

Les **60** ans du GFR à Marseille !

22-25/10/2024

The GFR (Groupe Français de Rhéologie) celebrates its 60th anniversary with a conference organized from 22-25th October 2024 in Marseille. Covering rheology in its broadest sense, this conference is intended to be very open and multidisciplinary: from foams, gels, suspensions and granular media, to the rheology at/with interfaces, food rheology... all the way to living fluids and geophysical systems.

We hope to bring together several communities currently very active in France. Those working on biological fluids and tissues, where rheology and mechanical constraints are becoming increasingly important, as for instance in tissue morphogenesis to better understand embryonic development and cell differentiation. Then, the community devoted to geophysical fluids where the investigated media are often very complex and require appropriate descriptions. Finally, the granular media and dense suspensions community, where significant progress has been made over the last ten years, in particular through the study of the effect of how micro-interactions (friction, adhesion, entanglement) affect the rheological behavior of these systems — A great opportunity to gather and share our latest advances, both fundamental and technical, in these highly varied fields of research.

Invited-speakers:

Oryaelle Chevrel (LMV, IRD), **Olivier Pouliquen** (IUSTI, CNRS), **Sham Tiili** (IBDM, CNRS)

Program & Scientific committee:

23-25/10/2024

S1 Rheology of biological fluids and tissues

Chair: S. Gsell (IRPHE Marseille), S. Tiili (IBDM, Marseille)

S2 Granular media and dense suspensions: from micro (friction/adhesion/entanglement) to rheology

Chair: F. M. Rocha, L. Bergougnoux, Y. Forterre (IUSTI Marseille)

S3 Rheology of geo-physical fluids (earth, snow, glacier, mud, magma, ice caps)

Chair: A. Bougouin (IUSTI Marseille), J. A. Olive (ENS Paris), G. Chambon (INRAE Grenoble)

S4 Gels, polymers, foams and rheology at/with interfaces

Chair: L. Domino, H. Lhuissier (IUSTI Marseille)

S5 Food rheology

Chair: M. Ramaoli (INRAE Paris), L. Ramos (L2C Montpellier)

Location: Amphi Gastaut, Jardin du Palais du Pharo, 58, boulevard Charles Livon, 13007 Marseille



Short courses:

22/10/2024

This day of lectures, preceding the conference, will consist of 3 lectures summing-up the progresses made over the last 10 years in the description of dense granular suspensions. Particular focus will be made on the role of microscopic interactions between particles (friction, adhesion, repulsive forces), underlining their primary importance in determining the macroscopic rheological behavior of these systems.

Jean Comtet (CNRS, ESPCI Paris)

Microscopic characterization and formulation of solid interfaces

Francisco Melo da Rocha (IUSTI, Marseille)

Macroscopic rheological behavior of dense granular suspensions from microscopic considerations

François Peters (InphyNi, Nice)

Numerical simulations of dense granular suspensions.



Location: Laboratory IUSTI, Technopole de Chateau Gombert, 5 rue Enrico Fermi, 13453 Marseille.

Organizing Committees: B. Metzger, L. Bergougnoux, O. Pouliquen, F. M. da Rocha, L. Tiran (IUSTI Marseille), S. Tlili (IBDM Marseille), S. Gsell (IRPHE Marseille).

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