DISPERSED TWO-PHASE FLOWS (5th edition)

July 8 - 10, 2024

Vandœuvre-lès-Nancy

KEY DATES

Abstract deadline
30 april 2024

Abstract selection
15 may 2024

Final program
15 june 2024

The objective of the conference is to bring together researchers from different communities (academics and researchers from industrial research institutes in fluid mechanics, chemical engineering, ...) working on fundamental problems involving dispersed flows.

Organised by : Société Hydrotechnique de France
Event coordinators : Nicolas Rimbert (LEMTA) and Véronique Roig (IMFT)
Local Organizing Committee (LEMTA - CNRS/Université de Lorraine)

- *Monday evening: Visit of experimental facilities of LEMTA ► website*
- *Tuesday evening: Gala Dinner at Opera National de Lorraine on Place Stanislas ► website*

ENSEM - 2 avenue de la Forêt de Haye - 54500 Vandœuvre-lès-Nancy

shf LA SCIENCE AU SERVICE DE L'EAU · lemta Laboratoire Énergies & Mécanique Théorique et Appliquée · cnrs · UNIVERSITÉ DE LORRAINE · LORRAINE INP Ensem · IAHR AIRH International Association for Hydro-Environment Engineering and Research Hosted by Spain Water and IWHR, China · cea

Objectives

The objective of the conference is to bring together researchers from different communities (academics and researchers from industrial research institutes in fluid mechanics, chemical engineering, ...) working on fundamental problems involving dispersed flows.

Event presentation

In many industrial or environmental situations, particles, drops or bubbles are dispersed in a carrier fluid. Understanding and modeling dispersed flows is therefore a major issue for many applications including chemical engineering (bubble columns, water treatment, fluidized beds, oil refining), nuclear industry (boiling in steam generators, containment spray systems), environmental engineering (sediment transport, coastal erosion, river restauration), geophysics (volcanic processes, fluid migration in sedimentary basins), astrophysics (protoplanetary dust, planet formation) and combustion applications (atomization, spray combustion).

Experimental, numerical and theoretical studies will be presented on the following topics :

- Dynamics and transfer around isolated particles
- Interfacial dynamics (deformation, coalescence and rupture)
- Hydrodynamics of dispersed flows (turbulence, dispersion, two-way coupling)
- Mixing, transfers and phase-change in dispersed flows
- Transport in dispersed flows at high volume fraction
- Complex dispersed flows: density/viscosity stratification, granular & non-Newtonian flows
- Development of experimental methods
- Development of numerical methods
- Multiscale, multiphysics modeling
- Deep-learning and multiphase flow

Keynote Conferences

Pr Markus Uhlmann (Karlsruhe Institute of Technology - Germany)
Pr Filippo Coletti (ETH Zurich - Switzerland)
Dr Konstantin Mikityuk (Paul Scherrer Institute, Villigen - Switzerland)
Dr Pascal Fede (IMFT, CNRS/Toulouse INP/Université Toulouse III – Paul Sabatier)
Dr Romain Volk (Laboratoire de Physique, CNRS/ENS Lyon - France)

Scientific & Technical Committee

Agathe Chouippe (ICUBE, CNRS/Université de Strasbourg/INSA/ENGEES)
Aurore Naso (LMFA, École Centrale de Lyon/CNRS/Université Claude Bernard Lyon 1)
Christian Marchioli (University of Udine, Italy)
Daniel Fuster (Institut Jean Le Rond d'Alembert, Sorbonne Université/CNRS)
Denis Funfschilling (ICUBE, CNRS/Université de Strasbourg/INSA/ENGEES)
Diether Bothe (Technische Universität Darmstadt, Germany)
Emmanuel Porcheron (IRSN, Saclay)
Éric Lajeunesse (Institut de Physique du Globe de Paris, Université Paris Cité/CNRS)
Fabien Candellier (IUSTI, CNRS/Aix-Marseille Université)
Gauthier Verhille (IRPHE, Aix-Marseille Université/CNRS/École Centrale Marseille)
Guillaume Bois (CEA Saclay)
Hui-Zhi Li (LRGP, CNRS/Université de Lorraine)
Javier Ruiz-Rus (University of Jaen, Spain)
Jean Philippe Matas (LMFA, École Centrale de Lyon/CNRS/Université Claude Bernard Lyon 1)
Jean Sébastien Kroll-Rabotin (Institut Jean Lamour, CNRS/Université de Lorrain)
Jean-Régis Angilella (ABTE, Normandie Université)
Mathieu Guingo (EDF, Chatou)
Mickaël Bourgoin (Laboratoire de Physique, CNRS/ENS Lyon)
Nathalie Seiler (CEA Cadarache)
Nathanaël Machicoane (LEGI, CNRS/Grenoble INP, Université Grenoble-Alpes)
Panagiota Angeli (University College London)
Rainier Hreiz (LRGP, CNRS/Université de Lorraine)
Sander Huisman (University of Twente, Netherlands)
Stéphane Mimouni (EDF, Chatou)
Véronique Roig (IMFT, CNRS/Toulouse INP/Université Toulouse III – Paul Sabatier)
Yan Delaure (Dublin City University, Ireland)

Find out more and register : www.shf-hydro.org/colloques/dispersed-two-phase-flows/