

The Institute for Pure and Applied Mathematics (IPAM) at the University of California, Los Angeles



and the Program in Applied and Computational Mathematics at Princeton University

Present

International Forum on Multiscale Methods and Partial Differential Equations

in Celebration of the 60th Birthday of **Bjorn Engquist**

at the Institute for Pure and Applied Mathematics at UCLA

August 26 - 27, 2005

Organizing Committee: Weinan E, Co-Chair (Princeton University), Tom Hou, Co-Chair (California Institute of Technology), Russ Caflisch (UCLA), Tony Chan (UCLA), Stanley Osher (UCLA), Richard Tsai (University of Texas, Austin), Hongkai Zhao (UC Irvine)



Scientific Content:

In this forum, a balance will be struck between theory, numerics, and applications. In addition, to address some new developments in nonlinear PDE theory and new numerical methodology, we will focus on multiscale modeling and simulations in fluids and materials, geophysical and environmental science including wave propagation in random media and multiscale climate modeling, free boundary problems arising from materials science and multi-component fluid dynamics.

Three main themes will serve to integrate new developments in multiscale methods and partial differential equations:

- Fundamental Theory and Numerical Analysis
- Multiscale Analysis, Modeling and Simulation
- Applications: Geophysics, Materials Science, Free Boundary Problems

Invited Speakers: Yann Brenier (University of Nice), Luis Caffarelli (Univ. of Texas, Austin), Ingrid Daubechies (Princeton), Irene Gamba (Univ. of Texas, Austin), Roland Glowinski (Univ. of Houston), Gene Golub (Stanford), John Nash (Princeton), Jean-Claude Nedelec (C.M.A.P. Palaiseau), Stanley Osher (UCLA), George Papanicolaou (Stanford), Takis Souganidis (Univ. of Texas, Austin) and Eitan Tadmor (Univ. of Maryland)

For further information, including an online registration form:

http://www.ipam.ucla.edu/programs/bef2005/