



Workshop on Upscaling in Porous Media

A tribute to M. Quintard

15-16 April 2019 – Bordeaux

PROGRAM:

15/04/2019:

- 09:00 – 09:30 Welcome to participants – Coffee
- 09:30 – 10:00 **Introduction - J.C. Batsale** (I2M, Bordeaux): *Du LMP à I2M, évolution des structures de recherche de Bordeaux dans le domaine de la mécanique*
- 10:00 – 10:30 **M. Hassanizadeh** (Utrecht Univ., The Netherlands) *Two-phase flow in industrial porous media. Experiments, theory, and modelling*
- 10:30 – 11h00 *Coffee break*
- 11:00 – 11:30 **Y. Davit** (IMF, Toulouse) *Tools of porous media for brains and bacteria*
- 11:30 – 12:00 **M. Dentz** (IDAEA, Spain) *Upscaling of non-equilibrium transport from the pore to the Darcy scale*
- 12:00 – 12:30 **S. Whitaker** (UC Davis, California) *Fick's law: a derivation*
- 12:30 – 13:30 *Lunch*
- 13:30 – 15:00 *Volume averaging in a nutshell: short course by M. Quintard* (IMF, Toulouse)
- 15:00 – 15:30 **C. Moyne** (LEMTA, Nancy) *Incorporating nanoscopic solvation forces in a three-scale poromechanical model applied to enhanced coalbed methane recovery*
- 15:30 – 16:00 **B. Wood** *Upscaling turbulence in porous media: experiments, theory, and DNS for 3-dimensional materials*
- 16:00 – 16:30 **A. Bottaro** (Genoa Univ., Italy) *Adjoint homogenization*
- 16:30 – 17:00 *Coffee break*
- 17:00 – 17:30 **B. Goyeau** (CentraleSupélec, Gif/Yvette) *Macroscopic modeling for momentum at a fluid-porous interfacial region*
- 17:30 – 18:00 **H. Bertin** (I2M, Bordeaux) *La mousse en milieu poreux depuis le LEPT jusqu'à I2M en passant par TREFLE*
- 20:00 *Diner downtown Bordeaux*

16/04/2019:

- **09:00 – 09:30 G. Buckinx** (KU Leuven, Belgium) *Macro-scale modelling of laminar developed flow and heat transfer in channels*
- **09:30 – 10:00 B. Noetinger** (IFPEN, Rueil Malmaison) *Finite size effects in stochastic and volume averaging of up-scaled conductivity of random media: a numerical study*
- **10:00 – 10:30 F. Fichot** (IRSN, Cadarache) *Water injection in a highly superheated porous medium: experiments and modelling*
- **10:30 – 11h00** *Coffee break*
- **11:00 – 11:30 C. Soullaine** (BRGM, Orléans) *Superfluid helium flow in porous media*
- **11:30 – 12:00 I. Battiato** (Stanford Univ., California) *Homogenization of dynamically fluctuating systems: experiments and theory*
- **12:00 – 12:30 Concluding discussion**

Lunch boxes

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