committee, shall be responsible to the Council for the administration of the financial affairs of the Institute and for ensuring that proper accounts are kept in accordance with these Byelaws but may delegate such responsibility to the Chief Executive [Executive Director] who may be assisted by the other salaried staff in the discharge of such responsibility.

The Finance Committee reviews the IMA budgets and end of financial year accounts and provides reports and recommendations to Council which also approves the accounts at its March meeting following the audit.

Executive Board

The Executive Board includes all Honorary Officers of the Institute, together with the Equality and Diversity Champion. Selected staff members from the Secretariat are invited to attend as required.

Secretariat

At 31 December 2023, the IMA employed a total of 19 members of staff, including six part-time employees. One post remained vacant. The Secretariat is led by the Executive Director and provides a number of functions in support of the IMA's aims and objectives. A full list of the 2023 team is provided in the References and Glossary section.

The Trustees' Report 2023

The 2023 budget was forecasted as an unrestricted loss of £2,828. The end of year result is an unrestricted surplus of £4,740.

The Trustees are content with the tight cost controls that have kept the performance close to budget.

At the end of 2023 the total assets less current liabilities is £1,525,202 of which £139,401 is in relation to restricted reserves. In 2022 the equivalent figure was £1,454,609 of which £73,548 was in relation to restricted reserves.

Funds were used to support our charitable aims. There is a clear public benefit in our activities to support education; to run educational conferences; to support mathematics to government; to regulate the profession of Chartered Mathematician; to contribute to the advancement of research initiatives; to be an influencing voice for the use of mathematics across STEM, industry and commerce; and to promote mathematics across media and society in the UK.

Members receive a membership publication. The revenue received from member subscription exceeds the value of direct membership services. The subscription surplus is spent on meeting our charitable objectives.

Finance Committee, which reports to Council, sets the pay and remuneration of the charity's personnel.

Reserves Policy

The Institute is a charitable organisation that promotes mathematics and its applications. It is a learned society and a professional body where income is principally based on subscriptions, and revenue from conferences and publications. The Institute requires adequate reserves to provide for any shortfall in immediate income and to allow remedial action in event of any long-term adverse change in circumstances. The Institute also requires financial reserves in order to respond to any major opportunities to develop and promote its objectives.

Council considers that reserves equivalent to one year's standard expenditure (excluding large projects which are not part of standard long-term activities) would be an appropriate level.

When Restricted Funds exist, for example the IMA Leslie Fox Fund, those funds will be used for the purpose for which they are restricted. Restricted reserves will not be counted when calculating the amount of reserves for general purposes.

Two months' operating expenses should be held as liquid reserves.'

At the end of 2023, the total reserves are £1,525,202, of which £139,401 is in relation to restricted reserves, which is close to one year's standard expenditure, and is therefore deemed to meet this policy.

Free reserves

As the year end the Charity held total free reserves of £1,290,253 (2022: £1,285,522).

Sources of funding

Key unrestricted revenue streams were:

Publications £548,405
Membership Subscriptions £351,722
Conference Income £96,629

Some of our most significant expenditure on charitable activities during the year were:

Promoting Maths £242,116
Education £29,225
Maths Today £166,818
Conference Expenditure £195,587
Grants £66,932

The expenditure of our incoming resources on these charitable activities was fully in line with our charitable objectives.

The non-current reserves of the Institute on 31/12/2023 were held with the following Finance Organisations: £105,848 is held at the Charity Bank, £210,884 at the Clydesdale Bank, £316,520 at Shawbrook Bank, and £1,066,168 at Lloyds; and £139,401 at Lloyds held on behalf of the Leslie Fox and QJMAM.

Management of Risks

Council has delegated the oversight of risk to the Finance Committee in the first instance.

The Finance committee assesses risk annually at a minimum, or more frequently in periods of economic or other uncertainties. Operationally, risks are under constant scrutiny by the senior management team, and any risk 'events' are reported via established processes.

The Risk Register is managed by the Governance Manager with input from the senior leadership team and other subject matter experts. The Risk Register is divided into the following categories:

- People, Leadership and Culture
- Financial
- Governance & Risk (including Data/GDPR)
- Operational Risk (including IT Resilience, Change Management & Procurement)

Risks are assessed on both an inherent and residual basis, and based on risk appetite, the top risks are reported at a senior level, along with the control environment that they operate in.

In 2023, the key areas of risks under scrutiny could be summarised as follows:

- **IT Risk – Cybersecurity**

The protection of member and staff data is of utmost importance to the IMA. Due to the prevalence of cybersecurity risk across all sectors, and the impact a breach of our security may have, we foresee this risk remaining a focus for some time.

- **Governance – Regulatory Compliance**

Compliance with our Royal Charter, the Charity Commission, GDPR and other external regulations is core to our culture; the oversight and reporting of all aspects of this risk is kept under constant scrutiny.

- **Financial Sustainability**

Compliance with our Royal Charter, the Charity Commission requirements and IMA Accounting and Investment policies, including meeting reserves and 'going concern' obligations.

- **Reputational Risk**

The materialisation of any risk has the potential to damage the IMA's reputation, and this drives our focus on risk management. Further to that, we have our codes of professional conduct for all members which is made by the Council in line with the Royal Charter

There were no material risk events reported within the accounting period 1 January – 31 December 2023.

Notes to the Financial Statements for the year ended 31 December 2023

The accounts given in Appendix A provide the IMA's full, formal financial statements and accounting policies.

This Annual Trustees' Report to Members 2023 was approved by the Trustees at the Council meeting of March 2024.

On behalf of the IMA Trustees

President Hannah Fry

INDEPENDENT AUDITORS' REPORT TO THE TRUSTEES OF THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

Opinion

We have audited the financial statements of Institute of Mathematics and Its Applications (the 'charity') for the year ended 31 December 2023 which comprise the statement of financial activities, the balance sheet, the statement of cash flows and notes to the financial statements, including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice).

In our opinion, the financial statements:

- give a true and fair view of the state of the charity's affairs as at 31 December 2023 and of its incoming resources and application of resources, for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the charity in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

In auditing the financial statements, we have concluded that the use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

Other information

The other information comprises the information included in the annual report other than the financial statements and our auditor's report thereon. The trustees are responsible for the other information contained within the annual report. Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon. Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters in relation to which the Charities (Accounts and Reports) Regulations 2008 require us to report to you if, in our opinion:

- the information given in the financial statements is inconsistent in any material respect with the report; or
- sufficient accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of trustees

As explained more fully in the statement of trustees' responsibilities, the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the financial statements, the trustees are responsible for assessing the charity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

We have been appointed as auditor under section 144 of the Charities Act 2011 and report in accordance with the Act and relevant regulations made or having effect thereunder.

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

We identified areas of laws and regulations that could reasonably be expected to have a material effect on the financial statements from our: general commercial and sector experience; through verbal and written communications with those charged with governance and other management; through communications with legal counsel, and via inspection of the charity's regulatory and legal correspondence.

We discussed with those charged with governance and other management the policies and procedures regarding compliance with laws and regulations.

We communicated identified laws and regulations to our team and remained alert to any indicators of non-compliance throughout the audit, we also specifically considered where and how fraud may occur within the charitable company.

The potential effect of these laws and regulations on the financial statements varies considerably.

Firstly, the charity is subject to laws and regulations that directly affect the financial statements, including: the charity's constitution; relevant financial reporting standards; company law; the Statement of Recommended Practice applicable to charities preparing their accounts in accordance with FRS 102 (effective from 1 January 2019); and we assess the extent of compliance with these laws and regulations as part of our procedures on the related financial statement items.

Secondly the charity is subject to many other laws and regulations where the consequences of non-compliance could have a material effect on the amounts or disclosures in the financial statements, for instance through the imposition of fines and penalties, or through losses arising from litigations. We identified the following areas as those most likely to have such an affect: legislation directly applicable to charities sector such as the Charities Act 2011, employment legislation; health and safety legislation; the regulatory requirements of the Charity Commission; data protection legislation; anti-bribery and anti-corruption legislation.

International Auditing Standards (UK) limit the required procedures to identify non-compliance with these laws and regulations to the procedures, and no procedures over and above those already noted are required. These limited procedures did not identify any actual or suspected non-compliance which laws and regulations that could have a material impact on the financial statements.

In relation to fraud, we performed the following specific procedures in addition to those already noted:

- Challenging assumptions made by management in its significant accounting estimates in particular: depreciation and accrued income;
- Identifying and testing journal entries, in particular any entries posted with unusual nominal ledger account combinations, journal entries posted by senior management, journal entries crediting cash or any revenue account and large year end journals;
- Performing analytical procedures to identify unexpected movements in account balances which may be indicative of fraud;
- Ensuring that testing undertaken on both the Statement of Financial Activity (SoFA) and the Balance Sheet includes a number of items selected on a random basis;

These procedures did not identify any actual or suspected fraudulent irregularity that could have a material impact on the financial statements.

Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with International Auditing Standards UK). For example, the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely the procedures that we are required to undertake would identify it. In addition, as with any audit, there remains a high risk of non-detection of irregularities, as these might involve collusion, forgery, intentional omissions, misrepresentation, or the override of internal controls. We are not responsible for preventing non-compliance with laws and regulations or fraud, and cannot be expected to detect non-compliance with all laws and regulations or every incidence of fraud.

A further description of our responsibilities is available on the Financial Reporting Council's website at: <https://www.frc.org.uk/auditorsresponsibilities>. This description forms part of our auditor's report.

Use of our report

This report is made solely to the charity's trustees, as a body, in accordance with part 4 of the Charities (Accounts and Reports) Regulations 2008. Our audit work has been undertaken so that we might state to the charity's trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and the charity's trustees as a body, for our audit work, for this report, or for the opinions we have formed.

Caroline Peters (Senior Statutory Auditor)
for and on behalf of Rickard Luckin Limited

Chartered Accountants
Statutory Auditor

1st Floor
County House
100 New London Road
Chelmsford
Essex
CM2 0RG

Appendix A

Financial Statements

APPENDIX A – FINANCIAL STATEMENTS

Financial Statements of Activities 31 December 2023

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

STATEMENT OF FINANCIAL ACTIVITIES INCLUDING THE INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2023

	Unrestricted Funds 2023 £	Restricted Funds 2023 £	Total Funds 2023 £	Unrestricted Funds 2022 £	Restricted Funds 2022 £	Total Funds 2022 £	Notes
Income and endowments from:							
<i>Donations and legacies</i>							
Appeal Fund, Donations and Bequests	38	0	38	16,878	0	16,878	
<i>Charitable activities</i>							
Member Entrance fees	2,545	0	2,545	2,401	0	2,401	
C. Math/C Math Teacher Member Entrance fees	580	0	580	709	0	709	
Member Subscription fees	351,722	0	351,722	338,339	0	338,339	
Conference and symposium fees	96,629	0	96,629	75,132	0	75,132	
Publications income and Institutional subscriptions	548,405	100,000	648,405	555,280	0	555,280	
Donations	12,135	0	12,135	2,728	0	2,728	
Scholarships	0	145,098	145,098	103,579	0	103,579	
<i>Investment Income</i>	9,584	874	10,458	4,347	70	4,417	17
Total	1,021,638	245,972	1,267,610	1,099,393	70	1,099,463	
Expenditure on:							
<i>Charitable Activities</i>							
Branches and groups	4,746	0	4,746	10,212	0	10,212	
Conferences	195,587	0	195,587	136,861	0	136,861	
Education	29,225	0	29,225	23,277	0	23,277	
Grants/Donations	66,932	0	66,932	75,772	0	75,772	1a
Promoting Mathematics (including Scholarships)	238,071	145,098	383,169	400,395	0	400,395	1c
Mathematics Today	165,197	0	165,197	180,479	0	180,479	
Membership	123,187	0	123,187	105,236	0	105,236	
Professional development	57,015	0	57,015	35,788	0	35,788	
Other publications	39,766	35,021	74,787	39,925	59,857	99,782	
<i>Governance</i>	97,172	0	97,172	55,205	0	55,205	1d
Total	1,016,898	180,119	1,197,017	1,063,149	59,857	1,123,007	1a
Net movement in funds	4,740	65,853	70,593	36,241	(59,787)	(23,546)	
Reconciliation of funds							
Total Funds brought forward at 1 January 2023	1,381,061	73,548	1,454,609	1,344,819	133,335	1,478,154	
Total Funds carried forward at 31 December 2023	1,385,801	139,401	1,525,202	1,381,060	73,548	1,454,608	

No separate Statement of Total Recognised Gains and Losses has been presented as all such gains and losses have been dealt with in the Statement of Financial Activities.

The net movement in funds arises from the charity's continuing operations.
The detailed Income and Expenditure Account (2023) is attached (Appendix 1a).

Balance Sheet

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

BALANCE SHEET AS AT 31 DECEMBER 2023

	2023 £	2022 £	Notes
FIXED ASSETS			
Tangible assets	95,548	93,538	2
	<u>95,548</u>	<u>93,538</u>	
CURRENT ASSETS			
Stock	4,842	4,842	3
Debtors	35,799	40,920	4
Cash at bank and in hand	1,838,960	1,731,169	
	<u>1,879,601</u>	<u>1,776,931</u>	
LIABILITIES			
Creditors: amounts falling due within one year	449,947	415,860	
	<u>449,947</u>	<u>415,860</u>	5
NET CURRENT ASSETS	<u>1,429,654</u>	<u>1,361,070</u>	
TOTAL ASSETS LESS CURRENT LIABILITIES	<u>1,525,202</u>	<u>1,454,608</u>	
Creditors: amounts falling due after one year	0	0	
TOTAL NET ASSETS	<u>1,525,202</u>	<u>1,454,608</u>	
FUNDS			
Restricted income funds	139,401	73,548	
Unrestricted income funds:			
General funds	1,385,801	1,381,060	
TOTAL CHARITY FUNDS	<u>1,525,202</u>	<u>1,454,608</u>	

The Financial Statements together with the Trustees' Annual Report (2023) were approved and authorised for issue by the Council on 27 March 2024 and signed on their behalf by

PROFESSOR ANDREW OSBALDESTIN

Honorary Treasurer

PROFESSOR HANNAH FRY

President

Cash Flows

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2023

Notes

	2023 £	2022 £	
Net Cash (used in)/provided by:			
Operating activities	<u>108,175</u>	<u>222,711</u>	16
Investing activities	10,458	4,417	17
Financing activities	(10,842)	0	
Cash flow for the period	<u>107,791</u>	<u>227,127</u>	
Unrealised gains or losses arising on cash and equivalents held in foreign currencies	0	0	
Opening cash and cash equivalents;	1,731,169	1,504,042	
Closing cash and cash equivalents	<u>1,838,960</u>	<u>1,731,169</u>	

The Institute Of Mathematics and its Applications

Financial Statements For The Year Ended 31 December 2023

Accounting Policies

Basis Of Accounting

The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard in the UK and Republic of Ireland (FRS102) (Charities SORP (FRS102)) as updated by the Charities SORP (FRS 102) update bulletin 1 & 2, and the Charities Act 2011 and applicable regulations.

The charity has elected to apply the provisions of Section 11 'Basic Financial Instruments' and Section 12 'Other Financial Instruments Issues' of FRS 102 to all of its financial instruments. Financial instruments are recognised in the charity's balance sheet when the charity becomes party to the contractual provisions of the instrument.

Financial assets and liabilities are offset, with the net amounts presented in the financial statements, when there is a legally enforceable right to set off the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously.

Incoming Resources

All incoming resources are included in the Statement of Financial Activities when the charity is legally entitled to the income and the amounts can be quantified with reasonable accuracy. The following specific policies are applied to particular categories of income:

- Investment income is included on receipt;
- Incoming resources from publications and conferences are accounted in the period in which services are provided;
- Subscriptions are recognised over the period to which the fees relate;
- Scholarship income is recognised on a performance basis.

To the extent that reliable estimations are available with regard to the final settlement of each accounting year's publication income and expenditure, provision is made for the final settlement figure. Where reliable estimations are not available, no provision is made.

Funds Structure

Unrestricted funds comprise those funds which the Trustees are free to use in accordance with the charitable objects. Restricted funds are funds which have been given for particular purposes and projects (see note 7).

Resources Expended

Resources expended are recognised in the period in which they are incurred and include attributable Input VAT that cannot be recovered. Resources expended are allocated to the particular activity where the cost relates directly to that activity.

Governance costs include the costs of governance arrangements that relate to the general running of the charity. These activities provide the governance infrastructure that allows the charity to operate and to generate the information required for public accountability. They include the strategic planning processes that contribute to the future development of the charity.

Direct expenditure is allocated to categories of activity. Where expenditure cannot be directly allocated it represents support costs and is apportioned on a basis consistent with the use of resources, by reference to the % allocation of staff working on each activity.

The Institute makes grants and donations to members of the mathematics community. The purpose of the grants and donations is to facilitate research activity in all areas of mathematics.

Government Grants

Government grants are recognised at the fair value of the asset received or receivable when there is reasonable assurance that the grant conditions will be met and the grants will be received. A grant that specifies performance conditions is recognised in income when the performance conditions are met. Where a grant does not specify performance conditions it is recognised in income when the proceeds are received or receivable. A grant received before the recognition criteria are satisfied is recognised as a liability.

Branches

The Statement of Financial Activities represents the results of the charity only. The Institute has seven current branches and these are not consolidated on the basis they are not material to the charity. There are no other related parties.

Leased Assets and Obligations

All leases are “operating leases” and the annual rentals are charged to the Statement of Financial Activities on a straight line basis over the lease term.

Tangible Fixed Assets

Depreciation is provided on all tangible fixed assets other than freehold land at rates calculated to write each asset down to its estimated residual value evenly over its expected useful life, as follows: -

Freehold buildings	2%
Fixtures, fittings and equipment	15%
Computer equipment	33%

Following the implementation of FRS 102, the charity has followed the transitional provisions to retain the book value of freehold buildings re-valued on 31 December 1991, but not to adopt a policy of revaluation in the future.

Stock

Stocks are stated at the lower of cost and estimated selling price less costs to complete and sell. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the stocks to their present location and condition. Items held for distribution at no or nominal consideration are measured the lower of replacement cost and cost.

Basic Financial Assets

Basic financial assets, which include debtors and cash and bank balances, are initially measured at transaction price including transaction costs and are subsequently carried at amortised cost using the effective interest method unless the arrangement constitutes a financing transaction, where the transaction is measured at the present value of the future receipts discounted at a market rate of interest. Financial assets classified as receivable within one year are not amortised.

Cash at Bank

Current asset investments are investments which a charity holds for resale or pending their sale and cash or cash equivalents with a maturity date of less than one year. This heading includes cash on deposit and cash equivalents with a maturity of less than one year held for investment purposes rather than to meet short-term cash commitments as they fall due.

Basic Financial Liabilities

Basic financial liabilities, including creditors, are initially recognised at transaction price unless the arrangement constitutes a financing transaction, where the debt instrument is measured at the present value of the future payments discounted at a market rate of interest. Financial liabilities classified as payable within one year are not amortised.

Debt instruments are subsequently carried at amortised cost, using the effective interest rate method.

Trade creditors are obligated to pay for goods or services that have been acquired in the ordinary course of operations from suppliers. Amounts payable are classified as current liabilities if payment is due within one year or less. If not, they are presented as non-current liabilities. Trade creditors are recognised initially at transaction price and subsequently measured at amortised cost using the effective interest method.

Pensions

The Institute operates a defined contribution scheme. The amount charged to the Statement of Financial Activities in respect of pension costs and other post retirement benefits are the contributions incurred in the year.

Judgements and Estimates

In preparing financial statements it is necessary to make certain judgements, estimates and assumptions that affect the amounts recognised in the financial statements. The following judgements and estimates are considered by the Trustees to have the most significant effect on amounts recognised in the financial statements:

- Depreciation and amortisation charges are based on the estimated useful life of the assets held.
- Publication income is based on the budgeted royalty commission from the OUP.

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2023

1.Expenditure on:

	2023			2023				2022	
a) Analysis of expenditure on	Support	Direct	Staff	Total	Support	Direct	Staff	Total	Notes
	Costs	Costs	Costs	£	Costs	Costs	Costs	£	
<u>Unrestricted funds</u>	£	£	£	£					
Operating activities in furtherance of Charity's objectives									
Branches and groups	622	1,279	2,845	4,746	1,725	1,664	6,823	10,212	
Conferences	20,998	78,491	96,098	195,587	17,847	48,419	70,595	136,861	
Education	4,490	4,188	20,547	29,225	4,246	2,235	16,796	23,277	
Grants/donations	2,279	54,221	10,432	66,932	3,649	57,689	14,434	75,772	
Promoting Mathematics	35,051	24,101	178,919	238,071	58,850	29,125	232,779	320,754	1e
Mathematics Today	17,614	66,975	80,608	165,197	18,644	88,091	73,744	180,479	
Membership	20,446	9,172	93,569	123,187	19,705	7,588	77,943	105,236	
Professional development	9,463	4,245	43,307	57,015	6,701	2,581	26,506	35,788	
Other publications	3,385	20,892	15,489	39,766	3,848	20,858	15,221	39,925	
Governance	5,319	67,512	24,341	97,172	4,910	30,875	19,420	55,205	
Total unrestricted resources expended	119,667	331,076	566,155	1,016,898	140,125	289,125	554,261	983,508	1b

Restricted funds

Operating activities in furtherance of Charity's objectives									
QJMAM	0	33,400	0	33,400	0	59,857	0	59,857	
Scholarships	18,481	60,550	66,067	145,098	5,839	50,708	23,094	79,641	
Mathematics Today (Leslie Fox Prize Fund award)	0	1,621	0	1,621	0	0	0	0	

Total resources expended	138,148	426,648	632,222	1,197,017	145,964	399,690	577,355	1,123,006	
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b) Analysis of Total Support Costs

	Conferences	Education	Maths Membership Today	Governance	Other
	£	£	£	£	£
<u>Unrestricted funds</u>					
DMH premises 18 Nelson Street	1,274	272	1,069	1,240	4,203
Communications & IT	6,233	1,333	5,228	6,069	20,565
Postage & printing	964	206	808	938	3,180
Financial costs	11,185	2,392	9,383	10,891	36,905
Depreciation	1,342	287	1,126	1,307	4,429
Total unrestricted	20,999	4,490	17,614	20,446	69,281

	2023	2022
	£	£
Conferences	20,999	17,847
Education	4,490	4,246
Mathematics Today	17,614	18,644
Membership	20,446	19,705
Governance	5,319	4,910
Other	69,281	80,612
	138,148	145,964

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2023

c) Analysis of promoting mathematics costs

	2023					2022			
	Support Costs £	Direct Costs £	Staff Costs £	Total £		Support Costs £	Direct Costs £	Staff Costs £	Total £
Maths Careers	3,523	6,366	16,122	26,011		4,180	6,296	16,533	27,009
Other	31,529	17,735	162,797	212,061		54,670	22,829	216,246	293,745
Total promoting mathematics costs	35,052	24,101	178,919	238,072		58,850	29,125	232,779	320,754
Scholarships	18,481	60,550	66,067	145,098		5,839	50,708	23,094	79,641
	<u>53,533</u>	<u>84,651</u>	<u>244,986</u>	<u>383,169</u>		<u>64,689</u>	<u>79,833</u>	<u>255,873</u>	<u>400,395</u>

Maths Careers is only supported by the Institute of Mathematics and its Applications.

d) Analysis of governance costs

	2023					2022			
	Support Costs £	Direct Costs £	Staff Costs £	Total £		Support Costs £	Direct Costs £	Staff Costs £	Total £
Audit fees - Audit of Financial Statements	0	14,500	0	14,500		0	10,255	0	10,255
Legal and professional	0	2,386	0	2,386		0	2,500	0	2,500
Irrecoverable VAT	0	0	0	0		0	0	0	0
Strategy Review Weekend	0	18,912	0	18,912		0	0	0	0
Cost of AGM and Trustee travel etc.	0	31,714	0	31,714		0	0	0	0
Apportionment of staff costs	0	0	24,341	24,341		0	0	19,420	19,420
General overhead costs	5,319	0	0	5,319		4,910	18,120	0	23,030
Total governance costs	<u>5,319</u>	<u>67,512</u>	<u>24,341</u>	<u>97,172</u>		<u>4,910</u>	<u>30,875</u>	<u>19,420</u>	<u>55,205</u>

e) Analysis of grants expended

	2023	2022
	Total	Total
	£	£
Educational Grants	2,174	600
Small Grants	14,282	10,020
University Liaison Officer Grants	3,568	8,861
CMS	<u>19,510</u>	<u>21,006</u>
	<u>39,533</u>	<u>40,487</u>
	<u>0</u>	<u>0</u>
	<u>39,533</u>	<u>40,487</u>

See in the Trustees Annual Report where details are given for Educational Grants, Small Grants & University Liaison Officer Grants.
The grants are payable to individuals £0 and institutions £20,024 and £19,510 to CMS

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2023

2. TANGIBLE FIXED ASSETS

	Freehold property & land	Fixtures fittings & equipment	TOTAL
Cost or valuation:	£	£	£
Property 1 January 2023	230,000	168,261	398,261
Additions	6,200	4,642	10,842
Disposals	<u>0</u>	<u>0</u>	<u>0</u>
31 December 2023	<u>236,200</u>	<u>172,903</u>	<u>409,105</u>
Depreciation			
1 January 2023	142,576	162,147	304,723
Charged in the year	4,655	4,177	8,832
Disposals	<u>0</u>	<u>0</u>	<u>0</u>
31 December 2023	<u>147,231</u>	<u>166,324</u>	<u>313,555</u>
Net book value:			
31 December 2023	<u>88,969</u>	<u>6,579</u>	<u>95,548</u>
31 December 2022	<u>87,424</u>	<u>6,114</u>	<u>93,538</u>

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2023

3. STOCKS

	2023	2022
	£	£
Goods for resale	<u>4,842</u>	<u>4,842</u>

4. DEBTORS

	2023	2022
	£	£
Due within one year:		
Trade debtors	546	1,059
Prepayments and accrued income	<u>35,253</u>	<u>39,861</u>
	<u>35,799</u>	<u>40,920</u>

5. CREDITORS

	2023	2022
	£	£
Amounts falling due within one year:		
Trade creditors	3,986	28,605
Other taxation and social security costs	60,073	58,305
Accruals and Deferred Income	<u>385,888</u>	<u>328,951</u>
	<u>449,947</u>	<u>415,861</u>

6. Deferred Income

	2023	2022
	£	£
Deferred income b/fwd.	312,408	315,305
Amounts released	(312,408)	(315,305)
Deferred in year	<u>358,461</u>	<u>312,408</u>
Deferred income c/fwd	<u>358,461</u>	<u>312,408</u>

Deferred income mainly consists of publishing and membership income relating to 2023 and will therefore be released next year.

7. MOVEMENTS IN FUNDS

	2023			2022	
		Incoming resources	Resources expended	Transfer between funds	
	£	£	£	£	£
Restricted reserves					
Scholarships	0	145,098	(145,098)	0	0
Leslie Fox Prize Fund	1,452	0	(1,621)	0	3,073
QJMAM	<u>137,949</u>	<u>100,874</u>	<u>(33,400)</u>	<u>0</u>	<u>70,475</u>
	<u>139,401</u>	<u>245,972</u>	<u>(180,119)</u>	<u>0</u>	<u>73,548</u>
Unrestricted funds					
Unrestricted Reserves	<u>1,385,801</u>	<u>1,021,638</u>	<u>(1,016,898)</u>	<u>0</u>	<u>1,381,061</u>
	<u>1,385,801</u>	<u>1,021,638</u>	<u>(1,016,898)</u>	<u>0</u>	<u>1,381,061</u>
Total restricted and unrestricted funds	<u>1,525,202</u>	<u>1,267,610</u>	<u>(1,197,017)</u>	<u>0</u>	<u>1,454,609</u>

QJMAM funds are held to provide grant awards to applicants that are successful in submitting papers included in the QJMAM journal

The Scholarships funds are spent on the administration and events surrounding the DFE maths teacher scholarships scheme

The Leslie Fox Prize Fund may be used to award biennially for best submission in Numerical Analysis.

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2023

8. ANALYSIS OF NET ASSETS BETWEEN FUNDS

	Tangible fixed assets	Net current assets	Fund balance balance
	£	£	£
Unrestricted funds	95,548	1,290,253	1,385,801
Restricted funds	0	139,401	139,401
	<u>95,548</u>	<u>1,429,654</u>	<u>1,525,202</u>

9. COMMITMENTS UNDER OPERATING LEASES

At the reporting end date the charity had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall as follows:

	2023	2022
	£	£
Plant and machinery		
Within one year	0	1,134
Between two and five years	0	0
	<u>0</u>	<u>1,134</u>

10. PENSION COSTS

The Institute makes payments to personal pension funds set up by individual members of staff. Contributions payable by the Institute amounted to £48,746 (2022: £53,275).

11. EMPLOYEES

The following number of employees received employee benefits (excluding employer pension costs) during the year between:

	2023	2022
£70,001 - £80,000	1	1

The total employee benefits including pension contributions of the key management personnel were £149,612 (2022 - £133,435).

12. STAFF NUMBERS

The average weekly number of persons employed by the Institute regardless of whether they are part time or full time during the year was:

	2023	2022
Administration:	15	15
Management:	2	2
Scholarships	2	1
	<u>19</u>	<u>18</u>

	2023	2022
	£	£
Staff costs for the above persons:		
Salaries	524,569	488,954
Pension contributions	54,082	39,314
Social security costs	44,202	41,237
Other costs	9,369	7,853
	<u>632,222</u>	<u>577,358</u>

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2023

13. TAXATION

The Institute is accepted by HM Revenue & Customs as an educational charity and as such is not subject to corporate taxation for activities within its charitable objects.

