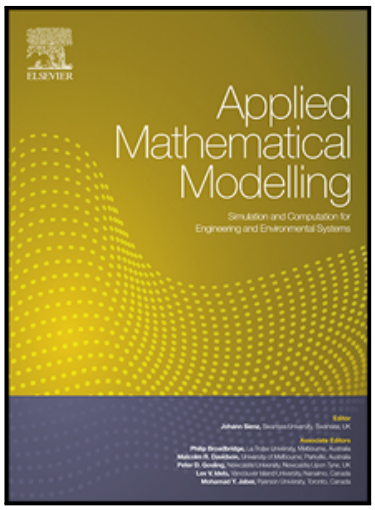


# Electro-thermo-mechanical vibration and stability analyses of double-bonded micro composite sandwich piezoelectric tubes conveying fluid flow

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**Highlights**

- Development of size-dependent electro-thermo-mechanical vibration and stability of flow-conveying double-bonded micro tubes
- Employing modified strain gradient theory to consider size dependent effect for sandwich piezoelectric micro composite tube
- Simulating micro composite tubes rested in an orthotropic elastic medium
- Applying non-uniform temperature distribution
- Employing the bifurcation curves for system instability using GDQM