



18th European Conference on Mixing

MIXING 18

30 August - 02 September 2026
University of Limerick, Ireland

Smarter Mixing for Sustainable Processes and Products

18TH EUROPEAN CONFERENCE ON MIXING

MIXING18

SMARTER MIXING

for more sustainable processes and products

PROGRAMME BOOKLET

Limerick, Ireland

30 August–2September2026

Organised by the University of Limerick
in collaboration with the EFCE Working Party on Mixing
Professional Conference Organizer: BlueBox Events B.V.



The MIXING18 Programme Book is provided **digitally only**.
No printed programme book will be distributed at the conference.

*This edition reflects the programme published on mixing18.dryfta.com as of 25 August 2026.
The programme remains provisional and subject to change.*

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Welcome

~~On behalf of the University of Limerick and the EFCE Working Party on Mixing, it is our great pleasure to welcome~~ you to MIXING18, the 18th European Conference on Mixing, taking place on the University of Limerick campus from 30 August to 2 September 2026. Held every three years, this conference has long served as the leading European forum for researchers, engineers and industry professionals working on mixing phenomena across the chemical, pharmaceutical, food, biotechnology and energy sectors.

This year's theme, "Smarter Mixing – for more sustainable processes and products," reflects our shared ambition to advance mixing science and technology in ways that support more efficient, resource-conscious and sustainable processes. Over the course of the conference, you will have the opportunity to engage with keynote lectures from leading international experts, a rich programme of oral and poster presentations, and numerous occasions for informal networking and discussion.

We hope this Programme Booklet will be a useful companion throughout your time in Limerick, and we look forward to a stimulating and enjoyable conference.



SAY HELLO TO

Meet Bluebuddy

Your Personal Conference Assistant

TWO WAYS TO START

Scan, tap Send & start chatting

Bluebuddy is the MIXING18 congress agent — a WhatsApp assistant that answers any question covered on the conference website (mixing18.dryfta.com), any time, from your phone.

[Tap here to meet Bluebuddy →](#)

Or message us directly: **+31 970 580 19005**



SCAN ME

What can Bluebuddy help with?

In short: anything published on the MIXING18 website — including:

01 Programme & Speakers Session times, rooms, chairs, keynotes and the EFCE Mixing Awards	02 Registration & FAQs What's included, visas, badges, payment and refund questions
03 Venue & Travel Getting to campus, airports, hotels and local transport	04 Social Programme Welcome Reception, Conference Dinner and the Cliffs of Moher excursion
05 Sponsors & More Exhibitors, sponsors and general conference information	

Nice to know — Bluebuddy answers using the content published on mixing18.dryfta.com, so it's most reliable for anything already on the website — for anything else, the on-site Secretariat desk is always on hand. Bluebuddy is provided by BlueBox Events, the Professional Conference Organizer for MIXING18. Standard WhatsApp messaging rates from your provider may apply.

General Information

Dates & Venue

- Conference dates: Sunday 30 August – Wednesday 2 September 2026
- Venue: University of Limerick, Plassey Campus, Limerick, Ireland — sessions are held in the Analog Devices (Bernal Institute) Building
- Social venues: The Stables Club (Plassey Campus Centre) for the Welcome Reception & BBQ and evening functions; The Pavilion for lunches; the Foyer 1st/2nd floors for poster viewing
- EFCE event number: 827
- Dress code: business casual for all conference sessions and social events, including the Welcome Reception & BBQ and the Conference Dinner

Chemical Engineering Research and Design – Special Issue

Following the conference, a selection of MIXING18 papers will be invited for a special issue of Chemical Engineering Research and Design (Institution of Chemical Engineers / Elsevier). In consultation with the session chairpersons, approximately 20 presenters will be invited to submit an extended version of their work. The provisional deadline for submission to the special issue is early January 2027. Invited authors will be contacted directly with full submission instructions following the conference.

OVERVIEW

Programme at a Glance

Note: the programme is provisional and subject to change. See the Detailed Programme section for session-level information, including presenters and abstracts.

TIME	PROGRAMME ITEM
Sun 30 Aug	11:00 – 12:00 – Registration opens The Stables, University of Limerick Campus
	12:00 – 17:30 – Optional excursion to the Cliffs of Moher Departs from The Stables
	17:00 – Registration reopens The Stables
	17:30 – 21:00 – Welcome Reception & BBQ The Stables Club · included in registration · dress code: business casual
Mon 31 Aug	08:15 – 18:10 – Oral sessions (lunch included) — including the EFCE Young Researcher Award presentation
Tue 1 Sep	18:10 – Poster viewing session Complimentary drinks · Foyer 1st/2nd floors Poster Session
	08:15 – 18:10 – Oral sessions (lunch included) — including the Alvin & Helen Nienow Lifetime Recognition Award
	18:30 – 19:00 – Buses leave for the Conference Dinner Departing from The Stables Club · fee €85
Wed 2 Sep	19:00 – 22:00 – Conference Dinner Dunraven Arms Hotel, Adare · dress code: business casual

08:15 – 13:00 – Oral sessions

13:00 – Lunch (included) | Closing lunch

Keynote Speakers

MIXING18 features four keynote lectures from leading international experts, spanning experimental characterisation, computational modelling, product-focused intensified mixing and bioprocessing applications.

