

EUROPEAN FEDERATION OF CHEMICAL ENGINEERING

REPORT OF THE TRUSTEES for the year ended 31 December 2021

KEY ACHIEVEMENTS DURING 2021

In 2021, scientific cooperation and professional exchange was still affected by COVID-19 related restrictions in many European countries. The digital tools already used to cope with the pandemic in 2020 became even more important in 2021. The main scientific event in Europe for chemical engineering, the joint European Conference on Chemical Engineering / European Conference for Applied Biotechnology, had to be held fully online, since hygiene requirements and high levels of uncertainty made an in-person event impossible. It is credit to the dedication of the organisers and scientific volunteers that the event was successfully moved from in-person to virtual in a matter of weeks, allowing EFCE and ESBES to deliver a successful online conference under the headline of "Engineering the Future". The spectrum of topics ranged from raw materials and their availability - including CO₂ - to the handling of energy and water resources and deep into the details of process engineering. ECCE/ECAB 2021 was also host to the first ever EFCE Science Slam, which was won by Sofia Garcia Fracaro presenting "Immersive technologies applied for training of operators in the chemical industry".

While the successful EFCE Spotlight Talk series went into its second year, the first-ever EFCE Early Career Engineers Forum took place in April 2021. Presenters from seven European countries discussed early career-relevant topics, ranging from national activities like AIDIC's early careers working group *Giovani* or the ChemCar competition, via special education offerings like summer schools and student competitions, to European young professional networks and round table events discussing recent graduates' thoughts about chemical engineering curricula. Special interest workshops on career opportunities in academy, industry and design and on sustainability completed the programme, which was followed by almost a hundred participants.

A major EFCE research project, the EFCE European Skills Base Survey, was completed in 2021. Reliable statistical data for a subject as distinct as chemical engineering is difficult to extract from the government or consulting databases; e.g. for Germany, EFCE together with the national organisations ProcessNet and Dechema had to run its own survey of 73 universities offering chemical and bio-chemical engineering or similar (e.g. environmental engineering, brewing technology) courses. Analysis supplied by the eighteen countries featured in the study showed widely differing approaches to teaching chemical engineering and similar subjects as well as some clear cases of neglect. Student / staff ratios reflected two traditions: one with a ratio of around 16-to-one and the other around eight-to-one. It is likely this reflects a different organization of studies and of the staff that teach them. While teaching staff in most countries have a similar average age, in three countries the average was significantly higher, indicating that the recruiting of new teaching staff has been lacking over the years.

Online activities became the standard in 2021, showing the great opportunities present in the digital work space, but also its limitations. Attendance at online meetings of the EFCE Board, working parties and sections is excellent, reflecting the much greater ease to participate. However, covering the cost of hosting and supporting online scientific events has not yet been fully addressed, given that participants are increasingly reluctant to pay for online scientific exchange, while willingness to participate in online trainings remains strong.

The European Federation of Chemical Engineering (EFCE) has promoted cooperation in Europe and elsewhere between non-profit making professional scientific and technical societies since 1953. In 2014 EFCE was registered as a Charitable Incorporated Organisation (CIO) to help it foster the general advancement of science and education of the public in chemical engineering. In addition, we support the development of chemical engineering in collaboration with our member societies. EFCE encourages progress in chemical engineering through facilitating the exchange of information and opinion in meetings, congresses and journals, supporting leading researchers and emerging talent through medals and prizes, and enabling industrialists and academics from across Europe to discuss topics of common concern.

OBJECTIVES AND ACTIVITIES

Working parties and sections

EFCE has 20 Working Parties and four Sections, whose activities span organising conferences, promoting and judging awards, and running summer courses for PhD students. The Working Parties and Sections (WP&S) are at the heart of EFCE's activities. They involve around 1000 volunteers from across Europe who are experts in their fields. Of these, 18% are industrial delegates.

**EUROPEAN FEDERATION OF CHEMICAL
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**REPORT OF THE TRUSTEES
for the year ended 31 December 2021**

WORKING PARTIES

- Agglomeration

Chair: Prof. S. HEINRICH, Hamburg/DE; email: stefan.heinrich@tuhh.de

- Characterisation of Particulate Systems

Chair: Prof. Martin MORGENEYER, Compiègne/FR; email: martin.morgeneyer@utc.fr

- Chemical Reaction Engineering

Chair: Prof. Kai-Olaf HINRICHSSEN, Garching/DE; email: hinrichsen@tum.de

- Comminution and Classification

Chair: Prof. Arno KWADE, Braunschweig/DE; email: a.kwade@tu-bs.de

- Computer Aided Process Engineering

Chair: Prof. Flavio MANENTI, Milano/IT; email: flavio.manenti@polimi.it

- Crystallization

Chair: Prof. Marco MAZZOTTI, Zurich/CH; email: marco.mazzotti@ipe.mavt.ethz.ch (until August 2021); successor:

Prof. Daniele MARCHISIO, Torino/IT; email: danielle.marchisio@polito.it

- Drying

Chair: Prof. Angelique LEONARD, Liège/BE; email: a.leonard@ulg.ac.be

- Education

Chair: Prof. Eric SCHAEER, Nancy/FR; email: eric.schaer@univ-lorraine.fr

- Electrochemical Engineering

Chair: Prof. Karel BOUZEK, Prague/CZ; email: karel.bouzek@vscht.cz

- Fluid Separations

Chair: Prof. Harry KOOIJMAN, Amsterdam/NL; email: Harry.Kooijman@shell.com and
Potsdam/USA; email: kooijman@clarkson.edu

- High Pressure Technology

Chair: Prof. Eberhard SCHLÜCKER, Erlangen/DE; email: sl@ipat.uni-erlangen.de (until May 2021); successor: Prof.

