

Abstract Submitted
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Numerical simulations of flow past flat plates LING XU, Univeristy of New Mexico, MONIKA NITSCHKE, University of New Mexico — The starting vortex in flow past a finite and a semi-infinite plate is studied numerically, using a semi-Lagrangian, compact finite difference method with an implicit time-stepping scheme. The results are compared with those existing in the literature for driven cavity flow and flow past plates. The effects of viscosity on the core trajectory and the shed circulation are investigated. Furthermore, an alternative vortex method is explored which has more flexibility in terms of the fluid domain, and is potentially much faster, provided a fast summation algorithm is used.

Ling Xu
University of New Mexico

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