14. RELATED PARTY TRANSACTIONS

During the year payments were made to Dr Snezana Lawrence in relation to services provided as an assessor for the mathematics teacher training scholarships amounting to £434. (2022 £826 relating to services provided by Dr Snezana Lawrence and £1,967 for Dr Sophie Carr as assessors on the teacher training scholarships). In addition, re-imbursed expenses for travel and subsistence to Council Members amounted to £8,266, 13 members re-imbursed (2022: £6,209, 12 members re-imbursed).

15. SCHOLARSHIPS

In 2012 the Teaching Agency approached the IMA to run a Mathematics Initial Teacher Training Scholarship Scheme.

Under such a scheme the institute would be paid by the DFE (for England only) to run the Scheme. In 2012 costs associated with the negotiation were borne by the IMA. In addition DFE paid for a small grant to develop the submission. DFE announced on 21st December 2012 that the Scheme would be run. The amounts awarded by the DFE were as follows:

Year	Award
2019	137,739
2020	128,053
2021	119,920
2022	103,579
2023	143,028

16. Reconciliation of net movement in funds to net cash flow from operating activities

	2023	2022
	Total	Total
	£	£
Net movement in funds	70,593	(23,546)
Add back depreciation	8,831	9,649
Deduct investment income	(10,458)	(4,417)
Decrease/(increase) in stock	(0)	1
Decrease/(increase) in debtors	5,121	298,298
(Decrease)/increase in creditors	34,087	(57,273)
Net cash provided by/(used in) operating activities	108,175	222,711

17. INVESTMENT INCOME

	2023	2022
	Total	Total
	£	£
Interest on cash deposits	10,458	4,417

Investment income includes £874 (2022 £70) in respect of restricted funds.

18. ANALYSIS OF CHANGES IN NET DEBT

	As at 1 Jan 2023	Cash flows	other non- cash changes	As at 31 Dec 2023
Cash	1,731,169	107,791	0	1,838,960
Loans falling due within one year	0	0	0	-
Loans falling due after one year	0	0	0	-
Balance at the end of the year	1,731,169	107,791	0	1,838,960

Appendix B

Secretariat, IMA representatives and Glossary

APPENDIX B | Secretariat, IMA representatives and Glossary

IMA Staff Team

The Institute staffing in 2023 was:

Executive Director – Rosalind Azouzi;

Operations Director – Alan Peacock;

Administration Assistant – Debbie Sullivan

Administration Officer – Karen Hedderley

Administration Officer – Emma Emmerton

Conference and Administration Assistant – Ella Dixon

Conference and Administration Officer – Pamela Bye

Conference and Events Executive – Maya Everson

Editorial Officer – Rebecca Waters

Education Manager and Project Manager, Scholarships – Vanessa Thorogood

Governance Manager – Emma-Jane Wheal

Governance & Diversity Officer – Stacie Lang

IT & Systems Executive – Eugene Kidwell

Marketing Officer – Nikki Barnes

Membership Assistant – Sabeen Hansraj

Membership Development Executive – Jenny May Roberts (from September 2023)

Membership Officer – Natalie Stanton (until November 2023, position vacant at 31 December 2023)

Membership Manager – Caroline Irwin

Scholarships Project Officer – Jaydene Merry

Special Projects Officer – Joanna Baldacci

University Liaison Officer – Erica Tyson (retired February 2023, new post created)

UK Maths

The IMA continues to work with many organisations in Mathematics, Science and Engineering. The Institute's representatives included over 2023:

- **CMS**

Professor Paul Glendinning (IMA President, University of Manchester)

Dr Martine Barons (IMA Vice President – Learned Society, University of Warwick)

Rosalind Azouzi (Executive Director)

- **Heads of Departments of Mathematical Sciences (HoDoMS)**

Professor M. Grove (University of Birmingham)

- **Joint Mathematical Council**

Professor P. Glaister CBE (IMA Honorary Secretary – Membership University of Reading)

- **sigma**

Professor D. Lawson (Coventry University)

UK STEM and Others

- **Alliance for Data Science Professionals**

Professor Paul Glaister CBE (IMA Honorary Secretary – Membership, University of Reading)
Rosalind Azouzi (Executive Director)

- **EPSRC**

Professor Sara Lombardo (Herriot-Watt University)

- **Science Council**

Rosalind Azouzi (Executive Director)

International

- **ICIAM**

Professor I.D. Abrahams (Isaac Newton Institute for Mathematical Sciences)
Professor I. Duff (STFC)

Glossary

ACME — Advisory Committee on Mathematics Education
AcadMathSci — Academy for Mathematical Sciences
AfDSP — Alliance for Data Science Professionals
AI- Artificial Intelligence
AMS — Australian Mathematical Society
BCS — British Computing Society, the Chartered Institute for IT
BSHM — British Society for the History of Mathematics
CMath — Chartered Mathematician
CMS — Council for the Mathematical Sciences
CPD — Continuing Professional Development
DfE — Department for Education
DSIT — Department for Science, Innovation and Technology
ECM — Early Career Mathematicians
ED — Executive Director
EdMS — Edinburgh Mathematical Society
EPSRC — Engineering and Physical Sciences Research Council
EuMS — European Mathematical Society
FE — Further Education
FRS — Fellow of the Royal Society
HE — Higher Education
HEC — Higher Education Committee
HEdSA — Higher Education Services Area
HEIs — Higher Education Institutions
HoDoMS — Heads of Departments of Mathematical Sciences
ICIAM — International Council for Industrial and Applied Mathematics
ICMS — International Centre for Mathematical Sciences
ICTP — International Centre for Theoretical Physics
IF — Impact Factor
IMA — Institute of Mathematics and its Applications
InFOMM — Industrially Focused Mathematical Modelling
INI — Isaac Newton Institute for Mathematical Sciences
KE — Knowledge Exchange
KS2 — Key Stage 2
KS3 — Key Stage 3
LMS — London Mathematical Society
MA — The Mathematical Association
MEI — Mathematics in Education and Industry
ML — Machine Learning
NANAMIC — National Association of Numeracy and Mathematics in Colleges
NCETM — National Centre for Excellence in the Teaching of Mathematics
OBE — Order of the British Empire
OR — Operational Research
ORS — Operational Research Society
OU — Open University
OUP — Oxford University Press
PAC — Professional Affairs Committee
QAA — The Quality Assurance Agency for Higher Education
RSS — Royal Statistical Society
S&FE — Schools and Further Education
SIAM — Society for Industrial and Applied Mathematics
SIAM UKIE — UK and Republic of Ireland Section of SIAM
STEM — Science, Technology, Engineering and Mathematics
STFC — Science and Technology Facilities Council
UKRI — UK Research and Innovation



<http://ima.org.uk>

Accounts



Institute of
mathematics
& its applications

Incorporated by Royal Charter

FINANCIAL STATEMENTS

31 DECEMBER 2022

The Institute of Mathematics and its Applications
Registered Charity Number: 1017777

REPORT OF THE COUNCIL

The Council submits its report and the financial statements of The Institute of Mathematics and its Applications for the year ended 31 December 2022. The Financial Statements have been prepared in accordance with the accounting policies set out on pages 9 and 10 to the accounts and comply with the Institute's Trust Deed, the Charities Act 2011 and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) – (Charities SORP (FRS 102) as updated by the Charities SORP (FRS 102) update bulletin 1).

PRINCIPAL ACTIVITIES

The principal activity of the Charity during the year was the operation of a learned and professional society for those involved in all areas of mathematics and its applications, working as a charity for the public benefit.

REVIEW OF THE BUSINESS AND FUTURE DEVELOPMENTS

Council considers that the Institute's state of affairs is satisfactory, and that future results will continue on a close to breakeven result.

The Council members also produce a Trustees' Annual Report (2022) (Appendix 2 – attached) which reports Legal and Administrative Information; Activities and Achievements; and Future Plans.

RESULTS

The Statement of Financial Activities on page 6 shows a deficit in reserves of £23,546 for the year compared to a surplus of £65,907 in the previous year. The deficit in reserves is made up of a deficit of 59k in restricted and a surplus of 36k in unrestricted funds. During the year, income of a restricted nature amounting to £70 was received (2021: £12). Total unrestricted net assets at the year-end amount to £1,381,060 (2021: £1,344,819). Restricted Net assets for 2022 were £73,548 (2021: £133,335).

COUNCIL

The constitution of the Council on 31 December 2022 was as follows:

PRESIDENT

Professor P Glendinning (From 1 January 2022)

VICE-PRESIDENTS

Dr P Rowlett
Dr M Barons
Dr R Pinch

HONORARY TREASURER

Professor A Osbaldestin

HONORARY SECRETARIES

Professor P Glaister
Professor M Grove

PAST PRESIDENTS

Professor A Fitt
Professor C Linton
Dr N C Chamberlain

MEMBERS OF THE COUNCIL

Professor R Bearon	Dr F de Melo Virissimo	Professor G Niblo
Professor E Rothead	Dr E Campillo Funollet	Dr S Lawrence
Professor N Steele	Dr S Carr	Professor S Lombardo
Mr N Turner	Mr C Chipperton	Professor T N Phillips
Mr D S Bays	Mr N M Brusby	Professor C Budd

The following completed their term of office as Councillor and Trustee at the 2022 AGM: Professor C Breward; Dr B Dias and Professor C Hobbs. The following completed their term of office as Councillors and Trustees at the end of 2022: Dr R Pinch, Professor M Grove.

REPORT OF THE COUNCIL**TAX STATUS**

The Institute is accepted by the HM Revenue & Customs as an educational charity. As a charity, the Institute is exempt from tax on income and gains to the extent these are applied to its charitable objects. No tax charges have arisen in the Institute.

AUDITORS

During the year, Croucher Needham (Essex) LLP were re-appointed as auditors. It was decided this year that the audit for 2023 financial year will go out to tender. A decision to re-appoint will be taken at the autumn Annual General Meeting.

By order of the Council

Professor P Glendinning

29 March 2023

Main office address:
Catherine Richards House
16 Nelson Street
Southend-on-Sea
Essex
SS1 1EF

TRUSTEES' RESPONSIBILITIES IN THE PREPARATION OF FINANCIAL STATEMENTS

The Trustees (Council members) are responsible for preparing the Trustees' Annual Report and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The Royal Charter of Incorporation and the law applicable to charities in England & Wales requires the Trustees' (Council members) to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Institute and of the incoming resources and application of resources of the Institute for that period. In preparing these financial statements, the Trustees (Council members) are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements and;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Institute will continue in business.

The Trustees (Council members) are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Institute and to enable them to ensure that the financial statements comply with the Charities Act 2011, the Charity (Accounts and Reports) Regulations 2008 and the provisions of the Royal Charter of Incorporation. They are also responsible for safeguarding the assets of the Institute and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

INDEPENDENT AUDITORS' REPORT TO THE TRUSTEES OF THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS**OPINION**

We have audited the financial statements of The Institute of Mathematics and its Applications (the 'charity') for the year ended 31 December 2022, which comprise the statement of financial activities, the balance sheet, the statement of cash flows and the notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" (United Kingdom Generally Accepted Accounting Practice). In our opinion the financial statements:

- give a true and fair view of the state of the charity's affairs as at 31 December 2022 and of its incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

BASIS FOR OPINION

We have been appointed as auditors under section 144 of the Charities Act 2011 and report in accordance with regulations made under section 154 of that Act. We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the charity in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

CONCLUSIONS RELATING TO GOING CONCERN

In auditing the financial statements, we have concluded that the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue. Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

OTHER INFORMATION

The other information comprises the information included in the annual report other than the financial statements and our auditor's report thereon. The trustees are responsible for the other information contained within the annual report. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon. Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

We have nothing to report in respect of the following matters in relation to which the Charities (Accounts and Reports) Regulations 2008 require us to report to you if, in our opinion:

- the information given in the financial statements is inconsistent in any material respect with the Trustees Annual Report; or
- sufficient accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records; or
- we have not received all the information and explanations we require for our audit.

As explained more fully in the Statement of Trustees' responsibilities in the preparation of financial statement, the trustees, who are also the directors of the charity for the purposes of company law, are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the financial statements, the trustees are responsible for assessing the charity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to cease operations, or have no realistic alternative but to do so.

AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

THE EXTENT TO WHICH THE AUDIT WAS CONSIDERED CAPABLE OF DETECTING IRREGULARITIES, INCLUDING FRAUD

Irregularities, including fraud, are instances of non-compliance with laws and regulations. The objectives of our audit are to obtain sufficient appropriate audit evidence regarding compliance with laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements, to perform audit procedures to help identify instances of non-compliance with other laws and regulations that may have a material effect on the financial statements and to respond appropriately to identified or suspected non-compliance with laws and regulations identified during the audit.

However, it is the primary responsibility of management, with the oversight of those charged with governance, to ensure that the entity's operations are conducted in accordance with applicable laws and regulations and for the prevention and detection of fraud.

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud, the audit engagement team:

- obtained an understanding of the nature of the charity, including the legal and regulatory framework that the charity operates in and how the charity is complying with the legal and regulatory framework;
- inquired of management, and those charged with governance, about their own identification and assessment of the risks of irregularities, including any known actual, suspected or alleged instances of fraud; and
- discussed matters about non-compliance with laws and regulations and how fraud might occur including assessment of how and where the financial statements may be susceptible to fraud.

As a result of these procedures we consider the most significant laws and regulations that have a direct impact on the financial statements are:

- FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice);
- The Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (The FRS 102 Charities SORP);
- The Charities (Accounts and Reports) Regulations 2008; and
- The Charities Act 2011.

The audit engagement team identified the risks of transactions with unidentified related parties and management override of controls as the areas where the financial statements were most susceptible to material misstatement due to fraud.

Based on the results of our risk assessment we designed audit procedures to identify fraud or non-compliance with such laws and regulations identified above. The relevant audit procedures performed included but were not limited to:

- obtaining the trustees' register of interests and corroborating entries by reviewing entries on the Charities Commission website;
- inspecting minutes of Trustees' meetings;
- maintaining vigilance throughout the audit work to identify all related parties;
- identifying and reviewing unusual accounting transactions and journal entries;
- discussions with management including consideration of known or suspected instances of non-compliance with laws and regulations and fraud; and
- performing a detailed review of the completeness and accuracy of disclosures.

A further description of our responsibilities is available on the Financial Reporting Council's website at: <https://www.frc.org.uk/auditorsresponsibilities>. This description forms part of our auditor's report.

James Robert Marchant FCCA (Senior Statutory Auditor)
For and on behalf of Croucher Needham (Essex) LLP

Date:

Chartered Certified Accountants
Statutory Auditor

Market House
10 Market Walk
Saffron Walden
Essex
CB10 1JZ

**STATEMENT OF FINANCIAL ACTIVITIES
FOR THE YEAR ENDED 31 DECEMBER 2022**

	Unrestricted Funds 2022 £	Restricted Funds 2022 £	Total Funds 2022 £	Total Funds 2021 £	Notes
Income and endowments from:					
<i>Donations and legacies</i>					
Appeal Fund, Donations and Bequests	16,878	0	16,878	15,055	
<i>Charitable activities</i>					
Member Entrance fees	2,401	0	2,401	3,949	
C. Math/C Math Teacher Member Entrance fees	709	0	709	709	
Member Subscription fees	338,339	0	338,339	334,168	
Conference and symposium fees	75,132	0	75,132	39,411	
Publications income and Institutional subscriptions	555,280	0	555,280	546,198	
Sundry	2,728	0	2,728	887	
Scholarships	103,579	0	103,579	119,920	
<i>Investment Income</i>	4,347	70	4,417	4,770	16
Total	1,099,393	70	1,099,463	1,065,067	
Expenditure on:					
<i>Charitable Activities</i>					
Branches and groups	10,212	0	10,212	11,552	
Conferences	136,861	0	136,861	80,171	
Education	23,277	0	23,277	27,475	
Grants/Donations	75,772	0	75,772	75,867	1a
Promoting Mathematics	320,754	0	320,754	144,818	1c
Scholarships	79,641	0	79,641	112,153	1c
Mathematics Today	180,479	0	180,479	185,512	
Membership	105,236	0	105,236	137,577	
Professional development	35,788	0	35,788	43,018	
Other publications	39,925	59,857	99,782	59,471	
<i>Governance</i>	55,205	0	55,205	121,546	1d
Total	1,063,149	59,857	1,123,006	999,160	1a
Net movement in funds	36,241 	(59,787)	(23,546)	65,907	
Reconciliation of funds					
Total Funds brought forward at 1 January 2022	1,344,819	133,335	1,478,154	1,412,247	
Total Funds carried forward at 31 December 2022	1,381,060	73,548	1,454,608	1,478,154	

No separate Statement of Total Recognised Gains and Losses has been presented as all such gains and losses have been dealt with in the Statement of Financial Activities.

The net movement in funds arises from the charity's continuing operations.
The detailed Income and Expenditure Account (2022) is attached (Appendix 1a).

BALANCE SHEET AS AT 31 DECEMBER 2022

	2022 £	2021 £	Notes
FIXED ASSETS			
Intangible fixed assets	0	0	2
Tangible assets	93,538	103,186	3
	<u>93,538</u>	<u>103,186</u>	
CURRENT ASSETS			
Stock	4,842	4,843	4
Debtors unrestricted	40,920	339,217	5
Cash at bank and in hand restricted	73,478	133,335	
Cash at bank and in hand unrestricted	1,657,691	1,370,707	
	<u>1,776,931</u>	<u>1,848,102</u>	
LIABILITIES			
Amounts falling due within one year unrestricted	415,860	473,134	
	<u>415,860</u>	<u>473,134</u>	6
NET CURRENT ASSETS	<u>1,361,070</u>	<u>1,374,968</u>	
TOTAL ASSETS LESS CURRENT LIABILITIES	<u>1,454,608</u>	<u>1,478,154</u>	
FUNDS			
Restricted funds	73,548	133,335	
Unrestricted funds	1,381,060	1,344,819	
	<u>1,454,608</u>	<u>1,478,154</u>	

The Financial Statements on page 6 to 16 together with the Trustees' Annual Report (2022) in Appendix 2 were approved and authorised for issue by the Council on 29 March 2023 and signed on their behalf by

PROFESSOR ANDREW OSBALDESTIN	Honorary Treasurer
PROFESSOR PAUL GLENDINNING	President

STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED 31 DECEMBER 2022

Notes

	2022	2021	
	£	£	
Net Cash (used in)/provided by operating activities	<u>222,711</u>	<u>124,674</u>	15
Cash flows from investing activities			
Investment income	4,417	4,770	16
Purchase of fixture and fittings & Equipment	0	(4,003)	
Net Cash (used in)/provided by investing activities	<u>4,417</u>	<u>767</u>	
Change in cash and cash equivalents in the year	227,127	125,441	
Cash and cash equivalent brought forward	1,504,042	1,378,601	
Cash and cash equivalents carried forward	<u>1,731,169</u>	<u>1,504,042</u>	
	(0)	(0)	

FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2022**ACCOUNTING POLICIES****BASIS OF ACCOUNTING**

The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard in the UK and Republic of Ireland (FRS102) (Charities SORP (FRS102)) as updated by the Charities SORP (FRS 102) update bulletin 1, and the Charities Act 2011 and applicable regulations.

TANGIBLE FIXED ASSETS

Fixed assets include properties valued by Chartered Surveyors on an existing use/open market basis. Other fixed assets are stated at historical cost. No fixed asset under £250 is capitalised.

Depreciation is provided on all tangible fixed assets other than freehold land at rates calculated to write each asset down to its estimated residual value evenly over its expected useful life, as follows:-

Freehold buildings	2%
Fixtures, fittings and equipment	15%
Computer equipment	33%

Following the implementation of FRS 102, the charity has followed the transitional provisions to retain the book value of freehold buildings re-valued on 31 December 1991, but not to adopt a policy of revaluation in the future.

INTANGIBLE FIXED ASSETS

The cost of attaining the Royal Charter has been capitalised and has now been written off on a straight line basis over ten years.

STOCK

Stock is valued at the lower of cost and net realisable value. Net realisable value is based upon estimated selling price less further costs expected to be incurred to completion and disposal. Provision is made for obsolete and slow moving items.

FUNDS STRUCTURE

Unrestricted funds comprise those funds which the Trustees are free to use in accordance with the charitable objects. Restricted funds are funds which have been given for particular purposes and projects (see note 7).

LEASED ASSETS AND OBLIGATIONS

All leases are "operating leases" and the annual rentals are charged to the Statement of Financial Activities on a straight line basis over the lease term.

PENSIONS

The Institute operates a defined contribution scheme. The amount charged to the Statement of Financial Activities in respect of pension costs and other post retirement benefits are the contributions in the year.

BRANCHES

The Statement of Financial Activities represents the results of the charity only. The Institute has seven current branches and these are not consolidated on the basis they are not material to the charity. There are no other related parties.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2022**ACCOUNTING POLICIES****INCOMING RESOURCES**

All incoming resources are included in the Statement of Financial Activities when the charity is legally entitled to the income and the amounts can be quantified with reasonable accuracy. The following specific policies are applied to particular categories of income:

- Investment income is included when receivable;
- Incoming resources from publications and conferences are accounted for when earned;
- Subscriptions are recognised over the period to which the fees relate.
- Scholarship income is recognised when invoiced.

To the extent that reliable estimations are available with regard to the final settlement of each accounting year's publication income and expenditure, provision is made for the final settlement figure. Where reliable estimations are not available, no provision is made.

RESOURCES EXPENDED

Resources expended are recognised in the period in which they are incurred and include attributable Input VAT that cannot be recovered. Resources expended are allocated to the particular activity where the cost relates directly to that activity.

Governance costs include the costs of governance arrangements that relate to the general running of the charity. These activities provide the governance infrastructure that allows the charity to operate and to generate the information required for public accountability. They include the strategic planning processes that contribute to the future development of the charity.

Direct expenditure is allocated to categories of activity. Where expenditure cannot be directly allocated it represents support costs and is apportioned on a basis consistent with the use of resources, by reference to the number of staff working on each activity.

The Institute makes grants and donations to members of the mathematics community. The purpose of the grants and donations is to facilitate research activity in all areas of mathematics.

GOVERNMENT GRANTS

Incoming resources from grants are accounted for on an accruals basis for re-imbursement of expenses incurred and entitlement to grant allocation in line with signed contracts.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2022

1.Expenditure on:

a) Analysis of expenditure on	Support Costs £	2022 Direct Costs £	Staff Costs £	2022 Total £	2021 Total £	Notes
<u>Unrestricted funds</u>						
Operating activities in furtherance of Charity's objectives						
Branches and groups	1,725	1,664	6,823	10,212	11,552	
Conferences	17,847	48,419	70,595	136,861	80,171	
Education	4,246	2,235	16,796	23,277	27,475	
Grants/donations	3,649	57,689	14,434	75,772	75,867	
Promoting Mathematics	58,850	29,125	232,779	320,754	144,818	
Scholarships	5,839	50,708	23,094	79,641	112,153	
Mathematics Today	18,644	88,091	73,744	180,479	185,512	
Membership	19,705	7,588	77,943	105,236	137,577	
Professional development	6,701	2,581	26,506	35,788	43,018	
Other publications	3,848	20,858	15,221	39,925	41,694	
Governance	4,910	30,875	19,420	55,205	121,546	
Total unrestricted resources expended	145,964	339,833	577,355	1,063,149	981,383	1b
<u>Restricted funds</u>						
Operating activities in furtherance of Charity's objectives						
QJMAM	0	59,857	0	59,857	17,777	
Mathematics Today (Leslie Fox Prize Fund award)	0	0	0	0	0	
Total resources expended	145,964	399,691	577,356	1,123,006	999,160	
b) Analysis of Total Support Costs	Conferences	Education	Maths Membership Today	Governance	Other	
<u>Unrestricted funds</u>	£	£	£	£	£	£
DMH premises\18 Nelson Street	2,426	577	2,534	2,678	667	10,956
Communications & IT	3,855	917	4,027	4,257	1,061	17,413
Postage & printing	1,257	299	1,313	1,388	346	5,678
Financial costs	9,130	2,172	9,537	10,080	2,511	41,236
Depreciation	1,180	281	1,232	1,303	325	5,329
Total unrestricted	17,847	4,246	18,644	19,706	4,910	80,612
	£					
Conferences	17,847					
Education	4,246					
Mathematics Today	18,644					
Membership	19,705					
Governance	4,910					
Other	80,612					
	145,964					

Direct expenditure is allocated to categories of activity. Where expenditure cannot be directly allocated it represents support costs and is apportioned on a basis consistent with the use of resources, by reference to the number of staff working on each activity.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2022

c) Analysis of promoting mathematics costs

				2022	2021
	Support	Direct			
	Costs	Costs Staff	Costs	Total	Total
	£	£	£	£	£
Maths Careers	4,180	6,296	16,533	27,009	35,497
Maths Matters				0	0
Other	54,670	22,829	216,246	293,745	109,321
Total promoting mathematics costs	58,850	29,125	232,779	320,754	144,818
Scholarships	5,839	50,708	23,094	79,641	112,153
	64,689	79,833	255,873	400,395	256,971

Maths Careers is only supported by the Institute of Mathematics and its Applications.

d) Analysis of governance costs

				2022	2021
	Support	Direct			
	Costs	Costs Staff	Costs	Total	Total
	£	£	£	£	£
Audit fees - Audit of Financial Statements		10,255		10,255	9,135
Legal and professional		2,500		2,500	0
Irrecoverable VAT				0	8,311
Cost of AGM and Trustee travel etc.				0	8,725
Apportionment of staff costs			19,420	19,420	87,342
General overhead costs	4,910	18,120		23,030	8,033
Total governance costs	4,910	30,875	19,420	55,205	121,546

e) Analysis of grants expended

	2022	2021
	Total	Total
	£	£
Educational Grants	600	1,501
Small Grants	10,020	7,300
University Liaison Officer Grants	8,861	3,999
Donation/Sponsorship	0	3,050
CMS	21,006	23,338
	40,487	39,188
	0	0
	40,487	39,188

See notes 6, 8 and 10 in the Trustees Annual Report where details are given for Educational Grants, Small Grants & University Liaison Officer Grants. The grants are payable to individuals £0 and institutions £15,760

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2022

2. INTANGIBLE FIXED ASSETS

	£
Cost: 1st January 2022 and as at 31st December 2022	<u>47,131</u>
Amortisation: as at 1st January 2022 and 31st December 2022	<u>47,131</u>
Net Book value as at 1st January 2022 and as at 31st December 2022	<u>0</u>

Intangible fixed assets represent legal costs incurred in 1992 in respect of the application for a Royal Charter.

3. TANGIBLE FIXED ASSETS

	Freehold property & land	Fixtures fittings & equipment	TOTAL
Cost or valuation: £	£	£	£
Property 1 January 2022	189,750	168,263	358,013
Land 1 January 2022	40,250	0	40,250
Additions	0	0	0
Disposals	<u>0</u>	<u>0</u>	<u>0</u>
31 December 2022	<u>230,000</u>	<u>168,263</u>	<u>398,263</u>
Representing assets stated at:			
Cost	0	168,263	168,263
Valuation	<u>230,000</u>	<u>0</u>	<u>230,000</u>
	<u>230,000</u>	<u>168,263</u>	<u>398,263</u>
Depreciation			
1 January 2022	137,976	157,098	295,073
Charged in the year	4,600	5,049	9,649
Disposals	<u>0</u>	<u>0</u>	<u>0</u>
31 December 2022	<u>142,576</u>	<u>162,147</u>	<u>304,722</u>
Net book value:			
31 December 2022	<u>87,424</u>	<u>6,114</u>	<u>93,538</u>
31 December 2021	<u>92,024</u>	<u>11,163</u>	<u>103,186</u>

The freehold property was revalued at 31 December 1991 by Wheeldon and Deacon, Chartered Surveyors on an existing use open market basis.

The original cost of the freehold land & property was £219,074.

The Council considers that the current value of the property (Catherine Richards House) is to the best of the information available in excess of the 1991 revaluation.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2022

4. STOCKS

	2022	2021
	£	£
Goods for resale	<u>4,842</u>	<u>4,843</u>

5. DEBTORS

	2022	2021
	£	£
Due within one year:		
Trade debtors	1,059	301,385
Prepayments and accrued income	<u>39,861</u>	<u>37,831</u>
	<u>40,920</u>	<u>339,216</u>

Trade and other debtors are recognised at the settlement amount due after any trade discount offered.

Prepayments are valued at the amount prepaid after taking account of any trade discounts due.

6. CREDITORS

	2022	2021
	£	£
Amounts falling due within one year:		
Trade creditors	28,605	19,290
Other taxation and social security costs	58,305	111,454
Accruals	16,543	27,084
Deferred income	<u>312,408</u>	<u>315,305</u>
	<u>415,860</u>	<u>473,133</u>

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

	2022	2021
	£	£
Deferred income b/fwd.	315,305	335,152
Amounts released	(315,305)	(335,152)
Deferred in year	<u>312,408</u>	<u>315,305</u>
Deferred income c/fwd	<u>312,408</u>	<u>315,305</u>

Deferred income mainly consists of publishing and membership income relating to 2023 and will therefore be released next year.

7. MOVEMENTS IN FUNDS

	2022			2021	
		Incoming resources	Resources expended	Transfer between funds	
	£	£	£	£	£
Restricted reserves					
Leslie Fox Prize Fund	3,073	0	0	0	3,073
QJMAM	<u>70,475</u>	<u>70</u>	<u>(59,857)</u>	<u>0</u>	<u>130,262</u>
	<u>73,548</u>	<u>70</u>	<u>(59,857)</u>	<u>0</u>	<u>133,335</u>
Unrestricted funds					
Free reserve	1,319,015	1,095,045	(1,063,149)	0	1,287,119
Gains/(losses) on investment assets	<u>62,046</u>	<u>4,347</u>	<u>0</u>	<u>0</u>	<u>57,699</u>
	<u>1,381,060</u>	<u>1,099,391</u>	<u>(1,063,149)</u>	<u>0</u>	<u>1,344,818</u>
Total restricted and unrestricted funds	<u>1,454,608</u>	<u>1,099,462</u>	<u>(1,123,006)</u>	<u>0</u>	<u>1,478,153</u>

QJMAM funds are held by the Institute of Mathematics and its Application and grants are awarded from the funds upon instruction by the Trustees of QJMAM in line with their terms and conditions.