Maria Jose COCERO ALONSO, Valladolid/ES; email: mjcocero@iq.uva.es

- Loss Prevention and Safety Promotion

Chair: Prof. Bruno FABIANO, Genoa/IT; email: brown@unige.it

- Mechanics of Particulate Solids

Chair: Prof. Diego BARLETTA, Fisciano (SA), Italy; email: dbarletta@unisa.it

- Mixing

Chair: Dr. Joëlle AUBIN, Toulouse/FR; email: joelle.aubin@ensiacet.fr

- Multiphase Fluid Flow

Chair: Prof. Michael SCHLÜTER, Hamburg/DE; email: michael.schlueter@tuhh.de

- Polymer Reaction Engineering

Chair: Prof. Markus BUSCH, Darmstadt/DE; email: markus.busch@pre.tu-darmstadt.de

- Process Intensification

Chair: Prof. Tom VAN GERVEN, Leuven/BE; email: tom.vangerven@kuleuven.be

- Quality by Design

Chair: Prof. Christoph HERWIG, Wien/AT; email: christoph.herwig@tuwien.ac.at

- Static Electricity in Industry

Chair: Prof. Petro LLOVERA SEGOVIA, Paterna/ES; email: pedro.llovera@ite.es

- Thermodynamics and Transport Properties

Chair: Prof. Sabine ENDERS, Karlsruhe/DE; email: sabine.enders@kit.edu

**EUROPEAN FEDERATION OF CHEMICAL
ENGINEERING**

**REPORT OF THE TRUSTEES
for the year ended 31 December 2021**

SECTIONS

- Energy

Co-Chairs: Prof. Fabrizio BEZZO, Padova/IT; email: fabrizio.bezzo@unipd.it and
Prof. Francois MARÉCHAL, Sion/CH; email: francois.marechal@epfl.ch

- Food

Chair: Dr.-Ing. Volker HEINZ, Quakenbrueck/DE; email: v.heinz@dil-ev.de

- Membrane Engineering

Chair: Prof. Enrico DRIOLI, Arcavacata di Rende/IT; email: e.drioli@itm.cnr.it

- Product Design and Engineering

Chair: Dr. Stefan KAUFMANN, Hamburg/DE; email: stefan.kaufmann@beiersdorf.com

Working Parties and Sections conduct their business throughout the year, and every group has at least one meeting per year. Since mid-March 2020 all planned business meetings of the Working Parties and Sections were held online. In 2021, Working Parties and Sections were involved in a broad range of online events and webinar series and conferences which, due to the ongoing COVID-19 restrictions were either held as virtual events or moved to 2022.

EFCE events of 2021:

- 3rd CHISA De Gruyter - EFCE Web-Seminar series

online, 20 January and 6 May 2021

- CHISA 2021 VIRTUALLY

online, 15 - 18 March 2021

various WPs involved

- EEM21 - 7th International Congress "Engineering, Environment and Materials in Process Industry"

Jahorina, East Sarajevo, Bosnia and Herzegovina and online, 17 - 19 March 2021 (EFCE Event No. 777)

- EFCE Early Career Engineers Forum

online, 22 April 2021

- 2nd Series of EFCE Spotlight Talks

online, 17 - 21 May 2021

Working Parties and Sections involved

- Emerging Risks and Advanced Modelling within the Process Safety Horizon

Working Party on Loss Prevention and Safety Promotion in the Process Industries

- Intensification of mixing and multiphase contacting in continuous flow equipment

Working Parties on Mixing and on Process Intensification

- Electrolyte Thermodynamics challenges from industrial needs to academic research

Working Party on Thermodynamic and Transport Properties (TTP)

(sponsored by IFPEN/ElcTher)

- Recent Developments and Further Demands in Reactive Gas-Liquid Flows

Working Parties on Multiphase Fluid Flow and on Chemical Reaction Engineering

- Drying research: focus on freeze-drying, lyophilization, spray-drying and product quality

Working Party on Drying

- Alternative Food Technologies - Science meets industry

online 25 - 27 May 2021

Section on Food

- ESCAPE-31 - 31st European Symposium on Computer Aided Process Engineering

online, 6 - 9 June 2021 (EFCE Event No. 776)

Working Party on CAPE

- ESEE 2021 - 12th European Symposium on Electrochemical Engineering

online, 14 - 17 June 2021 (EFCE Event No. 766)

Working Party on Electrochemical Engineering

- ISIC2021 - 21st International Symposium on Industrial Crystallization

online, 30 August - 2 September 2021 (EFCE Event No. 751)

Working Party on Crystallization

- CHEMREACTOR-24 - XXIV International Conference on Chemical Reactors

online, 12 - 17 September 2021 (EFCE Event No. 769)

- ECCE13 & ECAB6

Online, 20 - 23 September 2021 (EFCE Event No. 767)

