

DISPERSED TWO PHASE FLOW 2021

 Ecole Normale Supérieure de Lyon

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232nd Scientific & Technical session of SHF

ORGANISED BY

SHF + Valérie Vidal & Romain Volk (ENS de Lyon)

IN ASSOCIATION WITH



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 restoration), geophysics (volcanic processes, fluid migration in sedimentary basins), astrophysics (protoplanetary dust, planet formation) and combustion applications (atomization, spray combustion)...

Important dates

Abstract submission deadline: May 15th, 2021 (1 page abstract)

Notification of acceptance: June 15th, 2021

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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.

Schedule

The conference will consist in about 60 selected oral presentations (~15') with several thematic sessions in series. Extra time outside the formal session will be dedicated to discussions between participants.

Contributions of work in progress are welcome. The conference is international, and will be held in English.

Topics

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