ΣΕΜΙΝΑΡΙΟ

ΟΜΙΛΗΤΗΣ: Dr. Anatoly Malevanets
The University of Western Ontario

ΘΕΜΑ: **MESOSCOPIC MULTI-PARTICLE COLLISION MODEL FOR FLUID FLOW AND MOLECULAR DYNAMICS**

ΤΟΠΟΣ: Αίθουσα Σεμιναρίων ΙΤΕ/ΕΙΧΗΜΥΘ

ΗΜΕΡΟΜΗΝΙΑ: Δευτέρα, 17 Οκτωβρίου 2005

ΩΡΑ: 17:00

ΠΕΡΙΛΗΨΗ

Complex fluids such as polymers in solution or multispecies reacting systems in fluid flows often can be studied only by employing a simplified description of the solvent motions. A stochastic model utilizing a synchronous, discrete-time dynamics with continuous velocities and local multiparticle collisions is developed for this purpose. An H theorem is established for the model and the hydrodynamic equations and transport coefficients are derived. The results of simulations are presented which verify the properties of the model and demonstrate its utility as a hydrodynamics medium for the study of complex fluids.