# **Trustees Annual Report 2023**

European Federation of Chemical Engineering
Europäische Föderation für Chemie-Ingenieur-Wesen
Fédération Européenne de Génie Chimique







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# The European Federation of Chemical Engineering will...

1

# **Serve the European Chemical Engineering Community**

By providing a platform for views and opinions and identifying opportunities for its voice to be heard

2

# **Support Chemical Engineers within EFCE Member Societies**

- Working Parties and Sections
- Conferences and Seminars
- Newsletters, Website and e-bulletins

3

# **Support the Education and Training of Chemical Engineers within Europe**

- Active Education Working Party
- EFCE Journals
- Input into Development of Curricula
- Training

4

# Influence Decision Makers and Opinion Formers on Matters of Importance to Chemical Engineers

- By Helping to Shape European Policy
- Promoting Public Understanding of Science
- Contributing to European R&D Programmes
- Fostering Academic/Industry Links

5

# Initiate Collaborations in Support of Common Goals and for the Advancement of Science and Technology

- Proactive Horizon Scanning and Topic Spotting
- Bringing People Together via Respected European Technical Networks

EFCE will help European society to meet its needs through highlighting the role of Chemical Engineering in delivering sustainable processes and products.

## Trustees 2023

#### **EFCE President**

Mr. Giorgio Veronesi

Techint E&C

giorgio.veronesi@techint.com

## **Executive Vice-President Prof. Jarka Glassey**

University of Newcastle jarka.glassey@newcastle.ac.uk

#### **Scientific Vice-President**

Until May 2023

#### Prof. Ing. Petr Klusoň

Academy of Sciences of the Czech Republic, Institute of Chemical Process Fundamentals kluson@icpf.cas.cz

From May 2023

#### **Prof. Michael Considine**

ChemRisk Ltd.

mike.considine@live.co.uk

#### **Prof. David Bogle**

University College London d.bogle@ucl.ac.uk

#### **Prof. Elisabetta Brunazzi**

Università di Pisa, Department of Civil and Industrial Engineering elisabetta.brunazzi@unipi.it

#### Mrs. Claudia Flavell-While

Institution of Chemical Engineers cflavell-while@icheme.org

#### **Dr. Andreas Förster**

DECHEMA e.V.

andreas.foerster@dechema.de

#### Dr. Ir. Antoon ten Kate

Nouryon RD&I ajbtenkate@gmail.com

#### **Prof. Antonis Kokossis**

National Technical University of Athens akokossis@mail.ntua.gr

#### **Dr. Silvie Müller**

Merck KgaA

silvie.mueller@merckgroup.com

#### **Mr. François Nicol**

Veolia Recherche & Innovation francois.nicol@veolia.com

#### **Dr. Alexis Pey Torruella**

Stahl Holdings by

alexis.pey@stahl.com

#### **Dr. Patrick M. Piccione**

F. Hoffmann-La Roche AG, Formulation and Process patrick.piccione@roche.com

#### Dr. Laura Pirro

Yara International laura.pirro@outlook.com

#### **Associate Prof. Álvaro Ramirez-Gomez**

Universidad Politécnica de Madrid, Department of Mechanical Engineering alvaro.ramirez@upm.es

#### **Dr. Maurizio Rovaglio**

Siemens S.p.A maurizio.rovaglio@siemens.com

#### **Prof. Eric Schaer**

Ecole Nationale Supérieure des Industries Chimiques (ENSIC) eric.schaer@univ-lorraine.fr

#### **Prof. Tomasz Sosnowski**

Warsaw University of Technology tomasz.sosnowski@pw.edu.pl

#### **Dr. Michael Wilk**

Merck KGaA, Senior Vice President Site Operations, Engineering & Maintenance michael.wilk@merckgroup.com

# Public Benefit Statement

The charity trustees confirm that they have complied with their duty to have due regard to the guidance on public benefit published by the commission in exercising their powers or duties.

# Objectives and activities

The objectives of the European Federation of Chemical Engineering, as stated in its Constitution, are "for the benefit of the public to promote co-operation in Europe and elsewhere between non-profit making professional scientific and technical societies which share amongst their aims the general advancement of science and education of the public in chemical engineering and the encouragement of the development of chemical engineering."

By enabling like-minded societies in Europe to co-operate, EFCE encourages progress in chemical engineering by facilitating the exchange of information and opinion in meetings, congresses and journals, support leading researchers and emerging talent through medals and prizes, and enabling industrialists and academics from across Europe to discuss topics of common concern.

