Center for Scientific Computation And Mathematical Modeling

INVITED PARTICIPANTS

A workshop on

"Perspectives on incompressible flows. Comparison of different computational strategies"

April 7-11, 2003

Center for Scientific Computation
And Mathematical Modeling (CSCAMM)
University of Maryland College Park

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– University of Tennessee Space Institute
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SCIENTIFIC CONTENT. The aim of the workshop is to bring together computational scientists working on diverse aspects of incompressible flows, to compare notes on different solution strategies and to discuss the potential advantages of blending different methods to form new, more effective solution strategies in applications. Among the methods to be discussed are:

- variants of pressure-projection methods typically associated with finite volume discretizations;
- solution algorithms associated with (mixed and stabilized) finite element approximation methods;
- high order discretization approaches such as spectral methods and associated domain decomposition solvers;
- grid-free methods such as particle methods and smoothed particle hydrodynamics.
- efficiency-oriented methods -- multigrid, fast multipole method, vorticity-based methods...

Issues to be addressed include computational costs and ease of implementation of different discretizations, adaptive refinement, utility in engineering codes, and rigorous convergence analysis.
A limited number of openings are available. To apply please RSVP at:
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