The Leslie Fox Prize Fund may be used to award biennially for best submission in Numerical Analysis.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2022

8. ANALYSIS OF NET ASSETS BETWEEN FUNDS

	Tangible fixed assets	Net current assets	Fund balance balance
	£	£	£
Unrestricted funds	93,538	1,287,522	1,381,060
Restricted funds	0	73,548	73,548
	<u>93,538</u>	<u>1,361,070</u>	<u>1,454,608</u>

9. COMMITMENTS UNDER OPERATING LEASES

At the reporting end date the charity had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall as follows:

	2022	2021
	£	£
Plant and machinery		
Within one year	1,134	3,210
Between two and five years	0	1,134
Building		
Within one year	0	5,000
Between two and five years	0	0
	<u>1,134</u>	<u>9,344</u>

10. PENSION COSTS

The Institute makes payments to personal pension funds set up by individual members of staff. Contributions payable by the Institute amounted to £53,275 (2021: £59,937).

11. EMPLOYEES

	2022	2021
The average weekly number of persons employed by the Institute regardless of whether they are part time or full time during the year was:		
Management:		
£70,001 - £80,000	1	0
Below £60,000	1	2
Administration:	15	15
Scholarships	1	2
	<u>18</u>	<u>19</u>

	2022	2021
	£	£
Staff costs for the above persons:		
Salaries	488,954	500,015
Pension contributions	39,314	43,179
Social security costs	41,237	41,192
Other costs	7,853	12,553
	<u>577,357</u>	<u>596,940</u>

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2022

12. TAXATION

The Institute is accepted by HM Revenue & Customs as an educational charity and as such is not subject to corporate taxation for activities within its charitable objects.

13. RELATED PARTY TRANSACTIONS

During the year payments were made to Dr Snezana Lawrence and Dr Sophie Carr (Bays Consulting) in relation to services provided as assessors for the mathematics teacher training scholarships amounting to £826, and £1,967 respectively (2021 £3,118 relating to services provided by Dr Snezana Lawrence as an assessor on the teacher training scholarships). In addition, re-imbursed expenses for travel and subsistence to Council Members amounted to £6,209, 12 members re-imbursed (2021: £1,661, 13 members re-imbursed).

14. SCHOLARSHIPS

In 2012 the Teaching Agency approached the IMA to run a Mathematics Initial Teacher Training Scholarship Scheme. Under such a scheme the scholarships would be paid by the DFE (for England only) to run the Scheme. In 2012 costs associated with the negotiation were borne by the IMA. In addition DFE paid for a small grant to develop the submission. DFE announced on 21st December 2012 that the Scheme would be run. The amounts awarded by the DFE were as follows:

Year	Award
2018	194,543
2019	137,739
2020	128,053
2021	119,920
2022	103,579

15. Reconciliation of net movement in funds to net cash flow from operating activities

	2022	2021
	Total	Total
	£	£
Net movement in funds	(23,546)	65,907
Add back depreciation	9,649	12,798
Deduct investment income	(4,417)	(4,770)
Decrease/(increase) in stock	1	(3,358)
Decrease/(increase) in debtors	298,298	9,572
(Decrease)/increase in creditors	(57,273)	44,524
Net cash provided by/(used in) operating activities	<u>222,711</u>	<u>124,674</u>

16. INVESTMENT INCOME

	2022	2021
	Total	Total
	£	£
Interest on cash deposits	4,417	4,770

Investment income includes £70 (2021 £12) in respect of restricted funds.

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS
INCOME AND EXPENDITURE ACCOUNT
FOR THE PERIOD 1st January - 31 December 2022

Appendix 1a

	Unrestricted Funds 2022	Restricted Funds 2022	Total Funds 2022	Total Funds 2021
	£	£	£	£
Incoming resources				
Entrance/Transfer fees	3,110		3,110	4,658
Subscriptions	338,339		338,339	334,168
Publications	555,280		555,280	546,198
Miscellaneous Income	19,606		19,606	887
Appeal fund and bequests	0		0	15,055
Interest Received	4,347	70	4,417	4,770
Conference income	75,132		75,132	39,411
Scholarships & HE STEM	103,579		103,579	119,920
	1,099,393	70	1,099,463	1,065,067
Resources expended				
Salaries, pension & NHI	569,504		569,504	584,386
Other staff expenses	7,853		7,853	12,553
Office overheads	20,934		20,934	17,959
Telephone	3,594		3,594	4,042
General printing, post. & stat.	10,281		10,281	2,065
Office equipment hire & maint.	5,489		5,489	5,656
Council and committee	11,292		11,292	6,961
Travel	16,998		16,998	3,570
Branches and groups	1,000		1,000	1,000
Education	600		600	1,501
Publications (inc. Maths Today)	100,256		100,256	94,470
General expenses	5,280		5,280	8,284
Bank charges	8,585		8,585	6,377
Legal and professional	2,500		2,500	0
Audit and accounts	56,209		56,209	54,629
Depreciation	9,649		9,649	12,798
Subscription to other bodies	12,395		12,395	14,789
Repairs and renewals	3,688		3,688	480
Web-site expenses	1,646		1,646	1,022
Presidential Address	11,793		11,793	2,750
Conference Direct Costs	41,546		41,546	3,469
Grants/Donations	56,284		56,284	51,517
Strategy Review Weekend	5,911		5,911	43
Information Technology	5,490		5,490	3,693
I. T. Consultancy	1,512		1,512	(34)
Careers in M & 50th Ann	4,687		4,687	7,900
Scholarships & HE STEM	48,460		48,460	39,915
Irrecoverable VAT	9,397		9,397	8,311
De Morgan House Rental	8,842		8,842	11,148
De Morgan House Other	4,355		4,355	5,491
18 Nelson Street Rental	6,641		6,641	6,250
18 Nelson Street Other	3,984		3,984	3,750
Development - SRW	253		253	329
Development - Database & Web	6,245		6,245	4,310
	1,063,149	0	1,063,149	981,383
Unrestricted Surplus/(Deficit)	36,241	70	36,311	83,684
Incoming resources				
Publications	0	0	0	0
	0	0	0	0
Resources expended				
Publications	0	59,857	59,857	17,777
	0	59,857	59,857	17,777
Restricted Surplus/(Deficit)	0	(59,856)	(59,856)	(17,776)
Overall Surplus/(Deficit)	36,241	(59,786)	(23,546)	65,907

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2022

12. TAXATION

The Institute is accepted by HM Revenue & Customs as an educational charity and as such is not subject to corporate taxation for activities within its charitable objects.

13. RELATED PARTY TRANSACTIONS

During the year payments were made to Dr Snezana Lawrence and Dr Sophie Carr (Bays Consulting) in relation to services provided as assessors for the mathematics teacher training scholarships amounting to £826, and £1,967 respectively (2021 £3,118 relating to services provided by Dr Snezana Lawrence as an assessor on the teacher training scholarships). In addition, re-imbursed expenses for travel and subsistence to Council Members amounted to £6,209, 12 members re-imbursed (2021: £1,661, 13 members re-imbursed).

14. SCHOLARSHIPS

In 2012 the Teaching Agency approached the IMA to run a Mathematics Initial Teacher Training Scholarship Scheme.

Under such a scheme the scholarships would be paid by the DFE (for England only) to run the Scheme. In 2012 costs associated with the negotiation were borne by the IMA. In addition DFE paid for a small grant to develop the submission. DFE announced on 21st December 2012 that the Scheme would be run. The amounts awarded by the DFE were as follows:

Year	Award
2018	194,543
2019	137,739
2020	128,053
2021	119,920
2022	103,579

15. Reconciliation of net movement in funds to net cash flow from operating activities

	2022	2021
	Total	Total
	£	£
Net movement in funds	(23,546)	65,907
Add back depreciation	9,649	12,798
Deduct investment income	(4,417)	(4,770)
Decrease/(increase) in stock	1	(3,358)
Decrease/(increase) in debtors	298,298	9,572
(Decrease)/increase in creditors	(57,273)	44,524
Net cash provided by/(used in) operating activities	<u>222,711</u>	<u>124,674</u>

16. INVESTMENT INCOME

	2022	2021
	Total	Total
	£	£
Interest on cash deposits	4,417	4,770

Investment income includes £70 (2021 £12) in respect of restricted funds.

Accounts



Incorporated by Royal Charter

Trustees' Annual Report 2021

Registered Charity Number: 1017777

TRUSTEES' REPORT 2021

LEGAL AND ADMINISTRATIVE INFORMATION

This is the Annual Report of the Trustees of 'The Institute of Mathematics and its Applications' (IMA) for the year 2021. The Institute is governed according to a Royal Charter and Byelaws granted in 1990 and revised in 1997, 1999, 2002, 2008 and 2015. The governance and control of the Institute is vested in its Council (i.e. the Trustees). The charity registration number is 1017777.

PRESIDENT

Dr N Chamberlain

VICE-PRESIDENTS

Dr P Rowlett
Dr R Pinch
Dr M Barons

HONORARY TREASURER

Professor A Osbaldestin

HONORARY SECRETARIES

Professor P Glaister
Professor M Grove

PAST PRESIDENTS

Professor A Fitt
Professor C Linton
Professor Dame Celia Hoyles

MEMBERS OF THE COUNCIL

The following were Councillors for the full year:

Mr A Apostolou	Dr S Lawrence (re-elected June 2021)
Professor R Bearon	Professor S Lombardo
Professor C Breward	Professor G Niblo (elected June 2021, previously co-opted)
Mr C Chipperton (re-elected June 2021)	Professor E Rothead
Dr F de Melo Viríssimo (elected June 2021, previously co-opted)	Professor N Steele (co-opted June 2021, previously elected)
Dr M B Dias	Mr N Turner
Professor C Hobbs	

The following was Councillor and Trustee for the period up to 30 June 2021:

Elected Members: Dr S Plata Iturralde.

The following were Councillors and Trustees for the period from 30 June 2021: Dr Eduard Campillo Funollet (co-opted) and Dr S Carr (elected).

The following completed their term of office as Councillors and Trustees at the end of 2021:

Mr A Apostolou and Professor Dame Celia Hoyles.

Additionally, Professor Paul Glendinning succeeded Dr Nira Chamberlain as IMA President with effect from 1 January 2022. Dr Chamberlain remains a Councillor and Trustee of the IMA as as Past President.

The Institute's Head Office is:

Catherine Richards House,
16 Nelson Street,
Southend-on-Sea,
Essex, SS1 1EF.

Its bankers are:

Lloyds Banking Group,
Business Service Centre,
Sedgemoor House,
Deangate Avenue,
Blackbrook Business Park,
Taunton, TA1 2UG.

Its auditors are:

Croucher Needham (Essex) LLP,
Market House
10 Market Walk,
Saffron Walden,
Essex, CB10 1JZ.

STRUCTURE, GOVERNANCE AND MANAGEMENT

As set out in the Royal Charter, the Honorary Officers are appointed by Council. Fifteen further Corporate Members are nominated by the Corporate Members of the Institute. If the number of nominations is more than the number of vacancies, a postal ballot of corporate members is held.

The Council may co-opt any Corporate Member to be a member of the Council, provided that at any time the total number of co-opted members shall not exceed six, of whom not more than one shall be an Associate Member, not more than one will be a Student Member and not more than one shall be an Affiliate Member.

At 4 January 2022 the Secretariat included the following staff of the Charity:

Rosalind Azouzi – Executive Director
Alan Peacock – Operations Director
Joanna Baldacci – Services Officer: Journals and MathsCareers website
Nikki Barnes – Marketing Officer (part-time)
Pam Bye – Conferences and Administration Officer (part-time)
Maya Everson – Conference Officer
Sabeen Hansraj – Membership Assistant
Karen Hedderley – Administration Officer: Mathematics Today (part-time)
Caroline Irwin – Membership Manager
Eugene Kidwell – Services Officer: IT and MathsCareers website
Catherine Marshall – Administration Assistant: Conferences
Alison Penry – Executive Manager: Council, Executive Board and Research Committee
Gemma Reeves – Services Officer: Council, Executive Board and Branches
Natalie Stanton – Membership Officer (part-time)
Debbie Sullivan – Administration Assistant: Professional Standards (part-time)
Vanessa Thorogood – Education Manager and Project Manager, Scholarships
Erica Tyson – University Liaison Officer (part-time)
Rebecca Waters – Editorial Officer

The IMA's organisational structure is led by the Council with support from the Executive Board. Council has responsibility for all decision-making but will normally delegate day-to-day business to committees such as Branches, Communications, Conferences, Early Career Mathematicians, Education, Finance, Journals Board of Management, Mathematics Today Editorial Board, MathsCareers, Membership, Professional Affairs and Research. Matters concerning the Secretariat are normally delegated to the Executive Director. Executive Board includes the Honorary Officers of the Institute (President, Vice-Presidents, Honorary Secretaries, Honorary Treasurer and President Designate/Past President) supported by the Executive Director and ad hominem members. Executive Board prepares and prioritises business for Council and maintains the activities of the IMA between Council Meetings. However, Council maintains overall responsibility for policy and decision making.

Trustees (Councillors) receive two categories of training. The Charity Commission publications "The Essential Trustee: What you need to know, what you need to do (CC3)" and "Managing Charity Finances" are the basis of generic training. Training in Institutional Affairs is provided by an IMA Briefing Pack that Councillors receive when they are appointed.

OBJECTIVES AND ACTIVITIES FOR THE PUBLIC BENEFIT

The Royal Charter sets the IMA's Object(ive)s as:

- to advance mathematics and its applications in all areas including commerce, engineering, finance, health, industry, scientific and other academic disciplines and the public sector and to promote and foster research and other enquiries directed to the advancement, teaching and application of mathematics for the public benefit;
- to seek to establish and maintain high standards of professional conduct for Corporate Members;
- to seek to promote, encourage and guide in the development of education and training in all matters relevant to the advancement of mathematics and its applications for members and all other persons who are engaged in or likely to be engaged in mathematics or its applications.

The activities for the Public Benefit are as set out as Mission and Goals in the Council approved Strategic Review (2018-2023). In particular the Mission is to benefit society through:

- Providing a suite of member focused services commensurate with its position as the principal professional and learned body for mathematics and its applications in the United Kingdom;
- Being a driving force for the use of mathematics in industry and commerce;
- Ensuring that the importance of mathematics is well represented to Government; a major contributor to the promotion of mathematics within the education systems of the United Kingdom, and helping further improve the quality of mathematics teaching, and the supply and support of mathematics teachers;
- Being a major contributor to the promotion of mathematics within the education systems of the United Kingdom, and helping further improve the quality of mathematics teaching, and the supply and support of mathematics teachers;
- Being an influencing voice for the use of mathematics in science, technology, engineering, economics and other fields of endeavour;

- Advancing its reputation as a major contributor to mathematics research initiatives;
- Engaging proactively at all levels with the full spectrum of the media and society for the promotion of mathematics in the UK;
- Adding value to the worldwide mathematics community by providing a range of services, conferences, publications and events that are fulfilling and beneficial for its membership and for mathematics;
- Promoting high standards of professional conduct for members;
- Regulating the Chartered Mathematician and Chartered Mathematics Teacher designations;
- Working with other mathematical organisations to develop a unified voice for mathematics in the UK;
- Collaborating with organisations in other countries to promote mathematics at an international level.

Trustees carefully consider the approved objectives and mission when planning and reviewing activities at their three meetings each year. Council has judged that the 2021 programme has been successful in the delivery of the agreed Objectives and Mission for the public benefit.

ACHIEVEMENTS AND PERFORMANCE IN 2021

Overall

The COVID-19 pandemic continued to dominate IMA activity in 2021, with staff continuing to work mainly from home and nearly all activities taking place online. As in 2020, most services were maintained and operations ran smoothly, and the Trustees remain very appreciative of the staff's hard work and flexibility.

Following the rapid expansion into virtual conferences and events in 2020, the Conference Team focussed this year on embedding and assessing the effectiveness of online delivery, with the primary aims of meeting the needs of delegates and improving accessibility. The team also trialled a hybrid event in September at the Isaac Newton Institute in Cambridge.

Last year we launched a series of Maths Teas virtual events that were established by our Social Media Taskforce. These have proved to be very popular with members, and have continued and expanded in 2021: in particular, we experienced high membership engagement for the Maths Teas which took place during Women's History Month 2021, Pride Month 2021 and Black History Month 2021.

We ran the Department for Education Mathematics Teacher Training Scholarships scheme for a ninth successful year, recommending 260 outstanding applicants for scholarship funds.

A large number of Branch events were held online, allowing members in much greater numbers from around the country to attend these regional events.

We played the leading role with the CMS in the inclusion of mathematics within STEM for Britain at Parliament; the results of the 2021 competition were announced on 8 March.

All issues of Mathematics Today continued to be printed and posted on time.

The membership eBulletins were issued every two months, alternating with Maths Today.

The popular IMA MathsCareers website received 399,939 visits. and increased its followers on Twitter to 7,537. We also issued six more editions of our e16plus newsletter which currently has 1,536 subscribers

Our eStudent offer continues to be highly popular, and we issued five eStudent newsletters to 6,648 subscribers during 2021.

Our grant programmes for research, education and university activities continued to be under-utilised because so few face-to-face activities, which are the mainstay of our grant programmes, could be held.

We ran our regular activities including education, journals, and mathematics consultations.

Our membership numbers continue to be healthy. We have strived to maintain IMA services throughout and we are grateful to all our members who support the Institute and to the Volunteers and Secretariat that maintained our Services to Mathematics at such a high standard in 2021.

SERVICES TO MATHEMATICS

Research Committee

Dr Martine Barons, Vice President Learned Society, chaired the Research Committee in 2021. The full membership of the Committee can be viewed on the IMA website:

<https://ima.org.uk/roles/research-committee/>

These researchers contribute to our discussions with the research funding councils and policy makers, and work to promote the benefits of fundamental and applied mathematical research to the economy and to society. The Research Committee also assess applications for Small Grants.

In addition to the three Committee meetings, Research Committee worked throughout the year, on behalf of the community in many ways, including the following:

- The Committee continued to consider the output of the Big Mathematics Initiative and the proposed creation of the ‘Connected Centres Knowledge Exchange Network’ and ‘Academy for the Mathematical Sciences’. In July several members of the Committee attended a meeting hosted by the IMA Professional Affairs Committee (PAC) at which invited guests, Joanna Jordan and Matt Butchers gave insight into how such initiatives might work. Further details on this topic are included in the update on the Professional Affairs Committee.
- As usual, the Committee worked to support the community in many ways, including by liaison with external bodies. For example, Committee members encouraged others in the community to stand for nomination to the EPSRC Mathematical Sciences Strategic Advisory Team, and an IMA representative attended a learned society workshop which was held as part of the EPSRC review of Doctoral Education.
- Nominations for the inaugural award of the ‘IMA Hedy Lamarr Prize for Knowledge Exchange in Mathematics and its Applications’, which had been introduced to the

community in 2020, closed on 31 January 2021. The first award was made to Professor Rebecca Hoyle for her sustained contributions to knowledge exchange in the mathematical sciences, creating new links between academia and the wider world, and inspiring, enhancing and supporting others in their knowledge exchange.

- Martine Barons worked with IMA and LMS colleagues to organise the 2021 joint IMA-LMS scientific meeting, which took place on 30 September and 1 October, on the theme of ‘Maths in Human Society’. This meeting, which was held virtually, included a number of mathematical lectures, as well as artistic exhibitions; a range of topics including pure and applied geometry, network science, and urban systems featured on the programme. Thanks are given to ICMS for hosting the event as part of its online Mathematical Sciences Seminars and to all involved from both societies, speakers, other participants and attendees.

Journals

The Institute’s eight academic journals are published by Oxford University Press (OUP). Three of these are traditional hybrid print journals:

- *IMA Journal of Applied Mathematics*
Editors: Alan Champneys, (Bristol), and Demetrios Papageorgiou, (Imperial);
- *IMA Journal of Numerical Analysis*
Editors: Arieh Iserles, (Cambridge), Endre Süli, (Oxford) and Charles Elliot (Warwick);
- *Teaching Mathematics and its Applications: an International Journal of the IMA*
Editors: Duncan Lawson, (Coventry); Christopher Sangwin, (Edinburgh) and Cathy Smith (OU).

Four are online only hybrid journals:

- *IMA Journal of Mathematical Control and Information*
Editors: Christophe Prieur (Grenoble), Sarah Spurgeon OBE, (UCL) and Joachim Rudolph (Saarland University);
- *Mathematical Medicine and Biology: A Journal of the IMA*
Editors: Oliver Jensen, (Manchester); John King, (Nottingham), James Keener, (Utah) and Bob. Guy (University of California Davis);
- *Information and Inference: A Journal of the IMA*
Editors: Robert Calderbank, (Duke); David Donoho, (Stanford); John Shawe-Taylor, (UCL) and Jared Tanner, (Oxford);
- *IMA Journal of Management Mathematics*
Editors: Philip Scarf, (Salford); and Aris Syntetos, (Cardiff).

One is an open access only online journal:

- *Transactions of Mathematics and its Applications*
Editor in Chief: Arieh Iserles (Cambridge) and Dominic Vella (Oxford).

Five journals currently have impact factors (IF). During the most recent assessment period the IF increased for *IMA Journal of Numerical Analysis* to 2.601.

Conferences

The IMA Conferences Committee met in January 2021 when it reviewed the position regarding the possibility of in-person conferences resuming in 2021. The committee agreed that we should continue to convert in-person events to online events for the next six months.

The Conferences Committee met again in June 2021, and reviewed the progress made in delivering online events. The committee agreed that the combination of Zoom and additional networking software was working well and that this should be continued for the rest of 2021.

Following the success of the IMA 2020 Mathematics Series in July/August we ran a similar online series in May this year. The IMA 2020 Gold Medal winner, Professor Nick Higham delivered his Gold Medal Lecture as the inaugural event of the 2021 Mathematics series.

The programme for 2021 was as follows:

- *Python for A-Level Mathematics and Beyond - online*
22 & 23 January 2021
- *Early Career Mathematicians Spring Conference - online*
13 March 2021
- *6th IMA Conference on Mathematics in Defence – online*
30 & 31 March 2021
- *3rd Mathematics of Operational Research – online (with the OR Society)*
20-23 April 2021
- *IMA Mathematics 2021- online*
6 May & 25 May 2021
- *11th IMA International Conference on Modelling in Industrial Maintenance and Reliability (MIMAR) – online*
28 June-2 July 2021
- *4th IMA Conference on Nonlinearity and Coherent Structures- online*
7-9 July 2021
- *Python for A-Level Mathematics and Beyond – Summer – online*
16 & 17 July 2021
- *3rd New Lecturers' Induction Course – hybrid (at the INI)*
8 & 9 September 2021
- *2nd IMA Conference on the Mathematics of Robotics - online*
8-10 September 2021
- *Maths in Human Society - Joint conference with LMS – online*
30 September & 1 October 2021
- *Black Heroes of Mathematics Conference –online (with BSHM, ICMS, LMS, INI, ICTP-East African Institute for Fundamental Research, African Institute for Mathematical Sciences and the Mathematical Association)*

5 & 6 October 2021

- *Early Career Mathematicians Autumn Conference – online*
23 October 2021
- *18th IMA International Conference on Cryptography and Coding – online*
14-16 December 2021

The feedback from delegates has been very positive, and we have noted that going online has resulted in an upward trend in female participation, more international delegates, and an overall accessibility of the conferences.

We give our thanks to the mathematical organising committees, and the conference team for working so diligently to ensure effective and engaging online delivery in 2021. We anticipate a mix of online and in-person events in 2022.

IMA Lectures

As reported within the Conferences events section, Professor Nick Higham gave the 2020 Gold Medal Lecture, *Communicating Applied Mathematics in 2021*, online.

Two 16plus lecture events are also reported within the Conferences events section.

Small Grants

The IMA's Small Grants Scheme is designed to be flexible, so that it can be used to facilitate any research activity within the scope of mathematics and its applications. Grants are available up to a value of £600 for individuals and up to £1,200 when enabling an event to take place. Applications are limited to IMA members only.

The budget for 2021 was £12,000. Events continued to be affected by Covid-19 so application numbers were reduced. The Scheme received 10 applications, requesting a total amount of £5,550, however, two were withdrawn. The remaining eight were awarded in full. Awards for 2021 are shown on the IMA website. Included in the financial statements are £1,750 worth of small grant applications relating to 2020.

Education

During 2021, our contribution to mathematics education was led by Professor Michael Grove (Honorary Secretary with responsibility for Education), supported by Professor Nigel Steele (Deputy Honorary Secretary Education), Professor Andrew Osbaldestin (Chair, HEdSA), Mr Christopher (Chris) Chipperton (Chair, S&FE), succeeded by Dr Gordon Laing (Chair, S&FE) and Vanessa Thorogood (Education Manager) together with all our education committee members.

The Education Service Area actively promotes the engagement of the Institute's members in education with its work through communications by email, on the website, and in *Mathematics Today*. For instance:

- notification of the publication of key reports;
- invitations to participate in events and / or contribute to external initiatives;
- opportunity to provide feedback on specific issues;
- invitations to contribute to Institute responses to consultations;

- publication of the Institute's submissions to consultation exercises.

Higher Education

During 2021, HEdSA updated the IMA Employability Statement.

Dr Tony Hill was invited to the meeting to present to HEdSA about his initiative Levelling up: Maths, which aims to support the provision of online tutoring for A-Level Mathematics students who come from underrepresented backgrounds in mathematics. To achieve this, undergraduate student tutors are brought together with A-Level Mathematics students who wish to study a STEM degree at university. The project works with universities who help to identify local schools with students who the project is aimed at, and recruit undergraduate students.

As a result, a Working Group was established to take forward the IMA's involvement with the Scheme and the IMA had engaged with four new universities to join the programme during Autumn 2021.

HE Teaching and Learning Series

The continuation of the COVID-19 pandemic resulted in the already postponed workshops from 2020 being postponed further.

We have agreed with the successful applicants to our third call in 2019/20 that their workshops can be held in 2022 (subject to government advice on COVID-19):

- University of Birmingham - *Making Mathematics Accessible to All*
- Cardiff University & University of Bristol - *Reflection? Action? Research: Enhancing Mathematical Research and Scholarship*
- University of Glasgow - *Assessment strategies for mathematical sciences in the digital era*
- University of Nottingham - *Project-based and synoptic modules*
- University of Plymouth - *Involving employers in the development of the mathematical sciences curriculum*
- University of Sheffield - *Effectively teaching small classes as a postgraduate demonstrator*

Induction Course for New Lecturers

The Induction Course for New Lecturers took place on Wednesday 8 and Thursday 9 September 2021 as a hybrid event.

IMA John Blake University Teaching Medal

The IMA John Blake University Teaching Medal is awarded to individuals who have made a significant and sustained contribution to the teaching of the mathematical sciences at university-level (Level 4 and above). The award is named in honour of Professor John Blake (1947-2016) who, in addition to his research profile in bubble dynamics and low Reynolds number biological flows, was amongst the first true champions of teaching and learning within higher education.

In 2021, the Council of the IMA has awarded the first IMA John Blake University Teaching Medal to Dr Lara Alcock (Reader in mathematics education at Loughborough University).

Course Accreditation

The Institute's Course Accreditation scheme accredits university degree courses from which all its graduates will meet the educational requirements for the CMath designation. A total of 64 universities currently have degrees accredited by the Institute.

During 2021, revised guidelines for Course Accreditation were published and have been fully implemented.

A list of accredited degree courses can be found on the Course Accreditation page of the Institute's website.

In February, the IMA was contacted by Dr Chris Tisdell (Professor of Mathematics and Mathematics Education (UNSW)) in his capacity as Vice-President of the Australian Mathematical Society (Education).

Chris has been given the task of looking into setting up an accreditation scheme for mathematics degrees in Australia and wanted to see what he can learn from the IMA's Course Accreditation scheme.

An online meeting took place, after which, a copy of the Course Accreditation guidelines and associated paperwork was shared with Chris with the proviso that the IMA's assistance is acknowledged if a similar scheme is introduced by the AMS.

Schools and Further Education

Mr Chris Chipperton's second three- term as Chair of the S&FE Committee ended in 2021. Chris was succeeded by Dr Gordon Laing.

- RS ACME Mathematical Futures Call for Views (joint response with HEdSA)
- DfE - Introducing international qualified teacher status (iQTS)
- Ofqual and the DfE Joint Consultation - How GCSE, AS and A level grades should be awarded in summer 2021
- Pearson - National Consultation into the Future of Qualifications and Assessment in the UK
- DfE & Ofqual Consultation: Proposed changes to the assessment of GCSEs, AS and A levels in 2022
- DfE & Ofqual Consultation: Contingency arrangements: GCSE, AS, A level, Project and AEA

Polymaths

Polymaths is a part-time open access course validated by the Institute offered by the University of Bolton. A total of five people was awarded the Polymaths certificate in 2021.

Education Grants

Individuals in schools, FE and HEIs in the UK can apply for a grant, normally up to a maximum of £600, to help with the costs of running or attending an educational activity relating to mathematics.

The Education Grants Judging Panel, consisting of the Institute's Honorary Secretary with Responsibility for Education and the Chairs of the education committees, decides on each

application.

During 2021, the Education Grants scheme received 17 applications; of which three were awarded grants for the full amount requested, one received a reduced grant and 13 were declined.

The Education Grants awarded a total of £1,801.34 in 2021.

Applications approved for 2021 are shown on the Institute's website.

IMA MathsCareers

During 2021 MathsCareers received 399,939 visits. The site is one of the top websites of its kind within the STEM community and continues to be popular among undergraduates seeking career advice as well as school audiences. Content planned for 2022 includes an increased range of articles on GCSE maths topics, as well articles on a variety of mathematical careers. Two contests are run every year where entrants submit posters on a mathematical theme. Members and non-members can take part, including school age children, with an exclusive IMA Water Bottle as the prize.