EFCE is a Charitable Incorporated Organisation with voting members other than its charity trustees. It has an 'Association' model constitution, dated 9 December 2014.



# Key achievements during 2023

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 national member societies.

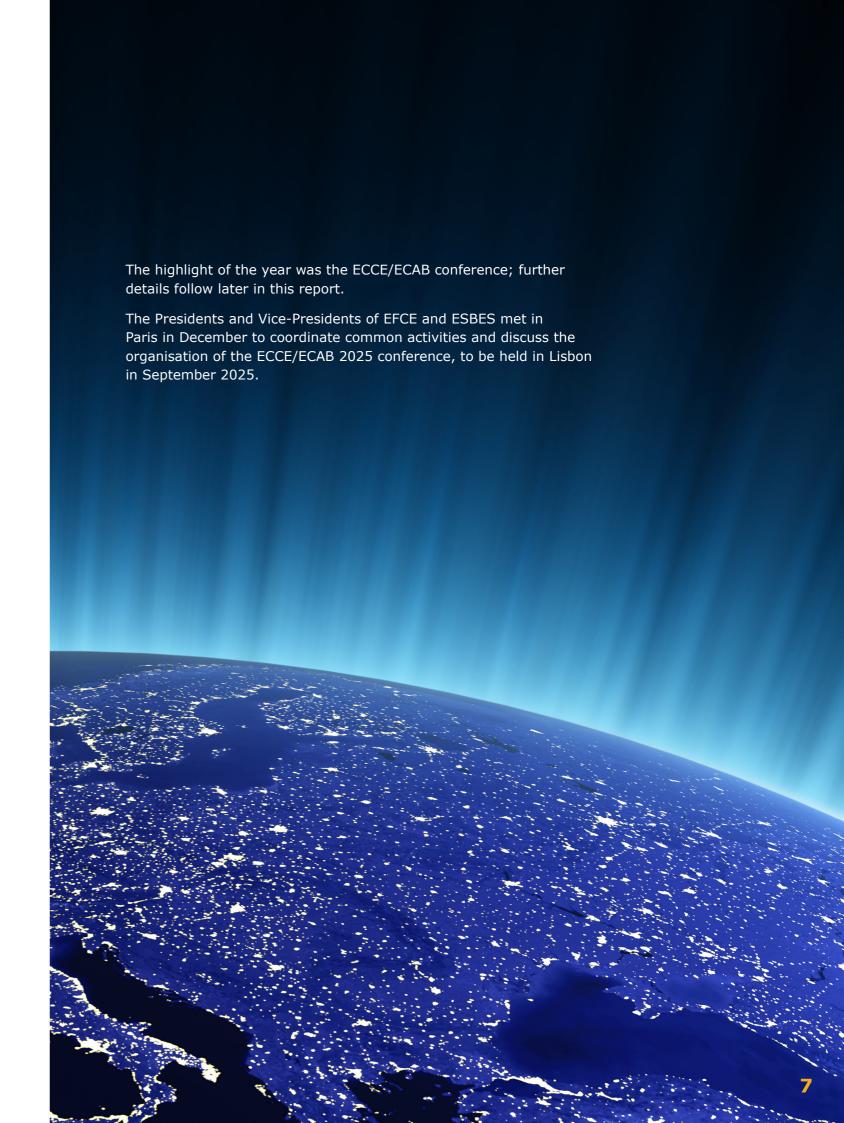
EFCE encourages progress in chemical engineering through facilitating the exchange of information and opinion in meetings, congresses and journals, supporting leading researchers and emerging talent through medals and prizes, and enabling industrialists and academics from across Europe to discuss topics of common concern.

2023 was the first full year of normality after the long period of restrictions to travel and meetings in person due to the COVID pandemic: scientific conferences, seminars, workshops, etc. were held with a physical presence of participants, some of them with record attendance, like the ESCAPE-33 conference by the CAPE Working Party in Athens.

The experience gained in organising web events made it possible to maintain some online activities, which have many advantages in terms of time, cost, environmental impact and inclusivity, and which make EFCE events more accessible to people who may not be able to attend in-person events.

In 2023 we continued with the EFCE Spotlight Talk webinars organised on topics selected by Working Parties (WPs) and Sections. Many thanks to EFCE's Scientific Secretariat, led by Prof. Martine Poux, who coordinated them from the initial phase to their conclusion.

