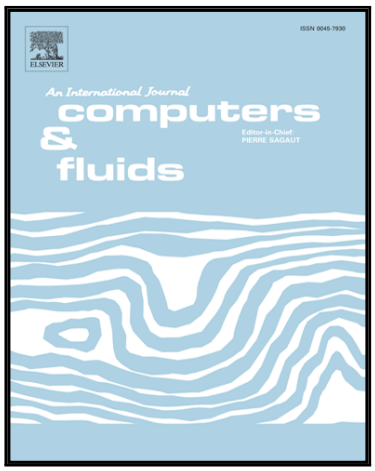


# Nonlinear model reduction for computational vibration analysis of structures with weak geometrical nonlinearity coupled with linear acoustic liquids in the presence of linear sloshing and capillarity

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**Highlights**

- Novel methodology for constructing a nonlinear ROM in fluid-structure interaction
- Viscoelastic structure with weak nonlinear geometrical effects
- Linear dissipative acoustic liquid with sloshing and capillarity in presence of a deformable structure
- Detailed construction of the vector bases for obtaining the nonlinear ROM