

Department of Mathematics

University of Houston

## Scientific Computing Seminar

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### The immersed interface method for flow simulation

Thursday, April 10, 2014

1:30 PM- 2:30 PM

Room 646 PGH

**Abstract:** The immersed interface method is a general methodology for solving interface problems governed by differential equations. In this talk, I will first give an overview of this method; I will then present a boundary condition capturing approach in the immersed interface method, which can enforce the prescribed or free motions of rigid objects in a fluid with desirable numerical stability, accuracy and efficiency; Last, if time permits, I will derive some principal jump conditions across a two-fluid interface, and present some thoughts on how to use them in the immersed interface method for simulation of two-fluid flows.

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