



TEXAS

The University of Texas at Austin

Walker Department of Mechanical Engineering
Cockrell of Engineering

Graduate Research Assistantship in Complex Systems Engineering and Design Research at The University of Texas at Austin

Two graduate assistant positions are available in Dr. Zhenghui Sha's research group in the Walker Department of Mechanical Engineering at The University of Texas at Austin starting from Spring 2022 or Fall 2022. Highly qualified and motivated students who have research interests in complex systems engineering and data-driven design research are strongly encouraged to contact Dr. Sha's lab at sidilab@austin.utexas.edu with the title "GRA Application to SiDi Lab." Please attach your CV, a copy of your transcripts, and a brief description of your research interests and experience.

General Scope

The System Integration & Design Informatics Laboratory (<https://sidilab.net>) focuses on the research of system science and design science as well as the intersection between these two areas. Specifically, our research is emphasized on generative design, swarm manufacturing, human-AI and human-system integration, and complex social-technical system. The associated projects include network science-based complex systems design, cooperative manufacturing scheduling and planning, data-driven generative design of 3D meshes, and sequential learning of design decisions. Candidates will be provided with opportunities to grow their research in these existing directions; meanwhile, they are welcome to collaborate with Dr. Sha to develop new research directions.

Requirements and preferred qualifications

- Hold a B.S. or an M.S. degree in Engineering or related areas with a minimum GPA of 3.0/4.0.
- Have completed GRE (waived for the 2022 application cycle).
- A minimum of 79 on TOEFL or a minimum of 6.5 on IELTS is required for international students.

Candidates with the following qualifications are preferred.

- Familiar with programming in Python, MATLAB, R, and/or C++.
- Fluency in at least one Machine Learning framework, such as PyTorch, Tensorflow, JAX, etc.
- Excellent communication skills, both oral and written.
- Experience with team collaboration as well as independent work.

About the Walker Department of Mechanical Engineering

Based on the U.S. News and World Report 2021, the Walker Department's graduate mechanical engineering program is ranked No. 10 in the U.S. (<https://www.me.utexas.edu>). The department's current faculty members include one Nobel Prize Laureate, two Members of the National Academy of Engineering, 20 NSF CAREER Award Winners, and 68 Tenure/Tenure-Track Faculty. In the Walker Department, faculties and students design and build devices and systems that transform industries and improve lives around the world. A pioneer in areas such as robotics and advanced manufacturing, Texas Mechanical Engineering is the birthplace of selective laser sintering, one of the first and most successful 3D printing technologies.