

Postdoc and PhD Positions in Experimental Solid Mechanics at UT-Austin

Position Description

The Yang Research Group (PI: Jin Yang) in the Department of Aerospace Engineering and Engineering Mechanics (ASE/EM) at The University of Texas at Austin is seeking **1-2 Postdocs** and **1-2 Ph.D. students** to join our group in **Fall 2026, Spring 2027, or Fall 2027**. We are particularly interested in candidates who are excited about research in (i) mechanical behavior of soft materials under extreme-rate loading conditions; (ii) machine-learning-assisted full-field deformation measurement and high-throughput exp characterization.

Available positions will be associated with two recently funded research projects:

- **Office of Naval Research Project -- Thermomechanical Properties of Tissues under Transient Loading:**

Developing experimental and computational approaches to quantify the coupled thermal and mechanical response of biological tissues over extreme loading rates and time scales.

- **Army Research Office Project -- Blast-Wave-Induced Traumatic Brain Injury:**

Investigating the mechanical and biological responses of human brain organoids and cellular systems to highly transient, blast-relevant mechanical loading to establish quantitative connections between local mechanical deformation and neural electrophysiological responses. (Link: <https://sites.utexas.edu/yang>)

Qualifications

- **For PhD applicants:** We welcome students who are interested in **experimental and computational solid mechanics** and have a strong foundation in mechanics and mathematics. Strong academic performance in coursework such as statics, mechanics of materials, solid mechanics, and linear elasticity is helpful.

- **For Postdoc applicants:** We are particularly interested in candidates with strong expertise in **at least one** of the following areas: (a) Biological experiments, including experimental work with cells, tissues, biomaterials, or related biological systems; (b) Experimental solid mechanics, including dynamic material characterization, high-rate mechanics, optical measurement, high-speed imaging, or related experimental techniques; (c) Computational solid and/or fluid mechanics, particularly modeling of strongly nonlinear and transient phenomena; (d) Constitutive modeling of soft materials, particularly hyper-visco-elasticity.

About UT-Austin: UT-Austin is ranked **#6 for engineering graduate programs** and **#30** among national universities by U.S. News & World Report in 2026. Austin is a major innovation hub with a strong presence of high-tech companies including AMD, Intel, Texas Instruments, Tesla, SpaceX, and many others.

About PI: Dr. Jin Yang has been an Assistant Professor at UT-Austin since August 2022. He received his B.Eng. degree from the Tsien Hsue-Shen Class at Tsinghua University in 2013, his Ph.D. from Caltech in 2019, and completed postdoctoral training at the University of Wisconsin–Madison. His honors include a United States **NSF Faculty Early CAREER Award (2025)** and the **ASME Haythornthwaite Research Initiation Award (2023)**. Recent publications have appeared in *PNAS*, *JMPS*, *CMAME*, *EML*, and *Experimental Mechanics*.

How to Apply: Interested Postdoc/PhD candidates are encouraged to contact Dr. Jin Yang directly via email at jin.yang@austin.utexas.edu. Please include: (i) CV; (ii) Brief description of research background and research interests. (iii) Contact info for ≥ 2 references. Applications will be reviewed on a rolling basis until the positions are filled.