KEYNOTE LECTURE

Federico Alberini

Associate Professor in Chemical Engineering, University of Bologna, Italy

Monday 31 August · 08:35 – 09:15 · Chair: Joëlle Aubin

Bridging Academic and Industrial Perspectives Through the MIXING of Experimental Techniques and Methodologies for Complex-System Characterization

The mixing of complex fluids and multiphase systems are at the heart of many industrial processes, yet their characterization remains one of the most challenging tasks in chemical and process engineering. This lecture explores how the integration of experimental techniques and methodologies can provide a deeper understanding of complex flow phenomena while addressing both academic and industrial needs.

The role of experimental data as a critical asset for process development, model validation, and scale-up is discussed, highlighting the complementary perspectives of research institutions and industry. A range of state-of-the-art measurement approaches, including Particle Image Velocimetry (PIV), Positron Emission Particle Tracking (PEPT), Electrical Resistance and Capacitance Tomography (ERT/ECT), and Passive Acoustic Emission (PAE), will be presented through practical case studies. Particular attention is devoted to the challenges associated with dispersed-phase characterization, non-transparent systems, and large-scale operations. The impact of measurement scale on representativity, resolution, and reproducibility is examined, together with the growing role of computational tools and digitalization. The lecture concludes by emphasizing that effective characterization of real systems requires the convergence of multiple techniques, interdisciplinary expertise, and strong collaboration between academia and industry.

KEYNOTE LECTURE

Ning Yang

Professor, Institute of Process Engineering, Chinese Academy of Sciences, Beijing, China

Monday 31 August · 14:00 – 14:45 · Chair: Claudio P. Fonte

Mesoscale Modeling of Multiphase Flows in Stirred Tanks and Rotor-Stator Devices

Multiphase flows in stirred tanks and rotor-stator devices are characterized by complex interactions across multiple scales, from molecular-level interfacial phenomena to device-scale turbulence. Accurate prediction of key performance parameters, such as gas holdup, flow regime transition, and droplet size distribution, remains a significant challenge for conventional CFD models. This talk presents a mesoscale modeling framework that bridges the gap between sub-grid interfacial physics and macroscopic transport phenomena.

We first evaluate the role of drag models in gas-liquid stirred tanks, demonstrating that the dual-bubble-size (DBS) drag models, rooted in the Energy-Minimization Multi-Scale (EMMS) concept, significantly improve predictions of flow regimes and gas dispersion compared to classical or turbulence-corrected drag models. Extending to liquid-liquid emulsification in rotor-stator devices, we integrate the EMMS approach into CFD-population balance modeling (PBM) to derive a breakage rate corrector without empirical fitting.

Finally, we address the second mesoscale — emulsifier adsorption at droplet interfaces — through coarse-grained molecular dynamics (CGMD). By coupling CGMD-derived adsorption parameters with surfactant transport equations in CFD-PBM, we develop a unified model that captures the inhibition of coalescence due to interfacial coverage. This cross-scale coupling, from molecular adsorption to device-scale turbulence, represents a paradigm shift toward predictive emulsification modeling.

KEYNOTE LECTURE

Gül Özcan-Taşkın

Professor, Loughborough University, United Kingdom

Tuesday 1 September · 08:15 – 08:55 · Chair: Tomáš Jirout

Intensified Mixing Processes for High Performance Products – From Paints, Coatings to Cosmetics; Car Tyres, Batteries to Personal Care and Pharmaceuticals; Lubricants, Greases to Food and Crop Protection

Recent decades have seen the development of several novel products containing nanoscale powders in their formulation. A crucial requirement in the manufacture of these products, with significantly superior performance characteristics compared to their micron-sized counterparts, is the disintegration of powder clusters. This requires intensified mixing to achieve a fine and stable dispersion so as to ensure the benefits associated with fine-scale dispersions.

The talk will cover the dispersion process — the initial powder incorporation and pre-dispersion preparation (or intercalation in the case of layered structures) — and the deagglomeration of nanoparticle clusters in liquids. How we study the kinetics and mechanisms of deagglomeration, and the implications for practice, will be elaborated, with reference also to powders with layered structures, such as nanoclays, and their dispersion through intercalation and exfoliation.

A series of case studies from collaborative projects based in industry and academia will be presented, highlighting how product and process development go hand-in-hand.

