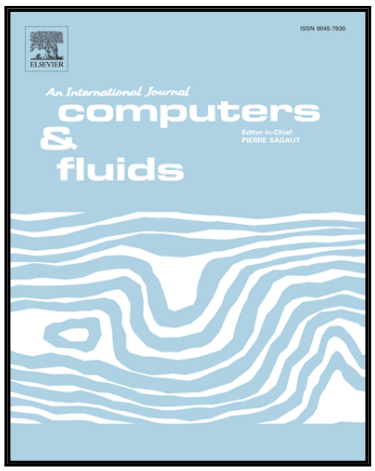

A physically consistent and numerically robust k-ϵ model for computing turbulent flows with shock waves

Pratikkumar Raje, Krishnendu Sinha

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Highlights

- New k-ϵ model is proposed for shock-homogeneous turbulence interaction.
- Model consistent with the physics of turbulence amplification across shock waves.
- Model parameters independent of upstream flow variables for easy CFD implementation.
- Model equations cast in Conservative form to limit numerical error at shock waves.
- Model predictions match DNS data for a range of upstream Mach numbers.