

Fluid-structure interaction dealing with thin objects

Suguru Miyauchi¹ and Takeo Kajishima²

¹ Graduate School of Engineering,
Osaka University, Suita, Osaka 565-0871, Japan
miyauchi@fluid.mech.eng.osaka-u.ac.jp

² Department of Mechanical Engineering,
Osaka University, Suita, Osaka 565-0871, Japan
kajisima@mech.eng.osaka-u.ac.jp

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An immersed solid method is applied for simulations of biological flows, to deal with the interaction between a fluid and solids of different dimensional topologies. The mesh used in both methods is non-conforming with respect to the fluid-solid interface, and the coupled approach facilitates the handling of the fluid-structure interaction including major deformation of thin membrane and/or fibers.