Michael Schlüter

Professor, Institute of Multiphase Flows, Hamburg University of Technology, Germany

Wednesday 2 September · 08:15 – 08:55 · Chair: Alain Liné

Deeper Understanding of Mixing and Mass Transfer in Aerated Stirred Tank Reactors for Biopharmaceutical Processes through Trajectory-Based Modelling

Efficient pharmaceutical manufacturing requires a detailed understanding of flow, mixing, and transport phenomena in aerated stirred tank reactors (STR). Local hydrodynamics strongly affect mass transfer, gas dispersion, nutrient distribution, cell stress, and ultimately process performance and product quality. The complex interaction of turbulent flow, multiphase phenomena, and biological systems makes process characterization and scale-up particularly challenging.

This lecture presents recent advances in experimental and computational tools for analysing mixing and transfer processes in aerated STRs and SMART Reactors. Particular emphasis is placed on trajectory-based models that track the local environments experienced by cells, bubbles, and particles, enabling the quantification of process-relevant heterogeneities beyond conventional averaged approaches.

By combining detailed simulations with experiments in a transparent 15,000 L replica of an aerated STR at production scale, these approaches support a more predictive understanding of pharmaceutical mixing and mass transfer processes, facilitating the development of more efficient and scalable manufacturing technologies.

This work is partly funded by the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) – SFB 1615 – 503850735.

EFCE Mixing Awards 2026

MIXING18 is proud to present two EFCE Working Party on Mixing awards during the conference, recognising outstanding contributions to mixing science and technology at both ends of a research career.

Alvin and Helen Nienow Lifetime Recognition Award in Mixing

The Alvin and Helen Nienow Lifetime Recognition Award in Mixing is a triennial award presented to a senior researcher or industrial engineer from an EFCE member country in recognition of an outstanding and sustained contribution to mixing science, technology and practice. Since 2021, the award has been generously sponsored by Alvin and Helen Nienow.

GOOD TO KNOW

2026 Award Recipient — Professor Hugh Stitt

Presentation: "Of Mix and Men" · Tuesday 1 September, 14:00 – 14:45 · Chair: Giuseppina Montante

Hugh Stitt is a chemical engineer with more than 35 years of industrial experience in catalytic reaction engineering, catalyst manufacture and process development at Johnson Matthey. During his career, he has contributed to numerous manufacturing improvement and innovation projects involving a broad range of mixing and processing operations.

His work has combined industrial practice with academic research, including extensive collaboration on mixing, reactor engineering and advanced process measurement. He is an Honorary Professor at the University of Birmingham, a Fellow of the Institution of Chemical Engineers and a Fellow of the Royal Academy of Engineering.

The award recognises his exceptional and sustained contribution to the development and practical application of mixing science and technology throughout his career.

Abstract — Of Mix and Men

This presentation will explore, based on the presenter's experience, some key essential elements of implementing industrial mixing practice and innovation. This will emphasise how early-career learning can be essential in framing the mixologist's future outlook. Modelling is a vital part of the industrial toolbox: the importance of fundamental and mathematical understanding of the models, as well as validation of underpinning sub-models and parameters, will be emphasised. The critical role of basic research in process improvement, scale up and innovation will be demonstrated, and the presentation will explore how advanced experimental measurement and flow visualisation methods can be exploited. Good basic research can enable innovation, or indeed avoid costly larger-scale work. Examples will also be given of how information-rich measurement and mixing characterisation methods can be scaled to and exploited on full-scale manufacturing plant.

EFCE Young Researcher Award in Mixing

The EFCE Young Researcher Award in Mixing recognises an outstanding contribution to mixing science by an early-career researcher, presented on the basis of their work at the European Conference on Mixing.

GOOD TO KNOW

2026 Award Recipient — Dr Ernest Simon

Presentation: “Experimental and Numerical Study of the Mixing of a Non-Newtonian Fluid” · Monday 31 August, 17:40 – 18:10 · Chair: Giuseppina Montante

Ernest Simon is a post-doctoral researcher at the Toulouse Biotechnology Institute (TBI), France, where his work focuses on the experimental characterisation of complex, non-Newtonian flows in mixing tanks using advanced Lagrangian Particle Tracking techniques. His award-winning study, conducted with colleagues at TBI, IFPEN and IMFT, is among the first to apply time-resolved 3D particle tracking to laminar non-Newtonian flow in a stirred vessel.

Co-authors: Jérôme Morchain (Professor, TBI), Frederic Augier (Engineer, IFPEN), Sébastien Cazin (Research Engineer, IMFT) and Alain Liné (Toulouse Biotechnology Institute).

Abstract — Experimental and Numerical Study of the Mixing of a Non-Newtonian Fluid

Mechanically agitated tanks are widely used in the chemical and biochemical industries. Although working fluids often present complex rheology, little work has been done to understand the hydrodynamics of non-Newtonian fluids in a mixing tank. Studying such a configuration is challenging because (i) the local apparent viscosity μ_a is shear dependent and (ii) the flow developing in mixing tanks is inherently 3D, inducing strong heterogeneities of local shear rate. The objective of this study is to deepen the understanding of the impact of non-Newtonian rheology on flow in a mixing tank through the acquisition of high-quality experimental data.

