

## EFCE officially registered as a Charitable Incorporated Organisation

**The European Federation of Chemical Engineering (EFCE) was officially set up and registered as a Charitable Incorporated Organisation (CIO) in the UK in December 2014.**

Formally registering EFCE as a legal entity within the EU was not only essential for administrative reasons but will also allow EFCE to participate with other organisations, such as the European Association SPIRE – a public-private partnership launched as part of EU's Horizon

2020 research framework.

The Executive Board met for the first time as charity trustees for the newly registered EFCE CIO in Copenhagen, Denmark, on Friday 27 March.

Items discussed on the agenda include the approval of budget as well as the upcoming election of charity trustees and executive officers at the General Assembly later this year at the tenth European Congress of Chemical Engineering (ECCE 10) in Nice, France.

### Plenary speakers for ECCE 10 + ECAB 3 + EPIC 5 announced

The plenary speakers for ECCE 10, held jointly with the third European Congress of Applied Biotechnology (ECAB 3) and the fifth European Process Intensification Conference (EPIC 5), have been announced.

They include **Professor Christodoulos A. Floudas** from Texas A & M University, US, who will deliver the **Danckwerts Memorial Lecture**.

The P.V. Danckwerts Memorial Lecture was established in 1985 to honor Professor 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 past President of IChemE.



The Danckwerts Lecture is co-sponsored by Chemical Engineering Science, the Institution of Chemical Engineers (IChemE), the American Institute of Chemical Engineers (AIChE), and EFCE, and is held in alternating years at the ECCE and AIChE meetings.

Professor Floudas, the Erle Nye '59 Chair Professor for Engineering Excellence at the Artie McFerrin Department of Chemical Engineering at Texas A & M University, is a world-renowned authority in mathematical modelling and optimisation of complex systems. He will present his lecture on: 'Carbon Capture, Utilization, and Sequestration: A Multi-scale Grand Challenge'.

For the 2015 Danckwerts Lecture, Professor Floudas will introduce a multi-scale energy systems engineering framework for addressing the grand challenge of CO<sub>2</sub> capture, utilization, and sequestration (CCUS) at an individual process level and at the supply chain network level.

**For more information on the plenary lectures at ECCE 10 + ECAB 3 + EPIC 5, visit: [www.ecce2015.eu/programme/plenary-lectures](http://www.ecce2015.eu/programme/plenary-lectures)**

## Upcoming EFCE events

### 2015 International Congress on Sustainability Science & Engineering - ICOSSE '15

Balatonfüred, Hungary, 26-29 May 2015 (EFCE Event No. 732)

The Symposium is co-organised by the University of Pannonia, the American Institute of Chemical Engineers (AIChE), and the Sustainability Section of the European Federation of Chemical Engineering (EFCE). As the premier sustainability forum for engineers and scientists from industry, academia and other organisations around the globe, this year's congress promises to be a source of scientific and engineering knowledge that will allow you to steer your organization in new directions.

**The purpose of the Congress** is to exchange emerging ideas about ways and means of protecting the environment and its resources, so that we can achieve sustainable development and societal benefits throughout generations. It will provide a common platform for researchers and practitioners of various physical and ecological sciences, engineering fields, economics, and social sciences.

**ICOSSE '15** will focus on managing natural resources, industrial sustainability from a systems perspective using scientific and engineering innovations, and the considerations of social and economic aspects of sustainability.

**ICOSSE '15 Key Themes: Sustainable Water Management; Sustainable Manufacturing; Energy Sustainability; Sustainability Issues in the Food-Energy-Water Nexus; Sustainability Education and Societal Issues.**

For more information, visit the Symposium website: <http://icosse.org/2015>

## Call for Nominations – EFCE Awards

### 2016 EFCE Distinguished Lecture in Thermodynamics and Transport Properties

The call for nominations for the biennial Distinguished Lecture in Thermodynamics and Transport Properties to recognize an outstanding research career and achievements within the field is now open.

