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**Igor Kukavica\*** (kukavica@usc.edu), **Amjad Tuffaha** and **Mohammed Ziane**. *Local well-posedness for a structure-fluid interaction model.*

In the talk we address a structure-interaction model introduced by Lions. The system describes the fluid, modeled by the Navier-Stokes equations, and an elastic body, modeled by an elasticity equation. On the common boundary, which is variable but held fixed, the velocities and stresses are matched. We discuss available results on local well-posedness and prove a new local well posedness when the velocity  $u$  belongs to  $H^1$  and the elastic displacement  $w$  belongs to  $H^{1/2+}$  with  $w_t$  in  $H^{3/2+}$ . (Received September 15, 2009)