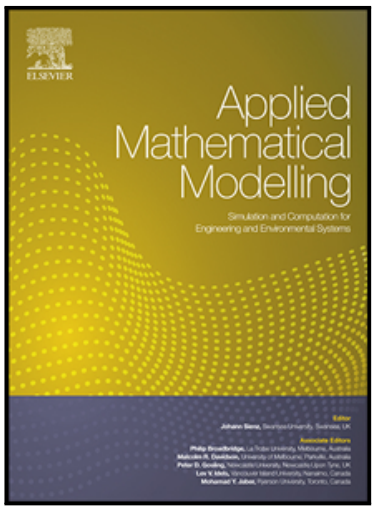

Vibration analysis of a fluid-conveying curved pipe with an arbitrary undeformed configuration

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Highlights:

- A dynamic model of an extensible fluid-conveying curved pipe is established.
- Acceleration vectors of fluid under an arbitrary initial configuration are derived.
- Differential-algebraic equations are solved by the differential quadrature method.
- Effects of initial geometrical imperfections on dynamic stability are studied.
- A dramatic change of a first critical velocity is found for curved pipes.