

## **Ibrahim Hmamou, IDP-Orléans: Fluid-particle suspension flows dominated by sedimentation.**

*mardi 13 mai 2025 16:30 (30 minutes)*

Sedimentary flows involve different types of fluids/sediments, with varying particle concentrations. The dynamics of these extreme events is very difficult to observe: the deposit is the only quantity that can be measured. We aim to model these flows in order to predict their duration, the distance covered, and their deposition geometry.

In this talk, we derive a simplified model from the Navier-Stokes equations, with several thin layers, of shallow water type. Thanks to an approximation based on a finite volume scheme, this model can be compared to real data measured in the laboratory.