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- 9th PhD-Student on Workshop on Polymer Reaction Engineering
online, 23 - 25 November 2021
Working Party on Polymer Reaction Engineering

Virtual ECCE13 & ECAB6 - A great event - in many dimension
20 - 23 September 2021 (EFCE Event No. 767)

130 monitors, 65 people in the background, several terabytes of data volume - this does not describe the bridge of a cruise ship or the key data for a small satellite launch, but the 13th European Conference on Chemical Engineering and 6th European Conference on Applied Biotechnology, in short ECCE & ECAB 2021. The technical and organizational effort in the background of such a large event is not to be underestimated, since more than 500 lectures in 13 parallel strands, 215 posters and various special formats had to be coordinated and supported. The fact that the organizers and, above all, the committee were highly committed and recruited chairpersons virtually up to the last minute paid off. In the end, it was possible to run a very attractive and diverse four-day program (almost) without any gaps, without any technical problems and with expert support for all sessions. 235 hours of live streaming went out on air!

A program for every field of expertise

ECCE and ECAB fully lived up to their claim of covering all facets of the chosen motto "Engineering the Future". The broad spectrum of topics ranged from the availability of raw materials to vital resources like energy and water, and to biological production systems and education and training. Short presentation sessions were followed by broad discussions ensuring a lively exchange where everyone could ask their questions. The same applied to the posters: Here, the "wonder.me" platform offered the opportunity to engage in informal conversation with the authors after a stroll through the virtual poster dimensions exhibition or one of the poster flashtalks. In the end, Laura Marie Helleckes from Forschungszentrum Jülich won 1st place for her poster on "Automated high-throughput strain characterization". Robin Dinter from TU Dortmund University was the runner up with a photoreactor concept, and third place went to Katrin Rosenthal and Alexander Behr from TU Dortmund University with a contribution on biocatalytic reactors.

Plenary lectures: Spotlights on pandemics and climate change

The diversity of topics was also reflected in the outstanding plenary lectures. In his highly engaging talk, Jiri Drahos drew connections between his field of science, chaotic systems, and the political arena in which he travels today. The cutting-edge field of pharmaceutical production was covered by two speakers, Michael Doherty and Luis Freitas dos Santos: while Michael Doherty, University of California, looked at continuous production research from a university perspective, Luisa Freitas Dos Santos, Vice President Global Clinical Supply Chain at GlaxoSmithKline, described how the pandemic has directly impacted operations and methods in a global pharmaceutical company. Emily Nguyen from Palantir Technologies described how global supply chains can become more resilient thanks to digitalization and what challenges the pandemic has revealed here. The chemical industry faces completely different, but no less significant challenges. Melanie Maas-Brunner, CTO of BASF, presented the strategies the company is pursuing on its way to CO₂-free chemical production, which rest on several pillars ranging from the electrification of processes to chemical recycling.

ChemCar - the miniature race

ChemCar - that's usually the lunch break meeting place where seasoned industry experts and dignified professors get carried away with enthusiasm and cheer loudly for their teams. That's hard to do in a virtual space. But digitalisation did make it possible to turn the competition into a global event: Seven teams, including one from Iran and three from Indonesia, rose to the challenge of convincing with concept and precision. In the end, first place went to the "Spring O2'clock" team from RWTH Aachen University, nicknamed "Wheely," followed by Team "Spectronics" from the University of Surabaya, Indonesia, and the pHantasticCar, which was developed at TU Dortmund University.

Student and doctoral program

Networking is particularly important for students and young scientists, who are facing far-reaching decisions about their preferred career path and making a good start in their professional life. This is where the practical exchange of experience is particularly important. The "creative young process engineers", kVIs, had prepared a program for the virtual ECCE and ECAB that was designed to do just that. Despite all the weighty questions, however, there was no shortage of fun, not least in the "Expert vs Audience" quiz, in which this year the expert had to admit defeat to the assembled broad knowledge of the audience.

Science Slam - Science with fun

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And ECCE and ECAB offered another special program item: In a science slam, six researchers presented their work in a compact and entertaining way. Sofia Garcia Fracaro walked off the screen as the winner; she is working on "Immersive technologies applied for training of operators in the chemical industry". Roos Goedhart and Theresa Jaster took 2nd and 3rd place.

The conclusion: It was great... but

The ECCE and ECAB showed what a virtual conference can do: Impart a lot of knowledge and enable the exchange of information worldwide, regardless of distances and time zones. It can provide new professional contacts and initiate a very straightforward dialogue. It can even provide a different setting for a competition that thrives strongly on the emotion of the audience. In terms of scientific breadth and depth, such a virtual conference need not hide from any face-to-face event; in some cases, the virtual setting even significantly reduces the barriers to participation. Nevertheless, there is also something missing: the infectious enthusiasm, the chance encounter or the personal conversation over beer and pretzels cannot be recreated in the digital space. And that's also what a big conference is about, in addition to the scientific content: The atmosphere that inspires and the exchange that leads to new ideas.

And that's exactly what there will be at the next edition of ECCE and ECAB: From September 17 to 21, 2023, EFCE, ESBES and DECHEMA invite you to Berlin, and then it will be once again: what can technical chemists, process engineers and biotechnologists do for the future?

We are looking forward to it!