During 2023 EFCE established a new Section for Early Career Chemical Engineers and reactivated the Section on Sustainability. The Early Career Section presented their first activity plan at EFCE Board in Milan in April 2023 and actively pursued them during 2023. The reactivated Sustainability Section held its inaugural meeting during the ECCE/ECAB conference in Berlin in September 2023.



# Working Parties and Sections

EFCE has twenty Working Parties and seven Sections, whose activities span organising conferences, promoting and judging awards, and running summer courses for PhD students. The Working Parties and Sections 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.

## **Working Parties**

#### **Agglomeration**

Chair: Prof. Stefan HEINRICH, Hamburg/DE stefan.heinrich@tuhh.de

#### **Characterisation of Particulate Systems**

Chair: Prof. Martin MORGENEYER, Compiegne/FR martin.morgeneyer@utc.fr

#### **Chemical Reaction Engineering**

Chair: Prof. Kai-Olaf HINRICHSEN, Garching/DE hinrichsen@tum.de

#### **Comminution and Classification**

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

#### **Computer Aided Process Engineering**

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

#### Crystallisation

Chair: Prof. Daniele MARCHISIO, Torino/IT daniele.marchisio@polito.it

#### Drying

Chair: Prof. Angélique LÉONARD, Liège/BE a.leonard@ulg.ac.be

#### **Education**

Dr. Hermann J. FEISE, Ludwigshafen/DE; herman.feise@basf.com

#### **Electrochemical Engineering**

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

#### **Fluid Separations**

Chair: Prof. Harry KOOIJMAN, Amsterdam/NL

Harry.Kooijman@shell.com

Potsdam/USA; kooijman@clarkson.edu

#### **High Pressure Technology**

Chair: Prof. Maria Jose COCERO ALONSO, Valladolid/ES

mjcocero@iq.uva.es

#### **Loss Prevention and Safety Promotion**

Chair: Prof. Bruno FABIANO, Genoa/IT bruno.fabiano@unige.it

#### **Mechanics of Particulate Solids**

Chair: Prof. Diego BARLETTA, Fisciano (SA)/IT dbarletta@unisa.it

#### Mixing

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

#### **Multiphase Fluid Flow**

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

#### **Polymer Reaction Engineering**

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

#### **Process Intensification**

Chair: Prof. Georgios STEFANIDIS, Athens/GR gstefani@mail.ntua.gr

#### **Quality by Design**

Chair: Prof. Christoph HERWIG, Wien/AT christoph.herwig@lisalis.at

#### **Static Electricity in Industry**

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

#### **Thermodynamics and Transport Properties**

Chair: Prof. Maria Grazia DE ANGELIS, Edinburgh/UK; grazia.deangelis@ed.ac.uk

## **Sections**

#### **Energy**

Co-chairs: Prof. Valerio COZZANI, Bologna/IT valerio.cozzani@unibo.it

Dr. Jan VERSTRAETE, Solaize/FR jan.verstraete@ifpen.fr

#### Food

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

#### **Membrane Engineering**

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

#### **Product Design and Engineering**

Chair: Dr. Francesco PICCHIONI, Groningen/NL f.picchioni@rug.nl

#### **Chemical Engineering as Applied to Medicine**

Chair: Prof. Tomasz SOSNOWSKI, Warsaw/PL tomasz.sosnowski@pw.edu.pl

#### **Early Career Chemical Engineers**

Chair: Mr. Gabriele VERRECCHIA, Campagnano di Roma/IT g.verrecchia5@gmail.com (until August 2023); successor: Dr. Sofia GARCIA FRACARO, Darmstadt/DE sofia.garcia-fracaro@merckgroup.com

#### **Sustainability**

Chair: Prof. Antonis KOKOSSIS, Athens/GR akokossis@chemeng.ntua.gr

Working Parties and Sections conduct their business throughout the year, and every group is expected to hold at least one meeting per year, either physically or online.

In 2023, Working Parties and Sections were strongly involved in the organisation of the 14th European Congress of Chemical Engineering (ECCE14) as well as in a broad range of other events, webinar series and conferences.





# Impressions from ECCE14 & ECAB7

Under the motto 'Chemical and Biochemical Engineering – Acting Together', EFCE and ESBES, together with DECHEMA, welcomed the chemical and biochemical engineering community to the 14th European Congress of Chemical Engineering and 7th European Congress of Applied Biotechnology which took place in Berlin, Germany, on 17-21 September 2023. ECCE14 & ECAB7 attracted 1200 participants from 48 countries and 34 sponsors and exhibitors, with BASF as the gold sponsor.