The award will comprise a certificate, a cash prize of €1,500, a travel/accommodation grant (not exceeding €500) and fee waiver to attend the 14th International Conference on Properties and Phase Equilibria for Product and Process Design (PPEPPD) where the award will be presented.

The 2016 Distinguished Lecture will be delivered during a Plenary Session of the 14th PPEPPD Meeting which will be held in Porto, Portugal, from 22 to 26 May 2016.

Closing date for nominations: **1 July 2015.**

Further information can be found at: <http://www.wp-ttp.dk> or <http://www.efce.info/Distinguished+Lecture+in+TTP.html>.

### 2016 EFCE Excellence Award in Process Safety

EFCE presents its triennial Excellence Award in Process Safety to recognise a PhD thesis or paper(s) published in the preceding three-year period, which demonstrates an outstanding contribution to research and/or practice in the field.

The award consists of a certificate, €1,500 and a travel grant (not exceeding €500) to attend the Loss Prevention Symposium, 5-8 June 2016 in Freiburg, Germany, where the award will be presented.

Nominations may be submitted by PhD supervisors at a PhD-awarding institution in an EFCE member country or Members of a national or regional member association of EFCE.

The nominated PhD thesis or paper(s) must address a topic relevant to the field of Process Safety, and must have been published within the three calendar years preceding the closing

date of nominations. For a PhD thesis work the thesis must have been accepted, defended and the degree awarded.

Closing date for nominations is **31 October 2015**.

Further information can be found at: [http://www.efce.org/WP\\_LP.html](http://www.efce.org/WP_LP.html) or <http://www.efce.info/ExcellenceAwardProcessSafety.html>

## 2016 EFCE Excellence Award in Mechanics of Particulate Solids

Following the successful calls for nominations in 2010 and 2012, EFCE is pleased to issue a third invitation call for nominations for the Excellence Award in Mechanics of Particulate Solids.

This triennial award aims to recognise a PhD thesis or associated paper(s) of a researcher or engineer, which demonstrate(s) an outstanding contribution to research and/or practice in Mechanics of Particulate Solids.

The award consists of a certificate, €1,500, a travel grant of up to €500 and a fee waiver to attend the International Congress on Particle Technology, PARTEC 2016, which will be held in Nuremberg, Germany, from 19 to 21 April 2016.

Nominations may be submitted by any PhD supervisor at a PhD-awarding institution in an EFCE member country or by a member of an EFCE member society. Only PhD theses or paper(s) published between November 2012 and November 2015 are eligible for nomination.

Closing date for nominations: **30 November 2015**.

Further information can be found at: <http://www.efce.info/ExcellenceAwardMPS.html>.

## Upcoming EFCE events

### EFCE PhD-Student Workshop on Polymer Reaction Engineering Fürstenfeldbruck, Germany 30 October - 1 November 2015 Organised by the EFCE Working Party on Polymer Reaction Engineering

The 4th PhD-Student Workshop on Polymer Reaction Engineering, is going to be held as a direct follow-up event to the first European Symposium on Chemical Reaction Engineering - ESCRE 2015 (visit: <http://www.dechema.de/escre2015.html>).

The Workshop will provide an international platform where young researchers in the field of polymer reaction engineering can build up valuable networks. It is an opportunity to meet fellow PhD-students and make contact with interesting companies and potential employers. Moreover, the students can benefit from useful feedback on their work and improve their soft skills by practicing the presentation of complex scientific topics.

**Topics:** Emulsion polymerization; Gas-phase polymerization; High pressure polymerization; Atom Transfer Radical Polymerization; Modelling of polymerizations; Polymerization kinetics; Particle formation; Polymer foaming; and Plant design.