4D-LPT (3D time-resolved Lagrangian Particle Tracking) measurements are conducted — to the author's knowledge, one of the first attempts where such a technique has been employed to study laminar flow of a non-Newtonian fluid in a mixing tank. The fluid investigated is an aqueous solution of CMC modelled with the Carreau-Yasuda model, agitated by a classical Rushton turbine, with several mixing frequencies analysed to cover flow regimes

ranging from laminar to transitional ($Re \in [50, 554]$).

Local and time-resolved data are post-processed to evaluate ensemble- and phase-averaged velocity fields in order to investigate organised structures, in particular the development of coherent structures in the wake of the impeller. The local shear rate is characterised without truncation or isotropy assumptions, and the contributions of the mean and organised motions to the total shear rate are assessed through Proper Orthogonal Decomposition (POD). Finally, the spatial distribution of the local apparent viscosity is evaluated.

Detailed Programme

The following pages set out the day-by-day conference schedule. Presentation titles are listed under each session; full abstracts are available in the online programme. All times, rooms and speakers are provisional and subject to change.

Sunday 30 August 2026

TIME	PROGRAMME ITEM
11:00 – 12:00	Registration opens The Stables, University of Limerick Campus
12:00 – 17:30	Optional excursion to the Cliffs of Moher Departs from and returns to The Stables · coach transport
17:00	Registration reopens The Stables
17:30 – 21:00	Welcome Reception & BBQ The Stables Club, Plassey Campus Centre · included in registration · informal networking to mark the start of MIXING18. Dress code: business casual.

Monday 31 August 2026

TIME	PROGRAMME ITEM
08:00 – 08:15	Registration and Coffee/Tea Foyer ground floor
08:15 – 08:35	Conference Opening and Welcome Prof. Sarah Hudson (Director, Bernal Institute, University of Limerick) and Prof. Harry Van den Akker (Bernal Professor of Fluid Mechanics, Bernal Institute, University of Limerick) · Keynote Lecture Theater - AD2-010
08:35 – 09:15	Keynote Lecture — Federico Alberini <i>“Bridging Academic and Industrial Perspectives Through the MIXING of Experimental Techniques and Methodologies for Complex-System Characterization”</i> Chair: Joëlle Aubin · Keynote Lecture Theater - AD2-010
09:15 – 10:15	Session 1 — Experimental Techniques & Results (1)[Livestream] · Chair: Adam Kowalski · Lecture Theater - AD2-010 <i>Hydrodynamic Optimization of a Propeller Mixer for Wastewater Treatment: Combined CFD Simulation and Experimental Validation via PIV and ERT</i> Presenter: Marc Tusenko, PTM GmbH · Co-authors: Pavel Apanasevich, Anne Deutschmann, Sebastian Winkler, Sebastian Reinecke, Arman Mohseni <i>Power, Flow Field and Mixing Time Analysis of Dual-Shaft, Turbine-Anchor Stirred Tanks for Newtonian Fluids in the Transitional Regime</i> Presenter: Darius Khoshdel, EngD Student, Formulation Engineering CDT · Co-authors: Mark Simmons, Andrew Ingram, Thomas Abadie, Waldo Rosales Trujillo <i>Energy Balance Approach to Modeling Immiscible Liquid Draw Down in Stirred Tank Reactors with Multiple Up-Pumping Impellers</i> Presenter: Jason Giacomelli, Philadelphia Mixing Solutions/ITT FLOW · Co-authors: Cormac Ryan, Maria Walters

