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A Conservative Numerical Scheme for Modeling Nonlinear Acoustic Propagations in Thermoviscous Homogeneous Media

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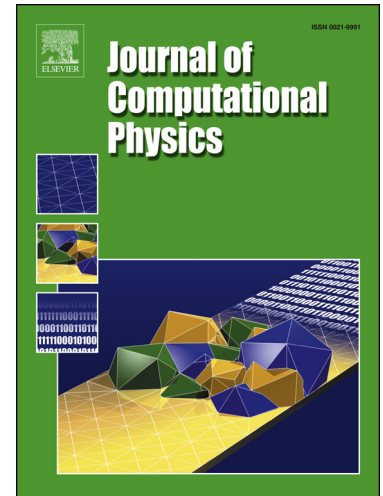
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Highlights

- A conservative nonlinear thermoviscous acoustic system model is proposed.
- Strongly nonlinear acoustic waves are studied with high-order WENO schemes. A focused ultrasound device has been studied to physically validate the model.
- Simulations using GPU accelerators were performed to illustrate the method in 2-d.

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