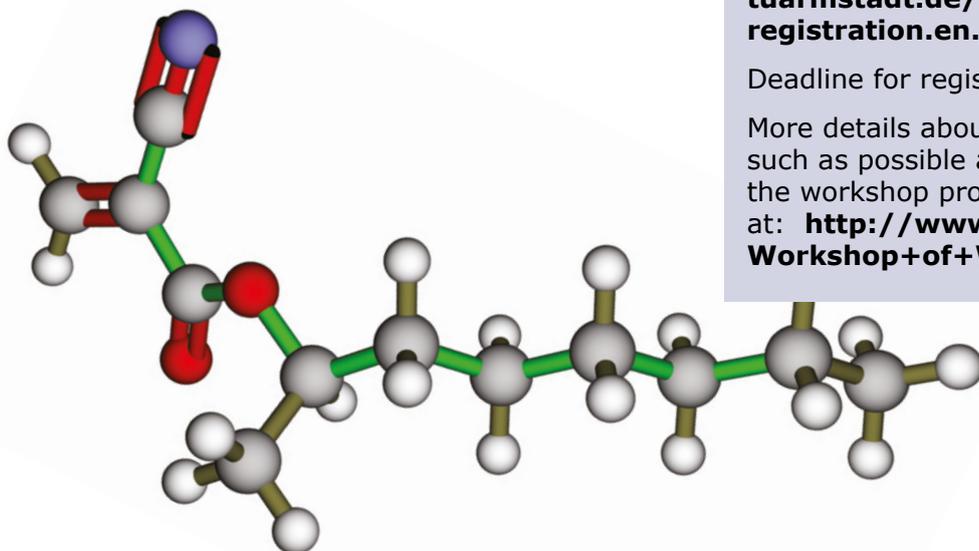
**Registration fee:** €100 (including course material and participation in the social events.)

The official language of the workshop will be English.

**Register online:** <http://www.chemie.tuarmstadt.de/busch/akbusch/wppre/registration.en.jsp>

Deadline for registration: **14 August 2015**

More details about the workshop itself, such as possible accommodation and the workshop program can be found at: [http://www.efce.info/PhD\\_Workshop+of+WPPRE-p-112424.html](http://www.efce.info/PhD_Workshop+of+WPPRE-p-112424.html)



# Memories of a Friend and Colleague

For John Marriot Smith, who passed away 28 March 2015

By Alwin Nienow, Birmingham, UK, 12 April 2015

**I first met John at a conference in Montreal in 1968. It was a Tripartite Chemical Engineering Conference organised by AIChE, CanSocChE and IChemE. It was a memorable day because it was my first meeting of many with John around the world.**

It was also memorable for me and perhaps for him too, because it was the only time that I met Professor P V Danckwerts, who was chairman of the mixing session in which we both were presenting. Our chairman was on that occasion notable for being singularly taciturn. My lecture concerned particle suspension and solid liquid mass transfer and John's was on high viscosity mixing with anchor impellers, from his first academic post in Swansea and co-authored with Colin Peters. Both were subsequently published in the Canadian Journal.

Later, John moved as professor to the prestigious Kramers Chair of Physical Technology at Delft University of Technology where initially he further developed his interest in high viscosity and non-Newtonian mixing and he published a significant amount of work on screw extrusion with Leon Janssen (who later became a leader in that type of processing with a chair in Groningen).

In 1974, we also both attended the First European Conference on Mixing and Centrifugal Separation (my italics-the reason for these strange bedfellows was because the venture was a commercial one by the BHRA conference section and the business leader of that section figured that as both involved rotating bodies, they could usefully be put together, thereby increasing the likely attendance!).

By that time, John was working with Klaas van't Riet and his paper discussed the trailing vortex of the Rushton turbine, a precursor to the 1975 CES article which was chosen as one of the 21 most influential by NAMF. Later, van't Riet went on to write one of the best biochemical engineering books, Basic Bioreactor Design, perhaps the only one on the topic which properly recognises the critical role of mixing in bioprocessing.

