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AN INTERVIEW WITH PROFESSOR RAFIQUL GANI

What do you hope to achieve as President of EFCE for your term of office?

When I started, I initially had 3 main goals with a view to develop others later on. My first goal was to initiate a scientific panel discussion on the role of chemical engineering in meeting the challenges we face within Europe and globally. Another goal I have is to develop a work plan to attract and involve students as I currently recognise that there is no younger generation involvement with EFCE. And my last goal is for EFCE to become better at telling people within the wider scientific community and beyond our message.

What is the Scientific Panel Discussion and what will become of it?

I think it would be a good idea for EFCE to play a leading role in defining the status for chemical engineering in terms of where we are, where we want to go and outline the important things that chemical engineers should be addressing.

This is what the Scientific Panel Discussion paper will describe – it will go into detail about the core topics of chemical engineering and how they interface with other disciplines. Both academics and industrialists are contributing to this panel discussion and the idea is produce a popular version and a more scientific version. The scientific version will hopefully be published in a journal, with potential to present it at the 10th European Congress of Chemical Engineering in 2015. My hope is that we can make a collective statement and in one voice say that this is our view on chemical and biochemical engineering within Europe.

You said you want to improve how EFCE communicates across its message, can you tell me more about that?

So EFCE has survived for the last 60 years and it will survive for many more years to come, but we can do better. We need to get across our message to the right people. We serve the member societies and they should be clear about what services we can provide for them such as conference organisation, supporting education and training, influencing decision makers and initiating collaboration. I also would like to see our conference – the European Congress of Chemical Engineering – become one of the most important conferences in Europe to go to for chemical engineers.

Where do you see EFCE heading in the future?

Do you think EFCE can influence decision makers?

First, we need to find out what our possibilities are. At the European level, we have commissioned a report from Dr. Townsend to outline what options we have, so I am very much looking forward to finding out how we can do it. EFCE can't do lobbying in the way that people understand, but perhaps there is a way for us to be nominated onto committees at the European Commission as we have a lot of experts on hot topics within our organisation.

What do you think the key challenges are in educating the next generation of chemical engineers?

One of the key challenges is thinking about what the core topics for a chemical engineering degree should be. We also need our students to extend their knowledge in order to be flexible and adaptable in solving the many challenges facing society today. EFCE want to play a role in helping to define this curriculum in terms of core topics, science related topics and how to factor in sustainability and product issues into the equation. I think this is a great time for chemical and biochemical engineering because there are so many opportunities. If we, as a community, don't take advantage of those opportunities then somebody else will and that is why we have to attract young people to come and study this discipline.

And finally, what is the most innovative thing that is happening in your area of expertise?

In my area of expertise - computer aided process engineering (CAPE) – we are trying to address the 'grand challenges' such as water, energy, raw materials, resources and food etc. As these problems are so large, they require a multi-disciplinary approach. Providing a solution to these problems requires a lot of input of data from different areas and so it becomes a very complex maths problem. And what the CAPE community do very well is to integrate these different components together and find the best solution. We can find solutions from the smallest scale - the unit operation of a reactor - right up to the large scale of processing plants for multinationals. We can find solutions that would otherwise not be found, and can therefore reduce time and cost for development.

WHO'S WHO

Change of Chairmanship

At the last meeting of the Working Party on Thermodynamics and Transport Properties on 4 April 2014, **Prof. Jean-Charles de Hemptinne**, IFP Energies nouvelles, Reuil Malmaison, France, was elected as its new Chair. He succeeds Prof. Ioannis Economou, the first Chair of this Working Party, who held the position for six-and-a-half years.

During its meeting on 16 April 2014, the Working Party on Crystallization elected **Prof. Marco Mazzotti**, ETH Zurich, Switzerland, to succeed Dr. Beatrice Biscans in the position of Chair of the Working Party.

EFCE AWARDS

The Federation has great pleasure in announcing its recent **Award winners**:

- *Producing emulsions in food could be less energy intensive:*
David Lloyd is the latest recipient of the **Julius Maggi Research Award**. David Lloyd, presented his work on rotating membrane emulsification (RME) to produce oil-in-water emulsions in April 2014 at the 8th European Workshop on Food Engineering and Technology, organised by EFCE's Section on Food in cooperation with the European Federation of Food Science and Technology (EFFoST). [▶ more...](#)
- *Research pinpoints cost of carbon capture and storage:*
Dr. Laurence Tock has been awarded the **2014 EFCE Excellence Award in Recognition of an Outstanding PhD Thesis on CAPE**. The award was presented at ESCAPE-24 in Budapest, Hungary on 16 June 2014. [▶ more...](#)
- *Novel wastewater treatment technologies recognized:*
The Federation has announced **Dr. Ignacio Sirés Sadornil** as the latest winner of the **Carl Wagner Medal of Excellence in Electrochemical Engineering**. The award will be presented at the 10th European Symposium on Electrochemical Engineering (ESEE) which will be

held in Chia, Domus de Maria (CA), Sardinia, Italy on 28 September – 2 October 2014.

