

Ph.D. Students and Postdocs in High-Performance
Computing
Harbin Institute of Technology

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Posted Jun. 16, 2025, set to expire Oct. 15, 2025

Job Title	Ph.D. Students and Postdocs in High-Performance Computing
Department	Department of Astronautical Science and Mechanics http://icam.hit.edu.cn/main.htm
Institution	Harbin Institute of Technology Harbin , Heilongjiang, China
Date Posted	Jun. 16, 2025
Application Deadline	Open until filled
Position Start Date	Available Immediately
Job Categories	Graduate Student Post-Doc
Academic Field(s)	Mechanical Engineering Engineering Mechanics Computer Engineering Computer Science Aerospace/Aeronautical/Astronautics
Job Website	http://homepage.hit.edu.cn/hejiaze
Apply Online Here	http://studyathit.hit.edu.cn/18360/list.htm
Apply By Email	
Job Description	

We are recruiting **Ph.D. students** and **Postdoctoral Researchers** in **High-Performance Computing**!

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I'm Dr. Jiaze He, a tenured professor in the Department of Astronautical Science and Mechanics and a Deputy Director at the International Center for Applied Mechanics at the **Harbin Institute of Technology (HIT)** in China. I warmly invite you to **join my group** (Lab for Computational Imaging and Smart Measurements) as a **Ph.D. student** (English-taught program in Mechanics) or a **Postdoctoral Researcher** in the School of Astronautics.

Before joining HIT, I served as a tenure-track assistant professor in the Department of Aerospace Engineering and Mechanics at the University of Alabama, a postdoctoral research associate in the Theoretical & Computational Seismology group at **Princeton University**, a research scholar at **NASA LaRC**, and an adjunct assistant professor in MAE at NCSU. I have led numerous national-level research projects in both the U.S. and China. I serve on the ASME NDPD Executive Committee, the SAE AMS K Committee, and is the Chair of the Congress-Wide Symposium on NDE & SHM at ASME IMECE. I am the recipient of the 2024 ASME SMASIS SHM Technical Committee Best Paper Award, the 2025 Smart Materials and Structures Emerging Leader Award, and the Best Paper Award at the 11th IWSHM.

My lab develops and implements cutting-edge computational ultrasonic imaging methods. Because of recent advancements in high-performance computing and quantitative imaging methods, our group will take the opportunity to push the limits on structural, material, and medical applications. We have fully-funded **Ph.D. openings** and **Postdoctoral openings** in the area of **High-Performance Computing for Imaging and AI**:

Background:

Computational science, applied mathematics, mechanical or aerospace engineering, computer science, electrical engineering, geophysics, or biomedical engineering

Required Skills:

- Parallel programming (MPI, OpenMP) and GPU acceleration (CUDA, OpenCL, or PyTorch)
- Experience with HPC clusters and job schedulers (e.g., SLURM)
- Numerical methods for PDEs or wave propagation (e.g., FDTD, FEM, spectral methods)
- Large-scale data handling and memory-efficient computing
- Machine learning frameworks (e.g., PyTorch) for physics-informed modeling or hybrid inversion
- Experience with imaging algorithms or scientific visualization (Paraview, matplotlib, etc.) is a plus

Related information:

- HIT is ranked #5th by US News for the Best Global Universities for Engineering.

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- Our Mechanics program is ranked Number 1 in China in the newest ranking!
- My research website: <http://homepage.hit.edu.cn/hejiaze>
- A Scholarship covers the tuition fee, on-campus dormitory, medical insurance, and monthly living allowance. More requirements and information regarding our program and the scholarship can be found here (<http://en.hit.edu.cn/admissions/doctoral>).
- Harbin is a vibrant city with an international ambiance. Feel free to take a look at this video: https://www.bilibili.com/video/BV1sf4y1y7A4/?share_source=copy_web&vd_source=d9a8e05ddf4be4ba

Interested candidates are encouraged to contact Prof. Jiaze He (jjazehe@hit.edu.cn) with a CV.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

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