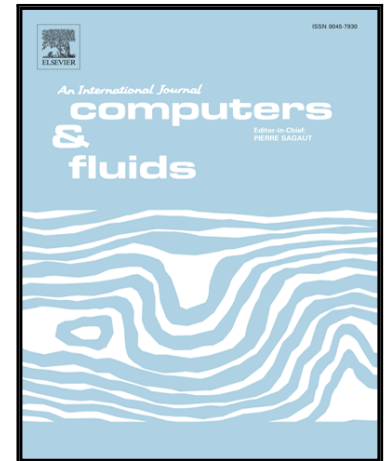


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RANS Simulation of High-Re Turbulent Flows Using an Immersed Boundary Method in Conjunction with Wall Modeling

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Highlights

- An immersed boundary method is developed for RANS simulation of turbulent flows.
- Wall-modeling is adopted to alleviate requirement on mesh resolution near wall.
- Velocity at an exterior node is computed via no-penetration and wall shear stress.
- Turbulence variables at an exterior node are computed via analytical solutions.
- Flows over stationary and moving bodies are simulated to validate the method.

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