

1065-65-211 **Padmanabhan Seshaiyer*** (pseshaiy@gmu.edu), 4400 University Drive, MS: 3F2, Mathematical Sciences, Science and Tech I, George Mason University, Fairfax, VA 22030. *Numerical Methods for Multi-physics Applications with Fluid-structure Interaction*. Preliminary report.

In this talk, numerical methods for efficient computation of the nonlinear interaction of fluid with a solid will be presented. Theoretical and numerical results for some coupled fluid-structure interaction problems that arise from biological and bio-inspired applications will be presented that validate the reliability and robustness of the proposed computational methodology. (Received September 13, 2010)