TIME	PROGRAMME ITEM
10:15 – 10:40	Coffee/Tea Break Foyer ground floor
10:40 – 12:40	Session 2 — Experimental Techniques & Results (2) · Chair: Ville Alopaeus · Lecture Theater - AD2-010 <i>Dramatic Improvement in Mixing Performance Due to Rotational Reciprocation of Anchor Impellers</i> Presenter: Yoshiyuki Komoda, Associate Professor, Kobe University · Co-authors: Ryo Arai, Naoto Ohmura <i>Gas-Induced Liquid Phase Blending</i> Presenter: Gustavo Padron, Senior Technical Consultant, Framatome Ltd. <i>Gassed Power for Single Radial Impellers in Stirred Tanks: A Mechanistic Approach</i> Presenter: Cormac Ryan, Research Engineer, SPXFLOW <i>Hydrodynamic Investigation of CMC Solution in a Stirred Tank Reactor with Lagrangian Sensor Particles for Validation of Euler-Based CFD Studies</i> Presenters: Christopher Staeglich, TU Dresden; Lukas Buntkiel, Research Associate, HZDR · Co-authors: Stefan Frölich, Sara Marchini, Sebastian Reinecke, Markus Schubert <i>Improving Gas–Liquid Mass Transfer Under Vacuum Surface Evaporation in Large Stirred Tanks</i> Presenter: Kunihiro Matsumura, Senior Researcher, Kobe University · Co-authors: Yoshiyuki Komoda, Naoto Ohmura <i>Antisolvent Precipitation of Lipid Nanoparticles: Influence of Device Design and Micro-Mixing</i> Presenter: Amol Joshi, Bernal Institute, University of Limerick, Ireland · Co-authors: Muzammilanwar Khan, Sarah Hudson, Vivek Ranade Lunch The Pavilion Keynote Lecture — Ning Yang
12:40 – 14:00	<i>“Mesoscale Modeling of Multiphase Flows in Stirred Tanks and Rotor-Stator Devices”</i> Chair: Claudio P. Fonte · Keynote Lecture Theater - AD2-010
14:00 – 14:45	5-Minute Industry Insight — M-Star
14:45 – 14:50	
14:50 – 15:50	Session 3 — Computational Fluid Dynamics (1) · Chair: Francois Bertrand · Lecture Theater - AD2-010 <i>Novel Approaches to Two-Fluid Models Using Lattice Boltzmann Method</i> Presenter: Githin Tom Zachariah, Post-Doctoral Researcher, Paul Scherrer Institute · Co-author: Harry E. A. Van Den Akker <i>A Free-Energy Lattice Boltzmann Model for Solute Transport in Bubbly Flows</i> Presenter: Orest Shardt, University of Limerick · Co-author: Craig Byrne <i>GPU-Accelerated LBM-LES Simulation for Turbulent Mixing and Liquid-Liquid Dispersion in Stirred Tanks</i> Presenter: Jingchang Zhang, Institute of Process Engineering, Chinese Academy of Sciences · Co-authors: Xiaoping Guan, Ning Yang Coffee/Tea Break Foyer ground floor
15:50 – 16:15	Session 4 — Computational Fluid Dynamics (2) · Chair: Jérôme Morchain · Lecture Theater - AD2-010
16:15 – 17:35	<i>Effect of Non-Newtonian Fluids on Flow Behavior in Confined Impinging Jets Mixers</i> Presenter: Inês Oliveira, Faculty of Engineering of the University of Porto · Co-authors: Margarida Brito, Madalena Dias, Lopes José Carlos, Maria Filomena Barreiro, Ricardo Santos

TIME	PROGRAMME ITEM
	<i>Fast Population Balance Predictions of Drop Size Distributions in Stirred Tanks Using Turbulent Dissipation Rate Statistics</i> Presenter: Antonio Buffo, Politecnico di Torino, Department of Applied Science and Technology · Co-authors: Gaetano D'Avino, Francesco Maluta, Cristian Marchioli, Alessandro Paglianti <i>CFD-Informed Model Development Linking Geometry to Power Constants in Inline High-Shear Mixers</i> Presenter: Georgina Wadsley, Process Engineer, Unilever · Co-authors: Waldo Rosales Trujillo, Adam Kowalski <i>Bridging the Gap: From CFD-Based Cavitation Insights to Process Efficiency in High-Pressure Homogenization</i> Presenter: Eva Rütten, PhD Candidate, Karlsruhe Institute of Technology · Co-authors: Andreas Håkansson, Ulrike Van Der Schaaf, Nico Leister
17:35 – 17:40	5-Minute Industry Insight — ITT
17:40 – 18:10	EFCE Young Researcher Award in Mixing 2026 · Chair: Giuseppina Montante · Lecture Theater - AD2-010 <i>Winner: Ernest Simon — “Experimental and Numerical Study of the Mixing of a Non-Newtonian Fluid”</i> Presenter: Ernest Simon, Post-doc, TBI · Co-authors: Jérôme Morchain, Frederic Augier, Sébastien Cazin, Alain Liné. See the EFCE Mixing Awards 2026 section for the full abstract and biography.
18:10 – 19:30	Poster Viewing Session Complimentary drinks served · Foyer 1st/2nd floors Poster Session · featuring approximately 45 poster presentations across all conference themes — see the online programme or on-site poster guide for the full list

Tuesday 1 September 2026

TIME	PROGRAMME ITEM
08:00 – 08:15	Registration and morning coffee Foyer ground floor
08:15 – 08:55	Keynote Lecture — Gül Özcan-Taşkın <i>“Intensified Mixing Processes for High Performance Products – From Paints, Coatings to Cosmetics; Car Tyres, Batteries to Personal Care and Pharmaceuticals; Lubricants, Greases to Food and Crop Protection”</i> Chair: Tomáš Jirout · Keynote Lecture Theater - AD2-010
08:55 – 10:15	Session 5 — Suspensions, Slurries, Emulsions (1) · Chair: Yoshiyuki Komoda · Lecture Theater - AD2-010 <i>Rethinking Flocculation Scale-Up: The Average Shear Rate Fallacy</i> Presenter: Sahil Sood, University of Alberta · Co-authors: Aref Fozooni Kangarshahi, Marcio Bezerra Machado, Sean Sanders <i>Hydrodynamic Optimization of an Impeller – The EPAL 3</i> Presenter: Wolfgang Keller, Head of R&D, EKATO RMT · Co-authors: Nicole Rohn, Niels Bussmann <i>Progress on Measuring the Yield Stress of Non-Newtonian Slurries with Coarse Particles Using an Instrumented Mixing Setup</i> Presenter: Imran Shah, Saskatchewan Research Council Pipe Flow Technology Centre · Co-authors: Reza Hashemi, Ryan Spelay, Clara Gomez <i>DEM Simulations of the Dry Mixing of NMC 622 Lithium-Ion Battery Cathodes</i> Presenter: Sam Hare, University of Birmingham · Co-authors: Alok Tiwari, Emma Kendrick, Rachel Smith, Mark Simmons Coffee/Tea Break Foyer ground floor
10:15 – 10:40	