Social Media is used to raise the profile of IMA MathsCareers, and it now has 7,537 followers on Twitter including several 'verified' followers. The profile of the site, as well as mathematics generally, is raised via the distribution of classroom posters.

Mathematics Teacher Training Scholarships

The IMA, working with LMS, MA, MEI, STEM Learning and RSS, delivered the Mathematics Teacher Training Scholarships on behalf of the Department for Education. The overall aim of the Scholarships scheme is to improve the quality, and widen the pool, of applicants for secondary teacher training by attracting highly qualified graduates and career-changers who might not normally consider teaching as a career.

The 2020/21 (year nine) scheme was announced in October 2020 and opened for applications in January 2021, with a target of awarding 270 Scholarships to those who commence secondary mathematics teacher training in the 2021/22 academic year. We had another successful year, receiving 520 applications and awarding 260 Scholarships. It is important to note that whilst the number of Maths Scholarships is less than the previous year, the number of awards was capped by the Government at 270.

Whilst all our activities remained online during 2020/21, in comparison to previous cohorts of Maths Scholars, we continued to provide the same quality and quantity of CPD for our Maths Scholars. The webinars that our Maths Scholars received were:

- The NRICH Maths Project (Mathematics resources for children, parents and teachers to enrich learning). - Dr Ems Lord (Director of NRICH)
- Operational Research - Let's play with Lego - Robin Wood (The OR Society)
- Using Desmos for Statistics - Natalie Vernon (MEI)
- Finding the Richness - Alison Kiddle (Consulting Mathematician)
- Maths Engagement in and Beyond the Classroom - Jess Sashaw and Beth Hawkins (Science Museum Group Academy)
- Mathemagic! - Steve Lyon and Michael Anderson (STEM Learning)

- Teaching for Mastery and Visual Learning - Simon Mazumder (NW1 Maths Hub)
- What's the point? Bringing the real world into maths lessons with STEM Ambassadors – Tamasin Greenough Graham (North Yorkshire STEM Ambassador Hub)
- Lost in transition? How to support students as they move from KS2 to KS3 - Alison Hopper (MEI)
- Financial Maths - how to make the finance of maths come to life for students - Bobby Seagull (Maths Teacher and Alumni)

Other than the first two webinars, our Alumni were also invited to attend the webinars.

In July we held our final CPD event, the Online Summer Bash 2021, which was hosted by Dr Nira Chamberlain.

To address the lack of networking opportunities that comes with online CPD, The Common Room was established to provide an informal space where Scholars and Alumni can mingle and share resources in a relaxed but purposeful way. There were five Common Rooms held in total.

The tenth year (2021/22) of the Mathematics Teacher Training Scholarships was announced in October 2021 and applications will open in January 2022. There is no change to the financial incentives for those going into mathematics initial teacher training for both the government bursary and the Scholarships. The Maths Scholarship is still a £26k tax-free bursary during the initial teacher training year.

Again, there are 270 Maths Scholarships available for individuals commencing secondary mathematics teacher training in the 2022/23 academic year.

University Liaison

The University Liaison activity increases membership, awareness of, and participation with the IMA amongst undergraduate and postgraduate students, and the university community. This is achieved through newsletters to our nearly 6,800 strong eStudent community, grants to postgraduate and undergraduate student mathematical societies, careers talks for mathematics undergraduates and supporting careers events and student conferences. In 2021 there were five issues of the eStudent newsletter. From October 2021 in-person talks resumed though some remained online. The Tomorrow's Mathematicians Today conference was hosted online in March by University of Greenwich, with over 120 delegates registered across the two days and 18 student presentations.

In 2021, £4,000 was paid in grants. Undergraduate awards were made to the Mathematical societies of the Universities of Aberdeen, Cardiff, Dundee, Newcastle, University College London, and Warwick. Awards were made to the IMA-SIAM Joint Student Chapters of the universities of Cardiff, Dublin, Edinburgh/Heriot-Watt, Sheffield and Warwick. Sponsorship of £850 was also given for prizes for the Oxford Industrially Focused Mathematical Modelling (InFoMM) Graduate Camp and speaker costs at the SIAM UKIE annual conference. Society activities supported included conferences, competitions, talks and participation in IMA conferences. The University Liaison Officer (ULO) delivered 28 careers talks, 15 of which were delivered remotely, and supported two careers panels, eight conferences and the InFoMM camp. Two events were delivered by IMA ambassadors.

In September, Council agreed that the IMA would support the Levelling Up Mathematics project piloted in 2020 by the LMS with the Universities of Durham and Leicester. The University Liaison Officer is coordinating this activity with our partner universities.

Academic Representatives

The Academic Representatives scheme was established by the Institute in 2017, and we currently have 60 Representatives at 58 universities. Representatives are members of academic staff and they support the Institute by highlighting the work of the IMA in the community and beyond, to their students and colleagues, as well as providing feedback on the priorities of academic members. During 2021 two AR Newsletters were sent to help to grow the full membership of students and academics. It is planned that the scheme will develop further over the next year.

Early Career Mathematicians' Group

The Early Career Mathematicians' (ECM) Group aims to provide those starting out in the profession with opportunities to develop their skills and network with peers. Two ECM conferences took place online in March and October. Both conferences were well-attended and offered early-career members a varied programme of engaging talks and dedicated time to network with other attendees. These conferences were organised with assistance from the Secretariat.

The Group also organised a popular Virtual Maths Tea session on the topic of working as a mathematician in industry. The ECM Group continues to work closely with the University Liaison project to recruit student members and is also active on social networking sites.

Professional Affairs

The Professional Affairs Committee (PAC) met three times during 2021 via remote conference facilities, chaired by Richard Pinch. The Key agenda items were advancing a Knowledge Exchange (KE) strategy within the IMA, and engagement with the Data Science Professionalisation steering group, which had emerged in 2020 following an initiative by the Royal Society, and comprising a number of professional bodies led by the RSS.

At the meeting in July, the committee was joined by members of the IMA's Research Committee to discuss KE. The Chair noted that both Executive Board and Council had agreed recently that PAC should take the lead on KE for the IMA to ensure that the non-academic side of KE is properly represented. He welcomed guests, Joanna Jordan and Matt Butchers, who provided an overview of the Connected Centres proposition, and described how they saw the project developing, how the IMA could contribute to the project, and specifically how the IMA could deploy the connection with members in supporting this.

The Employers' Forum did not take place this year due to the ongoing COVID-19 situation. It had been considered whether a specific KE Employers' Forum would be desirable in future, and following the earlier discussion it was agreed that the aim would be to hold an Employers' Forum in person in 2022, possibly with some online component, on the theme of KE, aiming to support some aspect of the proposed Academy of Mathematical Sciences and Connected Centres work programs.

The committee noted that the Data Science Professionalisation steering group had made a proposal regarding new professional designations which would not replace or compete with the chartered or professional designations of any of the existing societies, and which would be awarded in accordance with a jointly agreed set of criteria. This was welcomed as a positive step in improving data skills and enhancing professional standards in Data Science.

Details of our Corporate Affiliate members can be found at:

<https://ima.org.uk/affiliates/corporate-affiliates/>

We are very grateful for the involvement of these organisations with mathematics and with the Institute.

Mathematics Today

We continued to produce six printed issues of our publication in 2021. Highlights include the August Summer 'Bumper' issue, which contained an article by Mark Pencovitch on Knot Theory entitled 'What's Knot to Love?'; this was particularly well received and went on to be awarded the Catherine Richards Prize for the best article published in 2021. We celebrated Black History Month in the October issue, which included the Presidential Address from Dr Nira Chamberlain and learned contributions from mathematicians from ethnic minority groups.

The Graham Hoare Prize 2021 was awarded to Robyn Goldsmith for her entertaining article 'Could Mathematics Be Big at the Box Office?' which was published in the December 2021 issue.

IMA Website and Social Media

The Social Media Task Group was established in 2020 to support the IMA's Marketing Officer with guidance on making mathematical social media posts; and determine how we could connect with our membership during the pandemic. The role of the group continued and expanded in 2021, with new members joining to incorporate a more diverse input. We experienced high membership engagement this year during Women's History Month 2021, Pride Month 2021 and Black History Month 2021. Further information on the work of the group is contained under "Membership Development".

The IMA's presence on social media has increased over the year. We have gained over 3,000 followers on Twitter, bringing our total to 20,190. Our LinkedIn company page has over 20,775 followers. Our Facebook page has over 1130 followers and Facebook group has over 4,500 members. Our newest channel, the IMA Instagram page now has over 470 followers.

Google estimates demographic information about its users which it partially shares with us via our Google Analytics account. This demographic information extends to age and gender. Demographic information provided by Google Analytics of the visitors to the IMA website has been informative: in 2021 more than half of the visitors to the IMA site have been under 34 years of age (57.91%); and the gender distribution of total visitors is around 56/44 split of male to female (in comparison to the current total IMA member split of 75/25 male to female).

Sessions to the IMA website are up this year. Each month of 2021 resulted in more site visits than in 2020, with 1-2k sessions more than the corresponding month in 2020. Visits to the IMA website are up 11 per cent on 2020.

IMA e16plus Newsletter

The e16plus Newsletter published six editions in 2021. It is designed to inspire and raise interest in mathematics amongst 16 to 19-year olds and has 1,515 subscribers. The regular puzzle feature continues to be popular with readers, and the links in the newsletter are designed to encourage engagement with MathsCareers and the IMA website.

Branches

Branches continue to be an important feature of the IMA, providing regional networking opportunities. They are run by committees of local members, with administrative support provided

by the Secretariat.

The six active branches have held varied programmes of events for their members during 2021 and plans for the 2022 programme of talks are underway. Branches continued to provide an interesting selection of talks online, which enabled members who might usually be unable to attend in-person meetings to engage with their local branch. Many talks were recorded and uploaded to the IMA Youtube channel. Making these videos available has increased our interactions threefold and such on-demand content will help us grow engagement in the future. The West Midlands branch held the first hybrid online / in-person talk during November.

Some areas of the UK remain unrepresented by branches; members are encouraged to consider establishing new branches (or reviving dormant ones) in these areas, for which Secretariat assistance continues to be a high priority.

Diversity and Inclusion

The IMA is a signatory of the Science Council Declaration on Diversity, Equality and Inclusion, and Council has appointed champions to lead the IMA in this important agenda. Dr Snezana Lawrence is thanked for her valuable contributions as Diversity Champion during 2021.

By identifying diversity as a cross-cutting theme in all IMA committee meetings many improvements have been identified and achieved. This is reflected in key events and programmes across our portfolio of activities which the IMA has led or partnered over the course of 2021 including:

- International Women's Day Maths Tea event in March 2021;
- Support to the LMS Women in Mathematics Committee through IMA representation;
- Conference Organising Committee Members always take gender equality into account when considering invited speakers, and in the formation of the committee;
- Black Heroes of Mathematics Conference October 2021;
- Black History Month articles in *Mathematics Today* in October 2021;
- Continued commitment to increasing engagement from underrepresented groups through the e16plus Newsletter, MathsCareers website and social media activities;
- Becoming a partner with the Levelling Up: Mathematics programme to provide extra Mathematics tuition for disadvantaged A-Level students.

Our second Membership Diversity Survey was carried out during August; and we thank those members who took the time to respond. This, along with the results of the D&I Progression Framework benchmarking exercise, led by the Science Council and Royal Academy of Engineering, will help shape our plans in this area of work for 2022 and beyond.

MEMBERSHIP and CHARTERED REGISTERS

The Membership Committee, chaired by Professor Paul Glaister, is delegated, by Council, to assess individual membership applications. The Membership Committee is made up of Chartered Mathematicians and Scientists who are Fellows of the Institute. They have a background in at least one of the following major areas of employment for mathematicians: academic research and teaching, schools and further education, industry, commerce, finance and IT.

In 2021 we have had the privilege to welcome over 800 new members and assist 104 existing members in transferring to a higher grade. We have also recruited 18 new Chartered Mathematicians and/or Chartered Scientists.

Membership figures at 31 December 2021:

Honorary Fellow	16
Fellow	1,437
Member	1,297
Associate Member	1,858
Affiliate	543
Student	537
Total	5688

Of the above memberships, 1,483 are registered as Chartered Mathematicians and 213 as Chartered Scientists.

The Institute has continued to support UK University Mathematics Departments by offering over 100 IMA Graduate Prize Memberships in 2021.

Chartered Mathematics Teachers

The Chartered Mathematics Teacher Registration Authority consists of representatives from IMA, Association of Teachers of Mathematics, Mathematical Association, and National Association of Numeracy and Mathematics in Colleges. Professor Paul Glaister, the chair of the Institute's Membership Committee, also chairs the Chartered Mathematics Teacher Registration Authority. At 31 December 2021, we had 43 registered Chartered Mathematics Teachers.

Membership Development

The onset of the pandemic in 2020 led to a switch in focus to ensuring that we maintained close connection with and provided support to our membership. This remained principal focus during 2021.

The IMA "Virtual Maths Teas" launched in 2020, and proved very successful, enabling members to join informal discussions on a range of topics. This continued in 2021 with a further six successful events. The Virtual Maths Tea on 8 March - "Women in Maths" - was so successful that we decided to run the event again on 12 May for Women in Mathematics Day. Due to ongoing popularity, these events will continue into 2022.

The Membership eBulletin continues to be issued every two months, alternating with *Mathematics Today*. The last edition of 2021 was issued in November. The eBulletin issued in early May 2021 contained the following message to members:

"It is now over a year since the first lockdown and we are very pleased to report that our membership numbers continue to be healthy. We have strived to maintain IMA services throughout and we would like to thank you, our members, for your stalwart support during this challenging year. It is very much appreciated by IMA Council, committee members and the staff. We look forward to seeing you at our online (and hopefully in-person) events during the coming year."

REPRESENTATION AND PUBLIC RELATIONS

The Institute co-operated with a wide range of mathematical and scientific bodies. The Institute responded to government and statutory body consultations and was involved in informal contacts with senior officials in these areas. The Institute provided information on career opportunities and

on other aspects of mathematical education and practice.

The IMA believes that mathematics is best served when a unified voice is presented to government and funders. Therefore, whenever possible the IMA promotes its message through the Council for the Mathematical Sciences (which is comprised of the IMA, the London Mathematical Society, the Royal Statistical Society, the Edinburgh Mathematical Society and the Operational Research Society).

IMA and Government

Both in its own right and as a member of CMS, the IMA has been involved with a wide range of engagement activities in Parliament this year.

We continued to run the DfE Mathematics Teacher Training Scholarships scheme.

IMA Council members are in regular contact with DfE and UKRI.

In March a panel of CMS judges, chaired by Professor Helen Wilson, selected the Parliamentary and Scientific Committee STEM for Britain mathematics winners. Once again we are very grateful to the Clay Mathematics Institute and the Heilbronn Institute for their generous sponsorship of these prizes. STEM for Britain is the largest science event held in the Houses of Parliament on an annual basis and helps to strengthen our dialogue with Parliamentarians.

On 13 September, the Parliamentary and Scientific Committee held an IMA-sponsored meeting on Algorithms and Mathematical Modelling. Led by David Youdan and Dr Martine Barons, IMA Vice President Learned Society, the IMA assembled the following team of speakers: Dr Ellen Brooks-Pollock, Dr Nira Chamberlain (IMA President), Professor Hannah Fry and Dr Christian (Kit) Yates who each gave a 10-minute talk, followed by questions from the online audience. 220 people registered to attend this event.

Council for the Mathematical Sciences (CMS)

CMS is composed of IMA, LMS, RSS, EdMS, and ORS, and its leadership changed when Professor Alison Etheridge was appointed as the new chair in June 2021, succeeding Professor Sir Ian Diamond FBA. CMS provides an authoritative and objective body that exists to develop, influence and respond to UK policy issues that affect the mathematical sciences in higher education and research, and therefore the UK economy and society in general.

A number of activities that relate to education and research were advanced together with our sister societies within CMS.

CMS continues to receive briefings from Royal Society ACME, which is funded by the IMA and others.

CMS continued to promote the needs of mathematics to BEIS, DfE, UKRI, the House of Commons Science and Technology Committee, the House of Lords Science and Technology Committee, and the Scottish Funding Council.

The work of the CMS ‘Big Mathematics Initiative’ continued in 2021 with the focus now on the proposed Academy for the Mathematical Sciences and the associated Connected Centres Knowledge Exchange network. A Green Paper was produced at the end of the year to which responses were invited from members of all CMS member body societies. This work will continue into 2022.

London Mathematical Society (LMS)

Throughout 2021 we continued to work with the LMS in many areas including research, Mathematics Teacher Training Scholarships and mathematics promotion.

Together we also award the David Crighton Medal for Services to Mathematics and the Mathematics Community, and the Christopher Zeeman Medal for Mathematics Promotion. In 2021, Professor Caroline Series was awarded the David Crighton Medal, and the associated lecture in a joint programme with Professor Ken Brown, who was awarded the previous David Crighton Medal (2019), is planned for Spring 2022 as an in-person event. It is also hoped that the lecture event associated with Matt Parker's award of the 2020 Christopher Zeeman Medal will be held in 2022; these lectures have been postponed until COVID-19 distancing measures have been relaxed.

As documented in the Research Committee section of this report, a well-attended, fifth scientific meeting of the current IMA-LMS series, titled 'Maths in Human Society' took place online, on 30 September and 1 October.

The IMA continues to work closely with the LMS on a number of activities, from jointly recognizing and celebrating mathematical achievement, to supporting the next generation of mathematicians, in order to ensure the best use of available resources and individual strengths of each organisation.

Other UK Mathematics Organisations

We continue to work closely with the Association of Teachers of Mathematics, the Mathematical Association and NANAMIC in the management of the Chartered Mathematics Teacher Registration Authority.

We also work closely with many sister organisations, Royal Society ACME, NCETM, and the Joint Mathematical Council to promote and support mathematics whenever possible.

The IMA has a representative who is an invited observer to the HoDoMS meetings and activities. The IMA always seeks to develop its higher education strategy in agreement with HoDoMS and the LMS.

UK SET and Others

Science Council

The IMA is a member of Science Council and continues to work cooperatively with Science Council to promote science, including mathematics, to Government.

Throughout 2021 the Chartered Scientist designation has continued to be popular with members with 213 holding the designation.

International

SIAM

IMA members who live in the UK may receive a discounted SIAM membership fee under our reciprocity agreement. (A reciprocal arrangement exists for SIAM members who live in the US). We have joint promotional campaigns and co-operative activities with SIAM and SIAM UKIE.

European Mathematical Society

The IMA is a member of the European Mathematical Society. IMA members pay their discounted subscriptions directly to European Mathematical Society.

ICIAM

The IMA has continued its membership and support of the International Council for Industrial and Applied Mathematics.

FINANCE

The 2021 budget was a loss of £23,622. The result is an unrestricted surplus of £83,672.

In the following section all figures relate to the difference between budget and actual. The most significant reason for the changes was the COVID-19 pandemic. For example, there was a £32k saving in relation to meetings that were held remotely rather than face to face. There were savings in office costs of £25k, due to staff working from home. Lastly, there was a £32k saving in education and grants, due to university's not being at full capacity and lectures being held remotely.

At the end of 2021 the total assets less current liabilities is £1,478,154 of which £133,335 is in relation to restricted reserves. In 2020 the equivalent figure was £ 1,412,247, of which £151,100 was in relation to restricted reserves.

Funds were used to support our charitable aims. There is a clear public benefit in our activities to support education; to run educational conferences; to support mathematics to government; to regulate the profession of Chartered Mathematician; to contribute to the advancement of research initiatives; to be an influencing voice for the use of mathematics across STEM, industry and commerce; and to promote mathematics across media and society in the UK.

Members receive a membership publication. The revenue received from member subscription exceeds the value of direct membership services. The subscription surplus is spent on meeting our charitable objectives.

Finance Committee, which reports to Council, sets the pay and remuneration of the charity's personnel.

Policy on Reserves

'The Institute is a charitable organisation that promotes mathematics and its applications. It is a learned society and a professional body where income is principally based on subscriptions, and revenue from conferences and publications. The Institute requires adequate reserves to provide for any shortfall in immediate income and to allow remedial action in event of any long-term adverse change in circumstances. The Institute also requires financial reserves in order to respond to any major opportunities to develop and promote its objectives.

Council considers that reserves equivalent to one year's standard expenditure (excluding large projects which are not part of standard long-term activities) would be an appropriate level.

When Restricted Funds exist, for example the IMA Leslie Fox Fund, those funds will be used for the purpose for which they are restricted. Restricted reserves will not be counted when calculating the amount of reserves for general purposes.

Council continues to spend some of its reserves to boost future membership (e-16+ newsletter; postgraduate student initiative). The intention of this investment is to increase membership revenues that will recover the cost of development. Finance committee will monitor the effect of this investment on reserves.

Two months' operating expenses should be held as liquid reserves.'

At the end of 2021 the total assets less current liabilities is £1,478,154 (£1,412,247), which represents a coverage of 12-15 months of standard expenditure, and therefore is deemed to meet the policy.

Policy on Investments

‘The IMA holds reserves that are close to one year's standard expenditure (excluding large projects which are not part of standard long-term activities), with a requirement that two months' operating costs should be available at short notice.

The IMA Finance Committee recommends that reserve funds (above those required for operational purposes in the next two months) should be held in high interest deposit accounts, preferably those designed specifically for charities. Decisions on the accounts to be used will be based on interest rates and security. Decisions on the term of deposits will be based on the different interest rates available and the timing of any likely operational requirement for the funds to be deposited.

The amount to be held on deposit will be reviewed by the IMA's Finance Committee every meeting. The interest rates available will be reviewed by the Finance Committee. When time-limited accounts mature, the available options will be reviewed by the Executive Director and the Honorary Treasurer

A target of three months' (no more than six months') budget expenditure should be held with any one authorised financial institution or group.’

Policy on Risks

The Institute has had a regular income flow from subscriptions, publication sales and conference fees. While these may fluctuate on a year-to-year basis, the Institute has sufficient reserves to enable remedial action in event of any short- or medium-term decline. A review of the Institute's freehold property, Catherine Richards House, is conducted regularly to determine any repairs or refurbishment necessary.

Finance Committee agree a paper each year which sets out a range of perceived risks, together with assessments of probability (1-3), severity of consequence (1-3), rating (1-9), and a recovery strategy for each item. In the current risk analysis the highest rated risks and the recovery strategy for these risks are:

- Loss of Key personnel (rated 6)
- Decline in journals revenue (rated 6).

IMA Grant Policy

‘All IMA Grants are retrospectively reviewed at the end of the financial year by the IMA Council or Executive Board. All grant budgets are set by Council before the year begins. Grants are currently awarded by four routes: Small Grants to facilitate research activity; Education Grants; Undergraduate and Postgraduate Grants; and Other Grants. All Grants meet the stated Objectives and Mission of the Charity and produce Public Good.

Small Grants

The purpose of the Institute's Small Grant Scheme is to facilitate research activity in all areas of applicable mathematics. The Small Grant Committee normally awards grants to a value of £600. A higher ceiling figure of £1,200 can apply when the grant would enable a meeting/conference with a mathematical theme to take place.

Education Grants

Individuals in secondary schools, Colleges of Further Education (FE) and Higher Education Institutes (HEIs) in the United Kingdom can apply for a grant to help with the costs of running or attending an educational activity relating to mathematics. Grants to a value of £600 are awarded by the Education Grants Committee.

Undergraduate and Postgraduate Grants

Grants are available to University Mathematics Societies. The Secretariat award grants to a value of up to £400.

Other Grants

These grants are awarded at the discretion of Council or Executive Board to support organisations or activities that promote mathematics and its applications. The exact range of grants is not fixed, but typical examples of grants recipients include: the Council for the Mathematical Sciences; the Advisory Committee on Mathematics Education; the British Applied Mathematics Colloquium; journal prizes; and mathematical events or meetings.

Further details of all grants that can be applied for can be found on the IMA's website.

Going Concern

The Trustees have reviewed the assets, income and regular expenditure of the IMA and satisfied themselves that the Institute is in a good financial position. They are satisfied that the IMA is a Going Concern (as described in the Financial Reporting Council document – Going Concern and Liquidity Risk: Guidance for Directors of UK Companies 2009) and have prepared the Financial Statements on that basis.

FUTURE PLANS

The IMA remains in a secure financial position for 2022, and from this secure position we are continue to plan a phased return to 'the new norm', despite some ongoing uncertainties around Covid-19 and possible future impact on activities.

At the beginning of 2022, the staff team is moving to a structured return to the office, including flexible working, which will be reviewed at the end of the first Quarter of the year. Most services and activities are planned to be virtual for the first six months, however with some hybrid meetings and a tentative plan for in person events. This plan will be reviewed on a regular basis.

The 2022 budget was approved by Council in November 2021 with a planned deficit of -£23,622. This figure represents the first year of a dip in journal sales because of the effects of the pandemic. It is anticipated that this dip will return to normal levels in the next couple of years.

Since the IMA provided a full suite of services in 2020-2021 during the pandemic, it is in a good position to continue with virtual events, transitioning to face-to-face events when this is allowable, and exploring the introduction of hybrid events during 2022. Virtual working and virtual events provided additional benefits to mathematics and members by allowing activities to be available throughout the UK without the personal investment of considerable travel costs [both time and money]. There is also a clear positive impact on diversity, opening up participation levels for those who struggle to travel and/or attend external meetings and evening events. The Institute will continue to consider how to incorporate these benefits into its 'new norm' working. Similarly, services which were successfully introduced in 2020-21, such as the virtual 'Maths Teas' will be continued.

The effect of the pandemic on membership numbers and revenues will be monitored through 2022. September 2021 also marks the end of the current three-year term of the DfE grant to run the

Mathematics Teacher Training Scholarships scheme; this has since been extended for one year and we will learn whether the DfE wants this scheme to continue into 2023 and beyond in England.

The Membership Development Scheme that was an output from the Council Strategy Review of 2017 has now completed its three-year term. The benefits of this scheme will be continued into 2022 and built into normal IMA operations. These include an ongoing focus on attracting members and facilitating their journey to join and stay as members of the IMA through their careers, and the increased activities of promotion via communication, social media and a strong range of services will be maintained.

Several other membership growth initiatives will be continued:

- encouraging the use of the less complex entry mechanism for MIMA and FIMA for those from academia and Corporate Affiliates;
- continuing focus on transferring the eStudents to Student and Associate Members;
- Undergraduate and Postgraduate grants;
- e16plus Newsletter;
- IMA MathsCareers website, which increases branding exposure to a wide range of students of mathematics from age 11 to graduates, and achieved over 399,000 sessions in 2021;
- The liaison programme with undergraduate and postgraduate mathematics organisations will be continued and expanded where possible. Council considers that the support of students' networking, careers advice and mathematical aspirations, in addition to their formal coursework, is highly beneficial.

The IMA will also carry out a review the current qualifications landscape, including the impact of the Apprenticeship Levy on employer programmes for new and existing staff and the introduction of new Apprenticeship Standards which provide new entry routes into numerical careers. We will map these Standards across our current recognition frameworks to assess possibilities for alignment to, or routes into, our Chartered Mathematician Standard. This will also include our support for the work to advance the standards for the professionalisation of those mathematical scientists who work in the field of Data Science, which includes a focus on data ethics.

We will reintroduce our Employer Forums to understand employer needs for future skills development and professionalisation, in preparation for our next Strategic Review for which work will begin in 2022.

The IMA will review the support we provide to the mathematics community for primary school mathematics education and inspiration, both for teachers and pupils, as well as opportunities to highlight the exciting applications of mathematics, and resulting career paths to young people, identifying any gaps in provision for this age group and how these might be addressed. We will seek to return to exhibiting at external STEM engagement events, pandemic permitting, to share our materials and those of partners, and reignite interest in STEM subjects and mathematical careers among young people, teachers, parents and careers advisors.

The Education Small Grants will be allocated to promote mathematics education. Grants of up to £600 will be allocated up to a ceiling of £6,000.

The IMA will continue to run the Mathematics Teacher Training Scholarships scheme in the academic year 2021/2022.

The programme for Early Career Mathematicians will be supported and expanded.

The Institute's conference programme is run under the Learned Society brief. An initial programme of conferences to be run in 2022 is shown below:

- *Python for A-Level Mathematics and Beyond*, 21 and 22 January 2022, online;
- *3rd IMA Conference on Theoretical and Computational Discrete Mathematics*, 4-5 April 2022, online;
- *IMA Early Career Mathematicians' Conference*, 11 & 13 April 2022, Loughborough;
- *3rd IMA Conference on Inverse Problems from Theory to Application*, 3-5 May 2022, Edinburgh;
- *12th International Conference on Mathematics in Signal Processing*, 18-20 May 2022, Aston;
- *3rd IMA Conference on Mathematics in Finance and Climate Change*, 8-10 June 2022, Liverpool;
- *Python for A-Level Mathematics and Beyond*, 20-24 June 2022, online;
- *7th IMA Conference on Numerical Linear Algebra and Optimization*, 29 June- 1 July 2022, Birmingham;
- *IMA Mathematics in Music*, 13-15 July 2022, London;
- *4th Induction Course for New Lecturers*, (date tbc), Isaac Newton Institute, Cambridge;
- *IMA Early Career Mathematicians' Conference*, October/ November 2022 (date tbc), online;
- *4th IMA Conference on the Mathematical Challenges of Big Data*, October/ November 2022 (date tbc), Oxford.

SOURCES OF FUNDING

Key unrestricted revenue streams were:

- | | |
|----------------------------|----------|
| • Publications | £546,198 |
| • Membership Subscriptions | £334,168 |
| • Conference Income | £39,411 |

Some of our most significant charitable activities during the year were:

- | | |
|-------------------|----------|
| • Promoting Maths | £144,818 |
|-------------------|----------|

- Education £27,475
- Maths Today £185,512
- Conference Expenditure £80,171
- Grants £75,867

The expenditure of our incoming resources on these charitable activities was completely in line with our charitable objectives.

