CHONGRAN ZHAO

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Education

Southern University of Science and Technology — Shenzhen, Guangdong
Bachelor of Science in Theoretical and Applied Mechanics — *09/2019 – 06/2023*

Southern University of Science and Technology — Shenzhen, Guangdong
Master of Science in Mechanics — *09/2023 – Present*

Research Interests

Continuum Mechanics · Solid Mechanics · Viscoelasticity · Constitutive Modeling · Finite Element Analysis · High-Performance Computing · Soft Biological Tissues · Growth and Remodeling

Publications and Manuscripts

[1] J. Liu*, J. Guan, **C. Zhao**, and J. Luo. A continuum and computational framework for viscoelastodynamics: III. A nonlinear theory. *Computer Methods in Applied Mechanics and Engineering* 430 (2024), 117248.

[2] J. Liu*, **C. Zhao**, and J. Guan. Modeling finite viscoelasticity based on the Green–Naghdi kinematic assumption and generalized strains. *Journal of the Mechanics and Physics of Solids* 206 (2026), 106346.

[3] **C. Zhao**, H. Yuan, and J. Liu*. A framework for finite-strain viscoelasticity based on rheological representations. arXiv preprint. 2025. arXiv: 2508.14518.

Conference

The Chinese Congress of Theoretical and Applied Mechanics — Changsha, China
Oral Presentation — *Jul. 18-21, 2025*
A finite viscoelastic constitutive theory based on Green-Naghdi decomposition: A rheological model study

18th International Conference on Computational Plasticity — Barcelona, Spain
Oral Presentation — *Sep. 2-5, 2025*
A rational framework of finite viscoelasticity: Dissipation potential and non-newtonian effects

Summer School on Physics-Informed Modeling, Simulation and Experiments with Emphasis on the Cardiovascular System — Graz, Austria
Participant — *Sep. 15-19, 2025*

Skills

- **Technical Skills**: C++ · CMake · MPI · Matlab · Linux/Unix · Git · LaTeX
- **Languages**: Chinese · English