TIME	PROGRAMME ITEM
10:40 – 12:40	Session 6 — Suspensions, Slurries, Emulsions (2) · Chair: Antonio Buffo · Lecture Theater - AD2-010 <i>Measurement of Just-Suspended Speed (N_{js}) for Concentrated Suspensions</i> Presenter: Reza Hashemi, Manager/Senior Research Engineer, Saskatchewan Research Council · Co-authors: Imran Shah, Melissa McKibben, Sean Sanders, Jason Schaan, JP Portelli <i>Particle Suspension and Mechanisms in Continuous Oscillatory Baffled Reactors</i> Presenter: Rita Branco, INP Toulouse - LGC · Co-authors: Margarida Brito, Martine Poux, Joëlle Aubin <i>Volume Fraction Distributions of Individual Particle Species in Bi-Disperse Liquid–Solid Mixed Batches Using a New Measuring Method Based on Electrical Resistance</i> <i>Tomography (ERT)</i> Presenter: Filip Randák, Czech Technical University in Prague, Faculty of Mechanical Engineering · Co-author: Tomáš Jirout <i>Double Emulsion Preparation in Open-Cell Solid Foams: Hydrodynamics and Droplet Breakage Investigations</i> Presenter: Nida Sheibat-Othman, CNRS Director of Research, Université Claude Bernard Lyon 1, CNRS, LAGEPP · Co-authors: Ranim Chakleh, Noureddine Lebaz, Abbas Aldor, Fouad Azizi <i>Advancing Static Mixer Design for Gas Scrubbing: Integrating Experimental Testing, CFD, and Data Analytics</i> Presenter: Marcel Suhner, Global Product Expert Mixing & Reaction Technology, Sulzer Chemtech Ltd. · Co-authors: Philipp Riechmann, Aitor Amatriain, Vassilis Charitatos, Mathias Hack, Thomas Linder <i>Towards Sustainable Crop Protection Through Process Intensification: Emulsification of a Plant-Based Oil</i> Presenter: Dimas Tiar Wicaksono, PhD Student, Loughborough University · Co-authors: Diksha Vats, Vimal Kumar, N. Gul Ozcan-Taskin 5-Minute Industry Insight — Ekato
12:40 – 12:45	Lunch The Pavilion
12:45 – 14:00	Alvin & Helen Nienow Lifetime Recognition Award in Mixing 2026 / Keynote · Chair: Giuseppina Montante · KeynoteLecture Theater - AD2-010 Winner: Hugh Stitt — “Of Mix and Men”
14:00 – 14:45	Presenter: Hugh Stitt, Johnson Matthey. See the EFCE Mixing Awards 2026 section for the full abstract and biography.
14:45 – 15:45	Session 7 — Mixing& Processes (1) · Chair: Luis Sierra · Lecture Theater - AD2-010 <i>Digital Twins: A Mix of Synergistic Experimental Data-Driven and Computational Approaches for a Better Blend</i> Presenter: Francois Bertrand, Polytechnique Montreal <i>AcceleratingMultiphaseReactorDevelopmentUsingRPT-AIBased Digital Twins</i> Presenter: Jocelyn Doucet, Fluidmapper · Co-author: Jamal Chaouki <i>Reconstruction of Flow in Confined Impinging Jet Configurations Using Deep Learning BasedonProper OrthogonalDecomposition</i> Presenter: Sofia Brandão · Co-authors: Margarida Brito, Rachid Ouaret, Stephane Negny, José Carlos Lopes, Ricardo Santos
15:45 – 16:10	Coffee/Tea Break Foyer ground floor
16:10 – 18:10	Session 8 — Mixing & Processes (2)·Chair: Margarida Brito · Lecture Theater - AD2-010 <i>Recurrence CFD for Rapid Mixing Time Prediction in Stirred Tank Reactors: Experimental Validation and Parametric Analysis</i>