For a start, the youngest had something to celebrate: the winners of the DECHEMAX student competition were awarded prizes and had the opportunity to have their certificates signed by Benjamin List, winner of the 2021 Nobel Prize in chemistry. In his ceremonial lecture on organocatalysis, List showed how one can achieve remarkable feats using perseverance and scientific curiosity.

The importance of 'Acting together', the motto of this conference, was evident from the themes of the eight plenary lectures and 24 keynotes, with topics ranging from the processing of plant proteins in food, which poses new challenges for both biochemists and process engineers, to the design and use of proteins for diagnostics, therapeutics and analytics, to the modelling of supply chains.

This was rounded off on Thursday by the P. V. Danckwerts Memorial Lecture delivered by Jens Nielsen and the Villermaux Medal lecture presented by David Bogle.



Jacques Villermaux Medal laureate David Bogle (left) and P. V. Danckwerts Memorial Lecturer Jens Nielsen

The poster party on Monday evening was particularly lively, giving participants the opportunity to learn first-hand about the researchers' results. Representatives of EFCE's Early Career Chemical Engineers Section welcomed the first EFCE Travel Grant winner, Alper Koyuncu.

Entertainment was also provided by the ChemCar competition and, of course, the Science Slam, after which even the last one should have realised that chemistry has a lot to do with magic. The Science Slam was organised by BASF, which, as the main sponsor, contributed significantly to the success of the event.

Less scientific, but even more exuberant was the 'Oktoberfest' on Wednesday evening, with people of all generations storming the dance floor.

All in all, the 14th ECCE & 7th ECAB also showed what is important: making contacts, learning new things, developing ideas, and then working together on solutions – an impulse that will accompany all participants over the next few weeks.

From 8 to 10 September 2025, EFCE, ESBES, their Portuguese member organisations and DECHEMA e.V. invite you to ECCE15 & ECAB8.

We are looking forward to it!

## Events of 2023

## VIII International Congress 'Engineering, Environment and Materials in Process Industry'

Mountain of Jahorina, Bosnia and Herzegovina, 20-23 March 2023 (EFCE Event No. 789)

**16th European PhD Workshop on Food Engineering and Technology** Copenhagen, Denmark, 9-10 May 2023

#### **5th EFCE Spotlight Talks Series**

Online, 24 May - 5 June 2023

**15th Mediterranean Congress of Chemical Engineering – MECCE** Barcelona, Spain, 29 May - 2 June 2023 (EFCE Event No. 788)

8th European Process Intensification Conference – EPIC 2023 Warsaw, Poland, 31 May - 2 June 2023 (EFCE Event No. 795)

#### 11th World Congress of Chemical Engineering – WCCE11 Buenos Aires, Argentina, 4-8 June 2023

## 33rd European Symposium on Computer Aided Process Engineering (ESCAPE-33)

Athens, Greece, 18-21 June 2023 (EFCE Event No. 794)

## 13th European Symposium on Electrochemical Engineering (ESEE 2023)

Toulouse, France, 26-29 June 2023 (EFCE Event No. 793)

#### 17th European Conference on Mixing

Porto, Portugal, 2-5 July 2023 (EFCE Event No. 773)

#### **EuroDrying 2023**

Lodz, Poland, 4-7 July 2023 (EFCE Event No. 791)

#### ECCE14 & ECAB7

Berlin, Germany, 17-21 September 2023 (EFCE Event No. 782 - see report)

## 2nd International Conference on Energy, Environment & Digital Transition – E2DT 2023

Palermo, Italy, 22-25 October 2023 (EFCE Event No. 797)

#### **EFCE Forum 2023**

Palermo, Italy, 25 October 2023

## **Awards**

### **Jacques Villermaux Medal 2023**



The Federation awarded its prestigious Jacques Villermaux Medal to **Professor David Bogle**, University College London, United Kingdom.

He has been conferred the medal in recognition of his outstanding achievements within the remit of EFCE's science policy, in particular in his role as EFCE's Scientific Vice-President from 2018 to 2021. This includes his commitment to chemical engineering education and training, especially the development and publication of a report on The European Chemical Engineering Skills Pipeline. Furthermore, the award acknowledges his research in the fields of process systems engineering and systems biology and his services to the related EFCE Working Party

on CAPE and the new Section on Chemical Engineering as Applied to Medicine.

The Medal was presented to him in Berlin, Germany, on Monday, 18 September 2023 during the Opening Ceremony of ECCE14 & ECAB7.

Introduced in 1998, the Jacques Villermaux Medal is presented every four years to recognise "scientific achievements within the context of the Federation's science policy, working parties, conference programme or other related activities."

