

Semigroup approach to the interaction of a rigid body and a fluid

Hyeong-Ohk Bae

Ajou University (hobae@ajou.ac.kr)

To understand the motions of a fluid and a rigid body, we use the concept of B-evolution. Then in a similar way of the usual Navier-Stokes system, we obtain Helmholtz type decomposition. Then we analyze the linear parts of the system and then nonlinear system to get the existence.