

1104-35-152

M. Ignatova* (ignatova@math.princeton.edu), **I. Kukavica**, **I. Lasiecka** and **A. Tuffaha**.

On well-posedness and small data global existence for a damped free boundary fluid-structure model.

We address a fluid–structure system which consists of the incompressible Navier–Stokes equations and a damped linear wave equation defined on two dynamic domains. The equations are coupled through transmission boundary conditions and additional boundary stabilization effects imposed on the free moving interface separating the two domains. We first discuss the local in time existence and uniqueness of solutions. Given sufficiently small initial data, we prove the global in time existence of solutions. This is a joint work with I. Kukavica, I. Lasiecka, and A. Tuffaha. (Received August 29, 2014)