

1126-35-240

Irena Lasiiecka* (lasiiecka@memphis.edu), Department of Mathematical Sciences, Dunn Hall, University of Memphis, Memphis, TN 38152. *Minimizing pressure in a fluid structure interaction problem.*

Fluid structure interaction modeled by NS-equation coupled with a dynamic system of elasticity is considered. The goal is to minimize pressure on the moving interface between the fluid and the solid. The actuators are Dirichlet controls located on a part of the external boundary of the fluid. The main result is an existence of optimal control for the model described above. The proof is based on the estimates presented in joint work with M. Ignatova, I. Kukavica and A. Tuffaha 'Small data global existence for a fluid-structure model' to appear in *Nonlinearity*, 2017. (Received January 15, 2017)