Awards

Dieter Behrens Medal

The Federation awarded its prestigious Dieter Behrens Medal to Professor Guy B. Marin, Belgium. He has been chosen for the award in recognition of the role he has played for almost thirty years as an active member, secretary and committed Chair of the EFCE Working Party on Chemical Reaction Engineering, co-editor of the EFCE journal ChERD, and for his substantial contribution to Chemical Reaction Engineering in Europe through numerous publications, organisation of conferences and delivery of projects.

The medal was awarded on 20 September 2021, during the 13th European Congress of Chemical Engineering.

The Dieter Behrens Medal is presented every four years. It recognises a significant contribution on behalf of the Federation in raising the profile of chemical engineering in Europe or in relation to the organisation, management or development of EFCE's activity base. The medal was awarded on 20 September 2021, during the 13th European Congress of Chemical Engineering.

Excellence Awards

EFCE Excellence Awards recognise PhD theses or publications of young researchers published in preceding years which demonstrate the most outstanding contribution to research or the practice in the scientific fields of the EFCE Working Parties and Sections.

Awards typically comprise a certificate, a cash award of €1,500 and a €500 travel grant to attend the meeting at which the award will be presented. In 2021, all Excellence Awards were presented virtually.

In 2021, EFCE gave the following awards:

- Dr. Cédric Van Goethem
2021 EFCE-EMS Joint Excellence Award Membrane Engineering
- Dr. Evangelos Delikonstantis
2021 Excellence Award in Process Intensification
- Dr. Christian Rieck
2021 EFCE Excellence Award in Product Design and Engineering
- Dr. Ailo Aasen
2021 EFCE Excellence Award in Thermodynamics and Transport Properties
- Dr. Lena Hohl and Dr. Francesco Maluta
2021 EFCE Young Researcher Award in Mixing

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OBJECTIVES AND ACTIVITIES

Other Awards

- The Working Party on Mixing presented its 2021 Nienow Lifetime Recognition Award to Professor Alberto Brucato, Italy, and Professor Matthias Kraume, Germany, at the online event "Pushing the Boundaries in Mixing in the Process Industries" on 30 June 2021.

2021 and beyond

External Engagement

SusChem

SusChem is the European Platform for Sustainable Chemistry, and the EFCE Scientific VP is a member of its Board. SusChem has members from most major European chemicals companies and close collaboration with several Directorates of the European Commission, including RTD and GROW, to influence policies and funding priorities. EFCE had input to its Strategic Research and Innovation Agenda (SIRA) published in 2019. EFCE provided experts for 'Digital Technologies in line with Green Deal' being prepared by Accenture and CEFIC which is one of the SIRA topics.

Focus has now turned to Safe and Sustainable by Design (SSBD) RD&I Roadmap, working with Commission Ministries DGRTD, DGGrow, and DGENv towards 'A zero pollution ambition for a toxic free environment'. It involves safe and sustainable design of chemicals (substances, materials and products) looking at the following priority value chains: renewable energy, energy storage, packaging, agrochemicals, construction, water treatment.

SusChem is participating in a new EC-funded project. Led by Swedish company IVL, IRISS Safe and sustainable advanced materials, explores a number of product value chains. EFCE is providing advice on skills and methodologies for sustainability through particularly through the Education Working Party.

A-SPIRE

EFCE is an Associate Member of A-SPIRE, which is a partnership between ten industry groups and the European Commission. The groups represent cement, ceramics, chemicals, engineering, minerals and ores, non-ferrous metals, pulp and paper, refining, steel and water sectors. EFCE had input into A-SPIRE's roadmap Processes4Planets - Transforming the European Process Industry for a Sustainable Society, which directly informed the new EC R&D calls. The roadmap has strong ambitions for the process industry in terms of climate neutrality, resources circularity and competitiveness.

Chemical Engineering Skills Audit

The skills audit undertaken by the Scientific VP surveying whether the ecosystem for developing chemical engineers in Europe is optimal and consistent is complete and published on the EFCE website and in the Newsletter and circulated to Member Societies. There are figures for many but not all countries. A number of countries are adapting the report to focus specifically on their own countries with comparisons for publication in national newsletters. The aim is to help national member societies and universities argue for more academic recruitment where appropriate to maintain a strong discipline basis for chemical engineering in Europe.

Conferences

ECCE/ECAB was held virtually in Sept 2021. ECCE/ECAB 2023 will now be held in Berlin and ECCE/ECAB 2025 in Lisbon. CHISA, originally planned for August 2020, was held virtually in April 2021 and the next CHISA will be held in person in Prague in August 2022. The EFCE again organised sets of spotlight talks by its Working Parties and Sections, eleven in November/December 2020, seven in April 2021 and eight in April 2022. Registrants were able to participate in any of the events encouraging cross fertilisation between members of Working Groups and Sections.

Administrative report

2021 was the seventh year of EFCE as a Charitable Incorporated Organisation. Like in 2020, due to COVID 19 restriction, the Executive Board met online in April and August. While this allowed the boards to meet as planned and with good participation, for one more year the members of the Board, elected in September 2019, did not have the opportunity to meet in person with their colleagues.

The Management Committee met monthly and ahead of the Executive Board meetings via videoconference. Progress of activities and monitoring of agreed actions took place effectively through Basecamp platform.