The non-current reserves of the Institute on 31/12/2021 were held with the following Finance Organisations: £206,369 is held at the Charity Bank, £209,307 at the Clydesdale Bank, £313,442 at Shawbrook Bank, and £623,735 at Lloyds; and £151,112 at Lloyds held on behalf of the Leslie Fox and QJMAM.

Prepared by Alan Peacock and Dave Lloyd

Approved by Honorary Treasurer, Professor Andrew Osbaldestin:

Date: 30 March 2022

Approved by President, Professor Paul Glendinning:

Date: 30 March 2022



Institute of
mathematics
& its applications

Incorporated by Royal Charter

Financial Statements

31 DECEMBER 2021

The Institute of Mathematics and its Applications
Registered Charity Number: 1017777

REPORT OF THE COUNCIL

The Council submits its report and the financial statements of The Institute of Mathematics and its Applications for the year ended 31 December 2021. The Financial Statements have been prepared in accordance with the accounting policies set out on pages 7 and 8 to the accounts and comply with the Institute's Trust Deed, the Charities Act 2011 and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) – (Charities SORP (FRS 102) as updated by the Charities SORP (FRS 102) update bulletin 1).

PRINCIPAL ACTIVITIES

The principal activity of the Institute during the year was the operation of a learned and professional society for those involved in all areas of mathematics and its applications, working as a charity for the public benefit.

REVIEW OF THE BUSINESS AND FUTURE DEVELOPMENTS

Council considers that the Institute's state of affairs is satisfactory, and that future results will revert to a close to breakeven result.

The Council members also produce a Trustees' Annual Report (2021) (Appendix 2 – attached) which reports Legal and Administrative Information; Activities and Achievements; and Future Plans.

RESULTS

The Statement of Financial Activities on page 6 shows a surplus in reserves of £65,907 for the year compared to a surplus of £231,234 in the previous year. During the year, income of a restricted nature amounting to £12 was received. Total unrestricted net assets at the year end amount to £1,344,819 (2020: £1,261,148). Restricted Net assets for 2021 were £133,335 (2020: £151,100).

COUNCIL

The constitution of the Council on 31 December 2021 was as follows:

PRESIDENT

Dr N Chamberlain (succeeded on 31 December 2021)
Professor P Glendinning (From 1 January 2022)

VICE-PRESIDENTS

Dr P Rowlett
Dr R Pinch
Dr M Barons

HONORARY TREASURER

Professor A Osbaldestin

HONORARY SECRETARIES

Professor P Glaister
Professor M Grove

PAST PRESIDENTS

Professor A Fitt
Professor C Linton
Professor Dame C Hoyles

MEMBERS OF THE COUNCIL

Professor R Bearon	Dr F de Melo Virissimo	Professor G Niblo
Professor C Breward	Dr B Dias	Professor E Rothead
Dr E Campillo Funollet	Professor C Hobbs	Professor N Steele
Dr S Carr	Dr S Lawrence	Mr N Turner
Mr C Chipperton	Professor S Lombardo	

In addition the following served as members of the Council until their retirement during the year:
Dr S Plata Iturralde

The following completed their term of office as Councillors and Trustees at the end of 2021:
Mr A Apostolou Professor Dame C Hoyles

REPORT OF THE COUNCIL***TAX STATUS***

The Institute is accepted by the HM Revenue & Customs as an educational charity. As a charity, the Institute is exempt from tax on income and gains to the extent these are applied to its charitable objects. No tax charges have arisen in the Institute.

AUDITORS

During the year, Croucher Needham (Essex) LLP were re-appointed as auditors and a resolution to reappoint them as auditors will be put to the members at the Annual General Meeting.

By order of the Council

Dr R Pinch

30 March 2022

Catherine Richards House
16 Nelson Street
Southend-on-Sea
Essex
SS1 1EF

TRUSTEES' RESPONSIBILITIES IN THE PREPARATION OF FINANCIAL STATEMENTS

The Trustees (Council members) are responsible for preparing the Trustees' Annual Report and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The Royal Charter of Incorporation and the law applicable to charities in England & Wales requires the Trustees' (Council members) to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Institute and of the incoming resources and application of resources of the Institute for that period. In preparing these financial statements, the Trustees (Council members) are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements and;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Institute will continue in business.

The Trustees (Council members) are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Institute and to enable them to ensure that the financial statements comply with the Charities Act 2011, the Charity (Accounts and Reports) Regulations 2008 and the provisions of the Royal Charter of Incorporation. They are also responsible for safeguarding the assets of the Institute and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

INDEPENDENT AUDITORS' REPORT TO THE TRUSTEES OF THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS**OPINION**

We have audited the financial statements of The Institute of Mathematics and its Applications (the 'charity') for the year ended 31 December 2021 which comprise the statement of financial activities, the balance sheet, the statement of cash flows and the notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" (United Kingdom Generally Accepted Accounting Practice). In our opinion the financial statements:

- give a true and fair view of the state of the charity's affairs as at 31 December 2021 and of its incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

BASIS FOR OPINION

We have been appointed as auditors under section 144 of the Charities Act 2011 and report in accordance with regulations made under section 154 of that Act. We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the charity in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

CONCLUSIONS RELATING TO GOING CONCERN

In auditing the financial statements, we have concluded that the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue. Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

OTHER INFORMATION

The other information comprises the information included in the annual report other than the financial statements and our auditor's report thereon. The trustees are responsible for the other information contained within the annual report. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon. Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

We have nothing to report in respect of the following matters in relation to which the Charities (Accounts and Reports) Regulations 2008 require us to report to you if, in our opinion:

- the information given in the financial statements is inconsistent in any material respect with the Trustees Annual Report; or
- sufficient accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records; or
- we have not received all the information and explanations we require for our audit.

RESPONSIBILITIES OF TRUSTEES

Page 4

As explained more fully in the Statement of Trustees' responsibilities in the preparation of financial statement, the trustees, who are also the directors of the charity for the purposes of company law, are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the financial statements, the trustees are responsible for assessing the charity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to cease operations, or have no realistic alternative but to do so.

AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

THE EXTENT TO WHICH THE AUDIT WAS CONSIDERED CAPABLE OF DETECTING IRREGULARITIES, INCLUDING FRAUD

Irregularities, including fraud, are instances of non-compliance with laws and regulations. The objectives of our audit are to obtain sufficient appropriate audit evidence regarding compliance with laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements, to perform audit procedures to help identify instances of non-compliance with other laws and regulations that may have a material effect on the financial statements and to respond appropriately to identified or suspected non-compliance with laws and regulations identified during the audit.

However, it is the primary responsibility of management, with the oversight of those charged with governance, to ensure that the entity's operations are conducted in accordance with applicable laws and regulations and for the prevention and detection of fraud.

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud, the audit engagement team:

- obtained an understanding of the nature of the charity, including the legal and regulatory framework that the charity operates in and how the charity is complying with the legal and regulatory framework;
- inquired of management, and those charged with governance, about their own identification and assessment of the risks of irregularities, including any known actual, suspected or alleged instances of fraud; and
- discussed matters about non-compliance with laws and regulations and how fraud might occur including assessment of how and where the financial statements may be susceptible to fraud.

As a result of these procedures we consider the most significant laws and regulations that have a direct impact on the financial statements are:

- FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice);
- The Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (The FRS 102 Charities SORP);
- The Charities (Accounts and Reports) Regulations 2008; and
- The Charities Act 2011.

The audit engagement team identified the risks of transactions with unidentified related parties and management override of controls as the areas where the financial statements were most susceptible to material misstatement due to fraud.

Based on the results of our risk assessment we designed audit procedures to identify fraud or non-compliance with such laws and regulations identified above. The relevant audit procedures performed included but were not limited to:

- obtaining the trustees' register of interests and corroborating entries by reviewing entries on the Charities Commission website;
- inspecting minutes of Trustees' meetings;
- maintaining vigilance throughout the audit work to identify all related parties;
- identifying and reviewing unusual accounting transactions and journal entries;
- discussions with management including consideration of known or suspected instances of non-compliance with laws and regulations and fraud; and
- performing a detailed review of the completeness and accuracy of disclosures.

A further description of our responsibilities is available on the Financial Reporting Council's website at: <https://www.frc.org.uk/auditorsresponsibilities>. This description forms part of our auditor's report.

James Robert Marchant FCCA (Senior Statutory Auditor)
For and on behalf of Croucher Needham (Essex) LLP

Date:

Chartered Certified Accountants
Statutory Auditor

Market House
10 Market Walk
Saffron Walden
Essex
CB10 1JZ

**STATEMENT OF FINANCIAL ACTIVITIES
FOR THE YEAR ENDED 31 DECEMBER 2021**

	Unrestricted Funds 2021 £	Restricted Funds 2021 £	Total Funds 2021 £	Total Funds 2020 £	Notes
Income and endowments from:					
<i>Donations and legacies</i>					
Appeal Fund, Donations and Bequests	15,055	0	15,055	250	
Gift Aid	0	0	0	0	
<i>Charitable activities</i>					
Member Entrance fees	3,949	0	3,949	2,804	
C. Math/C Math Teacher Member Entrance fees	709	0	709	709	
Member Subscription fees	334,168	0	334,168	328,752	
Conference and symposium fees	39,411	0	39,411	(3,226)	
Publications income and Institutional subscriptions	546,198	0	546,198	700,343	
Miscellaneous income	887	0	887	435	
Careers in Mathematics	0	0	0	0	
Scholarships	119,920	0	119,920	128,053	
Education	0	0	0	0	
<i>Investment Income</i>	4,758	12	4,770	8,523	16
Total	1,065,055	12	1,065,067	1,166,642	
Expenditure on:					
<i>Charitable Activities</i>					
Branches and groups	11,552	0	11,552	10,408	
Conferences	80,171	0	80,171	106,823	
Education	27,475	0	27,475	25,980	
Grants/Donations	75,867	0	75,867	56,325	1a
Promoting Mathematics	144,818	0	144,818	136,361	1c
Scholarships	112,153	0	112,153	114,265	1c
Mathematics Today	185,512	0	185,512	169,769	
Membership	137,577	0	137,577	117,867	
Professional development	43,018	0	43,018	53,883	
Other publications	41,694	17,777	59,471	36,500	
<i>Governance</i>	121,546	0	121,546	107,227	1d
Total	981,383	17,777	999,160	935,408	1a
Net movement in funds	83,672	(17,765)	65,907	231,234	
Reconciliation of funds					
Total Funds brought forward at 1 January 2021	1,261,147	151,100	1,412,247	1,181,014	
Total Funds carried forward at 31 December 2021	1,344,819	133,335	1,478,154	1,412,247	7

No separate Statement of Total Recognised Gains and Losses has been presented as all such gains and losses have been dealt with in the Statement of Financial Activities.

The net movement in funds arises from the charity's continuing operations.
The detailed Income and Expenditure Account (2021) is attached (Appendix 1a).

BALANCE SHEET AS AT 31 DECEMBER 2021

	2021 £	2020 £	Notes
FIXED ASSETS			
Intangible fixed assets	0	0	2
Tangible assets	<u>103,186</u>	<u>111,983</u>	3
	<u>103,186</u>	<u>111,983</u>	
CURRENT ASSETS			
Stock	4,843	1,485	4
Debtors unrestricted	339,217	348,788	5
Cash at bank and in hand restricted	133,335	151,100	
Cash at bank and in hand unrestricted	<u>1,370,707</u>	<u>1,227,501</u>	
	<u>1,848,102</u>	<u>1,728,874</u>	
LIABILITIES			
Amounts falling due within one year restricted	0	0	
Amounts falling due within one year unrestricted	<u>473,134</u>	<u>428,610</u>	
	<u>473,134</u>	<u>428,610</u>	6
NET CURRENT ASSETS	<u>1,374,968</u>	<u>1,300,265</u>	
TOTAL ASSETS LESS CURRENT LIABILITIES	<u>1,478,154</u>	<u>1,412,247</u>	
FUNDS			
Restricted funds	133,335	151,101	
Unrestricted funds	<u>1,344,819</u>	<u>1,261,147</u>	
	<u>1,478,154</u>	<u>1,412,247</u>	7

The Financial Statements on page 6 to 16 together with the Trustees' Annual Report (2021) in Appendix 2 were approved and authorised for issue by the Council on 30 March 2022 and signed on their behalf by

PROFESSOR ANDREW OSBALDESTIN

Honorary Treasurer

PROFESSOR PAUL GLENDINNING

President

**STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED 31 DECEMBER 2021**

Notes

	2021 £	2020 £	
Net Cash (used in)/provided by operating activities	<u>124,674</u>	<u>(99,723)</u>	15
Cash flows from investing activities			
Investment income	4,770	8,523	16
Purchase of fixture and fittings & Equipment	(4,003)	(8,990)	
Net Cash (used in)/provided by investing activities	<u>767</u>	<u>(466)</u>	
Change in cash and cash equivalents in the year	125,441	(100,189)	
Cash and cash equivalent brought forward	1,378,601	1,478,791	
Cash and cash equivalents carried forward	<u><u>1,504,042</u></u>	<u><u>1,378,601</u></u>	

FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021**ACCOUNTING POLICIES****BASIS OF ACCOUNTING**

The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard in the UK and Republic of Ireland (FRS102) (Charities SORP (FRS102)) as updated by the Charities SORP (FRS 102) update bulletin 1, and the Charities Act 2011 and applicable regulations.

TANGIBLE FIXED ASSETS

Fixed assets include properties valued by Chartered Surveyors on an existing use/open market basis. Other fixed assets are stated at historical cost. No fixed asset under £250 is capitalised.

Depreciation is provided on all tangible fixed assets other than freehold land at rates calculated to write each asset down to its estimated residual value evenly over its expected useful life, as follows:-

Freehold buildings	2%
Fixtures, fittings and equipment	15%
Computer equipment	33%

Following the implementation of FRS 102, the charity has followed the transitional provisions to retain the book value of freehold buildings re-valued on 31 December 1991, but not to adopt a policy of revaluation in the future.

INTANGIBLE FIXED ASSETS

The cost of attaining the Royal Charter has been capitalised and has now been written off on a straight line basis over ten years.

STOCK

Stock is valued at the lower of cost and net realisable value. Net realisable value is based upon estimated selling price less further costs expected to be incurred to completion and disposal. Provision is made for obsolete and slow moving items.

FUNDS STRUCTURE

Unrestricted funds comprise those funds which the Trustees are free to use in accordance with the charitable objects. Restricted funds are funds which have been given for particular purposes and projects (see note 7).

LEASED ASSETS AND OBLIGATIONS

All leases are "operating leases" and the annual rentals are charged to the Statement of Financial Activities on a straight line basis over the lease term.

PENSIONS

The Institute operates a defined contribution scheme. The amount charged to the Statement of Financial Activities in respect of pension costs and other post retirement benefits are the contributions in the year.

BRANCHES

The Statement of Financial Activities represents the results of the charity only. The Institute has seven current branches and these are not consolidated on the basis they are not material to the charity. There are no other related parties.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021**ACCOUNTING POLICIES****INCOMING RESOURCES**

All incoming resources are included in the Statement of Financial Activities when the charity is legally entitled to the income and the amounts can be quantified with reasonable accuracy. The following specific policies are applied to particular categories of income:

- Investment income is included when receivable;
- Incoming resources from publications and conferences are accounted for when earned;
- Subscriptions are recognised over the period to which the fees relate.
- Scholarship income is recognised when invoiced.

To the extent that reliable estimations are available with regard to the final settlement of each accounting year's publication income and expenditure, provision is made for the final settlement figure. Where reliable estimations are not available, no provision is made.

RESOURCES EXPENDED

Resources expended are recognised in the period in which they are incurred and include attributable Input VAT that cannot be recovered. Resources expended are allocated to the particular activity where the cost relates directly to that activity.

Governance costs include the costs of governance arrangements that relate to the general running of the charity. These activities provide the governance infrastructure that allows the charity to operate and to generate the information required for public accountability. They include the strategic planning processes that contribute to the future development of the charity.

Direct expenditure is allocated to categories of activity. Where expenditure cannot be directly allocated it represents support costs and is apportioned on a basis consistent with the use of resources, by reference to the number of staff working on each activity.

The Institute makes grants and donations to members of the mathematics community. The purpose of the grants and donations is to facilitate research activity in all areas of mathematics.

GOVERNMENT GRANTS

Incoming resources from grants are accounted for on an accruals basis for re-imbursement of expenses incurred and entitlement to grant allocation in line with signed contracts.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021

1.Expenditure on:

a) Analysis of expenditure on	Support Costs £	2021 Direct Costs £	Staff Costs £	2021 Total £	2020 Total £	Notes
<u>Unrestricted funds</u>						
Operating activities in furtherance of Charity's objectives						
Branches and groups	1,635	1,748	8,169	11,552	10,408	
Conferences	11,888	8,903	59,380	80,171	106,823	
Education	4,026	3,341	20,107	27,475	25,980	
Grants/donations	3,774	53,242	18,851	75,867	56,325	
Promoting Mathematics	20,946	19,251	104,622	144,818	136,361	
Scholarships	11,196	45,033	55,924	112,153	114,265	
Mathematics Today	17,109	82,947	85,457	185,512	169,769	
Membership	21,323	9,747	106,507	137,577	117,867	
Professional development	6,667	3,048	33,303	43,018	53,883	
Other publications	3,460	20,955	17,280	41,694	30,211	
Governance	17,486	16,718	87,342	121,546	107,227	
Total unrestricted resources expended	119,512	264,932	596,940	981,383	929,119	1b

Restricted funds

Operating activities in furtherance of Charity's objectives					
QJMAM	0	17,777	0	17,777	6,289
Mathematics Today (Leslie Fox Prize Fund award)	0	0	0	0	0

Total resources expended	119,512	282,709	596,940	999,160	935,408
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b) Analysis of Total Support Costs	Governance	Conferences	Education	Maths Today	Membership	Other
<u>Unrestricted funds</u>	£	£	£	£	£	£
DMH premises\18 Nelson Street	3,349	2,277	771	3,277	4,084	9,131
Communications & IT	3,754	2,552	864	3,673	4,578	10,237
Postage & printing	302	205	70	296	368	824
Financial costs	8,208	5,581	1,890	8,031	10,010	22,381
Depreciation	1,873	1,273	431	1,832	2,283	5,106
Total unrestricted	17,486	11,888	4,026	17,109	21,323	47,679

	£
Governance	17,486
Conferences	11,888
Education	4,026
Maths Today	17,109
Membership	21,323
Other	47,679
	119,512

Direct expenditure is allocated to categories of activity. Where expenditure cannot be directly allocated it represents support costs and is apportioned on a basis consistent with the use of resources, by reference to the number of staff working on each activity.

**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2021**

c) Analysis of promoting mathematics costs

				2021	2020
	Support Costs	Direct Costs	Staff Costs	Total	Total
	£	£	£	£	£
Maths Careers	4,277	9,855	21,364	35,497	27,572
Maths Matters	0	0	0	0	51,290
Other	16,669	9,395	83,257	109,321	57,500
Total promoting mathematics costs	20,946	19,251	104,622	144,818	136,361
Scholarships	11,196	45,033	55,924	112,153	114,265
	32,142	64,283	160,545	256,971	250,626

Maths Careers is only supported by the Institute of Mathematics and its Applications.

d) Analysis of governance costs

				2021	2020
	Support Costs	Direct Costs	Staff Costs	Total	Total
	£	£	£	£	£
Audit fees - Audit of Financial Statements	0	9,135	0	9,135	8,735
Legal and professional	0	0	0	0	0
Irrecoverable VAT	8,311	0	0	8,311	13,377
Cost of AGM and Trustee travel etc.	0	8,725	0	8,725	1,840
Apportionment of staff costs	0	0	87,342	87,342	77,419
General overhead costs	8,033	0	0	8,033	5,856
Total governance costs	16,344	17,860	87,342	121,546	107,227

e) Analysis of grants expended

	2021	2020
	Total	Total
	£	£
Educational Grants	1,501	2,846
Small Grants	7,300	3,886
University Liaison Officer Grants	3,999	7,200
Donation/Sponsorship	3,050	1,138
CMS	23,338	14,529
HE Educational Grants	0	3,500
ACME	0	0
	39,188	33,099
Less: Allocated to development of membership growth £8,000.	0	0
	39,188	33,099

See notes 6, 8 and 10 in the Trustees Annual Report where details are given for Educational Grants, Small Grants & University Liaison Officer Grants. The grants are payable to individuals £0 and institutions £13,000.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021

2. INTANGIBLE FIXED ASSETS

	£
Cost: 1st January 2021 and as at 31st December 2021	<u>47,131</u>
Amortisation: as at 1st January 2021 and 31st December 2021	<u>47,131</u>
Net Book value as at 1st January 2021 and as at 31st December 2021	<u>0</u>

Intangible fixed assets represent legal costs incurred in 1992 in respect of the application for a Royal Charter.

3. TANGIBLE FIXED ASSETS

	Freehold property & land	Fixtures fittings & equipment	TOTAL
Cost or valuation: £	£	£	£
Property 1 January 2021	189,750	164,260	354,010
Land 1 January 2021	40,250	0	40,250
Additions	0	4,003	4,003
Disposals	0	0	0
31 December 2021	<u>230,000</u>	<u>168,263</u>	<u>398,263</u>
Representing assets stated at:			
Cost	0	168,263	168,263
Valuation	<u>230,000</u>	<u>0</u>	<u>230,000</u>
	<u>230,000</u>	<u>168,263</u>	<u>398,263</u>
Depreciation			
1 January 2021	133,376	148,900	282,276
Charged in the year	4,600	8,197	12,797
Disposals	0	0	0
31 December 2021	<u>137,976</u>	<u>157,097</u>	<u>295,073</u>
Net book value:			
31 December 2021	<u>92,024</u>	<u>11,162</u>	<u>103,186</u>
31 December 2020	<u>96,624</u>	<u>15,359</u>	<u>111,983</u>

The freehold property was revalued at 31 December 1991 by Wheeldon and Deacon, Chartered Surveyors on an existing use open market basis.

The original cost of the freehold land & property was £219,074.

The Council considers that the current value of the property (Catherine Richards House) is to the best of the information available in excess of the 1991 revaluation.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021

4. STOCKS

	2021	2020
	£	£
Goods for resale	<u>4,843</u>	<u>1,485</u>

5. DEBTORS

	2021	2020
	£	£
Due within one year:		
Trade debtors	301,385	317,324
Prepayments and accrued income	<u>37,831</u>	<u>31,464</u>
	<u>339,217</u>	<u>348,788</u>

Trade and other debtors are recognised at the settlement amount due after any trade discount offered. Prepayments are valued at the amount prepaid after taking account of any trade discounts due.

6. CREDITORS

	2021	2020
	£	£
Amounts falling due within one year:		
Trade creditors	19,290	3,642
Other taxation and social security costs	111,454	63,693
Accruals	27,084	26,123
Deferred income	<u>315,305</u>	<u>335,152</u>
	<u>473,134</u>	<u>428,610</u>

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

	2021	2020
	£	£
Deferred income b/fwd.	335,152	340,572
Amounts released	(335,152)	(340,572)
Deferred in year	<u>315,305</u>	<u>335,152</u>
Deferred income c/fwd	<u>315,305</u>	<u>335,152</u>

Deferred income mainly consists of publishing income relating to 2022 and will therefore be released next year.

7. MOVEMENTS IN FUNDS

The transfer from the revaluation reserve represents the difference between the depreciation charge of the property on an historic cost basis compared to the depreciation charge based on the revalued cost.

	2021		2020	
		Incoming resources	Resources expended	Transfer between funds
	£	£	£	£
Restricted reserves				
Leslie Fox Prize Fund	3,073	0	0	0
QJMAM	130,262	12	(17,777)	0
	<u>133,335</u>	<u>12</u>	<u>(17,777)</u>	<u>0</u>
Unrestricted funds				
Free reserve	1,287,119	1,060,297	(981,383)	0
Gains/(losses) on investment assets	57,699	4,758	0	0
Revaluation reserve	0	0	0	0
	<u>1,344,819</u>	<u>1,065,055</u>	<u>(981,383)</u>	<u>0</u>
Total restricted and unrestricted funds	<u>1,478,154</u>	<u>1,065,067</u>	<u>(999,160)</u>	<u>0</u>

The Leslie Fox Prize Fund may be used to award biennially for best submission in Numerical Analysis.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021

8. ANALYSIS OF NET ASSETS BETWEEN FUNDS

	Tangible fixed assets	Net current assets	Fund balance balance
	£	£	£
Unrestricted funds	103,186	1,241,633	1,344,818
Restricted funds	0	133,335	133,335
	<u>103,186</u>	<u>1,374,968</u>	<u>1,478,153</u>

9. COMMITMENTS UNDER OPERATING LEASES

At the reporting end date the charity had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall as follows:

	2021	2020
	£	£
Plant and machinery		
Within one year	3,210	3,210
Between two and five years	1,134	4,344
Building		
Within one year	5,000	5,000
Between two and five years	0	5,000
	<u>9,344</u>	<u>17,554</u>

10. PENSION COSTS

The Institute makes payments to personal pension funds set up by individual members of staff. Contributions payable by the Institute amounted to £59,937 (2020: £51,144).

11. EMPLOYEES

	2021	2020
	No.	No.
The average weekly number of persons employed by the Institute regardless of whether they are part time or full time during the year was:		
Management:		
£80,001 - £90,000	0	1
£70,001 - £80,000	0	0
Below £60,000	2	1
Administration:	15	15
Scholarships	2	1
	<u>19</u>	<u>18</u>

	2021	2020
	£	£
Staff costs for the above persons:		
Salaries	500,015	472,754
Pension contributions	43,179	56,772
Social security costs	41,192	42,207
Other costs	12,553	2,859
	<u>596,940</u>	<u>574,592</u>

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021

12. TAXATION

The Institute is accepted by HM Revenue & Customs as an educational charity and as such is not subject to corporate taxation for activities within its charitable objects.

13. RELATED PARTY TRANSACTIONS

There were no related party transactions during the year.

During the year payments were made to Dr Snezana Lawrence and Dr Sophie Carr (Bays Consulting) in relation to services provided as assessors for the mathematics teacher training scholarships amounting to £1,889, and £1,229 respectively (2020 £1,469 relating to services provided by Dr Snezana Lawrence as an assessor on the teacher training scholarships). In addition, re-imbursed expenses for travel and subsistence to Council Members amounted to £1,661, 13 members re-imbursed (2020: £1,840, 11 members re-imbursed).

14. SCHOLARSHIPS

In 2012 the Teaching Agency approached the IMA to run a Mathematics Initial Teacher Training Scholarship Scheme.

Under such a scheme the scholarships would be paid by the DFE (for England only) to run the Scheme. In 2012 costs associated with the negotiation were borne by the IMA. In addition DFE paid for a small grant to develop the submission.

DFE announced on 21st December 2012 that the Scheme would be run. The amounts awarded by the DFE were as follows:

Year	Award
2018	194,543
2019	137,739
2020	128,053
2021	119,920

15. Reconciliation of net movement in funds to net cash flow from operating activities

	2021	2020
	Total	Total
	£	£
Net movement in funds	65,907	231,234
Add back depreciation	12,798	11,756
Deduct investment income	(4,770)	(8,523)
Decrease/(increase) in stock	(3,358)	37
Decrease/(increase) in debtors	9,572	(302,973)
(Decrease)/increase in creditors	44,524	(31,255)
Net cash provided by/(used in) operating activities	<u>124,674</u>	<u>(99,723)</u>

16. INVESTMENT INCOME

	2021	2020
	Total	Total
	£	£
Interest on cash deposits	4,770	8,523

Investment income includes £12 (2020 £1) in respect of restricted funds.

