

Technical Programme

Day 1: January 23, 2012

08 : 00 - 08 : 45 Registration

08 : 45 - 09 : 15 Introductory remarks

Rheology and dynamics of suspensions

09 : 15 - 10 : 00 J. Hinch

10 : 00 - 10 : 30 M. L. Ekiel-Jeżewska

Fluctuations in the velocities of sedimenting particles

Clusters of particles settling under gravity in a viscous fluid

10 : 30 - 11 : 00 Coffee break

11 : 00 - 11 : 30 A. Ramachandran

Demonstration of secondary currents in the pressure-driven flow of a concentrated suspension through a square conduit

11 : 30 - 12 : 00 A. Singh

Radial segregation of settling suspension in horizontally rotating cylinder

12 : 00 - 12 : 30 M. S. Tirumkudulu

Ultimate strength of a colloidal packing saturated with a solvent

12 : 30 - 14 : 00 Lunch

14 : 00 - 14 : 30 O. Pouliquen

Rheology of very dense suspensions

14 : 30 - 15 : 00 G. Ovarlez

Local behavior of dense suspensions of noncolloidal particles

15 : 00 - 15 : 30 A. Lindner

Flow of dense granular suspensions: an experimental study.

15 : 30 - 16 : 00 Coffee break

16 : 00 - 16 : 30 J. F. Morris

Inertial effects upon rheology, migration, and segregation in suspensions

16 : 30 - 17 : 00 G. Leal

The role of copolymer surfactants in determining the polydispersity of drop size distribution and copolymer concentration in disperse phase polymer blends

Day 2: January 24, 2012**Slow granular flows**

08 : 45 - 09 : 30	J. D. Goddard	Dissipative potentials in the mechanics of particulate media
09 : 30 - 10 : 00	P. R. Nott	Kinematics and stress in dense granular materials sheared in a cylindrical Couette device
10 : 00 - 10 : 30	F. Radjai	Fabric states and plastic behavior of granular materials
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10 : 30 - 11 : 00	Coffee break	
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11 : 00 - 11 : 30	K. Kamrin	Local and nonlocal models for dense granular flow
11 : 30 - 12 : 00	T. G. Murthy	Experimental studies of particle shape effects on slow flow in a dense granular ensemble
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12 : 00 - 14 : 00	Lunch	
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14 : 00 - 14 : 30	D. Khakhar	Rheology and segregation of granular mixtures in dense flow
14 : 30 - 15 : 00	K. Hill	Segregation of binary mixtures: competing effects of gravity and shear rate gradients
15 : 00 - 15 : 30	É. Guazzelli	Dense suspension rheology: normal stresses and migration
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15 : 30 - 16 : 00	Coffee break	
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16 : 00 - 16 : 30	J. A. Dijksman	Particle diffusion in the bulk of slow granular flows
16 : 30 - 17 : 00	A. V. Orpe	Interstitial fluid effects on the dynamics of dense granular flows

Day 3: January 25, 2012**Granular flows in the intermediate regime**

08 : 45 - 09 : 30	S. Sundaresan	Rheology of dense granular flows: regime bridging and implications for kinetic theory
09 : 30 - 10 : 00	J. C. Ruiz-Suárez	Falling inside a superlight granular medium
10 : 00 - 10 : 30	N. Gray	Particle size segregation and spontaneous levee formation in geophysical mass flows

10 : 30 - 11 : 00 Coffee break

11 : 00 - 11 : 30	R. H. Davis	Collisions of wet particles
11 : 30 - 12 : 00	I. Sharma	Stability of granular asteroids
12 : 00 - 12 : 30	T. Pöeschel	Packing Structure of Granular Systems

12 : 30 - 14 : 00 Lunch

Rapid granular flows

14 : 00 - 14 : 45	V. Kumaran	Transition in a dense granular flow
14 : 45 - 15 : 15	T. Börzsönyi	Orientational order and alignment of elongated particles induced by shear
15 : 15 - 15 : 45	N. M. Vriend	The second normal-stress difference in avalanching granular flows

15 : 45 - 16 : 15 Coffee break

16 : 15 - 16 : 45	H. Hayakawa	Nonlinear analysis for a sheared granular flow: relaxation to a steady state and response around a steady state
16 : 45 - 17 : 15	S. Luding	From particles to continuum theory: shear-bands, jamming and dilatancy

Day 4: January 26, 2012

Turbulent fluid-particle flows

08 : 45 - 09 : 30 M. Reeks

Segregation of particles in incompressible random flows:singularities, intermittency and random uncorrelated motion

09 : 30 - 10 : 00 T. Tanaka

Numerical model for the motion of a large object in dense gas-solid flows

10 : 00 - 10 : 30 P. S. Goswami

Particle dynamics in a turbulent particle-gas suspension at high Stokes number

10 : 30 - 11 : 00 S. Roy

Dynamic flow structure in multiphase systems using single radio-labelled particle tracking

11 : 00 - 12 : 30 Coffee break and

Poster presentation

12 : 30 - 14 : 00 Lunch

Day 5: January 27, 2012**Living suspensions**

08 : 45 - 09 : 30 S. Ramaswamy

Chemotactic catalytic colloids

09 : 30 - 10 : 00 M. D. Graham

Hydrodynamic coordination of bacterial motions:
from bundles to biomixing

10 : 00 - 10 : 30 S. Rafaï

Active suspensions under flow

10 : 30 - 11 : 00 Coffee break

11 : 00 - 11 : 30 G. Subramanian

Pair-correlations in a bacterial suspension

11 : 30 - 12 : 00 P. Peyla

Rheology of active suspensions. Active rotors

12 : 00 - 12 : 30 D. Saintillan

The dynamics of active suspensions: effects of confinement and of concentration

12 : 30 - 14 : 00 Lunch

14 : 00 - 14 : 30 J. Brady

Reaction-induced motion: chemical swimming, sailing and surfing

14 : 30 - 15 : 00 A. S. Sangani

Evaluation of proposed mechanisms for ciliary beating of eukaryotic cells

15 : 00 - 15 : 30 R. Prabhakar

Measurements of extensional viscosities of suspensions of motile microbes

15 : 30 - 15 : 45 Valedictory remarks

15 : 45 - 16 : 15 Coffee break

