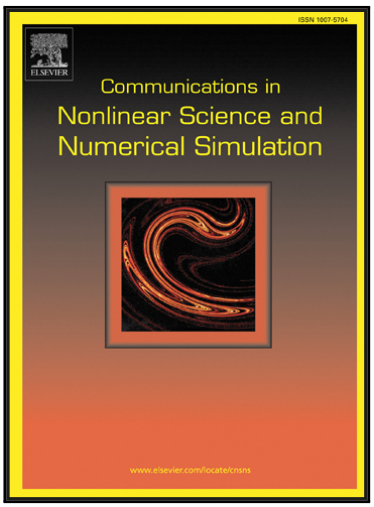

Numerical simulation of the nonlinear dynamics of harmonically driven Riesz-fractional extensions of the Fermi–Pasta–Ulam chains

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Highlights

- A fractional nonlinear chain consisting of anharmonic oscillators is proposed.
- The model is an extension of the well-known α-Fermi–Pasta–Ulam chain with global interactions.
- The system is perturbed harmonically at one end at a frequency in the forbidden band gap.
- The presence of nonlinear supratransmission is established thoroughly through numerical simulations.