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**EDITORIAL**

If you can look into the seeds of time  
And say which grain will grow and which will not...  
*Macbeth, I(iii), William Shakespeare*

The EFCE has been looking into the “seeds of time” recently – thinking about the future, and how it should shape its programme in a fast-changing world. At the Forum in the Hague in April we considered four particular topics, with the help of expert speakers and rapporteurs. These were **Education**, **Sustainability, the Bio dimension**, and **Innovation**. Each of these presents us with the classic mix of opportunities and challenges. In Education we are seeing the advent of Massive Open Online Courses – so-called MOOCs – which enable students anywhere to access free teaching material. At the same time we face the “hard-work” challenge of teaching a demanding chemical engineering curriculum that inspires the brightest students, but which can seem daunting to many. Beware “descriptive engineering” we heard – engineering without numbers. Sustainability is the subject of our newest EFCE Section, and one which is starting to supply the tools that we need to deal with the problems of decarbonisation, resource depletion and the tension between human development and environmental protection. The new Section has much to do! The Bio dimension is also starting to provide more solutions to problems, as we come to understand better how biosystems work, and are thus able to engineer them. We now have a close collaboration with our sister group ESBES (<http://www.esbesweb.org>) but how should we best work across the interface of chemical engineering and biotechnology? What is the best way to fit together? Innovation presents a similar puzzle – the answer to many problems, but how do we encourage the chemical engineering community to be more innovative and entrepreneurial?

These questions, and many more, were considered further by EFCE's Executive Board at its meeting in Basel in September. We recognised that there are many overlaps between the four topics discussed, and of course a future strategy will look further afield as well. These discussions are gradually shaping our course, and identifying the need for new activities and changing directions. As we look towards a new year – 2014 – we can say that we have planted some “seeds of time” that will come to yield significant outcomes as they grow.  
With best wishes

*Richard Darton, EFCE President*

## WHO'S WHO

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### Obituary Professor Roel Westerterp (1928 - 2013)

The EFCE was very sad to learn that Professor Dr.Ir. K. Roel Westerterp passed away on 24<sup>th</sup> August 2013 at the age of 85.

Born in Beilen (Netherlands) in 1928 he received his Master's degree in Chemical Engineering and his PhD in Technical Sciences from the Technical University of Delft. Along with Professor H. Kramer, the 'father' of chemical engineering in the Netherlands, he co-authored a well-received textbook on chemical reactors Elements of Reactor Design and Operation (1963) that has since run to many editions. Roel Westerterp began his professional career in 1952 with the Royal Dutch Shell Group where he worked in refineries and chemical plants in Curacao, Argentina, and Venezuela. Following his PhD he was the Managing Director of N.V. Petrochemie AKU-AMOCO, General Manager of the Fine Chemicals Division of ENKA Glanzstoff and Technical Managing Director at Philips Duphar B.V. In 1979 he was appointed full professor at Twente University where he established the group Industrial Processes and Products and a very well equipped High Pressure Laboratory. His research interests were in chemical reaction engineering, process development, high pressure technology and technical-economical evaluations – often fundamental research, but always with a practical application in mind. His teaching interests were centred in these topics, but also extended across a wide range of chemical and process technology, making use of his great industrial experience. He retired from his chair at Twente in 1998. Professor Westerterp contributed greatly to the development of chemical engineering in Europe, with colleagues and collaborators, who came to be friends, in many countries. As a member of the Executive Board of the European Federation of Chemical Engineering (EFCE) he fostered scientific exchange and cooperation with Eastern European countries. He was the second President of EFCE, from 1998 to 2002, and during his presidency, a programme on sustainable technology was launched, the interaction with the European Commission was intensified and collaboration with Cefic, the European Chemical Industry Council, was started. In 2003, this extensive and valuable service was recognised by the Federation in the form of a "Scroll of Honour".

The scientific contribution of Roel Westerterp's work is reflected in the twenty-six doctoral theses he directed and in more than three hundred and forty scientific publications. He contributed hugely to the community through membership of journal editorial boards, organizing committees of conferences, and not least through his encouragement of generations of students. His scientific and professional achievements were recognized by numerous awards and distinctions, including Honorary Membership of DECHEMA (1988), the Mendeleev Medal of the Russian of Sciences (1989), the Achemasia Medal of DECHEMA and CIESC (1989), the Honorary Medal of the Wroclaw Polytechnic Chemical Engineering Department (1995), and an Honorary Membership of the Royal Institute of Engineers of the Netherlands (1996).

He was Doctor Honoris Causa of the University Ramon Llull, Barcelona, Spain, and of the Warsaw University of Technology, Poland. Furthermore, he was made Knight of the Order of the Dutch Lion, the highest civil distinction for citizens of The Netherlands, granted personally by Queen Beatrix.

