

Tao Wang

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🎓 EDUCATION

Jilin University, Changchun, China 2021 – Present

Ph.D. student in Computational Mathematics, expected June 2026

Advisor: Tao Tang

University of Macau, Macau SAR, China 2022 – 2024

Visiting Ph.D. student in Computational Mathematics

Advisor: Tao Tang & Guanghui Hu

Jilin University, Changchun, China 2017 – 2021

B.S. in Computational Mathematics

JLU Tang Aoqing honors program in maths (Mount Qomolangma Project)

📖 RESEARCH INTEREST

Numerical solutions for partial differential equations

- Isogeometric Analysis (IGA), High-order finite element methods for PDEs
- h -adaptive methods & r -adaptive (moving mesh) methods

Density functional theory

- Kohn–Sham equation, electron structure calculations.

📄 PUBLICATION

1. **Tao Wang**, Yang Kuang, Ran Zhang, and Guanghui Hu. A hierarchical splines-based h -adaptive isogeometric solver for all-electron Kohn–Sham equation. *Submitted*.
2. **Tao Wang**, Xucheng Meng, Ran Zhang, and Guanghui Hu. A moving mesh isogeometric method based on harmonic maps. *Submitted*.
3. Yang Kuang, Xucheng Meng, **Tao Wang**, and Guanghui Hu. An improved isogeometric analysis method for Kohn–Sham equation. *Preprint*.

👥 EXPERIENCE

University of Macau, Macau SAR, China 2022 – 2023

Visiting Ph.D. Student & Teaching Assistant

- Developed the adaptive isogeometric solver for the simulation in Kohn–Sham density functional theory
- Served as teaching assistant in the Tutorial section of Mathematical Analysis in MATH 2003, 2023 fall

Jilin University, Changchun, China Nov. 2020 – Jun. 2021

Project Researcher, C #

Real-time calculation platform for constitutive relations of aviation tires under complex working conditions

- IGES file import; Mesh generation in two dimensions

⚙️ SKILLS

- Programming Languages: MATLAB > C++ == Python
- Others: \LaTeX , Linux