Dingtao Shen

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Education

The Hong Kong University of Science and Technology *Sep. 2023 - Present*
Division of Emerging Interdisciplinary Areas

- **Ph.D.** candidate in *Individualized Interdisciplinary Program*
- Research Topic: High-fidelity Numerical Algorithm. *(High-fidelity methods for Boltzmann transport equation-based modeling of phonon heat conduction.)*

University of Wisconsin-Madison *Sep. 2021 - May. 2023*
Department of Mathematics

- **Master** in *Mathematics*

Zhejiang University *Sep. 2017 - Jun. 2021*
School of Mathematical Sciences

- **Bachelor** in *Information and Computing Science*

Experience

Graduate Teaching Assistant *Jan. 2024 - Dec. 2024*
Division of Emerging Interdisciplinary Areas, HKUST

- (Graduate Level Course) *EMIA6500A - Special Topics: Discontinuous Galerkin Methods*
- (Undergraduate Level Course) *EMIA2020 - Cross-disciplinary Design Thinking*

Research Assistant *Jul. 2021 - Jun. 2022*
School of Mathematical Sciences, Zhejiang University

- **Project Involvement**: *Local discontinuous Galerkin method with implicit-explicit multistep time discretization for solving the nonlinear Schrödinger equation.*

Projects & Publication

- Accurate-geometry-embodied finite element method for phonon Boltzmann transport equation. ***Dingtao Shen**, Wei Su. Computer Physics Communications 313 (2025): 109623.*
- A high-performance parallel C++ solver for the Discontinuous Galerkin Discretization of 2D/3D Gray and Non-Gray Phonon Boltzmann Transport Equations.

Awards & Honors

- HKUST RedBird Academic Excellence Award *2024-2025*
- The Third Scholarship of Zhejiang University *2017-2018*
- The Outstanding Performance in Academic of Zhejiang University *2017-2018*

Skills & Interests

Language	Chinese; English
Programming	Python, C/C++, Matlab, SQL
Software & Tools	Git, Linux, PyTorch, etc.
Research Interests	Scientific computing; Numerical analysis; Uncertainty quantification; Machine learning; High-performance computing, etc.