The EFCE extends its deepest sympathy to Roel's family, friends and colleagues.

### Change of Chairmanship

In April 2013, the Working Party on Process Intensification elected **Professor Tom van Gerven**, Leuven, Belgium, to succeed Professor Iikka Turunen in the position of Chair of the Working Party. **Professor Georgios Stefanidis** was confirmed as the new Working Party Secretary

At the last meeting of the Working Party on Fluid Separations in June 2013, **Professor Elisabetta Brunazzi**, Pisa, Italy, was elected to succeed Dr. Eva Sorensen as the Chair of the Working Party. **Professor Harry Kooijman**, Amsterdam, The Netherlands, and **Dr. Ljudmila Fele Zilnik**, Ljubljana, Slovenia, were confirmed in the position of Vice-Chair and Secretary of the Working Party, respectively.

During its meeting in April 2013, the Working Party on Mechanics of Particulate Solids elected **Professor Alvaro Ramirez Gomez**, Madrid, Spain, to succeed Professor Massimo Poletto in the position of Chair of

the Working Party from 1 January 2014.

## EFCE AWARDS

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### EFCE Excellence Award winner

The Federation has great pleasure in announcing that **Dr.–Ing. Christoph Held** has been awarded the **2013 EFCE Excellence Award in Thermodynamics and Transport Properties** for his excellent PhD thesis "Measuring and Modeling Thermodynamic Properties of Biological Solutions". The award was presented in Manchester, United Kingdom, in September 2013 during the Thermodynamics 2013 conference. ▶ [more...](#)

### Turkish student wins free registration to Nice, 2015

Okan Akin, a PhD research student at the Izmir Institute of Technology is the lucky recipient of a free registration to ECCE10 in Sept-October 2015 in of Nice. Okan was among those who responded to a post-congress survey on his return from The Hague, The Netherlands, in April 2013 where he attended ECCE9. ▶ [more...](#)

### Distinguished Lecture in Thermodynamics and Transport Properties 2014

The Call for Nominations is open. The lecture recognizes an outstanding research career and achievements in Thermodynamics and/or Transport Properties. It comprises a certificate, a cash award of 1500 euros, a travel/accommodation grant (not exceeding € 500) and fee waiver to attend the 27<sup>th</sup> European Symposium of Applied Thermodynamics (ESAT) in Eindhoven, The Netherlands, from 6 to 9 July 2014 where the Lecture will be delivered during a Plenary Session.

Closing date for nominations: **1 November 2013**

Further information: <http://www.wp-ttp.dk>

### Calls for Nominations

PhD supervisors at a PhD-awarding institution in an EFCE member country are invited to submit nominations for the following Excellence Awards to be presented in 2014:

- **Excellence Award in Computer Aided Process Engineering (CAPE)**  
Deadline for submission of nominations: **31 December 2013**  
Further information: <http://www.efce.info/ExcellenceAwardCAPE.html>
- **Excellence Award in Fluid Separations**  
Deadline for submission of nominations: **14 March 2014**  
Further information: <http://www.efce.info/ExcellenceAwardFluidSeparations.html>
- **Excellence Award in Crystallization**  
Deadline for submission of nominations: **28 March 2014**  
Further information: <http://www.efce.info/ExcellenceAwardCrystallization.html>

The EFCE Excellence Awards recognise PhD theses (or papers), which demonstrate an outstanding contribution to research and/or practice. Each award consists of a certificate, a cash prize of 1500 euros, a travel grant and fee waiver to attend the event where the award will be presented. The nominated PhD theses (or papers) must address a topic relevant to the respective field.

### Carl-Wagner Medal of Excellence in Electrochemical Engineering 2014

The Carl Wagner Medal of Excellence in Electrochemical Engineering is awarded every three years by the EFCE Working Party on Electrochemical Engineering (WPEE) to a European researcher under the age of 35 who has made outstanding contributions to research in applied electrochemistry or electrochemical engineering. In 2014, the medal will be presented at the 10<sup>th</sup> European Symposium on Electrochemical Engineering (10<sup>th</sup> ESEE) held in Chia-Cagliari, Italy, 28 September - 2 October 2014, where the recipient of the medal will be invited to give a lecture. The award also comprises a cash award of 1250 euros, a certificate and a travel grant to attend the 10<sup>th</sup> ESEE.

