Uncertainty analysis for wave dispersion behavior of carbon nanotubes embedded in Pasternak-type elastic medium

Hu Liu , Zheng Lv

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Highlights

- Effect of uncertain material properties on the wave-dispersion behavior of carbon nanotubes embedded in a Pasternak-type elastic medium is studied.
- Upper and lower bounds of the wave frequencies are predicted by using the interval analysis method.
- The present model is verified by comparing with Monte Carlo simulation.
- Influences of the small scale and elastic medium parameters on the bounds of wave frequencies are discussed.