1107-35-24   **Yongjin Lu*** (`ylu@vsu.edu`), Department of Mathematics and Economics, PO Box 9068, Petersburg, VA 23806. *Uniform stabilization to equilibria of a nonlinear fluid structure interaction model.*

We consider uniform stability to a nontrivial equilibrium of a nonlinear fluid structure interaction (FSI) defined on a two or three dimensional bounded domain. It is shown that interior fully supported feedback applied to the fluid equation and a boundary or localized feedback applied to the wave does produce exponential decay rates to an unstable equilibrium of FSI with static interface. This is achieved by building multipliers based on Stokes-Dirichlet solver fed to the fluid via boundary traces on the interface. (Received November 14, 2014)