1126-35-192   **George Avalos*** (`gavalos@math.unl.edu`), Department of Mathematics, University of Nebraska-Lincoln, Lincoln, NE 68588. *Analysis of a Compressible Fluid - Structure PDE Interaction.*

In this talk, we present recently derived results for a partial differential equation (PDE) system which models a fluid-structure interaction of current interest within the mathematical literature. The coupled PDE model under discussion involves a Stokes system, which evolves on a three dimensional domain, interacting with a Lamé system of elasticity which evolves on a flat portion of said fluid domain. Moreover there is an additional coupling PDE which determines the associated pressure variable of the fluid-structure system. In addition, because of the presence of an "ambient flow" vector field, the coupled PDE is not dissipative. This is joint work with Pelin Güven Geredeli of Hacettepe University (Ankara, Turkey) and Justin Webster of The College of Charleston. (Received January 12, 2017)