A spectral element model for thermal effect on vibration and buckling of laminated beams based on trigonometric shear deformation theory

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Highlights

- A spectral element matrix is developed for generally layered composite beams.
- Thermal effect on vibration and buckling of composite beams is investigated.
- TSDBT, TD material properties, temperature change and Poisson effect are incorporated.
- Effects of various factors on natural frequencies of composite beams are discussed.