

Strong solutions for the interaction of rigid bodies and viscoelastic fluids

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For rigid bodies, it is essential to consider their geometry in order to determine their movement. For coupled fluid-rigid body interaction problems, we show how geometric properties can be encoded in the underlying linear operator to get local-in-time strong solutions for Newtonian, generalized Newtonian and viscoelastic fluids. We also discuss known results and natural but open questions concerning the asymptotics of these problems.