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Immersogeometric cardiovascular fluid–structure interaction analysis with divergence-conforming B-splines

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Highlights (for review)

Div-conforming B-splines improve immersed fluid-structure interaction (FSI) analysis.

Strong mass conservation prevents spurious non-physical leakage through barriers.

Semi-implicit time integration is shown to converge a priori for a model problem.

Div-conforming immersogeometric FSI analysis is practical for heart valve analysis.

FSI simulations reproduce qualitative features of in vitro experiments.

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