TIME	PROGRAMME ITEM
	Presenter: Asif Shaik, PhD Student, Hamburg University of Technology · Co-authors: Swantje Pietsch-Braune, Stefan Heinrich, Michael Schlüter, Ryan Rautenbach, Christian Weiland NETmix Crystalliser Design: Assessing the Effect of Injection Chamber Position on Micromixing Presenter: Laura Cullen, PhD Student, University of Porto · Co-authors: Isabel Fernandes, Madalena Dias, Lopes José Carlos, Vítor Vilar, Ricardo Santos Turbulent Mixing in Neutralization Reaction with Jet in a Semi-Batch Stirred Tank Presenter: Ryuta Misumi, Associate Professor, Yokohama National University · Co-authors: Shuhei Akita, Kazuhiko Tsuchioka Investigations of Micromixing and Mass Transfer Effects in Precipitation of Porous Silica Nanoparticles Presenter: Vaishnavi Honavar, Postdoctoral Research Assistant, Bernal Institute, University of Limerick, Ireland · Co-authors: Amol Gode, Chinmay Shukla, Vivek Ranade The Effect of Mixing on the Evolution of Particle Size Distribution of Batch Crystallization Processes Presenter: Kimiya Ramezani, PhD Student, University of Manchester · Co-authors: Antonio Buffo, Daniele Marchisio, Claudio P. Fonte, Ashwin Kumar Rajagopalan Model-Based Process Control for Optimal Operation of Liquid/Liquid Mixer-Settler Systems Presenter: Jörn Villwock, Postdoctoral Researcher, Technische Universität Berlin, Chemical and Process Engineering · Co-authors: Chrysoula Bliatsiou, Lucas Kerber, Steffi Knorn, Matthias Kraume
18:30 – 19:00	Buses Leave for Conference Dinner Departing from The Stables Club
19:00 – 22:00	Conference Dinner Dunraven Arms Hotel, Adare · dress code: business casual

Wednesday 2 September 2026

TIME	PROGRAMME ITEM
08:00 – 08:15	Registration and morning coffee Foyer ground floor
08:15 – 08:55	Keynote Lecture — Michael Schlüter <i>“Deeper Understanding of Mixing and Mass Transfer in Aerated Stirred Tank Reactors for Biopharmaceutical Processes through Trajectory-Based Modelling”</i> Chair: Alain Liné · Keynote Lecture Theater - AD2-010
08:55 – 10:15	Session 9 — Bioreactors and Bioprocesses (1)-Chair: Martina Micheletti ·Lecture Theater - AD2-010 A CFD Study of Vortex Shape and Power Characteristics in Stirred Bench-Top Reactors Presenter: Mohammadjavad Zeinali, Assistant Professor of Digital Manufacturing, University College Dublin · Co-authors: Andrew Bird, Jamie McCarry, Harry E. A. Van Den Akker CFD-DEM Characterization of a 250 mL Stirred Tank Bioreactor for Shear-Sensitive Stem-Cell Microcarrier Cultures Presenter: Ramon Van Valderen, PhD Student, Delft University of Technology · Co-authors: Cees Haringa, Brenda Juarez Garza, Marcel Ottens, Marieke Klijn, Tom Van Arragon Flow Decomposition and Free-Surface Dynamics in a Single-Use Stirred Tank Presenter: Francesco Maluta, University of Bologna, Department of Industrial Chemistry Toso Montanari · Co-authors: Federico Alberini, Alessandro Paglianti, Giuseppina Montante Smarter Mixing With Less Iteration: AI-Augmented Modeling to Reduce Power and Shear in Aerobic Bioreactors Presenter: Richard LaRoche, CEO, Rwanika-LaRoche LLC · Co-authors: Cenk Feridunoglu, André Bakker

TIME	PROGRAMME ITEM
10:15 – 10:40	Coffee/Tea Break Foyer ground floor
10:40 – 12:40	Session 10 — Bioreactors and Bioprocesses (2) · Chair: Mark Simmons · Lecture Theater - AD2-010 <i>Engineering Constraints on Transient Transfection Scale-Up Across Stirred-Tank and Rocking Bioreactor Platforms</i> Presenter: Laia Miranda Garrido, UCL · Co-authors: Sara Rodriguez-Conde, Andrea Ducci, Martina Micheletti <i>Characterization of Hydrodynamic Stress in Small-Scale AMBR 250 Bioreactors</i> Presenter: Miroslav Soos, University of Chemistry and Technology Prague · Co-authors: Albert Behner, Viktor Bursík, Dan Trunov <i>Hydrodynamics and Mixing Performance in a High Frequency Vibromixer</i> Presenter: Joëlle Aubin, TOULOUSE INP - LGC · Co-authors: Martine Poux, Muhammad Muhammad Gimba <i>Characterisation of the Xcellerex™ X-Platform Reactor: Insights from the Novel 6B-R50 Impeller and Vortex Formation</i> Presenter: Cristina Aleu Heredia, UCL · Co-authors: Kerem Irfan, Andrea Ducci, Martina Micheletti <i>Investigation of Spatial and Microbial Population Heterogeneities in Bioreactors Through a Coupled CMA–Monte-Carlo Approach</i> Presenter: Benjamin Casale, TBI · Co-authors: Jérôme Morchain, Philippe Villedieu <i>Bridging CFD and Kinetics: Lessons Learned from Dynamic Compartment-Model Surrogates</i> Presenter: Hector Maldonado De Leon, PhD Candidate, Delft University of Technology · Co-authors: Adrie Straathof, Cees Haringa Closure of the Conference Harry E. A. Van Den Akker · Lecture Theater - AD2-010
12:40 – 13:00	Lunch The Pavilion · closing lunch
13:00 – 14:00	

Social Programme

Getting to the Conference

The University of Limerick's Plassey Campus is well connected to Limerick city centre by bus, taxi, and on foot or by bike via the Riverside Path and Living Bridge. Conference sessions are held in the AD Building (Bernal Institute / Analog Devices Building).

