Abstract:

We consider the PDE-ODE system modelling the motion the motion of rigid bodies in a viscous fluid.
We describe some existence and uniqueness of solutions results. We next study an associated control problem. More precisely, the aim consists in steering the bodies to prescribed positions by means of exterior forces acting on them. We show, in particular, that in the presence of control forces we can obtain existence and uniqueness results which are “better” than in the uncontrolled case.