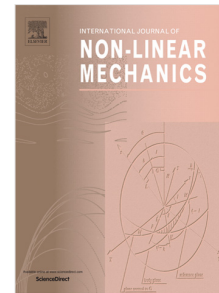


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Post-buckling evolution of wavy patterns in trapezoidal film/substrate bilayers

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Highlights

- Effect of trapezoidal geometric gradient on pattern formation was investigated.
- 1D graded wrinkles were explained based on a Fourier-related macroscopic beam/foundation model.
- A 3D shell/solid coupled finite element model was applied for post-buckling analyses from a quantitative standpoint.
- 3D graded wrinkles hold a wavy curvature shape that is perpendicular to the trapezoidal edges.
- A localized corner mode and its post-bifurcation evolution were first explored.

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