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A novel numerical solution strategy for solving nonlinear free and forced vibration problems of cylindrical shells

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**Highlights**

- An efficient and accurate numerical solution strategy is developed for solving nonlinear free and forced vibration of cylindrical shells.
- The generalized differential quadrature method and periodic differential operators are used along axial and circumferential directions.
- The time periodic discretization technique and the pseudo-arc length continuation method is employed.
- The effects of variations of fundamental vibrational mode shapes on the frequency response curves are investigated.

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