# Appendix 1

FSI coupling control parameters

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| * Deformable mesh controls for implicit scheme | Interval to check convergence | 1 |
| Maximum number of iterations | 250 |
| Linear convergence limit | 1e-7 |
| * Cell-Centered Edge-Based Incompressible Navier-Stokes | Time integration method | THETA |
| Energy equation and dependent variable | No Energy |
| Linear convergence limit | 1e-7 |
| * Turbulence model   Spalart-Allmaras model |  | 0.136 |
|  | 0.622 |
|  | 7.100 |
|  | 3.239 |
|  | 0.300 |
|  | 2.000 |
| σ | 0.667 |
| κ | 0.410 |
| E (Law of the wall coefficient) | 8.432 |
| Turbulent Prandtl number | 0.889 |
| Turbulent Schmidt number | 1.000 |
| Positivity rate | 0.200 |
| * Incrementation control   Fixed CFL incrementation | Start time | 0 |
| Termination time | 0.03 |
| Initial time step | 0.01 |
| Scale factor for time step growth | 0.25 |
| Maximum CFL number | 0.45 |
| * Poisson pressure equation (PPE) linear solver   Algebraic Multigrid solver parameters | Iteration limit | 250 |
| Smoother type for coarse grid solver | ICC |
| Solver type for krylov space solver | CG |
| Linear convergence limit | 1e-5 |
| Maximum CFL number | 0.45 |
| * Momentum & Turbulence transport equation linear solver   Diagonally-scaled FGMRES solver parameters | Iteration limit | 50 |
| Number of restart vectors | 15 |
| Linear convergence limit | 1e-5 |