▶ [more...](#)

- **Dr. Eloy S. Sanz Pérez** has been awarded the **2014 EFCE Excellence Award in Fluid Separations**. The award will be presented on 16 September 2014 at the 10th International Conference on Distillation and Absorption (D&A2014) in Friedrichshafen, Germany. ▶ [more...](#)
- **Dr. Thomas Vetter** is the winner of the **2014 EFCE Excellence Award in Crystallization**. The award will be presented on 18 September 2014 at the 19th International Symposium on Industrial Crystallization - ISIC 19 in Toulouse, France. ▶ [more...](#)

Student Mobility Award 2015 - APPLY NOW!

The EFCE is pleased to announce the **EFCE Student Mobility Award 2015**. The award is presented every two years to the best European students who have spent one or more semesters (< 30 ECTU) studying abroad. The deadline for submission of applications is **28 February 2015**.

For further details, please visit the EFCE website at

http://www.efce.info/Student_Mobility_Award.html

Calls for Nominations

The following Calls for Nominations are open:

- **Young Researcher's Award in Mixing 2015**
<http://www.efce.info/Call+for+nominations-p-112090.html>
Deadline for submission of nominations: **20 January 2015**
- **Lifetime Recognition Award in Mixing 2015**
<http://wp-mixing.inp-toulouse.fr/en/awards.html>
Deadline for submission of nominations: **20 January 2015**

EFCE EVENTS

10th European Congress of Chemical Engineering (ECCE10)
3rd European Congress of Applied Biotechnology (ECAB3)
5th 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*

Topics: Energy: New and unconventional resources, conservation and management; Water management and treatment; Biotechnology and food; Industrial ecosystems; Fundamental chemical and biochemical engineering research

[Sign up NOW for the ECCE10/ECAB3/EPIC5 newsletters!](#)

Exhibition and sponsorship:

ECCE10/ECAB3/EPIC5 is a unique opportunity for companies and organisations to contribute to the advancement and development of up-to-date and imperative scientific and technical issues related to the field of chemical and biochemical engineering.

Take advantage of this opportunity to showcase your company's / organisation's products, services and expertise.

Partnering with ECCE10/ECAB3/EPIC5 will guarantee your business' success attracting pertinent partakers in and around the Congress.

[Download the sponsorship and exhibition prospectus here.](#)

The Call for Papers will open in late September 2014.

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

Note in your diary!

10th World Congress of Chemical Engineering – WCCE10
Barcelona, Spain, 1-5 October 2017.

Congress website: <http://www.wcce10.org/>

EFCE EVENTS AND HIGHLIGHTS 2014/2015:

Distillation & Absorption 2014 - 10th 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 International conference. The conference will bring together scientists from all over Europe and beyond.

[The tentative programme is available here.](#)

[Online Registration](#)

Conference website: <http://www.da2014.de>

ISIC19 – 19th International Symposium on Industrial Crystallization

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

ISIC19 is organised 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 novices and experts. ISIC19, held in the conference centre of Toulouse, aims at honouring and continuing this tradition.

[The scientific programme is available here](#)

For further details and registration visit the Symposium website at: <http://www.isic19.fr>.

ESEE - 10th European Symposium of Electrochemical Engineering

Chia, Domus de Maria (CA), Sardinia, Italy, 28 September - 2 October 2014 (EFCE Event No. 723)

The 10th ESEE "*CURRENT electrochemistry: the POTENTIAL for a challenging future*", organised under the auspices of the EFCE Working Party on Electrochemical Engineering, aims to pinpoint the importance of Electrochemistry in offering solutions to current technological and environmental problems, to highlight its interdisciplinary character and to emphasize the links between fundamental and applied aspects. The main goal of the Conference is to provide a multinational platform where the latest CURRENT trends in Electrochemistry can be presented and discussed in a friendly environment with the aim of triggering all the POTENTIAL for new challenging ideas.

Topics: Electrochemical reactors; Industrial electrochemistry; Electrochemical engineering in environmental protection; Electrochemical energy conversion and storage; Corrosion protection engineering; Electrochemistry at nanoscale; General Sections; and Education in electrochemistry.

[Online Registration](#)

Symposium website: <http://www.10thesee.it/>

13th Mediterranean Congress of Chemical Engineering (13MCCE)

Barcelona, Spain, 30 September - 3 October 2014 (EFCE Event No. 725)

in the frame of EXPOQUIMIA

The Congress will cover all aspects and new findings related to Chemical Engineering, to its application in areas such as Sustainable Development and Environmental Engineering, Food and Biochemical Engineering, Process and Product Engineering, and classical areas such as Separation Technologies, Chemical Reactors, and Processes. Additionally, present and future prospects for a career in academic and industry will be considered as a main discussion subject, regarding the new educational and economic paradigms the sector is facing in Europe and all over the world.

