Jing Zhang\* (jizhang@vsu.edu) and Roberto Triggiani. Weak solution and long time behavior of a fluid-plate interaction model.

We consider a dynamical system consisting of a 3D Stokes equation coupled with a 2D viscoelastic plate equation under the assumption that the transversal displacement of the plate is negligible (therefore the interface can be treated as static). For this model, we prove the existence of the weak solution. We also prove that the system generates a strongly continuous semigroup that is exponentially stable and there exists a compact finite-dimensional global attractor for the system. (Received September 10, 2018)