Daniel Lengeler

Global weak solutions for an incompressible, Newtonian fluid interacting with a linearly elastic shell

I will present a result from my PhD thesis concerning the existence of global-in-time weak solutions for an incompressible, Newtonian fluid interacting with a linearly elastic shell of Koiter type. This is achieved by the introduction of a new method for showing the compactness of bounded sequences of approximate weak solutions. This method might be of general interest in the study of fluid dynamical problems involving a free boundary. There is no damping term involved in the shell equations.