

## WORKSHOP PROGRAM

**Monday 27. 09. 2004**

**Introduction:** 9.00 a.m.  
**P. A. Vermeer**

**Session 1:** 9.15 a.m. to 10.55 a.m.

Thematic: Granular Materials and Mechanics

Chairman: **Hans Herrmann**

**K. Bagi**

*Different rolling measures for granular assemblies*

**B. Cambou**

*Internal state in granular materials*

**J.D. Goddard**

*On maximum-entropy estimates for granular statics*

**P. Steinmann**

*Modeling microstructured materials - a comparison of gradient and micromorphic continua*

10.55 a.m. Coffee break

**Session 2:** 11.25 a.m. to 1.05 p.m.

Thematic: Continuous Modelling I

Chairman: **Pieter Vermeer**

**E.C. Aifantis**

*Gradient elasticity with diffusion, heat conduction and chemical reactions*

**E. Papamichos**

*Indentation method for damage diagnosis of natural building stones*

**F. Darve**

*Failure and flow rule in granular materials as incrementally non-linear media*

**J. Ozbolt**

*Transient thermal 3D FE analysis of concrete structures exposed to fire*

1.05 p.m. Buffet – light meals

**Session 3:** 2.05 p.m. to 3.45 p.m.

Thematic: Continuous Modelling II

Chairman: **Wolfgang Ehlers**

**S. Diebels**

*Theory and numerics of erosion processes in fluid-saturated porous media*

**R. Charlier**

*Chemo-mechanical modelling of soil or rock degradation*

**R. Chambon**

*Hydro mechanical numerical modelling of geotechnical problems using local second gradient models*

**M. Pastor**

*Numerical modelling of fast slope movements*

3.45 p.m. Coffee break

**Session 4:** 4.15 p.m. to 5.55 p.m.

Thematic: Localization and Fracture

Chairman: **Ekkehard Ramm**

**G. Gudehus**

*Hypoplastic shear localisation in psammoids and peloids*

**J.J.M. Desrues**

*Localized failure in saturated porous media*

**F.H. Wittmann**

*Size-dependent fracture energy correlated with crack tip stress fields in concrete-like materials*

**E.C. Aifantis**

*Pinning and propagation of interface cracks in slope failure: 1D and 2D considerations*

7.00 p.m. Dinner

**Tuesday 28. 09. 2004**

**Session 5:** 9.00 a.m. to 10.15 a.m.

Thematic: Discrete Modelling I

Chairman: **Folker Wittmann**

**G. Viggiani**

*Micro mechanics of the incremental response of virgin and preloaded granular soils to deviatoric stress probing*

**E. Ramm**

*Discrete models for geomaterials*

**G. Pijaudier-Cabot**

*Coupling between progressive damage and permeability of concrete: discrete modelling and experiments*

10.15 a.m. Coffee break

**Session 6:** 10.45 a.m. to 12.50 a.m.

Thematic: Discontinuum versus Continuum

Chairman: **Ioannis Vardoulakis**

**R. Nova**

*Modelling the subsidence induced by degradation of abandoned mines*

**S. Luding**

*Micro-Macro models for anisotropic granular media*

**H.A. Mang**

*Identification of macroscopic material properties of multi-composed materials from finer scales of observation*

**M.G.D. Geers**

*Two-scale continuous-discontinuous modelling of damaging materials*

**W. Ehlers**

*From particle ensembles to Cosserat continua: Definition of the macroscopic variables*

12.50 a.m. Lunch & Coffee

**Session 7:** 1.50 p.m. to 3.30 p.m.

Thematic: Regularization

Chairman: **Elias Aifantis**

**M. Jirasek**

*Nonlocal plasticity models for cohesive-frictional materials*

**G. Meschke**

*Discontinuous representation of brittle failure*

**L.J. Sluys**

*Continuous-discontinuous modelling of mode-I and mode-II failure*

**P.A. Vermeer**

*A strong discontinuity method without locking*

3.30 p.m. Coffee break

**Session 8:** 4.00 p.m. to 5.15 p.m.

Thematic: Discrete Modelling II

Chairman: **Herbert Mang**

**J.G.M. van Mier**

*Effect of ITZ-percolation on tensile fracture properties of 3-phase particle composites*

**J.T. Jenkins**

*The role of fluctuations in the mechanics of granular materials*

**H.J. Herrmann**

*Micromechanical aspects of soil plasticity: An investigation using a discrete model of polygonal particles*

5.15 p.m. **Closure by P.A. Vermeer**

5.30 p.m. **End**