MIXING18 – GETTING TO THE CONFERENCE

30 AUGUST – 2 SEPTEMBER 2026 | UNIVERSITY OF LIMERICK, PLASSEY CAMPUS

PLASSEY CAMPUS – KEY LOCATIONS

LIMERICK CITY – AT A GLANCE

GETTING TO CAMPUS

- Bus 304 / 310**
from Limerick city (~20–25 min)
Cash only
WiFi on board
- Taxi**
~10–15 min
€10–15
- Walk / Cycle**
via Riverside Path & Living Bridge
~20–45 min
Scenic route

Mixing18 Conference
Bernal Institute / Analog Devices Building

The Stables Club
Welcomes Reception and BBQ
Sunday 30 August from 18:00

Bus 310
To / from Limerick city
(Cash only, WiFi on board)

ACCOMMODATION – WELL CONNECTED

- Castletroy Park Hotel – within walking distance of campus
- Kilmurry Lodge Hotel
- Travelodge Castletroy
- Many hotels in Limerick city centre (15–20 min by bus or taxi)

SCAN FOR MORE INFO

For full details, maps and updates, visit: mixing18.dryfta.com

Excursion to the Cliffs of Moher

Sunday 30 August, 12:00 – 17:30, departing from and returning to The Stables (optional add-on)

An optional excursion to the world-famous Cliffs of Moher, one of Ireland's most spectacular natural landmarks. Coach transport is provided; places are limited and open to both participants and accompanying persons.

Welcome Reception & BBQ

Sunday 30 August, 17:30 – 21:00 — The Stables Club, Plassey Campus Centre

Join fellow delegates for an informal evening of food, drinks and networking at The Stables Club, the largest student club at the University of Limerick (established 1987). The Welcome Reception & BBQ is included in conference registration and marks the informal start of MIXING18. Dress code: business casual.

Conference Dinner — Adare

Tuesday 1 September, 19:00 – 22:00 — Dunraven Arms Hotel, Adare

One of the highlights of the MIXING18 social programme, the Conference Dinner takes place at the historic Dunraven Arms Hotel in the picturesque village of Adare. The evening includes dinner and drinks, music and atmosphere, with return coach transport included in the fee. Buses leave from The Stables Club, 18:30 – 19:00. Dress code: business casual.



Following the final sessions, buses depart from The Stables Club for the Conference Dinner at the Dunraven Arms, Adare (approx. 20 minutes, 16 km).

WITH THANKS

Thank You to Our Sponsors

MIXING18 gratefully acknowledges the support of our sponsors and partners, without whom this conference would not be possible. Their generous contribution enables the high-quality scientific programme, social events and facilities that make MIXING18 a success.

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University of Limerick — Bernal Institute

Platinum Sponsors

Our Platinum sponsors ITT, M-Star and Ekato RMT each contributed a 5-Minute Industry Insight talk to the technical programme this year (see the Detailed Programme).



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Practical Information

Conference Secretariat

BlueBox Events B.V. is acting as Professional Conference Organizer (PCO) on behalf of the University of Limerick for MIXING18. For any questions before or during the conference, please contact the Secretariat desk at the registration area, reach out via the conference website, or message Bluebuddy on WhatsApp (see the Meet Bluebuddy section near the front of this booklet).

On-Site Registration

The registration desk is located at The Stables, University of Limerick Campus. It opens Sunday 30 August, 11:00 – 12:00, and reopens from 17:00 for the Welcome Reception & BBQ. Please bring a valid form of identification to collect your badge and conference materials.

Dress Code

Business casual is the recommended dress code for all conference sessions and social events throughout MIXING18, including the Welcome Reception & BBQ and the Conference Dinner in Adare.

Wi-Fi

- The eduroam network should appear automatically for both University of Limerick users and external visitors.
- Visitors from participating institutions can connect to eduroam using the username and password provided by their own institution.
- If eduroam does not work, select UL Guest. No sign-in is required.

Getting to the Conference

The conference is held in the Analog Devices (Bernal Institute) Building on the University of Limerick's Plasey Campus. Bus routes 304 and 310 connect Limerick city centre to campus (approximately 20–25 minutes, cash only, WiFi on board); a taxi takes around 10–15 minutes. See the bus stop map and campus map in the Social Programme section for full details, including walking and cycling routes via the Riverside Path and Living Bridge.

Thank you for joining us in Limerick for MIXING18.

We wish you a stimulating conference and a memorable stay in Ireland.