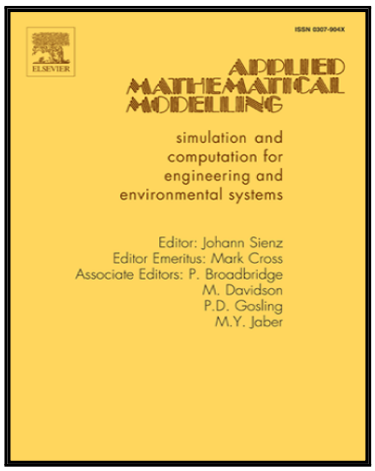

On an accurate α model for coarse mesh turbulent channel flow simulation

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Highlights

- Analysis and turbulent flow computations are performed for new reduced order NS-alpha model
- Coarse mesh turbulent channel flow results at $Re_\tau = 395$, 590 and 1000 are excellent
- Energy spectra and dissipation rate analyzed, and results are found to be consistent with true fluid flow
- Computational comparisons made to related, common alpha models, and results of new model found to be much better