



Math-Physics Joint Colloquium



Thursday, April 13th at 3:30 pm in SC 234

Dr. Giorgio Borgia

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The interaction between fluids and solids: modeling, discretization, simulations

Multiphysics problems attract an increasing attention in the mathematical community. In fact, their study leads to a deeper understanding of real-life processes. Among them, the interaction of fluids and solids is certainly one of the most interesting, with ubiquitous applications in fields such as aeroelasticity, biomechanics and civil engineering. We will explore the two-way coupling between fluid and solid mechanics in a broad perspective. The physical modeling, the definition of numerical algorithms and their computer implementation will be discussed, in order to highlight the main challenges as well as the effectiveness in the simulation of real-world phenomena.

Refreshments at 3:00 pm in SC 103