In January 1975, he invited me to a meeting of the EFCE Working Party on Non-Newtonian Processing at the Technical University of Twente when it had only just opened. It had superb buildings but only about half were occupied; a good example of Dutch forward thinking, with Twente now being a leading player in Dutch technical education.

Though the meeting was about non-Newtonian Processing and all talks but mine were about laminar flow, John was using it to try to get a WP on mixing established. He finally succeeded in Mons in 1978 when the EFCEWP on Mixing was established and he became the Dutch delegate. Later, he became the first recipient of the BHRG Prize for his 'Lifetime Contribution to Mixing Research and Practice'.

In 1983, the industrial consortium, Fluid Mixing Processes (FMP), run by BHRA (now BHRGroup) was established. John was heavily involved advising BHRA on the best structure for the consortium and acted as a consultant to it for many years. It is still going strong with a structure which has grown organically based on the initial one, so it seems the advice was good. In 1989, he and I were the only Europeans to be invited to a meeting in Maryland out of which the decision to establish the North American Mixing Forum (NAMF) grew. NAMF has had a major impact on bringing together, at the many mixing conferences that it organises, academics and industrialist from the US and the rest of the world with an interest in mixing; and it has gone from strength to strength.

Around 1992, John moved back to the UK to a Chair in the Department of Chemical Engineering at the University of Surrey linked to biotechnology. The 'bio' never really caught on with him. As he said, for a man interested in rock crystals and fossils (and especially searching for them in quarries wherever and whenever he could), it didn't seem appropriate. Instead, he established a new area of research based on his earlier great success in gas-liquid mixing, namely mixing in boiling and hot gassed reactors. Until he started, though highly-important

and industrially-relevant, it was a little-researched. Again, he published key papers on this, many with 'Bruce' Gao from Beijing; and Professor Gao and his team are still continuing studying the phenomena.

From 1983 to about 2011, John also participated in two mixing courses annually, one in Sweden and one in the US with me and Mike Edwards (who was replaced in the late 1980s by Art Etchells when Mike moved from Bradford University to Unilever). With occasional in-house courses during that period too, we 'taught' some 800 students over the years, including Jim Oldshue, Julian Fasano and Suzanne Kresta! He loved to introduce joke slides into his lectures from prints in his collection of old books, mostly on technology: one from 1851 of a large multiple paddle mixer driven by a single horse to which he gave the title, '1 HP per 1000 US gallons'; another of Stonehenge, which somehow became part of an early rotor-stator mixer. One of the courses was held at the Fort Lauderdale Marriott and on registering, they commented on his middle name being Marriott. They were sufficiently impressed that the next day, they placed a bowl of fruit and a bottle of wine in his room with the compliments of the hotel!

It was during the evenings on these courses that I got to know him best, especially in snug bars on cold winters

nights in Sweden and at the outdoor pool bar on balmy ones in Florida! In addition to his beautifully-presented rock and fossil collection at his house, he loved good wine, food and conversation; old technical books, classical music and rugby; and was proud of his Welsh background. In the summer of 1984, I also spent about a month with my wife Helen house-sitting in Delft for him and his wife Joyce while they were away in Buffalo with Jarda Ulbrecht. Our main task, carried out by Helen, was to ensure that the cat took its tablets each day. By carefully wrapping it in the cat's favourite food, the tablets got taken and Helen escaped with only minor bites and scratches!

John made a major impact on the ubiquitous chemical engineering unit operation of mixing, especially his research related to gas-liquid and boiling reactors; and in the development of the infrastructure that supports academic-industrial collaboration. His work was recognised by the EFCEWP on Mixing by making him the first recipient of its Lifetime Award; and many of his co-workers are still continuing to move the field forward. He was a good friend to many, particularly in the UK, in Europe (and especially Holland) and in the US and his company was always sought at the many conferences that he attended, often by invitation. He will be greatly missed.



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