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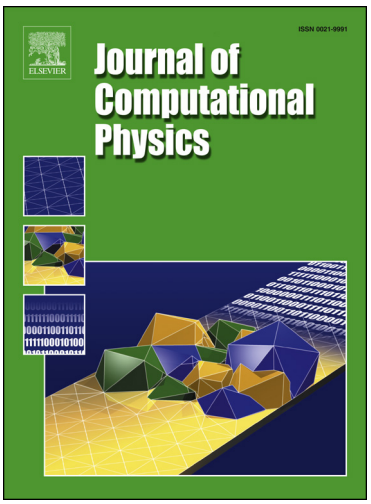

Spectral iterative method and convergence analysis for solving nonlinear fractional differential equation

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Highlights

- A spectral iterative method (SIM) is introduced to approximate the solutions of non-linear fractional multi-order differential equations.
- Error analysis of SIM is established under the exponential norm which is equivalent to L^2-norm.
- A numerical algorithm is offered to find the singularity index of the function at the end points of the interval.