**EUROPEAN FEDERATION OF CHEMICAL
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OBJECTIVES AND ACTIVITIES

During the year, invoicing, forecasting and payment of expenses were closely managed in order to keep the EFCE accounts under control. In consideration of the financial difficulties of a few EFCE members due to the COVID pandemic, EFCE fees remained unchanged.

Details about the economic and financial performance of the CIO are provided later in the financial report.

As mentioned earlier, EFCE online presence in 2021 was quite strong and was essential to keep close contacts with the scientific and chemical engineering community.

EFCE publicises its activities through its e-newsletter and six issues were published in 2021 (http://efce.info/EFCE_Newsletter.html). In addition, pdf versions are published on EFCE's social media pages and press releases (<http://efce.info/Press+Releases.html>) highlight other news, mainly relating to the various EFCE awards. 16 press releases were published in 2021.

EFCE's social media pages can be found at:

EFCE LinkedIn Group: http://bit.ly/EFCE_LinkedIn

Twitter: https://twitter.com/@EFCE_Comms

Facebook: <https://www.facebook.com/theEFCE>

YouTube: <https://www.youtube.com/channel/UCxuvfbb5ST3DMHLAwZ6326w>

STRUCTURE, GOVERNANCE AND MANAGEMENT

Governing document

The charity is controlled by its governing document, a deed of trust and constitutes an unincorporated charity.

Changes to the Board of Trustees

There were no changes to the Board of Trustees that took effect during 2021 - all EFCE trustees were serving the second of their two-year terms.

At the EFCE General Assembly in September 2021, the following officers and trustees were elected to take seats at the beginning of 2022:

Officers: Giorgio Veronesi as President, Prof. Jarka Glassey as Executive Vice-President and Professor Petr Kluson as Scientific Vice-President.

Trustees: David Bogle (United Kingdom), Elisabetta Brunazzi (Italy), Michael Considine (United Kingdom), Antoon ten Kate (The Netherlands), Antonis Kokossis (Greece), Alexis Pey Torruella (Spain), Patrick Piccione (Switzerland), Álvaro Ramirez-Gomez (Spain), Eric Schaefer (France), Maurizio Rovaglio (Italy), Tomasz Sosnowski, Poland, and Michael Wilk (Germany). They join the appointed trustees Andreas Förster (DECHEMA), François Nicol (SFGP), and Jon Prichard (IChemE), who represent the three EFCE General Secretariats.

Giorgio Veronesi, President

Petr Kluson, Scientific Vice-President

Jarka Glassey, Executive Vice-President

REFERENCE AND ADMINISTRATIVE DETAILS

Registered Charity number

1159541

Principal address

Davis Building
165-189 Railway Terrace
Rugby
Warwickshire
CV21 3HQ

**EUROPEAN FEDERATION OF CHEMICAL
ENGINEERING**

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for the year ended 31 December 2021**

Trustees

M Considine
H J Feise (resigned 31/12/2021)
F Nicol
G Veronesi
W Meier (resigned 27/9/2021)
D Bogle
A Azapagic (resigned 31/12/2021)
P Piccione
P Kluson
M Wilk
A ten Kate
F Friedler (resigned 31/12/2021)
J L Prichard
E Brunazzi
E Schaer
A Pey
M Rovaglio
H Lorenz (resigned 31/12/2021)
Dr J Glassey (appointed 1/1/2022)
A Kokossis (appointed 1/1/2022)
T R Sosnowski (appointed 1/1/2022)
A Foerster (appointed 27/9/2021)
A Ramirez-Gomez
T Anim-Somuah (resigned 31/12/2021)

Independent Examiner

Magma Audit LLP
Magma House
16 Davy Court
Castle Mound Way
Rugby
CV23 0UZ

Approved by order of the board of trustees on 21/8/2022 and signed on its behalf by:



.....
G Veronesi - Trustee

**INDEPENDENT EXAMINER'S REPORT TO THE TRUSTEES OF
EUROPEAN FEDERATION OF CHEMICAL
ENGINEERING**

Independent Examiner's Report to the Trustees of European Federation of Chemical Engineers

I report to the trustees (who are also Directors for the purpose of company law) on my examination of the financial statements of European Federation of Chemical Engineers ('the charitable company') for the year ended 31 December 2021 which comprise the Statement of Financial Activities, the Balance Sheet and related notes.

This report is made solely to the charity's trustees, as a body, in accordance with section 145 of the Charities Act 2011. My work has been undertaken so that I might state to the charity's trustees those matters I am required to state to them in this report and for no other purpose. To the fullest extent permitted by law, I do not accept or assume responsibility to anyone other than the charity and the charity's trustees as a body, for my work, for this report, or for the opinions I have formed.

Responsibilities and basis of report

As the trustees of charitable company you are responsible for the preparation of the financial statements in accordance with the requirements of the Companies Act 2006 ('the 2006 Act').

Having satisfied myself that the financial statements of the charitable company are not required to be audited under Part 16 of the Act and are eligible for independent examination, I report in respect of my examination of the charitable company's financial statements carried out under section 145 of the Charities Act 2011 ('the 2011 Act') and in carrying out my examination I have followed all the applicable Directions given by the Charity Commission under section 145(5)(b) of the 2011 Act.

