Preliminary studies on reduced-order modeling of fluid dynamic problems

We present some approaches for obtaining the reduced-order model of incompressible Navier-Stokes equations from the existing literature. The focus of our work is ultimately going to be towards the development of non-intrusive model reduction techniques which would be useful when one has no information about the discretized system. The talk will be given keeping this in mind and potential procedures in that direction would be discussed. We choose two-dimensional Taylor-Green vortex as the test problem during our studies.

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