Inaugural Lecture: Achieving more sustainable solutions through process intensification, Rafiqul GANI,

Denmark.

Plenary speakers: Gintaras V. (Rex) REKLAITIS, USA; Peter JAFFÉ, USA; Daniel RESASCO, USA; José Antonio GARRIDO, Spain; Adisa AZAPAGIC, United Kingdom.

Round Tables: The role of Chemical Engineering in a developing economy; Sustainable Chemical Engineering: Resources optimization: Situation of Chemical Engineering education.

For the detailed scientific programme, and registration visit the Congress website at:

<http://www.ub.edu/congmedit/>

4th International Gas Processing Symposium

Doha, Qatar, 26-27 October 2014 (EFCE Event No. 724)

Main theme: *Natural Gas and the World's Energy Mix*

The symposium aims to bring together key academicians and industrial experts to address the various challenges related to accessing, utilizing and processing of natural gas. The symposium will include oral and poster presentations, keynote lectures, workshops and an exhibition.

Topics: Energy Mix ; Environmental Challenges; Process Operations

Novel contributions are welcome with emphasis on the following areas: Environmental sustainability including greenhouse gases (GHGs), VOC emissions, Flaring; Clean production and efficient use of natural resources and energy applications; Sustainable technologies for carbon sequestration and utilization; Efficient utilization of natural resources (Feedstock, Energy, H₂O, etc.); Assessment of sustainability and life cycle analysis.

A **Research Meeting for Students** will be organised on 27 October 2014 in conjunction with the congress. Interested graduate and undergraduate students from Qatar and neighboring GCC countries are invited to submit abstracts for the special sessions dedicated to student research by 15 September 2014.

Symposium website: http://www.qu.edu.qa/gpc_symposium/

15th European Conference on Mixing

St. Petersburg, Russia, 28 June - 3 July 2015 (EFCE Event No. 728)

The 15th European Conferences on Mixing, held in Saint Petersburg on 28 June to 3 July 2015, will be organised by the EFCE Working Party on Mixing and the Department of optimization of chemical and biotechnological apparatuses, Saint Petersburg State Institute of Technology and chaired by Professor Rufat Abiev.

The conference provides a forum for presentations and interesting debates on the latest advances in theory and practice of mixing. Many new ideas, many new applications and many opinions will be expressed about the future of mixing as a research discipline.

Conference sessions will be on fluid mechanical fundamentals of mixing processes, chemically reactive flows and precipitation, single- and multi-phase mixing, mixing of complex fluids, suspensions and dispersions, mixing in process intensification, mixing in biotechnological applications, and advances in numerical simulation of mixing.

The Call for Papers is open. Deadline for abstract submission: **15 November 2014**

Conference website: <http://mixing15.eu>

PSE2015/ESCAPE-25

Copenhagen, Denmark, 31 May - 4 June 2015 (EFCE Event No. 727)

12th PSE (PSE - Process Systems Engineering conference) and 25th ESCAPE (ESCAPE - European Symposium on Computer Aided Process Engineering) Joint Event would like to highlight the contributions of the PSE/CAPE community to the sustainability of the modern society. The event is aimed to establish the core products of PSE/CAPE, define the new and changing scope of our results, and the future challenges we face. During the conference the 25th anniversary of the ESCAPE-series, the 12th PSE conference and the 40th year of the Computers and Chemical Engineering journal will be celebrated. PSE2015/ESCAPE25 will provide a platform to anybody who has a good story, high scientific quality, interesting application and new significant development to tell. To achieve all this, a package of measures is envisaged including flexible registration fee; attractive scientific program; world-wide participation; high industrial participation; and incentives for young researchers.

Three **plenary speakers** representing the regions of Asia, Europe and North America: Prof. Ignacio E. GROSSMANN, Carnegie Mellon University, Pittsburgh, USA; Prof. Ka Ming NG, The Hong Kong University of

Science and Technology, Clear Water Bay, Hong Kong; Prof. Kai SUNDMACHER, Max Planck Institute for Dynamics of Complex Technical Systems, Magdeburg, Germany.

Topical areas: Modelling, numerical analysis and simulation; Mathematical programming (optimization); Cyber-infrastructure, informatics and intelligent systems; Process and product synthesis/design; Process dynamics, control and monitoring; Abnormal events management and process safety; Plant operations, integration, planning/scheduling and supply chain; Enterprise-wide management and technology-driven policy making; Domain applications (molecular, biological, pharmaceutical, food, energy, and environmental systems engineering).

A special session on education with participation from EURECHA and CACHe will be organised as well.