Nominations for the medal, with supporting documentation (letter of support of the nomination by a senior electrochemist or electrochemical engineer, curriculum vitae, list of publications) should be sent **before January 21, 2014** to the WPEE Chairman:

Prof. M. Rodrigo, University of Castilla La Mancha, Faculty of Chemical Sciences, Department of Chemical

Engineering, Edificio Enrique Costa Novella, University Campus, 13071 Ciudad Real, SPAIN; e-mail: [Manuel.Rodrigo@uclm.es](mailto:Manuel.Rodrigo@uclm.es)

## EFCE EVENTS

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**10<sup>th</sup> European Congress of Chemical Engineering (ECCE10)**  
**3<sup>rd</sup> European Congress of Applied Biotechnology (ECAB3)**  
**5<sup>th</sup> European Process Intensification Conference (EPIC5)**

Nice, France, 26 September – 1 October 2015  
EFCE Event No. 720



Theme: *Chemical engineering and biochemical engineering for a new sustainable process industry in Europe*

Through four key scientific topics (Energy, Water management and treatment; Biotechnology and food; Industrial ecosystems) and the global theme, scientists and industrialists will present their contributions towards a new sustainable process industry.

Save the date and register now to the Congress newsletter to obtain frequently updated news.

Website: <http://www.ecce2015.eu>

### **9<sup>th</sup> World Congress of Chemical Engineering – WCCE9**

Coex, Seoul, South Korea, 18-23 August 2013

Incorporating the 15<sup>th</sup> Asian Pacific Confederation of Chemical Engineering Congress (APCChE 2013)

Please do not miss the chance to get some plenary lecture material. The presentations of **Adisa Azapagic** (Sustainable Chemical Engineering: Challenges and Opportunities for Shaping our Future), **R.A.**

**Mashelkar** (Game Changing Chemical Engineering for Our Sustainable Future), **Hiroshi Komiyama** (Beyond the Limits to Growth - New Ideas for Sustainability from Japan), **Duke du Plessis** (The Pivotal Role of Chemical Engineering in the Sustainable Development of Alberta's Oil Sands and Renewable Resources) and **Wolfgang Marquardt** (Bioeconomy Science – A Chemical Engineering Perspective) are now available for download [here](#)

The WCCE9 photo gallery is available at <http://www.wcce9.org/gallery/gallery.asp>

***Note in your calendar!***

***10<sup>th</sup> World Congress of Chemical Engineering – WCCE10***  
*Barcelona, Spain, 1-5 October 2017.*

### **EFCE EVENTS AND HIGHLIGHTS 2014:**

#### **ESCAPE 24 - 24<sup>th</sup> European Symposium on Computer Aided Process Engineering**

Budapest, Hungary, 15-18 June 2014 (EFCE Event No. 713)

ESCAPE 24 will create an inspiring forum where scientific and industrial contributions of computer-aided techniques will be presented with applications in process modelling and simulation, process synthesis and design, operation, and process optimization.

The conference will cover major classical themes, exploring, at the same time, a new range of applications that address the production of renewable forms of energy, environmental footprints and sustainable use of resources and water. It will foster discussion on previous achievements in PSE and missed opportunities. The critical reviews are expected to define the new frontiers and prepare a much stronger collaboration between academic institutions and industry.

The Symposium will be supplemented with pre and post conference workshops, where PSE technology transfer with advanced methodology and skills will be provided by speakers from both industry and academia.

Early registration deadline: **1 February 2014**

Symposium website: <http://www.escape24.mke.org.hu>

### **ANQUE–ICCE–BIOTECH2014**

Madrid, Spain, 1-4 July 2014 (EFCE Event No. 722)

ANQUE–ICCE–BIOTECH2014 Congress on Chemistry, Chemical Engineering and Biotechnology will be the meeting point of new scientific and technological trends in “Science, the key for a better life”. The main target of the congress will be: Advanced research and technological applications of new raw materials; new processes; new materials to conduct advanced chemical reactions and advanced catalysis. Another target is the increase in biotechnological applications to solve energy processes and products. The Congress will be divided into three symposia, covering main issues in every speciality, trying to look for convergence in common research and application lines. ANQUE and SEBIOT are combining their efforts to achieve these objectives at an unprecedented Congress.

Congress website: Under construction

### **CHISA 2014 /PRES 2014**

Prague, Czech Republic, 23-27 August 2014

The Czech Society of Chemical Engineering (CSCHE) is pleased to invite you to the 21st International Congress of Chemical and Process Engineering CHISA 2014 and the 17<sup>th</sup> Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction PRES 2014. Like all the CHISA Congresses before CHISA 2014 will cover a range of important topics and, together with the PRES conference will offer many interdisciplinary links. The logistics of the programme, which includes both the standard sessions and specialized symposia, will enable participants also to hear presentations which are close to their fields of research yet outside their everyday horizons.

The joint Call for Papers is now available at the website [www.chisa.cz/2014](http://www.chisa.cz/2014): Deadline for submission of applications: **30 November 2013**

The exhibition MARCHES 2014 – the **MARK**et of **CH**emical **E**ngineering and **S**ervices will take place in the premises of the CHISA 2014. Standard exhibition booths of 6 m<sup>2</sup> floor area will be available for business negotiations and demonstration purposes. Contact: [org@chisa.cz](mailto:org@chisa.cz)

Congress websites: <http://www.chisa.cz/2014> and <http://www.conferencepres.com>.

