

Università degli Studi di Udine  
Dottorato di Ricerca in Scienze dell'Ingegneria Energetica e Ambientale



Seminari del Corso di Dottorato AA 2017-2018

# Continuum Simulations of Dense Granular Flows

**Prof. Srdjan Sasic**

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Lunedì 12 Marzo 2018, ore 16.30 – 17:30  
Sala Multimediale DIMI

**Abstract** The first part of the seminar will give a brief overview of the multiphase-flow research at the Department of Applied Mechanics and Maritime Sciences at Chalmers. Examples will be taken from both fundamental and applied research.

Afterwards the focus will be on the fascinating world of granular flows and our ability to model their behaviour in a continuum framework. We will look at the recent developments in formulating comprehensive rheology models from the perspective of fluid mechanics. In particular, we will discuss the  $\mu$ -rheology model that treats a granular fluid as a visco-plastic fluid. We will talk about our experiences in formulating and implementing both local and non-local formulations of the  $\mu$ -rheology model.

**CV** Srdjan Sasic is Professor of Multiphase Flows at Chalmers University of Technology, Sweden. Professor Sasic obtained his PhD in 2005 at the same university in fluid mechanics. The research interests of Prof. Sasic and the multiphase flow group at Chalmers comprise modelling and simulations of a broad range of multiphase-flow problems, using a variety of techniques, from DNS of multiphase flows to those appropriate for simulations of large-scale units.