An independent examination does not involve gathering all the evidence that would be required in an audit and consequently does not cover all the matters that an auditor considers in giving their opinion on the financial statements. The planning and conduct of an audit goes beyond the limited assurance that an independent examination can provide. Consequently I express no opinion as to whether the financial statements present a 'true and fair' view and my report is limited to those specific matters set out in the independent examiner's statement.

Independent examiner's statement

I have completed my examination. I confirm that no material matters have come to my attention in connection with the examination giving me cause to believe that in any material respect:

- accounting records were not kept in respect of the charitable company as required by section 386 of the 2006 Act; or
- the financial statements do not accord with those records; or
- the financial statements do not comply with the accounting requirements of section 396 of the 2006 Act other than any requirement that the financial statements give a 'true and fair view' which is not a matter considered as part of an independent examination; or
- the financial statements have not been prepared in accordance with the methods and principles of the Statement of Recommended Practice for accounting and reporting by charities applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102).

I have no concerns and have come across no other matters in connection with the examination to which attention should be drawn in this report in order to enable a proper understanding of the financial statements to be reached.

Magma Audit LLP

Luke Edwards
Magma Audit LLP
Magma House
16 Davy Court
Castle Mound Way
Rugby
CV23 0UZ

Date: 10 September 2022

**EUROPEAN FEDERATION OF CHEMICAL
ENGINEERING**

**STATEMENT OF FINANCIAL ACTIVITIES
for the year ended 31 December 2021**

		2021 Unrestricted fund €	2020 Total funds €
INCOME AND ENDOWMENTS FROM	Notes		
Charitable activities	2		
Charitable activities		61,811	36,527
 EXPENDITURE ON			
Charitable activities	3		
Resources expended		29	198
Charitable activities		52,101	39,482
Other	5	2,807	2,396
Total		54,937	42,076
 NET INCOME/(EXPENDITURE)		6,874	(5,549)
 RECONCILIATION OF FUNDS			
Total funds brought forward		100,166	105,715
 TOTAL FUNDS CARRIED FORWARD		107,040	100,166

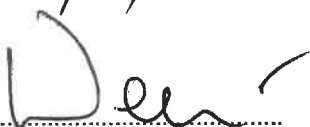
The notes form part of these financial statements

**EUROPEAN FEDERATION OF CHEMICAL
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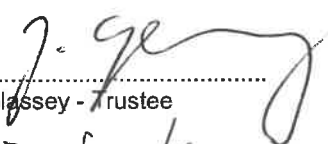
**STATEMENT OF FINANCIAL POSITION
31 December 2021**

		2021 Unrestricted fund €	2020 Total funds €
CURRENT ASSETS	Notes		
Debtors	7	17,797	6,166
Cash at bank		129,554	133,400
		147,351	139,566
CREDITORS			
Amounts falling due within one year	8	(40,311)	(39,400)
NET CURRENT ASSETS		107,040	100,166
TOTAL ASSETS LESS CURRENT LIABILITIES		107,040	100,166
NET ASSETS		107,040	100,166
FUNDS	9		
Unrestricted funds		107,040	100,166
TOTAL FUNDS		107,040	100,166

The financial statements were approved by the Board of Trustees and authorised for issue on 21/02/22 and were signed on its behalf by:



G Veronesi - Trustee



J Glassey - Trustee



P Kluson - Trustee

**EUROPEAN FEDERATION OF CHEMICAL
ENGINEERING**

**NOTES TO THE FINANCIAL STATEMENTS
for the year ended 31 December 2021**

1. ACCOUNTING POLICIES

Basis of preparing the financial statements

The financial statements of the charity, which is a public benefit entity under FRS 102, have been prepared in accordance with the Charities SORP (FRS 102) '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) (effective 1 January 2019)', Financial Reporting Standard 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland' and the Charities Act 2011. The financial statements have been prepared under the historical cost convention.

The presentational currency of this charity is Euros because this is also the functional currency.

The charity has taken advantage of the following disclosure exemptions in preparing these financial statements, as permitted by FRS 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland':

- the requirements of Section 7 Statement of Cash Flows.

Income

Licence fees and subscription income is recognised in the Statement of Financial Activities once the charity has entitlement to the funds, it is probable that the income will be received and the amount can be measured reliably.

Expenditure

Liabilities are recognised as expenditure as soon as there is a legal or constructive obligation committing the charity to that expenditure, it is probable that a transfer of economic benefits will be required in settlement and the amount of the obligation can be measured reliably. Expenditure is accounted for on an accruals basis and has been classified under headings that aggregate all cost related to the category. Where costs cannot be directly attributed to particular headings they have been allocated to activities on a basis consistent with the use of resources.

Taxation

The charity is exempt from tax on its charitable activities.

Fund accounting

Unrestricted funds can be used in accordance with the charitable objectives at the discretion of the trustees.

Restricted funds can only be used for particular restricted purposes within the objects of the charity. Restrictions arise when specified by the donor or when funds are raised for particular restricted purposes.

Further explanation of the nature and purpose of each fund is included in the notes to the financial statements.

Foreign currencies

At each year end foreign currency monetary items are translated using the closing rate. Non-monetary items measured at historical cost are translated using the exchange rate at the date of the transaction and non-monetary items measured at fair value are measured using the exchange rate when fair value was determined.

Foreign exchange gains and losses resulting from the settlement of transactions and from the translation at the year end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the statement of financial activities.