### **Distillation & Absorption 2014 - 10<sup>th</sup> International Conference on Distillation & Absorption**

Friedrichshafen, Germany, 14-17 September 2014 (EFCE Event No. 705)

The German ProcessNet Subject Division Fluid Separations and the EFCE Working Party on Fluid Separations are pleased to invite you to Germany for the next Distillation & Absorption 2014. The conference will bring together scientists from all over Europe and beyond. Selected special topics for DA 2014 are innovative energy efficient separation processes, aspects and/or problems of design, engineering, construction and operation of large distillation and absorption equipment, and the applications of distillation and absorption units in fine, pharmaceutical and biochemical processes. We are proud to announce that Prof. Jerzy Buzek, Member of the European Parliament, Dr. Peter Nagler, Chief Innovation Officer at Evonik Industries AG, and Dr. Eva Sorensen, Member of the EFCE Working Party on Fluid Separation and DA 2014 Chairperson, agreed to present plenary lectures. Moreover, the EFCE Excellence Award in Fluid Separations will also be awarded at the conference.

The call for papers is open. Deadline for abstract submission: **11 November 2013**

For further information please consult the [Call for Papers](#) and the conference website at <http://www.da2014.de>

### **ISIC19 – 19<sup>th</sup> International Symposium on Industrial Crystallization**

Toulouse, France, 16-19 September 2014 (EFCE Event No. 716)

ISIC19 is organized by the EFCE Working Party on Crystallization (WPC). The ISIC series has traditionally provided a unique opportunity for international exchange between scientists and engineers of all disciplines, academia and industry, and between novice and expert. ISIC19, held in the conference centre of Toulouse, aims at honouring and continuing such tradition.

ISIC19 will address the following topics, which represent a balanced mix of established and visionary areas of research and activity for crystallization scientists and practitioners: Fundamentals of crystallization science; Characterization techniques of crystals and suspensions; Process design, scale up, downstream processing; Product engineering: Industrial challenges.

The call for papers is open. Deadline for abstract submission: **30 January 2014**

Symposium website: <http://www.isic19.fr>

An extended list of events is available at <http://www.efce.info/events.html>

## SCIENCE AND TECHNOLOGY

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### New EFCE Sustainability Section

The Sustainability Section of the Federation, co-chaired by **Professors Adisa Azapagic** and **Michael Narodoslowsky** and launched at the ECCE9 in the Hague in April 2013, has published a Position Paper outlining its vision and mission. To read more about the Section and access the Position Paper, [click here](#).

### Special ChERD issue

In 2013, the EFCE celebrates its 60<sup>th</sup> anniversary. In honour of this occasion, Chemical Engineering Research and Design is publishing a special issue focussing on specific themes within which the European Chemical Engineering community has been particularly active. Guest editor for the special issue is Professor Rafiqul Gani, the EFCE's current Scientific Vice-President and its incoming President. Selected authors were invited to highlight the state of the art on a specific topic, as well as provide a perspective on future directions. New research results are also reported. It is expected that this special issue will become a very useful reference source. The issue is to be published in October 2013 and will feature 17 papers. It will be available online at: <http://www.sciencedirect.com/science/journal/02638762>

## NEWS FROM THE MEMBER SOCIETIES AND RELATED ORGANISATIONS

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### New roadmap explores technologies that improve chemical industry energy use, emissions intensity

In June 2013, the International Energy Agency (IEA), the International Council of Chemical Associations (ICCA) and DECHEMA (Society for Chemical Engineering and Biotechnology) jointly released their new roadmap that explores how the chemical industry can further amplify catalysis and other related technology advances to boost energy efficiency in its production processes.

Entitled "*Technology Roadmap: Energy and GHG Reductions in the Chemical Industry via Catalytic Processes*", the report looks at measures needed from the chemical industry, policymakers, investors and academia to achieve the full potential of catalysis for high-volume processes worldwide. The report details the potential impact of continuous improvements, best practices, emerging technologies, and breakthrough advances to cut energy use in 2050 by 13 exajoules and bring down greenhouse gas (GHG) emission rates by 1 gigatonne of CO<sub>2</sub> equivalent.

More information: Contact James Pieper, ICCA, at +32 2 676 7398 or at [jpi@cefic.be](mailto:jpi@cefic.be)

Here you will find the roadmap: <http://www.dechema.de/industrialcatalysis>

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## CONTACT

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Every effort is made to ensure the factual accuracy of the content of this e-newsletter, but EFCE cannot accept any responsibility for errors.

## IMPRINT

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