

Groupe de recherche MOMAS  
**Meeting on**  
**the particle methods and the probabilistic models**  
**applied to the simulation of the nuclear waste transport problems**

Friday, November 22, 2002, at the Institut Henri Poincaré, Paris  
Financial support provided by CEA, ANDRA, EDF, BRGM & CNRS

---

**I. Introduction**

- 9 h 00–9 h 10 – *Some remarks on the MOMAS targets*  
A. Bourgeat (Université Claude-Bernard, Lyon)
- 9 h 10–9 h 20 – *Introduction to the meeting*  
A. Lejay (INRIA-Nancy) and I. Mortazavi (MAB CNRS-UMR Bordeaux)

**II. Industrial Research**

- 9 h 20–9 h 40 – *Introduction to the numerical approaches used to approximate nuclear waste transport*  
E. Mouche (CEA-Saclay)
- 9 h 40–10 h 05 – *Simulation of the dispersion and the diffusion using particle and/or Eulerian methods*  
P. Maugis (CEA-Saclay)
- 10 h 05–10 h 30 – *Particle stochastic method to simulate polydispersed turbulent two-phase flows*  
J.-P. Minier (EDF Chatou)
- 10 h 30–10 h 55 – *A particle-tracking method applied to the nuclear waste problems*  
M.-È. Stockel (EDF Chatou)
- 10 h 55–11 h 20 – COFFEE BREAK
- 11 h 20–11 h 45 – *Stochastic modeling of geological heterogeneity and propagation of uncertainty : examples of application and open issues*  
O. Jacquet and R. Namar (Colenco, Zurich)
- 11 h 45–12 h 10 – *A stochastic model for turbulence modelling in Smoothed Particle Hydrodynamics*  
D. Violeau (EDF Chatou)
- 12 h 10–13 h 30 – LUNCH

**III. Academic Research Issues**

- 13 h 30–14 h 00 – *Particle methods for convection-diffusion-reaction problems*  
A. Ghoniem (MIT, USA)
- 14 h 00–14 h 30 – *Mixing scales for normal and anomalous diffusions*  
H. Owhadi (CNRS, Marseille)
- 14 h 30–15 h 00 – *Transport and retention of tracers in randomly fractured porous media*  
V. Cvetkovic (KTH, Sweden)
- 15 h 00–15 h 30 – *Percolation, conductivity and permeability of self-affine fractures*  
V.V. Mourzanko, J.-F. Thovert and P.M. Adler (Institut de Physique de Globe, Paris)
- 15 h 30–15 h 50 – COFFEE BREAK
- 15 h 50–17 h 20 – ROUND-TABLE ON THE FUTURE WORK AND COLLABORATIONS

---

The time scheduled for each talk contains the 5 minute question time.

Coffees and lunch are offered by the GdR MOMAS.

MEETING LOCATION: Room 201 — Institut Henri Poincaré  
11, rue Pierre et Marie Curie — 75231 Paris CEDEX 05

Tel : 00-33-(0)1 44 27 67 89 — Fax : 00-33-(0)1-43 25 40 67 — <[www.ihp.jussieu.fr/index.html](http://www.ihp.jussieu.fr/index.html)>

MAP: <[www.ihp.jussieu.fr/apropos/ihp-acces.html](http://www.ihp.jussieu.fr/apropos/ihp-acces.html)>

ORGANIZERS: A. Lejay <[Antoine.Lejay@iecn.u-nancy.fr](mailto:Antoine.Lejay@iecn.u-nancy.fr)>

I. Mortazavi <[Iraj.Mortazavi@math.u-bordeaux.fr](mailto:Iraj.Mortazavi@math.u-bordeaux.fr)>