Financial instruments

The charity has chosen to adopt the Sections 11 and 12 of FRS 102 in respect of financial instruments.

(i) Financial assets

Basic financial assets, including debtors and cash and bank balances are initially recognised at transaction price, 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.

(ii) 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 receipts discounted at a market rate of interest.

**EUROPEAN FEDERATION OF CHEMICAL
ENGINEERING**

**NOTES TO THE FINANCIAL STATEMENTS - continued
for the year ended 31 December 2021**

1. ACCOUNTING POLICIES - continued

Financial instruments

Cash and cash equivalents

Cash and cash equivalents are represented by cash in hand, deposits held at call with financial institutions, and other short-term highly liquid investments that mature in no more than three months from the date of acquisition and that are readily convertible to known amounts of cash with insignificant risk of change in value.

Critical accounting estimates and assumptions

The charity makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are addressed below.

(i) Impairment of debtors

The charity makes an estimate of the recoverable value of trade and other debtors. When assessing impairment of trade and other debtors, the trustees consider factors including the current credit rating of the debtor, the ageing profile of debtors and historical experience.

2. INCOME FROM CHARITABLE ACTIVITIES

		2021	2020
	Activity	€	€
Subscription income	Charitable activities	32,691	33,995
Licence fee	Charitable activities	13,108	2,532
Sponsorship	Charitable activities	16,012	-
		<u>61,811</u>	<u>36,527</u>

3. CHARITABLE ACTIVITIES COSTS

	Direct Costs (see note 4) €	Support costs €	Totals €
Resources expended	-	29	29
Charitable activities	52,101	-	52,101
	<u>52,101</u>	<u>29</u>	<u>52,130</u>

4. DIRECT COSTS OF CHARITABLE ACTIVITIES

	2021	2020
	€	€
Excellence awards	7,507	1,500
General secretarial	30,000	29,289
Memberships	1,000	-
Sundries	-	355
Bad debts	2,285	(1,835)
UK secretarial fee	10,109	10,173
Scientific projects	1,200	-
	<u>52,101</u>	<u>39,482</u>

**EUROPEAN FEDERATION OF CHEMICAL
ENGINEERING**

**NOTES TO THE FINANCIAL STATEMENTS - continued
for the year ended 31 December 2021**

5. OTHER

	2021	2020
	€	€
Independent examination fee	2,477	2,628
Exchange Differences	330	(232)
	<u>2,807</u>	<u>2,396</u>

6. TRUSTEES' REMUNERATION AND BENEFITS

There were no trustees' remuneration or other benefits for the year ended 31 December 2021 nor for the year ended 31 December 2020.

Trustees' expenses

During the year, trustees received reimbursement of expenses of €387 (2020: €638) for travel and other expenses.

7. DEBTORS: AMOUNTS FALLING DUE WITHIN ONE YEAR

	2021	2020
	€	€
Trade debtors	16,659	5,809
Prepayments and accrued income	1,138	357
	<u>17,797</u>	<u>6,166</u>

8. CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR

	2021	2020
	€	€
Trade creditors	34,543	29,370
Other creditors	5,768	10,030
	<u>40,311</u>	<u>39,400</u>

9. MOVEMENT IN FUNDS

	At 1/1/21 €	Net movement in funds €	At 31/12/21 €
Unrestricted funds			
General fund	100,166	6,874	107,040
	<u>100,166</u>	<u>6,874</u>	<u>107,040</u>
TOTAL FUNDS			
	<u>100,166</u>	<u>6,874</u>	<u>107,040</u>

Net movement in funds, included in the above are as follows:

	Incoming resources €	Resources expended €	Movement in funds €
Unrestricted funds			
General fund	61,811	(54,937)	6,874
	<u>61,811</u>	<u>(54,937)</u>	<u>6,874</u>
TOTAL FUNDS			
	<u>61,811</u>	<u>(54,937)</u>	<u>6,874</u>

**EUROPEAN FEDERATION OF CHEMICAL
ENGINEERING**

**NOTES TO THE FINANCIAL STATEMENTS - continued
for the year ended 31 December 2021**

9. MOVEMENT IN FUNDS - continued

Comparatives for movement in funds

	At 1/1/20 €	Net movement in funds €	At 31/12/20 €
Unrestricted funds			
General fund	105,715	(5,549)	100,166
TOTAL FUNDS	<u>105,715</u>	<u>(5,549)</u>	<u>100,166</u>

Comparative net movement in funds, included in the above are as follows:

	Incoming resources €	Resources expended €	Movement in funds €
Unrestricted funds			
General fund	36,527	(42,076)	(5,549)
TOTAL FUNDS	<u>36,527</u>	<u>(42,076)</u>	<u>(5,549)</u>

A current year 12 months and prior year 12 months combined position is as follows:

	At 1/1/20 €	Net movement in funds €	At 31/12/21 €
Unrestricted funds			
General fund	105,715	1,325	107,040
TOTAL FUNDS	<u>105,715</u>	<u>1,325</u>	<u>107,040</u>

A current year 12 months and prior year 12 months combined net movement in funds, included in the above are as follows:

	Incoming resources €	Resources expended €	Movement in funds €
Unrestricted funds			
General fund	98,338	(97,013)	1,325
TOTAL FUNDS	<u>98,338</u>	<u>(97,013)</u>	<u>1,325</u>

**EUROPEAN FEDERATION OF CHEMICAL
ENGINEERING**

**NOTES TO THE FINANCIAL STATEMENTS - continued
for the year ended 31 December 2021**

10. RELATED PARTY DISCLOSURES

There were no related party transactions for the year ended 31 December 2021.