## **EFCE Lifetime Achievement Award (LAA) 2023**



The EFCE Lifetime Achievement Award 2023 was presented to **Professor Alberto Brucato**, University of Palermo, Italy, during the Opening Ceremony of ECCE14 & ECAB7 in Berlin, Germany on 18 September 2023.

This Award is made in recognition of his continuous and outstanding contribution to the progress of mixing research, modelling and application, chemical plant design and biochemical engineering in Italy and internationally for more than 40 years. The award acknowledges in particular his substantial contribution to raising the profile of the field, of the Italian Association of Chemical Engineering (AIDIC), and the Federation through his research of high quality, international

collaborations, education and training of engineers and students, and his commitment to the EFCE Working Party on Mixing.

The EFCE Lifetime Achievement Award (LAA) is given to an individual in recognition of her/his sustained and outstanding contribution to the progress of Chemical Engineering in general and on specific topics covered by the EFCE Working Parties (WPs) and Sections in particular, over a period of at least 20 years. The Award acknowledges the candidates` substantial dedication to raising the profile of the field of Chemical Engineering and the EFCE through research and teaching, organisation of conferences and workshops, effort towards the auspicious prospect of the community, and commitment to the WPs and/or Sections of the EFCE. The Award is only given at the occasion of ECCE events (European Congress of Chemical Engineering, organised every two years), and only to one candidate per event.

### P. V. Danckwerts Memorial Lecture 2023



The 2023 P.V. Danckwerts Memorial Lecture was presented by **Professor Jens Nielsen**, BioInnovation Institute, Copenhagen, Denmark, and Chalmers University of Technology, Gothenburg, Sweden. He delivered the lecture at ECCE14 & ECAB7 in Berlin, Germany, on 21 September 2023. The title of the presentation was 'Systems Biology of Yeast Metabolism'.

The P. V. Danckwerts Memorial Lecture was established in 1985 to honour Prof. Peter V. Danckwerts as a leading scholar in the field of chemical engineering and for his contributions as an Executive Editor of Chemical Engineering Science, the second Shell Professor of Chemical

Engineering at the University of Cambridge, and a past president of the Institution of Chemical Engineers. The Danckwerts Lecture is co-sponsored by Chemical Engineering Science, IChemE, AIChE, and EFCE, and is presented in alternating years at the ECCE and AIChE Annual Meetings.

## **EFCE Process Intensification Award for Industrial Innovation 2023**

The 2023 EFCE Process Intensification Award for Industrial Innovation, sponsored by the European Process Intensification Centre – EUROPIC, has been awarded to the innovation 'Continuous production of a functional Consumer Care ingredient' developed by Croda International Plc in the United Kingdom.

Croda has successfully converted the batch production of one of Croda's key personal care products into continuous production using NiTech continuous reactor. This was achieved through collaborative development involving four organisations to understand and overcome the technical challenges required to move from a batch to continuous process.

The award was presented on 31 May 2023 at the 8th European Process Intensification Conference – EPIC 8, held in Warsaw, Poland, on 31 May - 2 June 2023. Croda colleagues involved in the innovation gave a presentation on 2 June 2023.

Launched in 2015, the biennial EFCE Process Intensification Award for Industrial Innovation is presented to an employee or a team of employees of a company, who have made excellent contributions to industrial application of process intensification.

### **Excellence Awards 2023**

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 2023, EFCE gave the following awards:



#### **Dr. Andrés Pina-Martinez**

2023 Excellence Award in Thermodynamics and Transport Properties

for his PhD thesis on 'Cubic and higher order equations of state for fluid mixtures: Development, parameterisation and validation through industrial energy conversion applications' performed at Université de Lorraine, France, under the supervision of Professor Jean-Noël Jaubert.

Sponsor: BAYER AG

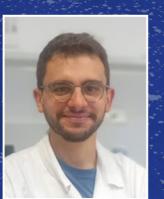


#### Dr. Matteo Antognoli

2023 Excellence Award in Process Intensification

for his PhD thesis on 'Mixing and chemical reactions in microchannels: experimental and numerical analysis' completed at the University of Pisa, Italy, under the supervision of Prof. Elisabetta Brunazzi and Prof. Chiara Galletti.

Sponsor: Microinnova Engineering GmbH



#### **Dr. Davide Clematis**

2023 Carl Wagner Medal of Excellence in Electrochemical Engineering

for his outstanding contributions to research in the field of applied electrochemistry and electrochemical engineering with a special focus on water treatment and energy conversion.

