



Final Program of the colloquium Euromech

“Films, bubbles, droplets and phase change”

Monday august 25th, 2025 to Friday august 29th, 2025

Venue: « Conference Centre, Metz Congrès Robert Schuman, Parvis de l'amphithéâtre - 100 rue aux Arènes, Metz »

D 1	Monday 25/08/2025 - pm
08h30-17h40	Registration of the attendees (Conference Centre, Metz Congrès Robert Schuman, Parvis de l'amphithéâtre - 100 rue aux Arènes, Metz)
17h40-18h30	Welcome cocktail

Venue: “Faculté de Droit Économie et Administration”, Amphitheater 3
University of Lorraine, Saulcy Campus, Metz



D 2	Tuesday 26/08/2025 - am
07h30-08h00	Registration of the attendees
08h00-08h30	Opening of the colloquium M Gradeck, A Amirfazli & Dr S Dorbolo
	Session 1: Industrial issues Chairman : Prof. Alidad Amirfazli
08h30-09h30	Plenary lecture 1 : Gretar Tryggvason (Johns Hopkins University - USA) Fully Resolved Simulations of Complex Multiphase Flows
09h30-10h00	Keynote 1 : Jacopo Seiwert & Lionel Vincent (Air Liquide – France) Keeping it Cool at Air Liquide: Hot topics in Cryogenic Distillation
10h00-10h30	Coffee break
10h30-11h00	Keynote 2 : Ghassan Ghazal (Arcelormittal Research – France) Multiscale modelling approaches in metallurgical and mineral processing at ArcelorMittal
11h00-12h00	Panel session – Key issues for numerical modelling and data management in industrial systems? participants: Plenary and keynote speakers + Nathalie Seiler (CEA)
12h00-14h00	Lunch break on the campus



D 2	Tuesday 26/08/2025 - pm
	Session 2 : Droplets Chairman : Stéphane Dorbolo
14h00-14h30	Keynote 3 : Jérôme Bellettre (Université de Nantes, France) Atomization of emulsified alternative fuel assisted by water drops sudden vaporization (micro-explosion)
14h30-15h00	Keynote 4 : Guillaume Castanet (CNRS LEMTA, France) Heat and Mass Transfers in Droplet Flows - Recent Advances Using LIF
15h00-16h00	Plenary lecture 2 : Tatiana Gambaryan-Roissman (TU Darmstadt – Germany) Drops of pure liquids and nanosuspensions on porous coatings: imbibition, evaporation, and deposit formation
16h00-16h30	Coffee break
16h30-17h00	Keynote 5 : Arthur Oliveira (EESC-USP, Brazil) Jet and spray quenching near-industrial conditions: results and next steps
17h00-17h20	Talk 1 : Ilia Roisman (TU Darmstadt, Germany) Supercooled drops: dynamics of impact, nucleation and solidification
17h20-17h40	Talk 2 : Joao Maris (Université de Lorraine, France) Thermal-hydraulic conditions at and downstream of a quench front during a Loss-of-Coolant Accident in a Pressurized Water Reactor
17h40-18h00	Talk 3: Pablo Lopez-Gavilan (INTA, Spain) Microbubble Drag Reduction Model considering Pressure Gradient

D 3	Wednesday 27/08/2025 - am
	Session 3: Flowing Films Chairman: Georg Dietze
08h00-09h00	Plenary lecture 3: Christian Ruyer-Quil (USMB-France) Advances on the modelling of falling liquid films
09h00-09h30	Keynote 6 : Anne Gosset (Universidade da Coruña, Spain) Liquid films interacting with gas jets
09h30-10h00	Keynote 7 : Catherine Colin (IMFT, France) Heat transfer through a vertical liquid film in upward and downward flows
10h00-10h30	Coffee break
10h30-11h00	Keynote 8 : Georg Dietze (FAST, France) A new short-wave instability mode in falling liquid films sheared by a counter-current gas flow
11h00-11h20	Talk 4 : Seyed Farshid Chini (University of Tehran, Iran) The Evolution of Waterproofing Agents Through the Ages, Modern Breakthroughs, and Future Trends
11h20-11h40	Talk 5 : Evgeny Mogilevskiy (Tel Aviv University, Israël) Circular hydraulic jumps affected by capillarity and external forces
11h40-12h00	Talk 6 : Rahul Sathyanath (Centrale supelec, France) Surface wave amplification of a falling liquid film by a perforation
12h00-12h20	Talk 7 : Misagh Mokhtari (Faculty of Engineering, Bu-Ali Sina University, Hamedan, Iran) Thermal Performance of Falling Liquid Films in Vertical Channels with intermittent Boiling
12h20-1400	Lunch break on the campus

