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**Yongjin Lu\*** (y1u@vsu.edu), Department of Mathematics and Economics, PO Box 9068, Virginia State University, Petersburg, VA 23838. *Uniform stability near a non-trivial equilibrium of a nonlinear fluid-viscoelastic structure interaction.* Preliminary report.

We consider uniform stability near a non-trivial equilibrium of a nonlinear fluid-structure interaction, where the elastic body exhibits small but rapid oscillations and the coupled dynamics is governed by a PDE system coupling Navier-Stokes equation with a wave equation. FSI considered here could model the dynamics of a structure submerged or surrounding viscous non-compressible fluid and has wide applications ranging from aerospace engineering, civil engineering, medicine and environmental sciences, etc. Uniform stability near a non-trivial equilibrium of FSI is obtained by implementing a viscoelastic damping on the structure and a fully supported interior feedback on the fluid. (Received September 20, 2016)