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS
INCOME AND EXPENDITURE ACCOUNT
FOR THE PERIOD 1st January - 31 December 2021

Appendix 1a

	Unrestricted Funds 2021	Restricted Funds 2021	Total Funds 2021	Total Funds 2020
Incoming resources	£	£	£	£
Entrance/Transfer fees	4,658		4,658	3,513
Subscriptions	334,168		334,168	328,752
Publications	546,198		546,198	620,343
Miscellaneous Income	887		887	435
Appeal fund and bequests	15,055		15,055	250
Interest Received	4,758	12	4,770	8,524
Conference income	39,411		39,411	(3,226)
Careers in M & 50th Ann	0		0	0
Scholarships & HE STEM	119,920		119,920	128,053
	<u>1,065,055</u>	<u>12</u>	<u>1,065,067</u>	<u>1,086,643</u>
Resources expended				
Salaries, pension & NHI	584,386		584,386	571,733
Other staff expenses	12,553		12,553	2,859
Office overheads	17,959		17,959	23,640
Telephone	4,042		4,042	4,458
General printing, post. & stat.	2,065		2,065	6,649
Office equipment hire & maint.	5,656		5,656	4,515
Council and committee	6,961		6,961	10,159
Travel	3,570		3,570	
Branches and groups	1,000		1,000	1,000
Education	1,501		1,501	2,356
Publications (inc. Maths Today)	94,470		94,470	68,190
General expenses	8,284		8,284	3,247
Bank charges	6,377		6,377	1,831
Audit and accounts	54,629		54,629	50,800
Depreciation	12,798		12,798	8,702
Amortisation of property	0		0	3,066
Subscription to other bodies	14,789		14,789	20,577
Repairs and renewals	480		480	0
Web-site expenses	1,022		1,022	8,309
Presidential Address	2,750		2,750	2,309
Conference Direct Costs	3,469		3,469	3,518
Grants/Donations	51,517		51,517	34,302
Strategy Review Weekend	43		43	0
Information Technology	3,693		3,693	0
I. T. Consultancy	(34)		(34)	1,771
Careers in M & 50th Ann	7,900		7,900	6,634
Scholarships & HE STEM	39,915		39,915	42,192
Irrecoverable VAT	8,311		8,311	13,377
Bad Debt	0		0	0
De Morgan House Rental	11,148		11,148	13,449
De Morgan House Other	5,491		5,491	6,624
18 Nelson Street Rental	6,250		6,250	3,503
18 Nelson Street Other	3,750		3,750	2,102
Development - SRW	329		329	126
Development - Membership Growth	0		0	52
Development - Database & Web	4,310		4,310	4,285
Development - Services	0		0	2,784
	<u>981,383</u>	<u>0</u>	<u>981,383</u>	<u>929,119</u>
Unrestricted Surplus/(Deficit)	<u>83,671</u>	<u>12</u>	<u>83,684</u>	<u>157,525</u>
Incoming resources				
Publications	<u>0</u>	<u>0</u>	<u>0</u>	<u>80,000</u>
	<u>0</u>	<u>0</u>	<u>0</u>	<u>80,000</u>
Resources expended				
Publications	<u>0</u>	<u>17,777</u>	<u>17,777</u>	<u>6,289</u>
	<u>0</u>	<u>17,777</u>	<u>17,777</u>	<u>6,289</u>
Restricted Surplus/(Deficit)	<u>0</u>	<u>(17,776)</u>	<u>(17,776)</u>	<u>73,711</u>
Overall Surplus/(Deficit)	<u>83,671</u>	<u>(17,764)</u>	<u>65,907</u>	<u>231,236</u>

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS
BALANCE SHEET AS AT 31 December 2021

Appendix 1b

	Unrestricted	31-Dec-21 Restricted	Total	31-Dec-20 Total	Total
	£	£	£	£	£
FIXED ASSETS					
Freehold Property	92,024			96,624	
Fixtures and equipment	<u>11,162</u>			<u>15,357</u>	
			103,186		111,981
CURRENT ASSETS					
Stocks	4,843			1,485	
Trade debtors	301,385			317,324	
Prepayments and accrued inc.	37,831			31,464	
Cash at bank and in hand	<u>1,370,707</u>	<u>133,335</u>		<u>1,378,603</u>	
	1,714,766	133,335	1,848,102	1,728,876	
 CREDITORS due within 1 year	 <u>473,134</u>		 473,134	 <u>428,610</u>	
NET CURRENT ASSETS/(LIABILITIES)			<u>1,374,968</u>		<u>1,300,266</u>
			<u>1,478,154</u>		<u>1,412,247</u>
 CAPITAL AND RESERVES					
Income and expenditure account			1,344,818		1,261,149
Restricted income and expenditure account			133,335		151,099
			<u>1,478,154</u>		<u>1,412,247</u>
 NOTES					
Creditors due within 1 year					
Trade creditors	19,290			3,642	
Social security and other taxes	111,454			63,693	
Accruals and deferred income	<u>342,390</u>			<u>361,275</u>	
	<u>473,134</u>			<u>428,610</u>	
 INCOME AND EXPENDITURE ACCOUNT					
Balance as at 1st January 2021	1,261,147	151,100	1,412,247		
Surplus for the 12 months	<u>83,672</u>	<u>(17,765)</u>	<u>65,907</u>		
Balance as at 31 December 2021	<u>1,344,819</u>	<u>133,335</u>	<u>1,478,154</u>		



Institute of
mathematics
& its applications

Incorporated by Royal Charter

Financial Statements

31 DECEMBER 2021

The Institute of Mathematics and its Applications
Registered Charity Number: 1017777

REPORT OF THE COUNCIL

The Council submits its report and the financial statements of The Institute of Mathematics and its Applications for the year ended 31 December 2021. The Financial Statements have been prepared in accordance with the accounting policies set out on pages 7 and 8 to the accounts and comply with the Institute's Trust Deed, the Charities Act 2011 and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) – (Charities SORP (FRS 102) as updated by the Charities SORP (FRS 102) update bulletin 1).

PRINCIPAL ACTIVITIES

The principal activity of the Institute during the year was the operation of a learned and professional society for those involved in all areas of mathematics and its applications, working as a charity for the public benefit.

REVIEW OF THE BUSINESS AND FUTURE DEVELOPMENTS

Council considers that the Institute's state of affairs is satisfactory, and that future results will revert to a close to breakeven result.

The Council members also produce a Trustees' Annual Report (2021) (Appendix 2 – attached) which reports Legal and Administrative Information; Activities and Achievements; and Future Plans.

RESULTS

The Statement of Financial Activities on page 6 shows a surplus in reserves of £65,907 for the year compared to a surplus of £231,234 in the previous year. During the year, income of a restricted nature amounting to £12 was received. Total unrestricted net assets at the year end amount to £1,344,819 (2020: £1,261,148). Restricted Net assets for 2021 were £133,335 (2020: £151,100).

COUNCIL

The constitution of the Council on 31 December 2021 was as follows:

PRESIDENT

Dr N Chamberlain (succeeded on 31 December 2021)
Professor P Glendinning (From 1 January 2022)

VICE-PRESIDENTS

Dr P Rowlett
Dr R Pinch
Dr M Barons

HONORARY TREASURER

Professor A Osbaldestin

HONORARY SECRETARIES

Professor P Glaister
Professor M Grove

PAST PRESIDENTS

Professor A Fitt
Professor C Linton
Professor Dame C Hoyles

MEMBERS OF THE COUNCIL

Professor R Bearon	Dr F de Melo Virissimo	Professor G Niblo
Professor C Breward	Dr B Dias	Professor E Rothead
Dr E Campillo Funollet	Professor C Hobbs	Professor N Steele
Dr S Carr	Dr S Lawrence	Mr N Turner
Mr C Chipperton	Professor S Lombardo	

In addition the following served as members of the Council until their retirement during the year:
Dr S Plata Iturralde

The following completed their term of office as Councillors and Trustees at the end of 2021:
Mr A Apostolou Professor Dame C Hoyles

REPORT OF THE COUNCIL***TAX STATUS***

The Institute is accepted by the HM Revenue & Customs as an educational charity. As a charity, the Institute is exempt from tax on income and gains to the extent these are applied to its charitable objects. No tax charges have arisen in the Institute.

AUDITORS

During the year, Croucher Needham (Essex) LLP were re-appointed as auditors and a resolution to reappoint them as auditors will be put to the members at the Annual General Meeting.

By order of the Council

Dr R Pinch

30 March 2022

Catherine Richards House
16 Nelson Street
Southend-on-Sea
Essex
SS1 1EF

TRUSTEES' RESPONSIBILITIES IN THE PREPARATION OF FINANCIAL STATEMENTS

The Trustees (Council members) are responsible for preparing the Trustees' Annual Report and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The Royal Charter of Incorporation and the law applicable to charities in England & Wales requires the Trustees' (Council members) to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Institute and of the incoming resources and application of resources of the Institute for that period. In preparing these financial statements, the Trustees (Council members) are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements and;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Institute will continue in business.

The Trustees (Council members) are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Institute and to enable them to ensure that the financial statements comply with the Charities Act 2011, the Charity (Accounts and Reports) Regulations 2008 and the provisions of the Royal Charter of Incorporation. They are also responsible for safeguarding the assets of the Institute and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

INDEPENDENT AUDITORS' REPORT TO THE TRUSTEES OF THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS**OPINION**

We have audited the financial statements of The Institute of Mathematics and its Applications (the 'charity') for the year ended 31 December 2021 which comprise the statement of financial activities, the balance sheet, the statement of cash flows and the notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" (United Kingdom Generally Accepted Accounting Practice). In our opinion the financial statements:

- give a true and fair view of the state of the charity's affairs as at 31 December 2021 and of its incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

BASIS FOR OPINION

We have been appointed as auditors under section 144 of the Charities Act 2011 and report in accordance with regulations made under section 154 of that Act. We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the charity in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

CONCLUSIONS RELATING TO GOING CONCERN

In auditing the financial statements, we have concluded that the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the charity's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue. Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

OTHER INFORMATION

The other information comprises the information included in the annual report other than the financial statements and our auditor's report thereon. The trustees are responsible for the other information contained within the annual report. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon. Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

We have nothing to report in respect of the following matters in relation to which the Charities (Accounts and Reports) Regulations 2008 require us to report to you if, in our opinion:

- the information given in the financial statements is inconsistent in any material respect with the Trustees Annual Report; or
- sufficient accounting records have not been kept; or
- the financial statements are not in agreement with the accounting records; or
- we have not received all the information and explanations we require for our audit.

RESPONSIBILITIES OF TRUSTEES

Page 4

As explained more fully in the Statement of Trustees' responsibilities in the preparation of financial statement, the trustees, who are also the directors of the charity for the purposes of company law, are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. In preparing the financial statements, the trustees are responsible for assessing the charity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to cease operations, or have no realistic alternative but to do so.

AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

THE EXTENT TO WHICH THE AUDIT WAS CONSIDERED CAPABLE OF DETECTING IRREGULARITIES, INCLUDING FRAUD

Irregularities, including fraud, are instances of non-compliance with laws and regulations. The objectives of our audit are to obtain sufficient appropriate audit evidence regarding compliance with laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements, to perform audit procedures to help identify instances of non-compliance with other laws and regulations that may have a material effect on the financial statements and to respond appropriately to identified or suspected non-compliance with laws and regulations identified during the audit.

However, it is the primary responsibility of management, with the oversight of those charged with governance, to ensure that the entity's operations are conducted in accordance with applicable laws and regulations and for the prevention and detection of fraud.

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud, the audit engagement team:

- obtained an understanding of the nature of the charity, including the legal and regulatory framework that the charity operates in and how the charity is complying with the legal and regulatory framework;
- inquired of management, and those charged with governance, about their own identification and assessment of the risks of irregularities, including any known actual, suspected or alleged instances of fraud; and
- discussed matters about non-compliance with laws and regulations and how fraud might occur including assessment of how and where the financial statements may be susceptible to fraud.

As a result of these procedures we consider the most significant laws and regulations that have a direct impact on the financial statements are:

- FRS 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice);
- The Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (The FRS 102 Charities SORP);
- The Charities (Accounts and Reports) Regulations 2008; and
- The Charities Act 2011.

The audit engagement team identified the risks of transactions with unidentified related parties and management override of controls as the areas where the financial statements were most susceptible to material misstatement due to fraud.

Based on the results of our risk assessment we designed audit procedures to identify fraud or non-compliance with such laws and regulations identified above. The relevant audit procedures performed included but were not limited to:

- obtaining the trustees' register of interests and corroborating entries by reviewing entries on the Charities Commission website;
- inspecting minutes of Trustees' meetings;
- maintaining vigilance throughout the audit work to identify all related parties;
- identifying and reviewing unusual accounting transactions and journal entries;
- discussions with management including consideration of known or suspected instances of non-compliance with laws and regulations and fraud; and
- performing a detailed review of the completeness and accuracy of disclosures.

A further description of our responsibilities is available on the Financial Reporting Council's website at: <https://www.frc.org.uk/auditorsresponsibilities>. This description forms part of our auditor's report.

James Robert Marchant FCCA (Senior Statutory Auditor)
For and on behalf of Croucher Needham (Essex) LLP

Date:

Chartered Certified Accountants
Statutory Auditor

Market House
10 Market Walk
Saffron Walden
Essex
CB10 1JZ

Accounts



Incorporated by Royal Charter

Trustees' Annual Report 2020

Registered Charity Number: 1017777

TRUSTEES' REPORT 2020

LEGAL AND ADMINISTRATIVE INFORMATION

This is the Annual Report of the Trustees of 'The Institute of Mathematics and its Applications' (IMA) for the year 2020. The Institute is governed according to a Royal Charter and Byelaws granted in 1990 and revised in 1997, 1999, 2002, 2008 and 2015. The governance and control of the Institute is vested in its Council (i.e. the Trustees). The charity registration number is 1017777.

PRESIDENT	Dr N Chamberlain
VICE-PRESIDENTS	Dr P Rowlett Dr R Pinch Professor H Wilson
HONORARY TREASURER	Professor A Osbaldestin
HONORARY SECRETARIES	Dr C Evans Dr M Grove
PAST PRESIDENTS	Professor A Fitt Professor C Linton Professor Dame Celia Hoyles

MEMBERS OF THE COUNCIL

The following were Councillors for the full year:

Mr A Apostolou	Dr S Lawrence
Professor R Bearon (re-elected July 2020)	Dr S Plata Iturralde
Professor C Breward	Professor E Rothead (elected July 2020, previously co-opted)
Mr C Chipperton	Professor N Steele
Dr M B Dias	Mr N Turner (re-elected July 2020)
Professor C Hobbs	

The following were Councillors and Trustees for the period up to 1 July 2020:

Elected Members: Professor R Craster, Professor P Glaister and Dr J Macey, and Co-opted Member, Miss W K Karrie Liu.

Dr D Boyce was a member of Council until 27 April 2020.

The following were Councillors and Trustees for the period from 1 July 2020. Co-opted Members: Dr F de Melo Virissimo and Professor G Niblo.

The following completed their terms of office as Councillors and Trustees at the end of 2020: Dr C Evans and Professor H Wilson.

Additionally, those below took up roles from 1 January 2021:

- 1) as Honorary Officers: Dr M Barons (Vice-President to succeed Professor H Wilson) and Professor P Glaister (Honorary Secretary to succeed Dr C Evans);
- 2) as Co-opted Councillor: Professor Sara Lombardo.

The Institute's Head Office is:

Catherine Richards House,
16 Nelson Street,
Southend-on-Sea,
Essex, SS1 1EF.

Its bankers are:

Lloyds Banking Group,
Business Service Centre,
Sedgemoor House,
Deangate Avenue,
Blackbrook Business Park,
Taunton, TA1 2UG.

Its auditors are:

Croucher Needham (Essex) LLP,
Market House
10 Market Walk,
Saffron Walden,
Essex, CB10 1JZ.

STRUCTURE, GOVERNANCE AND MANAGEMENT

As set out in the Royal Charter, the Honorary Officers are appointed by Council. Fifteen further Corporate Members are nominated by the Corporate Members of the Institute. If the number of nominations is more than the number of vacancies, a postal ballot of corporate members is held.

The Council may co-opt any Corporate Member to be a member of the Council, provided that at any time the total number of co-opted members shall not exceed six, of whom not more than one shall be an Associate Member, not more than one will be a Student Member and not more than one shall be an Affiliate Member.

At 1 January 2021 the Secretariat included the following staff of the Charity:

David Youdan – Executive Director
Alan Peacock – Assistant Director
Joanna Baldacci – Services Officer: Journals and MathsCareers website
Nikki Barnes – Part-time Marketing Officer
Pam Bye – Part-time Conferences and Administration Officer
Maya Everson – Conference Officer
Sabeen Hansraj – Membership Assistant
Karen Hedderley – Part-time Administration Officer: Mathematics Today
Caroline Irwin – Membership Manager
Eugene Kidwell – Services Officer: IT and MathsCareers website
Alison Penry – Executive Manager: Council, Executive Board and Research Committee
Gemma Reeves – Services Officer: Council, Executive Board and Branches
Natalie Stanton – Part-time Membership Officer
Debbie Sullivan – Part-time Administration Assistant: Professional Standards
Cerys Thompson – Conference and Administration Assistant
Vanessa Thorogood – Education Manager and Project Manager, Scholarships
Erica Tyson – Part-time University Liaison Officer
Rebecca Waters – Editorial Officer

The IMA's organisational structure is led by the Council with support from the Executive Board. Council has responsibility for all decision-making but will normally delegate day-to-day business to committees such as Branches, Communications, Conferences, Early Career Mathematicians, Education, Finance, Journals Board of Management, Mathematics Today, MathsCareers, Membership, Professional Affairs and Research. Matters concerning the Secretariat are normally delegated to the Executive Director. Executive Board includes the Honorary Officers of the Institute (President, Vice-Presidents, Honorary Secretaries, Honorary Treasurer and President Designate/Past President) supported by the Executive Director and ad hominem members. Executive Board prepares and prioritises business for Council and maintains the activities of the IMA between Council Meetings. However, Council maintains overall responsibility for policy and decision making.

Trustees (Councillors) receive two categories of training. The Charity Commission publications "The Essential Trustee: What you need to know, what you need to do (CC3)" and "Charity finances: trustee essentials (CC25)" are the basis of generic training. Training in Institutional Affairs is provided by an IMA Briefing Pack that Councillors receive when they are appointed.

OBJECTIVES AND ACTIVITIES FOR THE PUBLIC BENEFIT

The Royal Charter sets the IMA's Object(ive)s as:

- to advance mathematics and its applications in all areas including commerce, engineering, finance, health, industry, scientific and other academic disciplines and the public sector and to promote and foster research and other enquiries directed to the advancement, teaching and application of mathematics for the public benefit;
- to seek to establish and maintain high standards of professional conduct for Corporate Members;
- to seek to promote, encourage and guide in the development of education and training in all matters relevant to the advancement of mathematics and its applications for members and all other persons who are engaged in or likely to be engaged in mathematics or its applications.

The activities for the Public Benefit are as set out as Mission and Goals in the Council approved Strategic Review (2018-2023). In particular the Mission is to benefit society through:

- Providing a suite of member focused services commensurate with its position as the principal professional and learned body for mathematics and its applications in the United Kingdom;
- Being a driving force for the use of mathematics in industry and commerce;
- Ensuring that the importance of mathematics is well represented to Government; a major contributor to the promotion of mathematics within the education systems of the United Kingdom, and helping further improve the quality of mathematics teaching, and the supply and support of mathematics teachers;
- Being a major contributor to the promotion of mathematics within the education systems of the United Kingdom, and helping further improve the quality of mathematics teaching, and the supply and support of mathematics teachers;
- Being an influencing voice for the use of mathematics in science, technology, engineering, economics and other fields of endeavour;
- Advancing its reputation as a major contributor to mathematics research initiatives;

- Engaging proactively at all levels with the full spectrum of the media and society for the promotion of mathematics in the UK;
- Adding value to the worldwide mathematics community by providing a range of services, conferences, publications and events that are fulfilling and beneficial for its membership and for mathematics;
- Promoting high standards of professional conduct for members;
- Regulating the Chartered Mathematician and Chartered Mathematics Teacher designations;
- Working with other mathematical organisations to develop a unified voice for mathematics in the UK;
- Collaborating with organisations in other countries to promote mathematics at an international level.

Trustees carefully consider the approved objectives and mission when planning and reviewing activities at its three meetings each year. Council has judged that the 2020 programme has been successful in the delivery of the agreed Objectives and Mission for the public benefit.

ACHIEVEMENTS AND PERFORMANCE IN 2020

Overall

2020 was dominated by the COVID-19 pandemic. January and February were typical, after which we began to arrange our activities with all staff working from home and all activities being run online. We were fortunate that we had begun using more remote working in 2019 associated with the Scholarships scheme and so were in a good position to expand our remote / virtual working. Trustees are very appreciative of the huge team effort that enabled this.

There was a dramatic reduction of face-to-face activities, in particular conferences, but in other areas services were maintained and in some places expanded.

Our conference team ran one face-to-face event, 13 virtual events, postponed six events and cancelled one event. The rapid expansion of virtual events was commendable.

To compensate for the reduced programme and to provide increased services to members who had been furloughed, we launched a series of Maths Teas virtual events that were established by our Social Media Taskforce. These Maths Teas proved to be very popular with members and non-members joining from across the UK and internationally. It is planned that these Maths Teas will continue in 2021.

We ran the Department for Education Mathematics Initial Teacher Training Scholarships scheme for an eighth successful year recommending 333 outstanding applicants for scholarship funds.

A large number of Branch events were held online, allowing members in much greater numbers from around the country to attend these regional events.

We played the leading role with the CMS in the inclusion of mathematics within STEM for Britain at Parliament; the final of the 2020 competition took place in Parliament on 9 March.

All issues of Mathematics Today were printed and posted on time.

The membership e-Bulletins were issued every two months, alternating with Maths Today.

The popular IMA MathsCareers website was redesigned during the year; attracted 390,000 visits and increased its followers on Twitter to 7,267. We also issued six more editions of our e16plus newsletter.

Our eStudent offer continues to be highly popular, and following a refresh of our eStudent population, we had 7,000 eStudents at the end of 2020.

Our grant programmes for research, education and university activities were under-utilised because so few face-to-face activities, which are the mainstay of our grant programmes, could be held.

And on top of this we ran our regular activities including, education, journals, and mathematics consultations.

Our year-end membership numbers were at the highest level ever. We are grateful to all our members who support the Institute and to the Volunteers and Secretariat that kept our Services to Mathematics so vibrant in 2020.

SERVICES TO MATHEMATICS

Research Committee

Professor Helen Wilson, Vice President Learned Society, chaired the Research Committee in 2020. The full membership of the Committee can be viewed on the IMA website:

<https://ima.org.uk/roles/research-committee/>

These researchers contribute to our discussions with the research funding councils and policy makers, and work to promote the benefits of fundamental and applied mathematical research to the economy and to society. The Research Committee also assess applications for Small Grants.

Throughout the year, Research Committee worked on behalf of the community in many ways, including the following:

- The working group which was formed by the Committee in 2018 to consider IMA responses to Professor Bond's Review, "The Era of Mathematics, an independent review of knowledge exchange in the mathematical sciences", continued to meet in 2020 and worked to advance publicity of knowledge exchange. For example, the group initiated a special issue of 'Mathematics Today' with Knowledge Exchange as its theme. The working group and the Committee also continued to liaise with the two CMS Committees which were set up to take forward recommendations of the 'Bond Review' on behalf of the community.
- Committee Chair, Helen Wilson wrote to Amanda Solloway, MP and Parliamentary Under Secretary of State at BEIS (Minister for Science, Research and Innovation,) to welcome the Government's Research and Development Roadmap, which was published on 1 July, and to highlight the effectiveness and economic benefits of the Mathematical Sciences.
- The Committee responded, on behalf of the IMA, to the House of Commons Science and Technology Committee inquiry into the "The role of technology, research and innovation in the COVID-19 recovery".
- The Committee launched a call for nominations for the inaugural award of the 'IMA Hedy Lamarr Prize for Knowledge Exchange in Mathematics and its Applications'. Nominations

are invited until 31 January 2021, after which the award panel will consider entries for this new IMA prize.

- Helen Wilson worked with IMA and LMS colleagues to organise a further joint IMA-LMS scientific meeting, which took place on 1 and 2 October, on the theme of ‘Topological Methods in Data Science’. This meeting was held virtually which enabled a large audience to attend. Thanks are given to ICMS for hosting the event as part of its online Mathematical Sciences Seminars, the Presidents of both societies for chairing the event, all speakers, participants, attendees and organisers.

Journals

The Institute’s eight academic journals are published by Oxford University Press (OUP). Five of these are traditional hybrid print journals:

- *IMA Journal of Applied Mathematics*
Editors: Alan Champneys, (Bristol), and Demetrios Papageorgiou, (Imperial);
- *IMA Journal of Numerical Analysis*
Editors: Arieh Iserles, (Cambridge), Endre Süli, (Oxford) and Charles Elliot (Warwick);
- *Information and Inference: A Journal of the IMA*
Editors: Robert Calderbank, (Duke); David Donoho, (Stanford); John Shawe-Taylor, (UCL) and Jared Tanner, (Oxford);
- *IMA Journal of Management Mathematics*
Editors: Philip Scarf, (Salford); Aris Syntetos, (Cardiff) and Rogemar Mamon, (Western Ontario);
- *Teaching Mathematics and its Applications: an International Journal of the IMA*
Editors: Duncan Lawson, (Coventry); Christopher Sangwin, (Edinburgh) and Cathy Smith (OU).

Two are online only hybrid journals:

- *IMA Journal of Mathematical Control and Information*
Editors: Christophe Prieur (Grenoble) and Sarah Spurgeon OBE, (UCL);
- *Mathematical Medicine and Biology: A Journal of the IMA*
Editors: Oliver Jensen, (Manchester); John King, (Nottingham) and James Keener, (Utah).

One is an open access only online journal:

- *Transactions of Mathematics and its Applications*
Editor in Chief: Arieh Iserles (Cambridge) and Dominic Vella (Oxford).

Five journals currently have impact factors (IF). During the most recent assessment period the IF increased for *IMA Management Mathematics* to 1.529.

Conferences

The lockdown in March made a significant impact on our conferences programme, with an initial decision to postpone all events until at least September. It was soon apparent that in-person events

would not resume in 2020, so the conference team worked swiftly to facilitate running remote conferences, purchasing and testing appropriate software, and building a new online conference programme. We delivered the first of a series of online talks in July, with the IMA Presidential Address by Dr Nira Chamberlain, and continued with three other sessions. Together these events were badged as the IMA 2020 Mathematics Series. The revised programme for 2020 was as follows:

- *New Year IMA 16+ Lecture Day*
8 January 2020, University of Liverpool
- *IMA Mathematics 2020 Online series*
 - Week 1 – 14 July - “Building a Powerful Mathematical Identity!”
 - Week 2 – 22 July - “Open Mathematical Questions to Illuminate Quantum Machine Learning” and “Maths & Stats for Effective Regulation”
 - Week 3 – 30 July - “V-KEMS: The Virtual Forum for Knowledge Exchange in the Mathematical Sciences” and “Privacy-enhancing Technologies”
 - Week 4 – 12 August - “Robots and Maths: Are they related?” and “Tensors, graphs, and deep networks: Convergence of concepts and ideas”
- *Topological Methods in Data Science*
Joint conference with LMS – online
1 & 2 October 2020
- *IMA Early Career Mathematicians’ Autumn Conference 2020 – online*
24 & 25 October 2020
- *Black Heroes of Mathematics Conference – online (with BSHM, ICMS and LMS)*
26-27 October 2020
- *16plus Careers Lecture – online*
10 November 2020
- *Maths in Music Christmas Edition - online*
11 December 2020
- *Mathematics of Big Data: Lessons from COVID-19 - online*
15 December 2020

All of the above events were free to attend. For events in 2021, a moderate fee will be charged for attending online sessions.

The feedback from delegates has been very positive, and numbers attending have been generally in excess of 100. We have noted that going online has resulted in an upward trend in female participation, participation from international delegates, and an overall accessibility of the conferences.

We give our thanks to the mathematical organising committees and the conference team for working so diligently to ensure a smooth transition to online delivery within a very short space of time. We anticipate a mix of online and in-person events in the future.

IMA Lectures

IMA President, Dr Nira Chamberlain, gave his Presidential Address, “Building a Powerful

Mathematical Identity!” as the inaugural session of the IMA Mathematics 2020 Online series.

Two 16plus lectures are reported within the conference events section.

Small Grants

The IMA’s Small Grants Scheme is designed to be flexible, so that it can be used to facilitate any research activity within the scope of mathematics and its applications. Grants are available up to a value of £600 for individuals and up to £1,200 when enabling an event to take place.

The budget for 2020 was £12,000. As many events were affected by COVID-19 application numbers were reduced. The Scheme received 18 applications, requesting a total amount of £14,305. Eight applications were declined, seven were awarded in full, one was withdrawn, and two were awarded a reduced amount. Awards for 2020 are shown on the IMA website.

Education

During 2020, our contribution to mathematics education was led by Dr Michael Grove (Honorary Secretary with responsibility for Education), supported by Professor Nigel Steele (Deputy Honorary Secretary Education), Professor Andrew Osbaldestin (Chair, HEdSA), Mr Christopher (Chris) Chipperton (Chair, S&FE) and Vanessa Thorogood (Education Manager) together with all our education committee members.

The Education Service Area actively promotes the engagement of the Institute's members in education with its work through communications by email, on the website, and in *Mathematics Today*. For instance:

- notification of the publication of key reports;
- invitations to participate in events and / or contribute to external initiatives;
- opportunity to provide feedback on specific issues;
- invitations to contribute to Institute responses to consultations;
- publication of the Institute's submissions to consultation exercises.

Due to the COVID-19 pandemic in 2020, some of our regular activities, such as the Big Bang Fair, were postponed, and we look forward to the ability to resume most activities in 2021.

Higher Education

HE Teaching and Learning Series

A fourth call for the *Higher Education Teaching and Learning Series* was not released in early 2020/21. The COVID-19 pandemic resulted in the workshops due to take place in 2020 from the 2019/20 call to be postponed until 2021.

We have agreed with the successful applicants to our third call in 2019/20 that their workshops can be held in 2021 (subject to government advice on COVID-19):

- University of Birmingham - *Making Mathematics Accessible to All*
- Cardiff University & University of Bristol - *Reflection? Action? Research: Enhancing Mathematical Research and Scholarship*

- University of Glasgow - *Assessment strategies for mathematical sciences in the digital era*
- University of Nottingham - *Project-based and synoptic modules*
- University of Plymouth - *Involving employers in the development of the mathematical sciences curriculum*
- University of Sheffield - *Effectively teaching small classes as a postgraduate demonstrator*

Induction Course for New Lecturers

The Induction Course for New Lecturers was postponed until 2021.

Teaching and Learning Mathematics Online

The IMA endorsed TALMO; a two-day workshop which consisted of short online presentations on pedagogical and technological issues and practices associated with online delivery.

IMA John Blake University Teaching Medal

The IMA John Blake University Teaching Medal is awarded to individuals who have made a significant and sustained contribution to the teaching of the mathematical sciences at university-level (Level 4 and above). The award is named in honour of Professor John Blake (1947-2016) who, in addition to his research profile in bubble dynamics and low Reynolds number biological flows, was amongst the first true champions of teaching and learning within higher education.

Nominations for the inaugural award of the IMA John Blake University Teaching Medal opened on 1 October 2020.

Programme Accreditation

The Institute's Programme Accreditation scheme accredits university degree programmes from which all its graduates will meet the educational requirements for the CMATH designation. A total of 60 universities currently have degrees accredited by the Institute.

HEdSA has continued to revise the guidelines for Programme Accreditation, which will be fully implemented in 2021.

A list of accredited degree programmes can be found on the Programme Accreditation page of the Institute's website.

Schools and Further Education

Stella Dudzic (Programme Leader, Curriculum and Resources, MEI) attended a meeting of the S&FE Committee to discuss MEI's report: A new mathematics GCSE curriculum for post-16 resit students.

