



**16th European Symposium
on Comminution &
Classification**

2 - 4 September 2019
Leeds, UK



UNIVERSITY OF LEEDS

Dear Comminution & Classification Colleagues

The next European Symposium on Comminution & Classification (ESCC) will take place at the University of Leeds, UK. We have great pleasure in organising the event on behalf of the Working Party of the European Federation of Chemical Engineering (EFCE). ESCC has a long international history, and the last three conferences were held at Braunschweig, Gothenburg, and Izmir. As a long-standing member of the Working Party, representing the Institution of Chemical Engineers of UK, we are delighted to organise this important international conference and welcome the worldwide community to Leeds.

The conference structure is in line with the format of the previous events and will cover themes on foods, pharmaceuticals, mineral processing, fine and ultrafine grinding in the chemical and allied industries, fundamentals of breakage and comminution models as well as new applications. We will have plenary and keynote lectures from leading comminution and classification experts from all over the world, poster sessions and exhibitions by instrument manufacturers. ESCC is a focussed forum in which you have the opportunity to discuss current trends in this area and learn from other industries and can transfer knowledge to your own applications.

You are cordially invited to come to Leeds in 2019 to be part of the ESCC, which will bring together experts of comminution and classification technology from industry and academia worldwide.



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Milling is one of the oldest technologies developed by early civilisations, yet so little is known on what happens to the particles when they break. I look forward to your contributions which will enlighten the participants of the latest developments in the field.

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Professor Mojtaba Ghadiri FREng, CEng, FIChemE

Conference Chair

School of Chemical and Process Engineering,
University of Leeds, UK

16th European Symposium on Comminution & Classification

The European Symposium on Comminution & Classification (ESCC) is organised on behalf of the Working Party of Comminution and Classification of European Federation of Chemical Engineering (EFCE) on 2-4 September 2019.

The organising committee invites you to this international forum and solicits abstracts of work to be presented at the conference.

Conference Topics

The organisers encourage submission of abstracts on all topics related to size reduction and classification of particulate solids under both dry and wet conditions. The abstracts will be assessed by the international technical committee and allocated to relevant sessions.

The following topics are suggested as aide-memoire, rather than the expected full list to be covered in ESCC2019.

- Size reduction and classification related to energy technologies, pharmaceuticals, foods, minerals, and chemicals.
- Mechanochemically, bulk and surface transformations
- Modelling across length scales
- Wear, erosion, and contamination
- Innovations in milling and classification process and equipment
- Nanomilling
- Enabling technologies
- Fundamentals of fracture

Organising Committee

Professor Mojtaba Ghadiri,
University of Leeds, Conference Chair

Mr Iain Crosley,
Hosokawa Micron, UK

Dr Ali Hassanpour,
University of Leeds, PTSIG

Dr John Jones,
Bristol-Myers Squibb, FTSG, RSC

Dr Lian Liu,
University of Surrey

Professor Arno Kwade,
University of Braunschweig, WP Chair, EFCE

Dr Sadegh Nadimi,
University of Leeds

Professor Raffaella Ocone,
Heriot-Watt University, PTSIG Chair, IChemE

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Technical University of Kaiserslautern
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New Jersey Institute of Technology
Professor Alain Chamayou,
École des mines d'Albi-Carmaux
Professor Magnus Evertsson,
Chalmers University of Technology
Professor Jozsef Fajtli,
University of Miskolc
Professor Christine Frances,
INP-ENSIACET
Dr Colin Hare,
University of Surrey
Dr Willie Hendrickson,
AVEKA & International Fine Particle
Research Institute

Dr Jerry Heng,
Imperial College London
Dr Michael Juhnke,
Novartis Pharma AG
Professor Haim Kalman,
Ben Gurion University of the Negev
Professor Junya Kano,
University of Tohoku
Professor Arno Kwade,
Technical University of Braunschweig
Professor Aubrey Mainza,
University of Cape Town
Professor Vadim Mizonov,
Ivanovo State Power Engineering
University
Dr Martin Murtagh,
Corning
Dr Frank Müller,
BASF SE
Professor Jin Ooi,
University of Edinburgh
Dr Massih Pasha,
The Chemours Company

Professor Wolfgang Peukert,
University of Erlangen
Professor Malcolm Powell,
University of Queensland
Professor Pavol Rajniak,
Slovak Technical University & Process
Systems Enterprise
Professor Agba Salman,
University of Sheffield
Professor Tomáš Sverák,
Brno University of Technology
Professor Luis Marcelo Tavares,
Federal University of Rio de Janeiro
Professor Cino Viggiani,
University of Grenoble
Professor Yanmin Wang,
South China University of Technology
Professor Satoru Watano,
Osaka Prefecture University
Professor Karl-Ernst Wirth,
University of Erlangen
Dr Mohsen Yahyaei,
University of Queensland

Plenary Speakers



Prof. Arno Kwade

Prof. Kwade is the Head of the Institute for Particle Technology of the Technical University of Brunswick. His research activities are on production, tailoring, formulation of nano and micro sized particles and their use for the design of structured products like battery electrodes, pharmaceutical active ingredients and nano-composites. He is the Chairman of the EFCE Working Party on Comminution and Classification and has extensive collaborations worldwide.



Dr Michael Juhnke

Dr Juhnke is process engineer graduated in 1997 from Cologne University of Applied Sciences (BSc) and 2000 from Clausthal University of Technology (MSc). He continued with a PhD in particle technology and graduated in 2006 from Clausthal University of Technology. He then joined Novartis Pharma AG, Basel, Switzerland, in the Technical R&D department. He is currently Senior Fellow and responsible for the process development of engineered drug particles for oral, parenteral and respiratory applications from pre-clinical to production scale.



