

Abstract Submitted
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A time-stepping scheme for flow simulations that allows the use of large time step sizes¹ STEVEN DONG, Purdue University — We present a time-stepping scheme for incompressible Navier-Stokes equations that allows the use of time step sizes considerably larger than the commonly used semi-implicit type schemes. The scheme is based on a velocity correction type formulation, and involves only linear algebraic equations after discretization. Moreover, the computations of the velocity and pressure are decoupled. The proposed scheme and the semi-implicit scheme will be compared with several numerical problems.

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