The Committee responded to Ofqual's Consultation - Exceptional arrangements for exam grading and assessment in 2020.

School Speakers

In 2020 requests for School Speakers were handled regionally, where appropriate, by IMA Branches.

Polymaths

Polymaths is a part-time open access course validated by the Institute offered by the University of Bolton. A total of seven people was awarded the Polymaths certificate in 2020.

Education Grants

Individuals in schools, FE and HEIs in the UK can apply for a grant, normally up to a maximum of £600, to help with the costs of running or attending an educational activity relating to mathematics.

The Education Grants Judging Panel, consisting of the Institute's Honorary Secretary with Responsibility for Education and the Chairs of the education committees, decides on each application.

During 2020, the Education Grants scheme received 13 applications; of which four were awarded grants for the full amount requested, and nine were declined.

The Education Grants awarded a total of £2,356 in 2020.

Applications approved for 2020 are shown from the on the Institute's website.

IMA MathsCareers

Site development work was completed in November 2020 and the redesigned version of the MathsCareers site launched on 1 December. Despite the site being under development for much of the year it regularly received over 30,000 visits per month and 390,000 visits in the year. The site is one of the top websites of its kind within the STEM community and continues to be popular among undergraduates seeking career advice as well as secondary education audiences. New content planned for 2021 includes articles on GCSE maths topics, as well as content on a variety of mathematical careers. Two contests are run every year where entrants submit posters on a mathematical theme.

Social Media is used to raise the profile of IMA MathsCareers, and it now has 7,267 followers on Twitter including several 'verified' followers. The profile of the site, as well as mathematics generally, is raised via the distribution of classroom posters.

Mathematics Teacher Training Scholarships

The IMA, working with LMS, MA, MEI, STEM Learning and RSS, delivered the Mathematics Teacher Training Scholarships on behalf of the Department for Education. The overall aim of the Scholarships scheme is to improve the quality, and widen the pool, of applicants for secondary teacher training by attracting highly qualified graduates and career-changers who might not normally consider teaching as a career.

The 2019/20 (year eight) scheme was announced and opened for applications in October 2019, with a target of awarding 270 Scholarships to those who commence secondary mathematics teacher training in the 2020/21 academic year. This was the most successful year we have had, receiving 620 applications and awarding 333 Scholarships.

The pandemic during 2020 brought significant challenges and changes to the Maths Scholarships scheme. We continued to support our 2019/20 Maths Scholars, Alumni and recruit Maths Scholars for 2020/21 by taking all our activities online.

The ninth year (2020/21) of the Mathematics Teacher Training Scholarships was launched on 11 January 2021. There is a change to the financial incentives for those going into mathematics initial teacher training for both the government bursary and the Scholarships. The Maths Scholarship is now a £26k tax-free bursary during the initial teacher training year.

There are 270 Maths Scholarships available for individuals commencing secondary mathematics teacher training in the 2021/22 academic year.

Undergraduate and Postgraduate Liaison

The University Liaison activity increases membership, awareness of, and participation with the IMA amongst undergraduate and postgraduate students, and the university community. This is achieved through newsletters to our nearly 7,000 strong eStudent community, grants to student mathematical societies, careers talks for mathematics undergraduates and supporting careers events and student conferences. In 2020 there were seven issues of the eStudent newsletter and we continued posting general skills articles to the IMA Student Blog. From April 2020 events transferred online, though a number of conferences were postponed to 2021. An autumn Early Careers Mathematicians (ECM) conference was held online in October and was very successful with over 100 attendees on both days.

In 2020, £6,800 was paid in grants. Undergraduate awards were made to the Mathematical societies of the Universities of Aston, Birmingham, Bristol, Heriot-Watt, Manchester, Newcastle, Sheffield Hallam, University College London, University of East Anglia and Warwick. Awards were made to the IMA-SIAM Joint Student Chapters of the universities of Cardiff, Dublin, Edinburgh/Heriot-Watt, Manchester and Southampton. Sponsorship of £850 was also given for prizes for the Oxford Industrially Focused Mathematical Modelling (InFoMM) Graduate Camp and speaker costs at the SIAM UKIE annual conference. Society activities supported included conferences, competitions, talks and participation in IMA conferences. The University Liaison Officer (ULO) delivered 28 careers talks, 22 of which were delivered remotely, and two workshops, supported two careers fairs, five conferences and the InFoMM camp. Three events were delivered by IMA ambassadors.

Academic Representatives

The Academic Representatives' scheme was established by the Institute in 2017, and we currently have 57 Representatives at 55 universities. Representatives are members of academic staff and they support the Institute by highlighting the work of the IMA in the community and beyond, to their students and colleagues, as well as providing feedback on the priorities of academic members. During 2020 three AR Newsletters were sent to help to grow the full membership of students and academics. It is planned that the scheme will develop further over the next year.

Early Career Mathematicians' Group

The Early Career Mathematicians' (ECM) Group aims to provide those starting out in the profession with opportunities to develop their skills and network with peers. An ECM conference took place online over two days in October. The conference was well-attended and offered early-career members a varied programme of engaging talks and time to network with other attendees. These conferences were organised with assistance from the Secretariat.

The ECM Group works closely with the University Liaison project to recruit student members and is also highly active on a range of social networking sites.

Professional Affairs

The Professional Affairs Committee (PAC) met three times during 2020 via remote conference facilities, chaired by Richard Pinch. The key agenda item throughout the year was consideration of and engagement with progress on the Bond Review/ Big Mathematics Initiative (BMI). Discussions about an Academy for the Mathematical Sciences moved quickly and, by the beginning of July, an open meeting (online) about the creation of an Academy had been held. This was well attended and garnered general support for the Academy. The two BMI working groups were dissolved, to be replaced by a single working group to make a definite proposal and to "make the Academy happen". A number of Council members had agreed to join the group so that the interests of the

IMA are represented, including PAC members to provide industrial insight.

The Employers' Forum did not take place this year due to the ongoing COVID-19 crisis; however, the committee is aiming to host a virtual event in the first half of 2021.

The committee considered an initiative from The Royal Society regarding Data Science Professionalisation, which has been led by The Royal Statistical Society with other professional bodies, including the IMA, working alongside. The initiative highlights the government's desire for a major increase in data skills with the establishment of industry-wide professional standards. The Chair of PAC is on the steering group and working group.

Details of our Corporate Affiliate members can be found at: <https://ima.org.uk/affiliates/corporate-affiliates/>

We are very grateful for the involvement of these organisations with mathematics and with the Institute.

Mathematics Today

In October the Knowledge Exchange special issue celebrated the power of mathematics to make a real impact. We also explored the diverse career paths that our members have followed with a series of eight interviews focused on knowledge exchange that are available on the Mathematics Today section of the IMA website.

The Graham Hoare Prize 2020 was awarded to Luca Panconi for his uplifting article 'A Mathematician's Guide to the Perfect Mug of Tea', which was published in the December 2020 issue.

IMA Website and Social Media

In March, Council agreed that a small working group (the Social Media Task Group) should be established, to support the IMA's Marketing Officer with guidance on making mathematical social media posts; and discuss what content the IMA should be releasing during the pandemic, and how we could connect with our membership during this time. Further information on the work of the group is contained under "Membership Development".

The IMA's presence on social media has increased over the year. We have gained over 3,300 followers on Twitter, bringing our total to 17,100. Our LinkedIn company page has over 19,976 likes. Our Facebook page has 978 followers and Facebook group has over 4,443 members.

To foster engagement and raise awareness of the IMA our Communications Committee is encouraging regional branches to record talks. In 2020 17 talks were recorded, published, and embedded on the IMA website. These talks have received 2,146 views.

Google estimates demographic information about its users which it partially shares with us via our Google Analytics account. This demographic information extends to age and gender. Demographic information provided by Google Analytics of the visitors to the IMA website has been informative: in 2020 more than half of the visitors to the IMA site have been under 34 years of age (56.49%); and the gender distribution of total visitors is around 62/38 split of male to female (in comparison to the current total IMA member split of 76/24 male to female).

Sessions to the IMA website are up this year. Each month of 2020 resulted in more site visits than in 2019, with 1-2k sessions more than the corresponding month in 2019. Visits to the IMA website are up eight per cent on 2019.

IMA e16plus Newsletter

The e16plus Newsletter published six full editions in 2020. It is designed to inspire and raise interest in mathematics amongst 16 to 19-year-olds and has 1,449 subscribers. The regular puzzle feature continues to be popular with readers, and the links in the newsletter are designed to encourage engagement with MathsCareers and the IMA website.

Branches

Branches continue to be an important feature of the IMA, providing regional networking opportunities. They are run by committees of local members, with administrative support provided by the Secretariat.

The six active branches have held varied programmes of events for their members during 2020 and plans for the 2021 programme of talks are underway. Branches adapted well to the COVID-19 pandemic, and an interesting selection of talks was provided online, which enabled members who might usually be unable to attend in-person meetings, to engage with their local branch.

In November the West of England branch was relaunched as the South West and Wales branch, which was received positively by members. Some areas of the UK remain unrepresented by branches; members are encouraged to consider establishing new branches (or reviving dormant ones) in these areas, for which Secretariat assistance continues to be a high priority.

Diversity

The IMA is a signatory of the Science Council Declaration on Diversity, Equality and Inclusion, and Council has appointed champions to lead the IMA in this important agenda. Jenny Macey is thanked for her valuable contributions during her term as Diversity Champion, during which she oversaw the development of the IMA's diversity webpages for the benefit of members. The end of Jenny's term coincided with the end of her term as IMA Councillor in July 2020, when she was succeeded by Snezana Lawrence.

By identifying diversity as a cross-cutting theme in all IMA committee meetings many improvements have been identified and achieved. A benchmarking exercise, led by the Science Council, was started in late November and will continue into 2021.

Membership and Chartered Registers

The Membership Committee, chaired by Dr Charles Evans, is delegated, by Council, to assess individual membership applications. The Membership Committee is made up of Chartered Mathematicians who are Fellows of the Institute. They have a background in at least one of the following major areas of employment for mathematicians; academic research and teaching, schools and further education, industry, commerce, finance and IT.

In 2020 we have had the privilege to welcome over 900 new members and assist 113 existing members in transferring to a higher grade. We have also recruited 24 new Chartered Mathematicians and/or Chartered Scientists.

Membership figures at 31 December 2020:

Honorary Fellow	17
Fellow	1,444
Member	1,316
Associate Member	1,831
Affiliate	574

Student	525
Total	5,707

Of the above memberships, 1,527 are registered as Chartered Mathematicians and 229 as Chartered Scientists.

Trustees wish to acknowledge the long service of Dr Charles Evans as he steps down from the position of Honorary Secretary Membership.

The Institute has continued to support UK University Mathematics Departments by offering over 140 IMA Graduate Prize Memberships in 2020.

Chartered Mathematics Teachers

The Chartered Mathematics Teacher Registration Authority consists of representatives from IMA, Association of Teachers of Mathematics, Mathematical Association, and National Association of Numeracy and Mathematics in Colleges. Dr Charles Evans, the chair of the Institute's Membership Committee, also chairs the Chartered Mathematics Teacher Registration Authority. At 31 December 2020, we had 45 registered Chartered Mathematics Teachers.

Membership Development

We continued to deliver and update the Communications and Marketing Plan with input from the Membership Development Task and Finish Group in the first few months of the year; however, the onset of the pandemic led to a switch in focus to ensuring that we maintained close connection with, and provided support to, our membership during the crisis.

At its meeting in March shortly after lockdown, Council agreed that a small working group (the Social Media Task Group) should be established, to support the IMA's Marketing Officer with guidance on making mathematical social media posts; and discuss what content the IMA should be releasing during the pandemic, with a focus on providing existing members with services and information of value to them and in their careers. This led to the launching of the "Virtual Maths Teas" in April, which have proved very successful, enabling members to join informal discussions on a range of topics. The Social Media Task Group has decided to continue them on a monthly basis into the new year.

The Membership eBulletin continues to be issued every two months, alternating with *Mathematics Today*. The last edition of 2020 was issued in early November.

REPRESENTATION AND PUBLIC RELATIONS

The Institute co-operated with a wide range of mathematical and scientific bodies. The Institute responded to government and statutory body consultations and was involved in informal contacts with senior officials in these areas. The Institute provided information on career opportunities and on other aspects of mathematical education and practice.

The IMA believes that mathematics is best served when a unified voice is presented to government and funders. Therefore, whenever possible the IMA promotes its message through the Council for the Mathematical Sciences (which is comprised of the IMA, the London Mathematical Society, the Royal Statistical Society, the Edinburgh Mathematical Society and the Operational Research Society).

IMA and Government

Both in its own right and as a member of CMS the IMA has been involved with a wide range of engagement activities in Parliament this year.

We continued to run the DfE Mathematics Teacher Training Scholarships scheme.

IMA Council members are in regular contact with DfE and UKRI.

On 9 March a panel of CMS judges, chaired by Tim Pedley, selected the Parliamentary and Scientific Committee STEM for Britain mathematics winners. Once again we are very grateful to the Clay Mathematics Institute and the Heilbronn Institute for their generous sponsorship of these prizes. STEM for Britain is the largest science event held in the Houses of Parliament on an annual basis and helps to strengthen our dialogue with Parliamentarians.

The Parliamentary Links Day took place on 14 July virtually on the theme of ‘Trust in Science’. The IMA was represented at this event.

Our Executive Director, David Youdan, has continued to serve as an Advisor to the Parliamentary and Scientific Committee.

Council for the Mathematical Sciences (CMS)

CMS is composed of IMA, LMS, RSS, EdMS, and ORS, and has been chaired by Professor Sir Ian Diamond since September 2018. Many outside mathematics do not see the need for so many mathematics organisations. Those who only wish to deal with one authoritative organisation often deal with CMS.

A number of activities that relate to education and research were advanced together with our sister societies within CMS.

CMS continues to receive briefings from Royal Society ACME, which is funded by the IMA and others.

CMS continued to promote the needs of mathematics to BEIS, DfE, UKRI, the House of Commons Science and Technology Committee, the House of Lords Science and Technology Committee, and the Scottish Funding Council.

The work of the CMS ‘Big Mathematics Initiative’ continued in 2020 and included a virtual community meeting on the proposal of the Bond Review Report, The Era of Mathematics, regarding the establishment of an Academy for the Mathematical Sciences and other agenda items.

London Mathematical Society (LMS)

Throughout 2020 we continued to work with the LMS in many areas including research, Mathematics Initial Teacher Training Scholarships and mathematics promotion.

Together we also award the David Crighton Medal for Services to Mathematics and the Mathematics Community, and the Christopher Zeeman Medal for Mathematics Promotion. In 2020, Matt Parker was awarded the Christopher Zeeman Medal, and both his prize winner’s lecture and that of Professor Ken Brown, who was awarded the 2019 David Crighton Medal, are planned to take place when COVID-19 distancing measures have been relaxed.

As documented in the Research Committee section of this report, a well-attended, fourth scientific meeting of the current IMA-LMS series, titled ‘Topological Methods in Data Science’ took place online, on 1 and 2 October.

The IMA Council continues to affirm that it wishes to fully embrace the concepts and principles of

a New Unified Mathematics Society, and hopes that through constructive engagement the LMS and the IMA will be able to achieve this goal jointly at an agreed date in the future.

Other UK Mathematics Organisations

We continue to work closely with the Association of Teachers of Mathematics, the Mathematical Association and NANAMIC in the management of the Chartered Mathematics Teacher Registration Authority.

We also work closely with many sister organisations, Royal Society ACME, NCETM, and the Joint Mathematical Council to promote and support mathematics whenever possible.

The IMA has a representative who is an invited observer to the HoDoMS meetings and activities. The IMA always seeks to develop its higher education strategy in agreement with HoDoMS and the LMS.

UK SET and Others

Science Council

The IMA is a member of Science Council and continues to work cooperatively with Science Council to promote science, including mathematics, to Government.

Throughout 2020 the Chartered Scientist designation has continued to be popular with members with 229 holding the designation.

International

SIAM

IMA members who live in the UK may receive a discounted SIAM membership fee under our reciprocity agreement. (A reciprocal arrangement exists for SIAM members who live in the US). We have joint promotional campaigns and co-operative activities with SIAM and SIAM UKIE.

European Mathematical Society

The IMA is a member of the European Mathematical Society. IMA members pay their discounted subscriptions directly to European Mathematical Society.

ICIAM

The IMA has continued its membership and support of the International Council for Industrial and Applied Mathematics. Activities of ICIAM have been reduced during 2020 because of the Pandemic.

FINANCE

The 2020 budget was a loss of £17,575. The result is an unrestricted surplus of £157,522.

In the following section all figures relate to the difference between budget and actual. The most significant reason for the changes was the COVID-19 pandemic. For example, we lost almost all of our budget conference contribution, (£47k); we cancelled some education and outreach activities, £18k; there were non-awarded grants and underspend on CMS grant, £61k; and on scholarships, we lost a team member and recorded an increase of scholarships awards contribution, £29k; untaken holidays, (£11k).

Significant items that were not related to COVID-19 include a bonus payment on 2019 journal sales, £50k; increased membership fees, £6k; staff salaries, (£8k); reduced printing and stationery, £11k; reduced committee travel expenses, £29k; increased costs for GDPR, (£6k); and reduced depreciation, £5k.

At the end of 2020 the total assets less current liabilities is £1,412,247 of which £151,100 is in relation to restricted reserves. In 2019 the equivalent figure was £ 1,181,014, of which £77,388 was in relation to restricted reserves.

Funds were used to support our charitable aims. There is a clear public benefit in our activities to support education; to run educational conferences; to support mathematics to government; to regulate the profession of Chartered Mathematician; to contribute to the advancement of research initiatives; to be an influencing voice for the use of mathematics across STEM, industry and commerce; and to promote mathematics across media and society in the UK.

Members receive a membership publication. The revenue received from member subscription exceeds the value of direct membership services. The subscription surplus is spent on meeting our charitable objectives.

Finance Committee, which reports to Council, sets the pay and remuneration of the charity's personnel.

Policy on Reserves

'The Institute is a charitable organisation that promotes mathematics and its applications. It is a learned society and a professional body where income is principally based on subscriptions, and revenue from conferences and publications. The Institute requires adequate reserves to provide for any shortfall in immediate income and to allow remedial action in event of any long-term adverse change in circumstances. The Institute also requires financial reserves in order to respond to any major opportunities to develop and promote its objectives.

Council considers that reserves equivalent to one year's standard expenditure (excluding large projects which are not part of standard long-term activities) would be an appropriate level.

When Restricted Funds exist, for example the IMA Leslie Fox Fund, those funds will be used for the purpose for which they are restricted. Restricted reserves will not be counted when calculating the amount of reserves for general purposes.

Council continues to spend some of its reserves to boost future membership (e-16+ newsletter; postgraduate student initiative). The intention of this investment is to increase membership revenues that will recover the cost of development. Finance committee will monitor the effect of this investment on reserves.

Two months' operating expenses should be held as liquid reserves.'

At the end of 2020 the total assets less current liabilities is £1,412,247 (£1,181,014), which is close to one year's standard expenditure, and therefore is deemed to meet the policy.

Policy on Investments

'The IMA holds reserves that are close to one year's standard expenditure (excluding large projects which are not part of standard long-term activities), with a requirement that two months' operating costs should be available at short notice.

The IMA Finance Committee recommends that reserve funds (above those required for operational purposes in the next two months) should be held in high interest deposit accounts, preferably those designed specifically for charities. Decisions on the accounts to be used will be based on interest rates and security. Decisions on the term of deposits will be based on the different interest rates

available and the timing of any likely operational requirement for the funds to be deposited.

The amount to be held on deposit will be reviewed by the IMA's Finance Committee every meeting. The interest rates available will be reviewed by the Finance Committee. When time-limited accounts mature, the available options will be reviewed by the Executive Director and the Honorary Treasurer

A target of three months' (no more than six months') budget expenditure should be held with any one authorised financial institution or group.'

Policy on Risks

'The Institute has had a regular income flow from subscriptions, publication sales and conference fees. While these may fluctuate on a year-to-year basis, the Institute has sufficient reserves to enable remedial action in event of any short- or medium-term decline. A review of the Institute's freehold property, Catherine Richards House, is conducted regularly to determine any repairs or refurbishment necessary.

Finance Committee agree a paper each year which sets out a range of perceived risks, together with assessments of probability (1-3), severity of consequence (1-3), rating (1-9), and a recovery strategy for each item. In the current risk analysis the highest rated risks and the recovery strategy for these risks are:

- Loss of Key personnel (rated 6)
- Decline in journals revenue (rated 6).'

IMA Grant Policy

'All IMA Grants are retrospectively reviewed at the end of the financial year by the IMA Council or Executive Board. All grant budgets are set by Council before the year begins. Grants are currently awarded by four routes: Small Grants to facilitate research activity; Education Grants; Undergraduate and Postgraduate Grants; and Other Grants. All Grants meet the stated Objectives and Mission of the Charity and produce Public Good.

Small Grants

The purpose of the Institute's Small Grant Scheme is to facilitate research activity in all areas of applicable mathematics. The Small Grant Committee normally awards grants to a value of £600. A higher ceiling figure of £1,200 can apply when the grant would enable a meeting/conference with a mathematical theme to take place.

Education Grants

Individuals in secondary schools, Colleges of Further Education (FE) and Higher Education Institutes (HEIs) in the United Kingdom can apply for a grant to help with the costs of running or attending an educational activity relating to mathematics. Grants to a value of £600 are awarded by the Education Grants Committee.

Undergraduate and Postgraduate Grants

Grants are available to University Mathematics Societies. The Secretariat award grants to a value of up to £400.

Other Grants

These grants are awarded at the discretion of Council or Executive Board to support organisations or activities that promote mathematics and its applications. The exact range of grants is not fixed, but typical examples of grants recipients include: the Council for the Mathematical Sciences; the

Advisory Committee on Mathematics Education; the British Applied Mathematics Colloquium; journal prizes; and mathematical events or meetings.

Further details of all grants that can be applied for can be found on the IMA's website.'

Going Concern

The Trustees have reviewed the assets, income and regular expenditure of the IMA and satisfied themselves that the Institute is in a good financial position. They are satisfied that the IMA is a Going Concern (as described in the Financial Reporting Council document – Going Concern and Liquidity Risk: Guidance for Directors of UK Companies 2009) and have prepared the Financial Statements on that basis.

FUTURE PLANS

The IMA is in a secure financial position for 2021, and from this secure position we are planning a phased return to 'the new norm', as the effects of COVID-19 recede through 2021.

At the beginning of 2021 the position was that all services and activities were planned to be virtual for the first six months. This plan will be reviewed on a regular basis.

The 2021 budget was approved by Council in November 2020 with a planned deficit of -£23,622. This figure represents the first year of a dip in journal sales because of the effects of the pandemic. It is anticipated that this dip will return to normal levels in the next couple of years.

Since the IMA provided a full suite of services in 2020 during the pandemic, it is in a good position to continue with virtual events, transitioning to face-to-face events when this is allowable, and exploring the introduction of hybrid events during 2021. Virtual working and virtual events provided additional benefits to mathematics and members by allowing activities to be available throughout the UK without the personal investment of considerable travel costs [both time and money]. The Institute will consider how to incorporate these benefits into its 'new norm' working. Similarly, services which were successfully introduced in 2020, such as the virtual 'Maths Teas' will be continued.

The effect of the pandemic on membership numbers and revenues will be monitored through 2021. September 2021 also marks the end of the current three-year term of the DfE grant to run the Mathematics Teacher Training Scholarships scheme; and so we will learn during the year whether the DfE wants this scheme to continue into 2022 in England.

The Membership Development Scheme that was an output from the Council Strategy Review of 2017 has now completed its three-year term. The benefits of this scheme will be continued into 2021 and built into normal IMA operations. These include an ongoing focus on attracting members and facilitating their journey to join and stay as members of the IMA through their careers, and the increased activities of promotion via communication, social media and a strong range of services will be maintained. If membership revenues are significantly affected by COVID-19 this will be more clear in April 2021. By mid-January no negative indications had been seen.

Several other membership growth initiatives will be continued:

- encouraging the use of the less complex entry mechanism for MIMA and FIMA for those from academia and Corporate Affiliates;
- continuing focus on transferring the eStudents to Student and Associate Members;

- Undergraduate and Postgraduate grants;
- e16plus Newsletter;
- IMA MathsCareers website, which increases branding exposure to a wide range of students of mathematics from age 11 to graduates, and achieved over 390,000 sessions in 2020;
- The liaison programme with undergraduate and postgraduate mathematics organisations will be continued and expanded where possible. Council considers that the support of students' networking, careers advice and mathematical aspirations, in addition to their formal coursework, is highly beneficial.

The Education Small Grants will be allocated to promote mathematics education. Grants of up to £600 will be allocated up to a ceiling of £6,000.

The IMA will continue to run the Mathematics Teacher Training Scholarships scheme in the academic year 2020/2021.

The programme for Early Career Mathematicians will be supported and expanded.

The IMA will continue to work with like-minded organisations to advance the standards for the professionalisation of those mathematical scientists who work in the field of Data Science.

The Institute's conference programme is run under the Learned Society brief. An initial programme of conferences to be run in 2021 is shown below:

- *Python for A-Level Mathematics and Beyond*, 22 and 23 January 2021, online;
- *IMA Early Career Mathematicians' Conference*, 13 March 2021, online;
- *6th IMA Conference on Mathematics in Defence*, 30 and 31 March 2021, online;
- *3rd Mathematics of Operational Research*, 20-23 April 2021, online;
- *11th IMA International Conference on Modelling in Industrial Maintenance and Reliability (MIMAR)*, 28 June-2 July 2021, online;
- *4th IMA Conference on Nonlinearity and Coherent Structures*, 7-9 July 2021, Loughborough University (or may be online);
- *2nd IMA Conference on the Mathematics of Robotics*, 8-10 September 2021, Manchester Metropolitan University;
- *3rd Induction Course for New Lecturers*, 8 and 9 September 2021, Isaac Newton Institute, Cambridge;
- *IMA Early Career Mathematicians' Conference*, October/ November 2021 (date tbc), online;
- *4th IMA Conference on the Mathematical Challenges of Big Data*, 8-9 December 2021, venue tbc;

- *18th IMA International Conference on Cryptography and Coding*, 14-16 December 2021, venue tbc;
- *12th International Conference on Mathematics in Signal Processing*, December 2021 (date tbc), University of Birmingham.

SOURCES OF FUNDING

Key unrestricted revenue streams were:

- Publications £620,343
- Membership Subscriptions £328,752
- Conference Income £(3,226)

Some of our most significant charitable activities during the year were:

- Promoting Maths £136,361
- Education £25,980
- Maths Today £169,769
- Conference Expenditure £106,823
- Grants £56,325

The expenditure of our incoming resources on these charitable activities was completely in line with our charitable objectives.

The non-current reserves of the Institute on 31/12/2020 were held with the following Finance Organisations: £205,241 is held at the Charity Bank, £207,506 at the Clydesdale Bank, £311,652 at Shawbrook Bank, and £377,198 at Lloyds; and £3,073 at Lloyds held on behalf of the Leslie Fox Prize.

Prepared by David Youdan and Dave Lloyd

Approved by Honorary Treasurer, Professor Andrew Osbaldestin:

Date: 24 March 2021

Approved by President, Dr Nira Chamberlain:

Date: 24 March 2021



Institute of
mathematics
& its applications

Incorporated by Royal Charter

Financial Statements

31 DECEMBER 2020

The Institute of Mathematics and its Applications
Registered Charity Number: 1017777

REPORT OF THE COUNCIL

The Council submits its report and the financial statements of The Institute of Mathematics and its Applications for the year ended 31 December 2020. The Financial Statements have been prepared in accordance with the accounting policies set out on pages 7 and 8 to the accounts and comply with the Institute's Trust Deed, the Charities Act 2011 and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) – (Charities SORP (FRS 102) as updated by the Charities SORP (FRS 102) update bulletin 1.

PRINCIPAL ACTIVITIES

The principal activity of the Institute during the year was the operation of a learned and professional society for those involved in all areas of mathematics and its applications, working as a charity for the public benefit.

REVIEW OF THE BUSINESS AND FUTURE DEVELOPMENTS

Council considers that the Institute's state of affairs is satisfactory, and that future results will revert to a close to breakeven result.

The Council members also produce a Trustees' Annual Report (2020) (Appendix 2 – attached) which reports Legal and Administrative Information; Activities and Achievements; and Future Plans.

RESULTS

The Statement of Financial Activities on page 4 shows a surplus in reserves of £231,235 for the year compared to a surplus of £95,612 in the previous year. During the year, income of a restricted nature amounting to £80,001 was received. Total unrestricted net assets at the year end amount to £1,261,148 (2019: £1,103,626). Restricted Net assets for 2020 were £151,100 (2019: £77,388).

COUNCIL

The constitution of the Council on 31 December 2020 was as follows:

PRESIDENT

Dr Nira Chamberlain

VICE-PRESIDENTS

Dr P Rowlett
Dr R Pinch
Professor H Wilson (succeeded on 1 January 2021)
Dr M Barons (from 1 January 2021)

HONORARY TREASURER

Professor A Osbaldestin

HONORARY SECRETARIES

Dr C Evans (Succeeded on 1 January 2021)
Professor P Glaister (from 1 January 2021)
Dr M Grove

PAST PRESIDENTS

Professor A Fitt
Professor C Linton
Professor Dame C Hoyles

MEMBERS OF THE COUNCIL

Mr A Apostolou	Professor C Hobbs	Dr S Plata Iturralde
Professor R Bearon	Dr S Lawrence	Professor E Rothead
Professor C Breward	Professor S Lombardo (from 1 January 2021)	Professor N Steele
Mr C Chipperton	Dr F de Melo Viríssimo	Mr N Turner
Dr B Dias	Professor G Niblo	

In addition the following served as members of the Council until their retirement during the year:

Dr D Boyce Professor R Craster Professor P Glaister Dr J Macey Miss W K Karrie Liu

The following completed their term of office as Councillors and Trustees at the end of 2020:

Dr C Evans Professor H Wilson

REPORT OF THE COUNCIL**TAX STATUS**

The Institute is accepted by the HM Revenue & Customs as an educational charity. As a charity, the Institute is exempt from tax on income and gains to the extent these are applied to its charitable objects. No tax charges have arisen in the Institute.

