

Vortex structure in a two dimensional triangular lid-driven cavity

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ABSTRACT

Triangular lid driven cavity flow was simulated numerically using Finite Difference Method with streamfunction vorticity approach and compared with simulation results of Lattice Boltzmann Method. Two models of triangular cavity were simulated; right aligned triangular cavity and left aligned triangular cavity. Good agreements were achieved for simulation at Reynolds number of 1000, 1500 and 2000 when the computed streamline pattern and center of vortex location from both models were compared.

KEYWORDS:

Cavity flow; Finite Difference Method; Lattice Boltzmann Method; Triangular Cavity

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