D 3	Wednesday 27/08/2025 - pm
	Session 4: Bubbles/droplets dynamics Chairman : Nicolas Rimbart
14h00-15h00	Plenary lecture 4 : Ana S. Moita (University of Lisbon – Portugal) bubbles & drops dynamics on micro--and-nano-enhanced interfaces: microscale approach for (macro) industrial applications
15h00-15h30	Keynote 9 : Julien Sébilleau (Université Paul Sabatier, IMFT, France) Sliding droplet sheared by an air flow
15h30-16h00	Keynote 10 : Benoit Scheid (ULB, Belgium) Bubble and droplet dynamics in inertial microfluidics
16h00-16h30	Coffee break
16h30-17h00	Keynote 11 : Carole Planchette (TU Graz, Autriche) Drops collisions and fragmentation mechanisms
17h00-17h30	Keynote 12 : Giuseppe Pucci (CNR, INFN and University of Calabria, Italy) Capillary surfers at a vibrating fluid interface
17h30-18h00	Talk 7 : Marie-Charlotte Renoult (CORIA, France) On bubble parameters in the single bubbling regime
19h00	Diner downtown (El Theatris)

D 4	Thursday 28/08/2025 - am
	Session 5: Fluid Interfaces and Droplet Dynamics Chairman : Arthur Oliveira
08h00-09h00	Plenary lecture 5: Uwe Janoske (University of Wuppertal, Germany) Interaction of droplets with aerodynamic forces and mechanical vibrations
09h00-09h30	Keynote 13: Nicolas Rimbart (Université de Lorraine, LEMTA, France) Interplay between fragmentation and agglomeration in spray dynamics
09h30-10h00	Keynote 14: Baraa Qaddah (IRTM2P, Metz, France) Primary and secondary breakup of molten Ti64 in an EIGA atomizer for metal powder production
10h00-10h30	Coffee break
10h30-11h00	Keynote 15 : Céline Cohen (Institut de Physique de Nice, France) Receding contact line dynamics on superhydrophobic surfaces
11h00-11h30	Keynote 16 : Anne Laure Biance (CNRS, Institut Lumière Matière, France) Triboelectricity in a droplet impacting a superhydrophobic surface: coupling between electrostatics and hydrodynamics
11h30-12h00	Keynote 17: Jérôme Moritz (CNRS IJL, France) Advancing Liquid Metal Divertors in magnetic confinement devices: Plasma Interaction, Heat Exhaust, and Fabrication Challenges
12h00-14h00	Lunch break on the campus



D 4	Thursday 28/08/2025 - pm
	Session 7 : Boiling Frontiers Chairman: Julien Sébilleau
14h00-15h00	Plenary lecture 6: Vadim Nikolayev (CEA Paris-Saclay – France) Phenomena in the close heater vicinity at nucleate boiling: experimental and numerical studies
15h00-16h00	Plenary lecture 7: Sébastien Tanguy (Université Paul Sabatier, IMFT, France) A numerical solver for compressible two-phase flows. Applications to hydrodynamic cavitation and pool cavitation
16h00-16h30	Coffee break
16h30-17h00	Keynote 18: Prashant Valluri (University of Edimburgh, Scotland) Phase-Change of Liquid Mixtures: Stability Analyses, Direct Numerical Simulations and Experiments
17h00-17h20	Talk 10: Giovanni Ghigliotti (Université Grenoble Alpes, France) High-fidelity numerical simulations of nucleate boiling
17h20-17h40	Talk 11: Paolo Botticini (University of Brescia, Italy) Forced convection in two-phase core-annular flows
17h40-18h00	Talk 12: Luc Favre (IMFT, France) Experimental investigation of flow boiling in microgravity
18h00	Closure of the colloquium
19h00	Gala dinner at the stadium

D 5	Friday 29/08/2025 - am
08h30-12h30	Visit of Arcelor Mittal research center – campus of Maizières les Metz (only people registered for that) 
12h30	End of the visit and arrival in Metz