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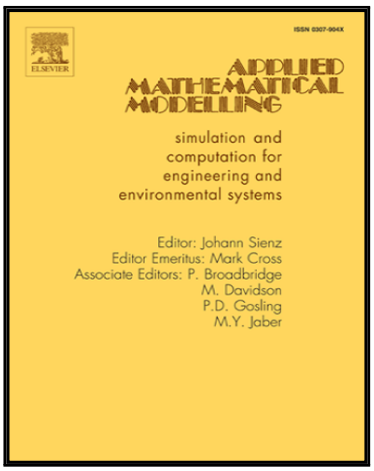

A Fluid-Structure Interaction Solver for Compressible Flows with Applications in Blast Loading on Thin Elastic Structures

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Highlights:

- Fluid-structure interaction model for blast loading on a thin structure is proposed.
- Model is able to handle large-scale flow-induced structure deformation.
- Simulations of realistic blast loading on a thin elastic plate are presented.
- Plate oscillates under influence of blast loading and restoring elastic forces.
- Response of plate is analyzed using time-varying plate tip displacement signal.

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