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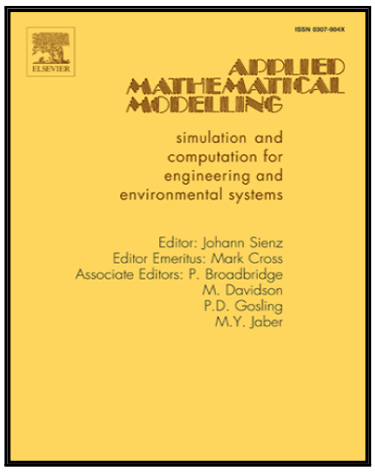

Small-Amplitude Free Vibrations of Straight Beams Subjected To Large Displacements and Rotation

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Highlights

- A systematic approach for vibrations of large deflected straight beams is presented
- General equations of free vibration of large deflected straight beams are obtained
- Effects of axial extension, shear deformation, and rotatory inertia are included
- Equations are simplified and investigated for different cases of loading conditions
- Several numerical examples are solved to show the versatility of present approach

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