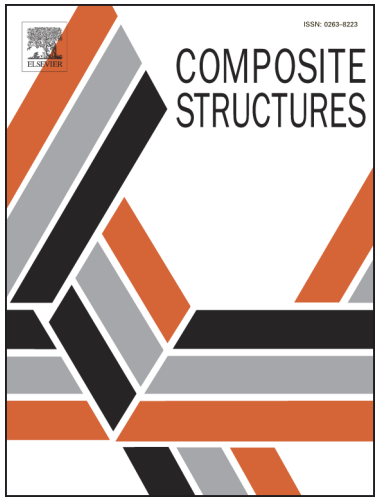


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# Buckling and vibrations of microstructured rectangular plates considering phenomenological and lattice-based nonlocal continuum models

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**Abstract**

The present study investigates three different kinds of nonlocal plate theories for capturing the small length scale effect of microstructured plates in elasticity. One kind is the classical stress gradient Eringen's theory as applied to the Kirchhoff-Love plate model, another kind is based on the continualization of the discrete lattice model and the last kind is a combination of Eringen's model with some additional gradient curvature terms. From the three associated