AUDITORS

During the year, Croucher Needham (Essex) LLP were re-appointed as auditors and a resolution to reappoint them as auditors will be put to the members at the Annual General Meeting.

By order of the Council

PROFESSOR P GLAISTER
DR M GROVE

24 March 2021

Catherine Richards House
16 Nelson Street
Southend-on-Sea
Essex
SS1 1EF

TRUSTEES' RESPONSIBILITIES IN THE PREPARATION OF FINANCIAL STATEMENTS

The Trustees (Council members) are responsible for preparing the Trustees' Annual Report and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The Royal Charter of Incorporation and the law applicable to charities in England & Wales requires the Trustees' (Council members) to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the Institute and of the incoming resources and application of resources of the Institute for that period. In preparing these financial statements, the Trustees (Council members) are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgements and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements and;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Institute will continue in business.

The Trustees (Council members) are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Institute and to enable them to ensure that the financial statements comply with the Charities Act 2011, the Charity (Accounts and Reports) Regulations 2008 and the provisions of the Royal Charter of Incorporation. They are also responsible for safeguarding the assets of the Institute and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

INDEPENDENT AUDITORS' REPORT TO THE TRUSTEES OF THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS

We have audited the financial statements of The Institute of Mathematics and its Applications for the year ended 31 December 2020 on pages 4 to 14 together with the Trustees' Annual Report 2020 set out in Appendix 2. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including FRS 102 – (Charities SORP (FRS 102) as updated by the Charities SORP (FRS 102) update bulletin 1).

This report is made solely to the charity's trustees as a body, in accordance with the Charities Act 2011. Our audit work has been undertaken so that we might state to the charity's trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and the charity's Trustees as a body, for our audit work, for this report, or for the opinions we have formed.

RESPECTIVE RESPONSIBILITIES OF TRUSTEES AND AUDITOR

As explained more fully in the Statement of Trustees' responsibilities set out on page 2 the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view.

We have been appointed as auditors under section 144 of the Charities Act 2011 and report in accordance with regulations made under section 154 of that Act. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's (APB's) Ethical Standards for Auditors.

SCOPE OF THE AUDIT OF THE FINANCIAL STATEMENTS

A description of the scope of an audit of financial statements is provided on the Financial Reporting Council's website <https://www.frc.org.uk/auditors/audit-assurance/standards-and-guidance/current-auditing-standards>.

OPINION ON FINANCIAL STATEMENTS

In our opinion the financial statements:

- give a true and fair view of the state of the charity's affairs as at 31 December 2020 and of its incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

MATTERS ON WHICH WE ARE REQUIRED TO REPORT BY EXCEPTION

We have nothing to report in respect of the following matters where the Charities Act 2011 requires us to report to you if, in our opinion:

- the information given in the Trustees' Annual Report is not consistent with the financial statements; or
- the charity has not kept sufficient accounting records; or
- the financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we require for our audit.

Croucher Needham (Essex) LLP
Statutory Auditor
Market House
10 Market Walk
Saffron Walden
Essex
CB10 1JZ

24 March 2021

Note: Croucher Needham (Essex) LLP is eligible to act as an auditor in terms of section 1212 of the Companies Act 2006.

**STATEMENT OF FINANCIAL ACTIVITIES
FOR THE YEAR ENDED 31 DECEMBER 2020**

	Unrestricted Funds 2020 £	Restricted Funds 2020 £	Total Funds 2020 £	Total Funds 2019 £	Notes
Income and endowments from:					
<i>Donations and legacies</i>					
Appeal Fund, Donations and Bequests	250	-	250	410	
Gift Aid	-	-	-	-	
<i>Charitable activities</i>					
Member Entrance fees	2,804	-	2,804	3,484	
C. Math/C Math Teacher Member Entrance fees	709	-	709	709	
Member Subscription fees	328,752	-	328,752	327,210	
Conference and symposium fees	(3,226)	-	(3,226)	145,816	
Publications income and Institutional subscriptions	620,343	80,000	700,343	664,675	
Miscellaneous income	435	-	435	2,853	
Careers in Mathematics	-	-	-	1,700	
Scholarships	128,053	-	128,053	137,789	
Education	-	-	-	-	
<i>Investment Income</i>	8,522	1	8,523	8,580	16
Total	1,086,641	80,001	1,166,642	1,293,227	
Expenditure on:					
<i>Charitable Activities</i>					
Branches and groups	10,408	-	10,408	14,576	
Conferences	106,823	-	106,823	230,111	
Education	25,980	-	25,980	33,247	
Grants/Donations	56,325	-	56,325	89,645	1a
Promoting Mathematics	136,361	-	136,361	155,495	1c
Scholarships	114,265	-	114,265	130,447	1c
Mathematics Today	169,769	-	169,769	161,029	
Membership	117,867	-	117,867	128,590	
Professional development	53,883	-	53,883	28,985	
Other publications	30,211	6,289	36,500	65,053	
<i>Governance</i>	107,227	-	107,227	160,438	1d
Total	929,119	6,289	935,408	1,197,615	1a
Net movement in funds	157,522	73,712	231,234	95,612	
Reconciliation of funds					
Total Funds brought forward at 1 January 2020	1,103,626	77,388	1,181,014	1,085,402	
Total Funds carried forward at 31 December 2020	<u>1,261,148</u>	<u>151,100</u>	<u>1,412,247</u>	<u>1,181,014</u>	7

No separate Statement of Total Recognised Gains and Losses has been presented as all such gains and losses have been dealt with in the Statement of Financial Activities.

The net movement in funds arises from the charity's continuing operations.
The detailed Income and Expenditure Account (2020) is attached (Appendix 1).

BALANCE SHEET AS AT 31 DECEMBER 2020

	2020 £	2019 £	Notes
FIXED ASSETS			
Intangible fixed assets	-	-	2
Tangible assets	111,983	114,750	3
	<u>111,983</u>	<u>114,750</u>	
CURRENT ASSETS			
Stock	1,485	1,522	4
Debtors unrestricted	348,788	45,815	5
Cash at bank and in hand restricted	151,100	77,388	
Cash at bank and in hand unrestricted	1,227,501	1,401,402	
	<u>1,728,874</u>	<u>1,526,127</u>	
LIABILITIES			
Amounts falling due within one year restricted	-	-	
Amounts falling due within one year unrestricted	428,610	459,865	
	<u>428,610</u>	<u>459,865</u>	6
NET CURRENT ASSETS	<u>1,300,265</u>	<u>1,066,262</u>	
TOTAL ASSETS LESS CURRENT LIABILITIES	<u>1,412,247</u>	<u>1,181,014</u>	
FUNDS			
Restricted funds	151,101	77,388	
Unrestricted funds	1,261,147	1,103,626	
	<u>1,412,247</u>	<u>1,181,014</u>	7

The Financial Statements on page 4 to 14 together with the Trustees' Annual Report (2020) in Appendix 2 were approved and authorised for issue by the Council on 24 March 2021 and signed on their behalf by

PROFESSOR ANDREW OSBALDESTIN

Honorary Treasurer

DR NIRA CHAMBERLAIN

President

STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED 31 DECEMBER 2020

Notes

	2020 £	2019 £	
Net Cash (used in)/provided by operating activities	<u>(99,723)</u>	<u>147,925</u>	15
Cash flows from investing activities			
Investment income	8,523	8,580	16
Purchase of fixture and fittings & Equipment	(8,990)	(11,467)	
Net Cash (used in)/provided by investing activities	<u>(466)</u>	<u>(2,887)</u>	
Change in cash and cash equivalents in the year	(100,189)	145,039	
Cash and cash equivalent brought forward	1,478,791	1,333,752	
Cash and cash equivalents carried forward	<u><u>1,378,601</u></u>	<u><u>1,478,791</u></u>	

FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2019**ACCOUNTING POLICIES****BASIS OF ACCOUNTING**

The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard in the UK and Republic of Ireland (FRS102) (Charities SORP (FRS102)) as updated by the Charities SORP (FRS 102) update bulletin 1, and the Charities Act 2011 and applicable regulations.

TANGIBLE FIXED ASSETS

Fixed assets include properties valued by Chartered Surveyors on an existing use/open market basis. Other fixed assets are stated at historical cost. No fixed asset under £250 is capitalised.

Depreciation is provided on all tangible fixed assets other than freehold land at rates calculated to write each asset down to its estimated residual value evenly over its expected useful life, as follows:-

Freehold buildings	2%
Fixtures, fittings and equipment	15%
Computer equipment	33%

Following the implementation of FRS 102, the charity has followed the transitional provisions to retain the book value of freehold buildings re-valued on 31 December 1991, but not to adopt a policy of revaluation in the future.

INTANGIBLE FIXED ASSETS

The cost of attaining the Royal Charter has been capitalised and has now been written off on a straight line basis over ten years.

STOCK

Stock is valued at the lower of cost and net realisable value. Net realisable value is based upon estimated selling price less further costs expected to be incurred to completion and disposal. Provision is made for obsolete and slow moving items.

FUNDS STRUCTURE

Unrestricted funds comprise those funds which the Trustees are free to use in accordance with the charitable objects. Restricted funds are funds which have been given for particular purposes and projects (see note 7).

LEASED ASSETS AND OBLIGATIONS

All leases are "operating leases" and the annual rentals are charged to the Statement of Financial Activities on a straight line basis over the lease term.

PENSIONS

The Institute operates a defined contribution scheme. The amount charged to the Statement of Financial Activities in respect of pension costs and other post retirement benefits are the contributions in the year.

BRANCHES

The Statement of Financial Activities represents the results of the charity only. The Institute has seven current branches and these are not consolidated on the basis they are not material to the charity. There are no other related parties.

FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2019**ACCOUNTING POLICIES****INCOMING RESOURCES**

All incoming resources are included in the Statement of Financial Activities when the charity is legally entitled to the income and the amounts can be quantified with reasonable accuracy. The following specific policies are applied to particular categories of income:

- Investment income is included when receivable;
- Incoming resources from publications and conferences are accounted for when earned;
- Subscriptions are recognised over the period to which the fees relate.
- Scholarship income is recognised when invoiced.

To the extent that reliable estimations are available with regard to the final settlement of each accounting year's publication income and expenditure, provision is made for the final settlement figure. Where reliable estimations are not available, no provision is made.

RESOURCES EXPENDED

Resources expended are recognised in the period in which they are incurred and include attributable Input VAT that cannot be recovered. Resources expended are allocated to the particular activity where the cost relates directly to that activity.

Governance costs include the costs of governance arrangements that relate to the general running of the charity. These activities provide the governance infrastructure that allows the charity to operate and to generate the information required for public accountability. They include the strategic planning processes that contribute to the future development of the charity.

Direct expenditure is allocated to categories of activity. Where expenditure cannot be directly allocated it represents support costs and is apportioned on a basis consistent with the use of resources, by reference to the number of staff working on each activity.

The Institute makes grants and donations to members of the mathematics community. The purpose of the grants and donations is to facilitate research activity in all areas of mathematics.

GOVERNMENT GRANTS

Incoming resources from grants are accounted for on an accruals basis for re-imbursement of expenses incurred and entitlement to grant allocation in line with signed contracts.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2020

1.Expenditure on:

		2020		2020	2019	
a) Analysis of expenditure on	Support	Direct	Staff			Notes
	Costs	Costs	Costs	Total	Total	
	£	£	£	£	£	
<u>Unrestricted funds</u>						
Operating activities in furtherance of Charity's objectives						
Branches and groups	1,496	2,561	6,351	10,408	14,576	
Conferences	18,383	10,416	78,024	106,823	230,111	
Education	4,204	3,933	17,843	25,980	33,247	
Grants/donations	3,919	35,773	16,633	56,325	89,645	
Promoting Mathematics	22,658	17,534	96,169	136,361	155,495	
Scholarships	12,825	47,005	54,435	114,265	130,447	
Mathematics Today	19,380	68,132	82,257	169,769	161,029	
Membership	20,948	8,008	88,911	117,867	128,590	
Professional development	9,405	4,559	39,919	53,883	28,985	
Other publications	3,919	9,659	16,633	30,211	31,114	
Governance	18,238	11,572	77,417	107,227	160,438	
Total unrestricted resources expended	135,376	219,152	574,592	929,119	1,163,677	1b
<u>Restricted funds</u>						
Operating activities in furtherance of Charity's objectives						
QJMAM	-	6,289	-	6,289	33,939	
Mathematics Today (Leslie Fox Prize Fund award)	-	-	-	-	-	
Total resources expended	135,376	225,441	574,592	935,408	1,197,616	
<u>b) Analysis of Total Support Costs</u>						
	Governance	Conferences	Education	Maths Today	Membership	Other
	£	£	£	£	£	£
DMH premises\18 Nelson Street	3,177	3,201	732	3,375	3,648	9,443
Communications & IT	4,400	4,434	1,014	4,675	5,053	13,078
Postage & printing	896	903	206	952	1,029	2,663
Financial costs	8,181	8,246	1,886	8,694	9,397	24,326
Depreciation	1,586	1,598	365	1,685	1,821	4,713
Total unrestricted	18,238	18,383	4,204	19,380	20,948	54,224
£						
Governance	18,238					
Conferences	18,383					
Education	4,204					
Maths Today	19,380					
Membership	20,948					
Other	54,224					
	135,376					

Direct expenditure is allocated to categories of activity. Where expenditure cannot be directly allocated it represents support costs and is apportioned on a basis consistent with the use of resources, by reference to the number of staff working on each activity.

**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 DECEMBER 2020**

c) Analysis of promoting mathematics costs

	Support Costs	Direct Costs	Staff Costs	2020 Total	2019 Total
	£	£	£	£	£
Maths Careers	4,275	5,152	18,145	27,572	36,809
Maths Matters	9,192	3,086	39,012	51,290	55,023
Other	9,192	9,296	39,012	57,500	63,664
Total promoting mathematics costs	22,658	17,534	96,169	136,361	155,495
Scholarships	12,825	47,005	54,435	114,265	130,447
	35,483	64,539	150,604	250,626	285,942

Maths Careers is only supported by the Institute of Mathematics and its Applications.

d) Analysis of governance costs

	Support Costs	Direct Costs	Staff Costs	2020 Total	2019 Total
	£	£	£	£	£
Audit fees - Audit of Financial Statements	-	8,735	-	8,735	7,920
Legal and professional	-	-	-	-	2,500
Irrecoverable VAT	13,377	-	-	13,377	14,769
Cost of AGM and Trustee travel etc.	-	1,840	-	1,840	35,717
Apportionment of staff costs	-	-	77,419	77,419	66,388
General overhead costs	5,856	-	-	5,856	33,144
Total governance costs	19,233	10,575	77,419	107,227	160,438

e) Analysis of grants expended

	2020 Total	2019 Total
	£	£
Educational Grants	2,846	4,049
Small Grants	3,886	12,115
University Liaison Officer Grants	7,200	10,678
Donation/Sponsorship	1,138	7,040
CMS	14,529	32,149
HE Educational Grants	3,500	500
ACME	-	7,000
	33,099	73,532
Less: Allocated to development of membership growth £8,000.	-	(8,000)
	33,099	65,532

See notes 6, 8 and 10 in the Trustees Annual Report where details are given for Educational Grants, Small Grants & University Liaison Officer Grants. The grants are payable to individuals £3,886 and institutions £29,213

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2020

2. INTANGIBLE FIXED ASSETS

	£
Cost: 1st January 2020 and as at 31st December 2020	<u>47,131</u>
Amortisation: as at 1st January 2020 and 31st December 2020	<u>47,131</u>
Net Book value as at 1st January 2020 and as at 31st December 2020	<u>-</u>

Intangible fixed assets represent legal costs incurred in 1992 in respect of the application for a Royal Charter.

3. TANGIBLE FIXED ASSETS

	Freehold property & land	Fixtures fittings & equipment	TOTAL
Cost or valuation:	£	£	£
Property 1 January 2020	189,750	155,270	345,020
Land 1 January 2020	40,250	-	40,250
Additions	-	8,990	8,990
Disposals	-	-	-
31 December 2020	<u>230,000</u>	<u>164,260</u>	<u>394,260</u>
Representing assets stated at:			
Cost	-	164,260	164,260
Valuation	<u>230,000</u>	<u>-</u>	<u>230,000</u>
	<u>230,000</u>	<u>164,260</u>	<u>394,260</u>
Depreciation			
1 January 2020	128,776	141,744	270,520
Charged in the year	4,600	7,156	11,756
Disposals	-	-	-
31 December 2020	<u>133,376</u>	<u>148,900</u>	<u>282,276</u>
Net book value:			
31 December 2020	<u>96,624</u>	<u>15,359</u>	<u>111,983</u>
31 December 2019	<u>101,224</u>	<u>13,526</u>	<u>114,750</u>

The freehold property was revalued at 31 December 1991 by Wheeldon and Deacon, Chartered Surveyors on an existing use open market basis.

The original cost of the freehold land & property was £219,074.

The Council considers that the current value of the property (Catherine Richards House) is to the best of the information available in excess of the 1991 revaluation.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2020

4. STOCKS

	2020	2019
	£	£
Goods for resale	<u>1,485</u>	<u>1,522</u>

5. DEBTORS

	2020	2019
	£	£
Due within one year:		
Trade debtors	317,324	3,889
Prepayments and accrued income	<u>31,464</u>	<u>41,925</u>
	<u>348,788</u>	<u>45,815</u>

Trade and other debtors are recognised at the settlement amount due after any trade discount offered.

Prepayments are valued at the amount prepaid after taking account of any trade discounts due.

6. CREDITORS

	2020	2019
	£	£
Amounts falling due within one year:		
Trade creditors	3,642	33,250
Other taxation and social security costs	63,693	59,264
Accruals	26,123	26,779
Deferred income	<u>335,152</u>	<u>340,572</u>
	<u>428,610</u>	<u>459,865</u>

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

	2020	2019
	£	£
Deferred income b/fwd.	340,572	331,148
Amounts released	(340,572)	(331,148)
Deferred in year	<u>335,152</u>	<u>340,572</u>
Deferred income c/fwd	<u>335,152</u>	<u>340,572</u>

Deferred income mainly consists of publishing income relating to 2020 and will therefore be released next year.

7. MOVEMENTS IN FUNDS

The transfer from the revaluation reserve represents the difference between the depreciation charge of the property on an historic cost basis compared to the depreciation charge based on the revalued cost.

	2020				2019
		Incoming resources	Resources expended	Transfer between funds	
	£	£	£	£	£
Restricted reserves					
Leslie Fox Prize Fund	3,073	1	-	-	3,072
QJMAM	148,027	80,000	(6,289)	-	74,316
	<u>151,101</u>	<u>80,001</u>	<u>(6,289)</u>	<u>-</u>	<u>77,388</u>
Unrestricted funds					
Free reserve	1,204,030	1,078,118	(929,119)	-	1,055,031
Gains/(losses) on investment assets	52,942	8,522	-	-	44,420
Revaluation reserve	4,174	-	-	-	4,174
	<u>1,261,147</u>	<u>1,086,640</u>	<u>(929,119)</u>	<u>-</u>	<u>1,103,625</u>
Total restricted and unrestricted funds	<u>1,412,247</u>	<u>1,166,641</u>	<u>(935,408)</u>	<u>-</u>	<u>1,181,013</u>

The Leslie Fox Prize Fund may be used to award biennially for best submission in Numerical Analysis.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2020

8. ANALYSIS OF NET ASSETS BETWEEN FUNDS

	Tangible fixed assets	Net current assets	Fund balance balance
	£	£	£
Unrestricted funds	111,983	1,149,164	1,261,146
Restricted funds	-	151,101	151,101
	<u>111,983</u>	<u>1,300,265</u>	<u>1,412,247</u>

9. COMMITMENTS UNDER OPERATING LEASES

At the reporting end date the charity had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall as follows:

	2020	2019
	£	£
Plant and machinery		
Within one year	3,210	3,929
Between two and five years	4,344	7,926
Building		
Within one year	5,000	5,000
Between two and five years	<u>5,000</u>	<u>10,000</u>
	<u>17,554</u>	<u>26,856</u>

10. PENSION COSTS

The Institute makes payments to personal pension funds set up by individual members of staff. Contributions payable by the Institute amounted to £51,144 (2019: £51,986).

11. EMPLOYEES

	2020	2019
	No.	No.
The average weekly number of persons employed by the Institute regardless of whether they are part time or full time during the year was:		
Management:		
£80,001 - £90,000	1	1
£70,001 - £80,000	-	-
Below £60,000	1	1
Administration:	15	15
Scholarships	<u>1</u>	<u>2</u>
	<u>18</u>	<u>19</u>

Pension contributions made on behalf of 1 amounted to £1,003 for higher paid employees (2019:1 £984).

	2020	2019
	£	£
Staff costs for the above persons:		
Salaries	472,754	462,240
Pension contributions	56,772	51,878
Social security costs	42,207	38,580
Other costs	<u>2,859</u>	<u>11,798</u>
	<u>574,592</u>	<u>564,496</u>

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2020

12. TAXATION

The Institute is accepted by HM Revenue & Customs as an educational charity and as such is not subject to corporate taxation for activities within its charitable objects.

13. RELATED PARTY TRANSACTIONS

There were no related party transactions during the year.

During the year payments were made to Dr Snezana Lawrence in relation to services provided as an assessor for the mathematics teacher training scholarships amounting to £1,469 (2019 £525 relating to services provided by Edward Rothead as an assessor on the teacher training scholarships). In addition, re-imbursed expenses for travel and subsistence to Council Members amounted to £1,840, 11 members re-imbursed (2019: £10,458, 21 members re-imbursed).

14. SCHOLARSHIPS

In 2012 the Teaching Agency approached the IMA to run a Mathematics Initial Teacher Training Scholarship Scheme.

Under such a scheme the scholarships would be paid by the DFE (for England only) to run the Scheme. In 2012 costs associated with the negotiation were borne by the IMA. In addition DFE paid for a small grant to develop the submission. DFE announced on 21st December 2012 that the Scheme would be run. The amounts awarded by the DFE were as follows:

Year	Award	Year	Award
2013	209,000	2017	229,826
2014	260,000	2018	194,543
2015	239,120	2019	137,739
2016	197,800	2020	128,053

15. Reconciliation of net movement in funds to net cash flow from operating activities

	2020	2019
	Total	Total
	£	£
Net movement in funds	231,234	95,612
Add back depreciation	11,756	14,831
Deduct investment income	(8,523)	(8,580)
Decrease/(increase) in stock	37	(548)
Decrease/(increase) in debtors	(302,973)	54,781
(Decrease)/increase in creditors	(31,255)	(8,170)
Net cash provided by/(used in) operating activities	(99,723)	147,925

16. INVESTMENT INCOME

	2020	2019
	Total	Total
	£	£
Interest on cash deposits	8,523	8,580

Investment income includes £1 (2019 £2) in respect of restricted funds.

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS
INCOME AND EXPENDITURE ACCOUNT
FOR THE PERIOD 1st January - 31 December 2020

Appendix 1a

	Unrestricted Funds 2020	Restricted Funds 2020	Total Funds 2020	Total Funds 2019
	£	£	£	£
Incoming resources				
Entrance/Transfer fees	3,513		3,513	4,193
Subscriptions	328,752		328,752	327,210
Publications	620,343		620,343	584,675
Miscellaneous Income	435		435	2,853
Appeal fund and bequests	250		250	410
Interest Received	8,523	1	8,524	8,580
Conference income	(3,226)		(3,226)	145,816
Careers in M & 50th Ann	-		-	1,700
Scholarships & HE STEM	128,053		128,053	137,789
	1,086,642	1	1,086,643	1,213,226
Resources expended				
Salaries, pension & NHI	571,733		571,733	552,698
Other staff expenses	2,859		2,859	11,798
Office overheads	23,640		23,640	31,725
Telephone	4,458		4,458	5,483
General printing, post. & stat.	6,649		6,649	14,937
Office equipment hire & maint.	4,515		4,515	2,389
Council and committee	10,159		10,159	51,910
Branches and groups	1,000		1,000	3,340
Education	2,356		2,356	11,233
Publications (inc. Maths Today)	68,190		68,190	70,152
General expenses	3,247		3,247	14,782
Bank charges	1,831		1,831	8,159
Legal and professional	-		-	2,500
Audit and accounts	50,800		50,800	32,391
Depreciation	8,702		8,702	10,231
Overseas activities	-		-	-
Amortisation of property	3,066		3,066	4,600
Subscription to other bodies	20,577		20,577	17,293
Repairs and renewals	-		-	6,592
Web-site expenses	8,309		8,309	10,501
Presidential Address	2,309		2,309	-
Conference Direct Costs	3,518		3,518	105,840
Grants/Donations	34,302		34,302	65,856
Strategy Review Weekend	-		-	-
Information Technology	-		-	2,387
I. T. Consultancy	1,771		1,771	1,320
Careers in M & 50th Ann	6,634		6,634	15,751
Scholarships & HE STEM	42,192		42,192	59,080
Irrecoverable VAT	13,377		13,377	14,769
Suspense Account	-		-	92
Bad Debt	-		-	-
De Morgan House Rental	13,449		13,449	8,991
De Morgan House furnishing	-		-	-
De Morgan House Other	6,624		6,624	4,428
18 Nelson Street Rental	3,503		3,503	5,521
18 Nelson Street Other	2,102		2,102	3,313
Development - SRW	126		126	7,590
Development - Membership Growth	52		52	3,027
Development - Database & Web	4,285		4,285	3,000
Development - Services	2,784		2,784	-
	929,119	-	929,119	1,163,677
Unrestricted Surplus/(Deficit)	157,524	-	157,525	49,549
Incoming resources				
Publications		80,000	80,000	80,000
	-	80,000	80,000	80,000
Resources expended				
Publications		6,289	6,289	33,939
	-	6,289	6,289	33,939
Restricted Surplus/(Deficit)	-	73,712	73,712	46,061
Overall Surplus/(Deficit)	157,524	73,712	231,236	95,610

THE INSTITUTE OF MATHEMATICS AND ITS APPLICATIONS
BALANCE SHEET AS AT 31 December 2020

Appendix 1b

	Unrestricted	31-Dec-20 Restricted	Total	31-Dec-19 Total	Total
	£	£	£	£	£
FIXED ASSETS					
Freehold Property	96,624			101,224	
Fixtures and equipment	<u>15,357</u>			<u>13,526</u>	
			111,981		114,750
CURRENT ASSETS					
Stocks	1,485			1,522	
Trade debtors	317,324			3,889	
Prepayments and accrued inc.	31,464			41,925	
Cash at bank and in hand	<u>1,378,603</u>			<u>1,478,791</u>	
	1,728,876	-	1,728,876	1,526,127	
CREDITORS due within 1 year	<u>428,610</u>		428,610	<u>459,865</u>	
NET CURRENT ASSETS/(LIABILITIES)			<u>1,300,266</u>		<u>1,066,262</u>
			<u>1,412,247</u>		<u>1,181,014</u>
CAPITAL AND RESERVES					
Income and expenditure account			1,261,149		1,103,624
Restricted income and expenditure account			151,099		77,388
			<u>1,412,247</u>		<u>1,181,014</u>
NOTES					
Creditors due within 1 year					
Trade creditors	3,642			33,250	
Social security and other taxes	63,693			59,264	
Accruals and deferred income	<u>361,275</u>			<u>367,351</u>	
	<u>459,865</u>			<u>459,865</u>	
INCOME AND EXPENDITURE ACCOUNT					
Balance as at 1st January 2020	1,099,451	77,388	1,176,840		
Surplus for the 12 months	<u>157,525</u>	<u>73,711</u>	<u>231,237</u>		
Balance as at 31 December 2020	<u>1,256,976</u>	<u>151,099</u>	<u>1,408,077</u>		

Our Ref: 30236/JOEW/309217
12 February 2021

The Institute of Mathematics and its Applications
Catherine Richards House
16 Nelson Street
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Dear Sirs,

In accordance with our normal practice we are writing to draw your attention to various matters which arose during the course of our audit of the charity's accounts for the year ended 31 December 2020.

1. We have no comments to make concerning the qualitative aspects of the entity's accounting practices and financial reporting.
2. We did not encounter any significant difficulties during the audit and there are no significant findings from the audit to draw to your attention.
3. A draft of our proposed letter of representation has also been sent. In all respects the letter is routine.
4. All unadjusted misstatements determined during the course of our audit can be seen on the enclosed schedule. We did not note any significant weaknesses with systems or processes.
5. As you are aware from our letter of engagement, our audit procedures were directed towards testing the accounting systems in operation upon which we have based our assessment of the accounts. No significant weaknesses in accounting systems and processes were identified during the course of our work. Please note that our review is not meant to be a full and accurate reflection of all weaknesses that may be present in your system.
7. We do not propose any modifications to our audit opinion and hence will be issuing a clean audit report.
8. The firm and the audit engagement team have complied with relevant ethical requirements concerning independence.

We would like to take this opportunity of expressing our thanks to your staff for their assistance during the course of our audit.

Please note that this report has been prepared for the sole use of The Institute of Mathematics and its Applications. It must not be disclosed to third parties, quoted or referred to, without our prior written consent. No responsibility is assumed by us to any other person.

The purpose of the audit was to enable us to express an opinion on the financial statements. The audit included consideration of internal control relevant to the preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of internal control. The matters reported above are limited to those deficiencies that the auditor has identified during the audit and that the auditor has concluded are of sufficient importance to merit being reported to those charged with governance.

If we can be of any further assistance, please contact James Marchant.

Yours faithfully

A handwritten signature in black ink that reads 'Croucher Needham (Essex) LLP'.

Croucher Needham (Essex) LLP

Enc