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Chaotic dynamics of the size-dependent non-linear micro-beam model

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Highlights

- Non-linear size dependent Sheremetev-Pelekh beams governing PDEs are derived.
- Reliability and validity of the governing PDEs is studied regarding statics and dynamics.
- Symmetric and non-symmetric frequency spectra distributions are detected and discussed.
- The Pomeau-Manneville route to chaos is illustrated in our infinite dimensional system.

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