

## Ph.D. and Master openings in Robotic Actuation Lab at Arizona State University

The Robotic Actuation Lab (Sun Lab) in the School of Matter, Transport, and Energy (SEMTE) at Arizona State University is seeking multiple highly motivated individuals for fully-funded Ph.D. and Master positions in artificial muscle and soft robotics, starting in Spring or Fall 2024. Ph.D. students will receive tuition coverage and a stipend. The lab's mission is to develop novel actuation and reconfiguration technology to enable robots that are adaptive to different environments, safely interact with humans, and match the adaptivity, robustness, and maneuverability of natural organisms.

### Qualifications:

You are encouraged to apply for the positions regardless of your background as long as you are a quick learner and have a strong passion for building robots that can change the world! Here are the projects you will work on:

Project 1: Modeling and control of shape-morphing robots

1. BS or MS degree in the field of mechanical engineering, computer science, physics, electrical engineering, Civil engineering, or similar.
2. Experiences or interests in at least one: dynamics modeling and control, machine learning, numerical computation, solid mechanics, or computer graphics.
3. Preferred skills: MATLAB/Python/C++, FEA software (Abaqus/Ansys).

Project 2: Artificial-muscle-driven robots

1. BS or MS degree in the field of mechanical engineering, electrical engineering, mechatronics, computer science, or similar.
2. Experiences or interests in at least one: robotic mechanical design, quick prototyping, or mechatronics.
3. Preferred skills: Microcontrollers (Arduino/Raspberry PI), SolidWorks, Linux, and ROS.

### How to apply:

To apply, interested candidates should submit an application to Arizona State University via <https://webapp4.asu.edu/dgsadmissions>, specifying their interest in working with Prof. Sun. Additionally, they should send an email titled "Prospective Ph.D. Student" or "Prospective Master Student" to [jiefeng.sun@asu.edu](mailto:jiefeng.sun@asu.edu), attaching their CV, transcript, and a cover letter before submitting their application. For more information, please visit <https://sunroboticslab.github.io>. Application deadlines for Spring and Fall 2024 are respectively 8/15/2023 and 12/31/2023.

### Useful Links:

MS in ME: <https://degrees.apps.asu.edu/masters-phd/major/ASU00/ESMEMS/mechanical-engineering-ms>

MS in Robotics: <https://degrees.apps.asu.edu/masters-phd/major/ASU00/ESRASMAEMS/robotics-and-autonomous-systems-mechanical-and-aerospace-engineering-ms>

PhD in ME: <https://degrees.apps.asu.edu/masters-phd/major/ASU00/ESMEPHD/mechanical-engineering-phd>

### PI and ASU

Dr. Jiefeng Sun obtained his Ph.D. degree in mechanical engineering from Colorado State University. Before joining ASU, he is a postdoc with Prof. Rebecca Kramer-Bottiglio at Yale University. His work has been selected as the finalist for the best student paper award at the 2018 IROS. He is the associate editor of 2023 ICRA, and he is the Reviewer of the Year 2021 for Smart Materials and Structures Journal, a 2022 DARPA Riser, and an ASME-DSCD rising star. **Arizona State University: Ranking:** #41 Mechanical Engineering, #43 Computer Science\*, #34 Electrical Engineering. **Living:** convenient life in Phoenix metropolitan area; 15 mins to phoenix airport.

