Department of Mathematics

University of Houston

Scientific Computing Seminar

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Solving Elliptic and Elasticity Interface Problems with Non-body-fitted Mesh

Thursday, April 17, 2014
1:30 PM- 2:30 PM
Room 646   PGH

Abstract:
Interface problems occur in many multi-physics and multi-phase applications in science and engineering. We proposed a non-traditional finite element method for solving elliptic and elasticity interface problems using non-body-fitted mesh. The invertibility of the coefficient matrix for local construction is proved under certain assumptions. The condition number of the large linear system is studied. We presented numerical results in both 2D and 3D.

This seminar is easily accessible to persons with disabilities. For more information or for assistance, please contact the Mathematics Department at 743-3500.