Sponsor: thyssenkrupp nucera



**Dr. Margarida Brito** 

2023 Young Researcher Award in Mixing

for her excellent research in the field of mixing in terms of quality of her PhD thesis on 'Mixing Mechanisms in 2D reactors', outstanding publications in international journals, international activities and network, and industrial significance of the scientific activity.

Sponsor: EKATO



#### Dr. Francesca Breveglieri

2023 Excellence Award in Crystallization

for her PhD thesis 'Deracemisation via batch temperature cycles – combining racemisation and crystallisation for chiral resolution' completed at the ETH Zurich, Switzerland, under the supervision of Professor Marco Mazzotti.



#### Ilaria Ceteroni - 2nd prize

Ilaria Ceteroni completed her Bachelor and an international Master's degree in Chemical and Biochemical Engineering at the University of Bologna, Italy. During her Bachelor studies, she attended courses of Chemical and Industrial Engineering at the University of Extremadura in Badajoz, Spain. As part of her Master thesis project, she worked as a research assistance at the Institute for Materials and Processes (IMP), University of Edinburgh, United Kingdom.



#### **Kévin Péridon – 3rd prize**

Kévin Péridon obtained the Diploma 'Ingénieur des Industries Chimiques' from the Ecole Nationale Supérieure des Industries Chimiques (ENSIC), University of Lorraine, Nancy, France, with specialisation in 'Process, Energy, Environment'. During his studies he completed courses at the Karlsruhe Institute for Technology (KIT), Karlsruhe, Germany. The jury emphasised his exemplary level of integration, e.g. through his involvement in the Franco-German friendship activities between the cities of Nancy and Karlsruhe and his work as an intern for the City of Karlsruhe.

## **Student Mobility Award 2023**



#### **Alexandra Antunes – 1st prize**

Alexandra Antunes completed her Master's thesis at the King Abdullah University of Science and Technology (KAUST), Saudi Arabia, as part of her studies in chemical engineering with specialisation in biotechnology at the Faculty of Engineering of the University of Porto, Portugal. During her studies she also successfully completed courses of study at the Hong Kong University of Science and Technology (HKUST), and an Entrepreneurial Skills course at Lund University in Sweden.

## First Travel Grant awarded to early career engineer



Alper Koyuncu (left) receiving the Travel Grant certificate from EFCE's Scientific Vice-President Jarka Glassey

In June, EFCE launched a new travel grant, designed to help early career chemical engineers attend EFCE conferences by helping cover the travel costs for early career engineers who are either a member of EFCE's Early Career Chemical Engineers Section or an early career member of an EFCE member society.

The winner of the Travel Grant of 600 EUR to support participation in ECCE14 & ECAB7 in Berlin is **Mr. Alper Koyuncu**, Master's student at the Middle East Technical University (METU), Turkey.

### **Other Awards**

- The Working Party on Computer Aided Process Engineering presented its Award for CAPE Recent Innovative Contribution Award (RIC) to Professor Anton Kiss and Professor David Bogle at ESCAPE-33 in Athens, Greece, in June 2023.
- The Working Party on Mixing presented the Alvin and Helen Lifetime Recognition Award in Mixing 2023 to Professor Alain Liné at the 17th European Conference on Mixing in Porto, Portugal, in July 2023 in recognition of his outstanding contribution to the advancement of mixing science.

Sponsors since 2021: Helen and Alvin Nienow († 5 November 2022)

• The Working Party on Electrochemical Engineering awarded Professor André Savall for his life-long outstanding achievements in the field of electrochemical engineering and applied electrochemistry. The Award was presented at the 13th European Symposium on Electrochemical Engineering in Toulouse, France, in June 2023.

# 2023 and Beyond

## **External Engagement**

#### **SusChem**

SusChem is the European Platform for Sustainable Chemistry, and an EFCE trustee 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.

SusChem https://suschem.org/ is represented on the European Commission's Task Force on the Transition Pathway for the Chemical Industry **EU Chemical Industry Transition Pathway (cefic.org)**. The task force group on International Competitiveness is particularly looking at market pull and factors that influence consumer choices to support the uptake of CO2, bio and waste products. The EC has published guidance for application of the Safe and Sustainable by Design (SSbD) framework GROW-2024-00145-00-00-EN-EDT-00. **pdf (europa.eu)** for which SusChem had input. There are considerable potential investment opportunities from the European Investment Bank: €20Bn for Innovation, Digital and Human Capital, €26.8Bn for Sustainable and Natural Resources, €21.33 Bn for Sustainable cities and regions and €19.96Bn for SMEs and mid-Caps, all of which have potential opportunities for the Chemical Industry Transition pathway. They have funded projects in the construction of an enzymatic recycling demonstration plant for PET and of biodegradable plastics and R&D on new catalyst technology for innovative hydrogen technologies.