The Call for Papers is open. Deadline for abstract submission: **31 August 2014**

Symposium website: <http://www.pse2015escape25.dk/>

European Symposium on Chemical Reaction Engineering - ESCRE 2015

Fuerstenfeldbruck near Munich, Germany, 27-30 October 2015 (EFCE Event No. 721)

Fifty-six years ago the first European Symposium on Chemical Reaction Engineering (ESCRE) was held in Amsterdam. After four symposia this conference series turned into the international symposium ISCRE, which is held biannually in Europe, America and Asia. So it was decided to start a renewal of ESCRE in 2015 in Germany (including the Annual Meeting of the ProcessNet subject division Reaction Engineering).

The theme of the conference CRE Proving Tomorrow's Solutions emphasizes the necessity of Chemical Reaction Engineering – CRE to meet the future challenges, particularly in energy sciences and technology.

Plenary speakers: Rakesh AGRAWAL, Forney Hall of Chemical Engineering, West Lafayette, USA; Olaf DEUTSCHMANN, Karlsruhe Institute of Technology (KIT), Germany; John C. HEMMINGER, University of California, Irvine, USA; Johan HOORN, DSM, Geleen, Netherlands; Dmitry Yu. MURZIN, Åbo Akademi University, Turku/Åbo, Finland; Kim B. MC AULEY, Queen's University, Kingston, Canada; Suojiang ZHANG, Chinese Academy of Sciences, Beijing, China

Topics: Reaction Engineering Fundamentals; Multiphase Systems; Catalytic Engineering; Micro Reaction Engineering; Polymer Reaction Engineering; Reaction Engineering of Fossil Fuels; Photo- and Electrochemical Engineering; Reactor Engineering; CO₂ Utilization; Biomass Conversion; Industrial Frontiers.

The Call for Papers will open in October 2014. Deadline for abstract submission: **14 January 2015**

Symposium website: <http://www.dechema.de/escres2015.html>

Note in your diary – EFCE Events in 2016!

15th International Symposium Loss Prevention and Safety Promotion in the Process Industries

Freiburg, Germany, 5-8 June 2016 (EFCE Event No. 718)

Symposium website: <http://www.lp2016.eu>

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

SCIENCE AND TECHNOLOGY

EFCE Working Party and Section activities:

Take part in the survey on process safety education and training

The EFCE Working Party on Loss Prevention is currently conducting a survey on process safety education among European engineers. The purpose of the survey is to help identify the needs for new initiatives in process safety education in Europe in order to better satisfy the needs of the European process industry in general, and particularly the chemical and refining sectors. We hope you will take the survey by visiting the following website: <https://safepark.limequery.com/index.php/16471/lang-en>

Please encourage your younger colleagues to take part in the survey as well.

The Working Party on Loss Prevention will publish the summary results on its website <http://www.wp-lossprevention.eu/> after the results have been presented to the Working Party members.

New Book:

New Approaches to the Process Industries

Co-written by Jean-Pierre Dal Pont President of the French Chemical Engineering Society (SFGP) and General Secretary of EFCE, and Catherine Azzaro-Pantel

Content: Project Management – Systems Engineering – the Industrialization Process; Metrics for Sustainability Assessment of Chemical Processes; From Preliminary Projects to Projects; Analysis of the Strategy of the Enterprise and the Enterprise Strategic Plan; Excellence in Manufacturing and Operations Control; Innovation and Change Management; Water and Energy Challenges; Engineers as Key Players for Sustainability: The Role of PSE Academia; Plant of the Future.

Published by John Wiley & Sons Inc., 8 July 2014; Print ISBN: 9781848215788, Online ISBN: 9781118984536

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NEWS FROM EFCE MEMBER SOCIETIES

Spanish EFCE Member Society SEQUI calls for nominations of projects to the ChemUp programme

ChemUp was set up to bring together researchers from entrepreneurially-oriented universities and public or private development centres on the one hand, and a representative sample of recognised companies from the global chemical industry interested in technological innovation on the other. Within this setting, ChemUp places particular emphasis on excellent young researchers and innovators across Europe in the start-up phase of their business projects, or those finishing a doctoral thesis, with novel ideas that can lead to new business projects.

The ChemUp programme kick off and launching will start between 30/09/2014 and 03/10/2014 at EXPOQUIMIA 2014 (Barcelona, Spain), which is now the second largest fair in Europe in volume and activity.

Candidates should submit documentation of the proposed project so the jury can properly assess the technological originality and impact on the market. The call is open to all projects currently performed by teams, R&D centres or businesses in any EU Member State. Send documents to: SEQUI, e-mail: sequi@ub.edu. Applications must be submitted in pdf digital format (5,000 words). The deadline for receipt of candidate projects is **31 December 2014**.

Read more about the ChemUp programme here: <http://www.efce.info/Media+Centre.html>

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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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