**EUROPEAN FEDERATION OF CHEMICAL
ENGINEERING**

**DETAILED STATEMENT OF FINANCIAL ACTIVITIES
for the year ended 31 December 2021**

	2021 €	2020 €
INCOME AND ENDOWMENTS		
Charitable activities		
Subscription income	32,691	33,995
Licence fee	13,108	2,532
Sponsorship	16,012	-
	<u>61,811</u>	<u>36,527</u>
Total Incoming resources	61,811	36,527
EXPENDITURE		
Charitable activities		
Excellence awards	7,507	1,500
General secretarial	30,000	29,289
Memberships	1,000	-
Sundries	-	355
Bad debts	2,285	(1,835)
UK secretarial fee	10,109	10,173
Scientific projects	1,200	-
	<u>52,101</u>	<u>39,482</u>
Other		
Independent examination fee	2,477	2,628
Exchange Differences	330	(232)
	<u>2,807</u>	<u>2,396</u>
Support costs		
Finance		
Bank charges	29	198
Total resources expended	54,937	42,076
Net income/(expenditure)	6,874	(5,549)

European Federation of Chemical Engineering
Davis Building
165-189 Railway Terrace
Rugby
CV21 3HQ

Magma Audit LLP
Magma House
16 Davy Court
Castle Mound Way
Rugby
CV23 0UZ

LETTER OF REPRESENTATION FOR THE YEAR ENDED 31 DECEMBER 2021

Dear Sirs

We confirm that the following representations are made on the basis of enquiries of management and staff with relevant knowledge and experience and, where appropriate, of inspection of supporting documentation, sufficient to satisfy ourselves that we can properly make each of the following representations to you, in connection with your examination of the charity's financial statements for the year ended 31 December 2021.

- 1 We acknowledge, as trustees, our collective responsibility under the Charities Act 2011 for presenting financial statements, which give a true and fair view and confirm that we have approved the financial statements for the year ended 31 December 2021. We also acknowledge our responsibility for making accurate representations to you. All the accounting records have been made available to you for the purpose of your assignment and all the transactions undertaken by the charity have been properly reflected and recorded in the accounting records. All other records and related information, including minutes of all trustee and management meetings, have been made available to you.
- 2 We confirm that the charity is eligible for an independent examination of its financial statements, and that there are no circumstances which we should draw to your attention which would invalidate this eligibility. We acknowledge that the work performed by you is substantially less in scope than an audit performed in accordance with International Standards on Auditing (UK and Ireland).
- 3 We confirm that the accounting policies and estimation techniques adopted for the preparation of the financial statements are the most appropriate to the circumstances in which the charity operates.
- 4 All grants, donations and other incoming resources, the receipt of which is subject to specific terms or conditions, have been notified to you. There have been no breaches of terms or conditions during the period in the application of such incoming resources.
- 5 Other than those disclosed in the financial statements we are not aware of any material liabilities, provisions, contingent liabilities, contingent assets or contracted for capital commitments that need to be provided for or disclosed in the financial statements.
- 6 The charity has satisfactory title to all assets and there are no liens or encumbrances on the charity's assets except as disclosed in the notes to the financial statements.
- 7 Other than those disclosed in the financial statements, the charity has not entered into any transactions or has balances outstanding involving trustees, officers or other related parties, which require disclosure under the law or the financial reporting

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framework adopted, including the Charities SORP. If relevant, appropriate disclosure has been made of the control of the charity.

- 8 We acknowledge our responsibility for the design and implementation of internal controls to prevent and detect errors or fraud, and have disclosed to you the results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud. We are unaware of any irregularities, including fraud and suspected fraud, involving management, employees or others who have significant roles in internal control, or those employed by the charity where the fraud could have a material effect on the financial statements. No allegations of such irregularities or breaches have come to our notice.
- 9 We are unaware of any breaches or possible breaches of statute, regulations, contracts, agreements or the charity's constitution which might result in the charity suffering significant penalties or other loss. No allegations of such irregularities or breaches have come to our notice. We confirm that the charity has had no non-routine communication with Charity Commission during or since the period of which you are unaware.
- 10 We have reviewed the affairs of the charity and confirm that no income is subject to income or capital gains tax.
- 11 The financial statements have been prepared on the going concern basis as we believe that adequate cash resources will be available to cover the charity's requirements for working capital and capital expenditure for at least the next twelve months. We are not aware of any other factors which could put into jeopardy the charity's going concern status during or beyond this period.
- 12 There have been no events since the balance sheet date which necessitate revision of the figures included in the financial statements or inclusion of a note thereto. Should further material events occur, which may necessitate revision of the figures included in the financial statements or inclusion of a note thereto, we will advise you accordingly.
- 13 We confirm that the charity has adequate procedures in place to identify intangible income and all intangible income has been appropriately valued and included in the financial statements.
- 14 We confirm that the charity has had no non-routine communication with Charity Commission during or since the period of which we are unaware.

Yours faithfully



Signed on behalf of the board of trustees

Date: 21/8/2022