Prof. Malcolm Powell

From a physics background, Prof. Powell worked at Mintek, then established the comminution research and consulting groups at the University of Cape Town. He took up the Chair in sustainable comminution in the University of Queensland in 2007. He has founded the Anglo American Centre for Sustainable Comminution and formed the Global Comminution Collaborative (GCC) of six University world-leading groups providing a comprehensive worldwide process optimisation team. He aims to link fundamental research into applied outputs through the development of mechanistically correct but practical and robust process models. Interests cover liner design, SAG mill modelling and control, the unified comminution model (UCM), ore characterisation, flexible circuits and application of novel processes to reducing the environmental impact of mining.

Keynote Speakers



Prof. Aubrey Mainza

Prof. Mainza is the Head of Department of Chemical Engineering, University of Cape Town (UCT). He graduated from UCT with a PhD in 2006. He has 18 years of collective experience in academia, research and industry. He is the Deputy Director and Head of Comminution and Classification Research in the Centre for Minerals Research, which is a large multi-disciplinary research centre. His research areas include comminution and classification and uses Discrete Element Method (DEM), Computational Fluid Dynamics (CFD), and Positron Emission Particle Tracking (PEPT) as tools in his modelling methods. He has participated in many local and international research projects and has worked on numerous comminution circuit design and optimisation projects.



Dr Lian Liu

Dr Liu joined the University of Surrey in May 2016 as the research centre manager at the Department of Chemical and Process Engineering. Dr Liu obtained her PhD from the University of Queensland in Australia in 1991 and worked in Carrier Transicold in Singapore for three years after her PhD. She then moved back to the University of Queensland and spent most of her academic career in the same University before moving to the University of Surrey. Dr Liu's research expertise is in particle technology, ranging from comminution (particle breakage process) to granulation process (particle size enlargement process) as well as bulk powder flow and compaction. She has worked with a wide range of industries such as minerals, agricultural and pharmaceutical industries.



Dr.-Ing. Steffen Sander

Steffen Sander studied process engineering/mineral processing at the Freiberg University of Mining and Technology. He continued to do research on the comminution of metals and received his Dr.-Ing. in 2002. After 10 years in different R&D related functions in the paper industry, during which his main focus was on paper making and paper coating technology, he joined HOSOKAWA ALPINE Aktiengesellschaft in February 2012. He is currently Head of R&D of the Powder and Particle Processing business segment of HOSOKAWA ALPINE Aktiengesellschaft with a strong focus on size reduction and classification for all kind of applications.



Prof. Wolfgang Peukert

The research interests of Wolfgang Peukert focus on key aspects of particle science and technology with special emphasis on formulation of functional particle systems. He is seeking for unifying principles in the design of particulate products in combination with modelling and optimization strategies. He uses methods from interface science and engineering for tailoring particle interactions, colloidal stabilization and ultimately particle properties. His activities include comprehensive particle characterization for size, shape, surface and functional properties. Recent progress in micro- and nanomechanical particle characterization coupled to size reduction at the nanoscale opens new pathways for scalable production of 2D materials such as graphene, particle shape control in mills and the formulation of pharmaceuticals,. He likes to work in interdisciplinary teams, his motto is: Innovation occurs at the interfaces.



Prof. Marcelo Luis Tavares

Prof. Tavares holds a bachelor's degree in mining engineering from the Federal University of Rio Grande do Sul (1988), a Master's degree in Mining, Metallurgical and Materials Engineering from the Federal University of Rio Grande do Sul (1991) and a PhD in Metallurgical Engineering from the University of Utah (1997). He is Professor of the Federal University of Rio de Janeiro and Head of the Laboratory of Mineral Technology of the Graduate School of Engineering (COPPE). He has experience in Mining, Metallurgical and Materials Engineering, with emphasis on Mineral Processing, working mainly in the topics of modelling and simulation of comminution and mineral concentration processes and fundamentals of particle breakage. He is a founding member of the Global Comminution Collaborative, has been a member of the editorial board of several scientific journals, including International Journal of Mineral Processing, Minerals, Heliyon and KONA Powder and Particle. He has presented invited keynote lectures in twelve countries and has been the principal investigators in more than 100 projects.



Dr Jerry Heng

Dr Heng is Reader in Particle Technology, Department of Chemical Engineering, Imperial College London and currently an EPSRC Manufacturing the Future Fellow. He received his PhD from Imperial College (2006) and his BEng from Universiti Teknologi Malaysia (2002). His research interests are in developing approaches to control nucleation and crystallisation of small molecule organic organic solids (polymorphism), studying the role of surface properties in processability and manufacturability of powders, including the effect of processing on powder properties, and developing methods to experimentally measure powder surface energy heterogeneity and models to determine surface energy distributions.

Abstracts

- Abstracts for oral and poster presentations are welcome
- Acceptance of abstracts is decided after a reviewing process
- The conference language is English
- For submission please follow the instructions on www.escc2019.com

Deadline for submitting extended abstracts (2 pages):

1st February 2019

Notice of acceptance:

April 2019

Journal publication

Full papers presented at the conference will be assessed and authors of selected papers will be invited to submit an extended version for possible publication in the special issue of a journal after a full review process of the respective journal.

Conference fees

	Early bird*	Normal
Regular	£500	£600
Student	£200	£300

*before 1st June

Email: escc2019@leeds.ac.uk

Online registration: www.escc2019.com



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