Opening Positions of Postdocs/Ph.D. Students/Research Assistants/ in AI-empowered Simulations for Structural Mechanics

Opening Positions

Fully funded positions of Postdocs/Ph.D. Students/Research Assistants, sponsored by GAC R&D Center, are now available (starting **immediately**) in the Internet of Things Thrust at HKUST(GZ). The positions will be advised by Dr. Zhilu Lai, focusing on research topics in **AI-empowered Simulations for Structural Mechanics**. The expectation of this research project is to study and develop AI tools for accelerating simulations of structural mechanics (both static and dynamic problems), that cover relevant topics of

- AI for design optimization and acceleration
- Reduced order modeling
- Physics-informed machine learning
- Machine learning for governing equation discovery

Your Profile

Essential pre-requisites:

- Relevant degrees (Ph.D./Master/Bachelor) in Mechanical Engineering, Civil Engineering, Computer Science, or related fields from a top university.
- Strong background in mechanics and mathematics including linear algebra, calculus, and statistics.
- Exposure to machine learning, preferably deep learning techniques and their applications.
- Proficiency in at least one programming language suitable for machine learning such as Python or C/C++.
- Strong verbal and written communication skills as evidenced by presentations, papers, etc.
- English language requirement (for Ph.D. Student Positions): TOFEL-iBT: 80; IELTS: 6.5 (all sub-score: 5.5)

Interested?

These are exciting opportunities to work on bridging conventional engineering and machine learning. We look forward to hearing from qualified candidates who are passionate about impactful research. To apply, please send your CV directly to myself at zhilulai@ust.hk.

About HKUST(GZ)

HKUST is a leading international university ranked 3rd by Times Higher Education Young University Rankings 2022 and 40th by QS World University Rankings 2023. It has established a new campus in Guangzhou, China (hkust-gz.edu.cn). The Guangzhou campus synergizes with and maintains the same academic standard as the Hong Kong campus. While capitalizing on the well-established disciplinary foundation at the Hong Kong campus, HKUST (GZ) charts new territories in higher education pedagogy through a unique and non-conventional Hub structure consisting of four Academic Hubs and a wide spectrum of cutting-edge Research Thrust Areas.

In order to foster true and meaningful collaboration between the two campuses, the 1.1-sq-km Guangzhou campus is conveniently located in Nansha, south of Guangzhou and adjacent to the Qingsheng station on the high-speed Guangzhou-Shenzhen-Hong Kong Express Rail Link. It takes just 30 minutes to travel there from the Hong Kong West Kowloon railway station.

About the Advisor

Dr. Zhilu Lai is a tenure-track assistant professor at the Internet of Things Thrust, Information Hub, and Intelligent Transportation Thrust, System Hub, HKUST(GZ), as well as an affiliate assistant professor in the Department of Civil and Environmental Engineering at HKUST. Prior to his current position, he served as a postdoctoral researcher at ETH-Zürich. Dr. Lai holds a Ph.D. from Rice University. Dr. Lai focuses on developing innovative methodologies for assimilating sensor data into the modeling, condition assessment, diagnostics, and digitalization of engineering systems. His work encompasses theoretical, analytical, and experimental studies, with the ultimate goal of advancing our understanding of complex engineering systems and improving their performance. He is an ASCE-EMI Dynamics Committee member. He serves as a guest editor of Journal of Structural Engineering (ASCE). More information can be found at his homepage: https://zlaidyn.github.io/.