The IRISS project **iriss-ssbd.eu/iriss/about-iriss** was initiated by SusChem and is underway co-ordinated by Emma Stromberg of the Swedish Environmental Research Institute. The IRISS project aims to connect, synergise and transform the Safe-and-Sustainable-by-Design (SSbD) community in Europe and globally towards a lifecycle approach. One of its work packages is on education and skills and they are working with the EFCE 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 is available at <a href="https://www.aspire2050.eu/p4planet/p4planet-sria-2050">https://www.aspire2050.eu/p4planet/p4planet-sria-2050</a>. The 'Processes4Planets' roadmap has significantly influenced the work programmes in the new DGRTD Framework Programme calls. A-SPIRE has fostered many projects relevant to the process industries which can be seen at <a href="https://www.aspire2050.eu/projects/our-spire-projects">https://www.aspire2050.eu/projects/our-spire-projects</a>.

# New Section activities

#### **Chemical Engineering as Applied to Medicine**

The Section Chemical Engineering as Applied to Medicine was formed at the very end of 2022, with Tomasz Sosnowski (Warsaw University of Technology, Poland) as chair and Davide Manca (Politecnico di Milano, Italy) as secretary. The Section contributed to the 2023 Spotlight Talks series with an overview of the current challenges and opportunities, featuring contributions on the metabolic clearance of uremic toxins in the artificial kidney, how chemical engineering can inform new cancer treatments, a presentation on quantitative systems pharmacology, and a summary of chemical engineering as a toolkit for precision crystallisation, spherical agglomeration and the formulation of pharmaceuticals. The Section spent the remainder of 2023 preparing for a one-day conference, to be held in Italy in 2024.

### **Early Career Chemical Engineers**

2023, the first full year of operations for the Early Career Chemical Engineers Section, was a great success. Activities included participating in the EFCE Spotlight Talk series with a presentation on Open Science, and raising awareness of EFCE in the early career community. The Section now has a dedicated webpage on the EFCE website and a LinkedIn profile, which by the end of the year had attracted 200 followers. In September, the Section conducted its inaugural meeting at the ECCE & ECAB conference in Berlin. Sofia Garcia Fracaro was voted Chair of the Section. Shortly after, the rest of the Section's Board Members were announced and took up office for the period of two years until 2025. Another major highlight was the Plenary Lecture award for Early Career ChemEng, which gave two awardees the opportunity to present their research with the community - Maria Papathanasiou at ECCE & ECAB in Berlin and Maximilian Kohns at E2DT in Palermo.



## Conferences

### **Spotlight Talks**

The Spotlight Talks are now seen by the community of practicing (bio)chemical and process engineers as an important means for sharing and disseminating the latest knowledge in chemical engineering science. This 5th series held in Spring 2023 (held from 24 May to 5 June 2023) included 8 webinars involving the following Working Parties and Sections: Characterisation of Particulate Systems, Chemical Engineering as Applied to Medicine, Crystallisation, Early Career Chemical Engineers, High Pressure Technology, Multiphase Fluid Flow, Quality by Design, Static Electricity in Industry, Thermodynamics and Transport Properties. In terms of participation, the average number of participants per webinar was 49 (389 in total), a very good number and quite stable now, which is equivalent or even higher than the number of participants in a thematic session at a generalist conference.

Since the start of the Spotlight Talks series, all the webinars have been recorded and made available on EFCE YouTube channel. In addition to the number of live participants, another indicator that shows the attractiveness and interest of the Spotlight Talks is the number of views of the videos. Most webinars reach a few hundred views, or even more than 700 for certain topics.



**Sustainability** 

subsections.

2023 saw significant progress in reactivating EFCE's Section

on Sustainability. Following extensive preparatory work during

the first half of the year, during which the general objectives,

Section had the first meeting in its new setup during the ECCE/

ECAB Conference in Berlin. The attending members confirmed

Antonis Kokossis as Chairman, François Nicol as Vice-Chairman

and Seyed Mansouri as Secretary. The section's next meeting

will be held online, to enable broad participation by interested

members, and will aim to finalise the organisation of its

time lines and organisational structure were clarified, the

# Administrative Report

2023 was the ninth year of EFCE as a Charitable Incorporated Organisation. In 2023 we operated as normal, following the disruptions due to COVID-19 restrictions in 2020-21 and the Executive Board met in person in April in Milan and in September in Berlin. This provided the members of the Board a valuable opportunity to interact with their colleagues more effectively and carry out the elections and the welcome of new board members more personally.

