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Challenges in scale-resolving simulations of turbulent wake flows with coherent structures

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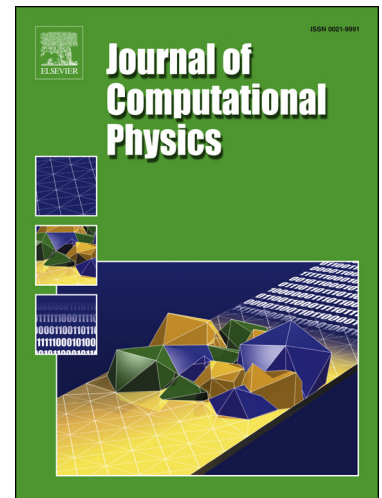
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Highlights

- Investigation of guidelines for SRS of turbulent wake flows with coherent structures;
- Identification of key flow mechanisms for the simulation of flows around circular cylinders;
- Kelvin-Helmholtz and vortex-shedding coherent structures dominate the TSL regime;
- Computational Reynolds number crucial for the simulation of coherent structures;
- Criteria based on $\langle S \rangle k_u / \epsilon_u$ can guarantee the correct use of one-point closure models.

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