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**Jin Wang\***, Department of Mathematics, University of Tennessee at Chattanooga. *Computing fluid-structure interaction.*

The interactions between fluid flows and immersed solid structures are nonlinear multi-physics phenomena that have applications to a wide range of scientific and engineering disciplines. Mathematically, such problems are described by systems of nonlinear PDEs linking the dynamics of the fluid and structure. In this talk, I will give a brief overview of representative numerical techniques currently available for computing fluid-structure interaction problems, with a focus on methods of the immersed boundary type. I will also highlight some recently developed methods which are capable of handling problems involving sophisticated structures described by detailed constitutive laws. (Received September 15, 2016)