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

During the year, invoicing, forecasting and payment of expenses were closely managed in order to keep the EFCE accounts under control. The membership fees were raised 3% to make up for rising costs, but still remained significantly below inflation levels.

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

Due to European sanctions against a number of Russian organisations and institutions in response to Russia's actions in Ukraine, the Boreskov Institute of Catalysis in Russia was removed from membership in Q3 of 2023. The EFCE Executive Board agreed to donate the Institute's 2023 membership fee to the International Red Cross to support humanitarian actions in Ukraine.

EFCE online presence in 2023 was strong and the positive impact of the Early Career Section in publicising particularly the Spotlight Talks via various social media was clearly visible. A vibrant EFCE online presence is 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 2022 (http://efce.info/EFCE\_Newsletter.html). In addition, pdf versions are published on EFCE's social media pages and press releases (https://efce.info/News.html) highlight other news, mainly relating to the various EFCE awards. Fifteen press releases were published in 2023.

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

# Changes to the Board of Trustees

As all of EFCE's officers and trustees were in their second year of their two year terms in 2023, it was anticipated that there would be no changes to report for the executive board in 2023. However, Petr Kluson had to step down as Scientific Vice President for personal reasons in March 2023. Mike Considine volunteered to step up to fill the role for the second half of the year.

A General Assembly was held in September 2023, during which EFCE's member societies elected new officers and trustees who would start their two year terms in January 2024.

Giorgio Veronesi, proposal director with Techint Engineering & Construction in Italy, was elected for a second term as President. Jarka Glassey, professor of chemical engineering at Newcastle University, UK, was confirmed to serve a second term as Executive Vice-President. Boelo Schuur, professor of chemical engineering at University of Twente, Netherlands, was chosen as the new Scientific Vice President.

Other new members elected to the Executive Board in 2023 are Giuseppe Bellussi (Italy), António Gonçalves da Silva (Portugal), Juraj Kosek (Czech Republic), and Laura Pirro (Belgium). Dr Pirro previous served on the Executive Board as a coopted member.



Giorgio Veronesi President



Mike Considine, Scientific Vice-President



Jarka Glassey
Executive Vice-President

# Financial Report

from the period of 1 January 2022 to 31 December 2023

	2023	2023	
	Unrestricted funds €	Total funds €	
INCOME AND ENDOWMENTS FROM CHARITABLE ACTIVITIES			
CHARITABLE ACTIVITIES TOTAL	114,268	114,268	
EXPENDITURE ON CHARITABLE ACTIVITIES			
Resources expended	14	14	
Charitable activities	69,956	70,956	
Other	3,502	3,502	
TOTAL	73,657	74,657	
NET INCOME (EXPENDITURE)	40,611	39,611	
RECONCILIATION OF FUNDS			
Total funds brought forward	94,866	112,727	
TOTAL FUNDS CARRIED FORWARD	135,477	152,338	

CURRENT ASSETS	2023 Unrestricted funds €	2023 Total funds €
Debtors	32,399	32,399
Cash at bank	185,145	202,006
TOTAL	217,544	234,405
CREDITORS		
Amounts falling due within one year	(82,067)	(82,067)
NET CURRENT ASSETS	135,477	152,338
TOTAL ASSETS LESS CURRENT LIABILITIES	135,477	152,338
NET ASSETS	135,477	152,338
FUNDS		
Unrestricted funds		135,477
TOTAL FUNDS		152,338

This financial report is an extract of the Unaudited Financial Statements for the year ended 31 December 2023, which have been independently examined by Magma Audit LLP, Rugby, UK. The full report is available on the EFCE website.



### **EFCE General Secretariat**

### **UK Secretariat (Finance & Principal Office)**

IChemE
Davis Building
165 – 189 Railway Terrace
Rugby
Warwickshire
CV21 3HQ
UK

### **German Secretariat (Membership and Administrative Support)**

DECHEMA Theodor-Heuss-Allee 25 60486 Frankfurt am Main Germany

### **French Secretariat (Scientific Support)**

SFGP 28, Rue Saint-Dominique 75007 Paris France

Charity Registration No. 1159541

