



## JOB POSITION ANNOUNCEMENTS

### *Assistant or Associate Professor in Aerospace and Mechanical Engineering*

#### Position Summary

The Department of Aerospace and Mechanical Engineering invites applications and nominations for three tenure-track/tenured faculty positions at the Assistant and Associate professor level. The three areas of interest are [Autonomous Systems/Robotics](#), [Energy Storage](#), and [Hypersonics](#). These positions are part of the multi-year hiring process associated with growth in the Aerospace and Mechanical Engineering programs, and are aligned with the Tackling Critical Problems at the Edges of Human Endeavor as a pillar within the University's Strategic Plan. A description for each of the specific areas follow:

#### Autonomous Systems/ Robotics (req12635)

Applications of interest include autonomous air, space, ground, and underwater vehicles, robotics, machine learning in guidance and navigation, automation, cooperative/networked control, distributed sensing and estimation, vision-based navigation, mechatronics, system identification, and motion planning. Both theoretical/computational and experimental expertise is of interest. Applicants who exhibit expertise in a combination of these approaches or the ability to collaborate with existing departmental researchers and participate in multidisciplinary collaborations will be viewed favorably.

The Department offers excellent opportunities to collaborate with ongoing related research efforts in robotics, control systems, networked control of UAVs and micro-air vehicles, and spacecraft GNC. Further opportunities on campus include the Department of Planetary Sciences, the Arizona Health Sciences Center, and the Bio5 Institute for Collaborative Bioresearch, the College of Optical Sciences and the Interdisciplinary Program in Applied Mathematics, all of which enjoy international recognition as centers for world-class academic programs and research.

#### Energy Storage (req12636)

Applicants are expected to be proficient in various areas of energy storage technologies including, but not limited to thermo-mechanical, electro-mechanical, and thermal aspects of rechargeable batteries; development and improvement of novel battery types (e.g., solid-state and hybrid) as well as their components; system integration and improvement (e.g., electric vehicles and aircraft). Both experimental and theoretical areas will be considered; however, preferences will be given to experimental expertise. Applicants with complementary expertise who can collaborate with existing faculties and have prior publications in their respective fields will be viewed favorably.

The Department offers excellent opportunities to collaborate inside the AME department, as well as among various departments within the College of Engineering. Departments of Material Science and Chemical Engineering have shared facilities and corresponding expertise in various areas of energy storage technologies.

#### Hypersonics (req12637)

Areas of interest include all aspects of research, both fundamental and applied, that are relevant for hypersonic flight, such as aerothermodynamics, structures, propulsion, thermal protection, and GNC. The Department and College offer excellent opportunities to collaborate with ongoing related experimental research efforts using high-speed and low-speed wind tunnels, high-enthalpy facilities, as well as with theoretical/computational efforts in fluid dynamics, thermal science, solid mechanics, and dynamics & controls.



In our effort towards inclusive excellence, applications from underrepresented minorities are encouraged.

## Duties & Responsibilities

The successful candidates will be expected to establish an externally funded and nationally and internationally recognized research program, teach and develop undergraduate and graduate courses, and contribute to mentoring students, including those from traditionally underrepresented backgrounds. The successful candidate will also be expected to contribute to an environment that nurtures collaboration among researchers across the Department, College and University. The successful candidate will also participate in outreach and contribute to departmental, college, and university service. In these, and other ways, the faculty member will help to develop innovative approaches to enhancing student engagement, increasing diversity, ensuring equity, and expanding collaborations with community and business partners.

## Knowledge, Skills, & Abilities

### Minimum Qualifications

- Ph.D. degree at the time of hire in Aerospace or Mechanical Engineering or a closely related discipline and must provide education credentials during the offer discussions.
- No experience beyond the Ph.D. is required for Appointment at Assistant Rank
- Four years of experience beyond the Ph.D. are required for Appointment at the Associate Rank

## To Apply

Please submit a cover letter, a curriculum vita that includes a list of recent publications; a list of three references with address, email and phone contact information; and a detailed statement of research interests (3 page maximum), teaching/educational philosophy (2 page maximum). The cover letter should clearly state one of the three areas of interest (Autonomous Systems /Robotics, Energy Storage, or Hypersonics). The application should also include a separate one-page statement on how the applicant's scholarship, teaching and service specifically address issues of equity and inclusive excellence in Aerospace and Mechanical Engineering. For full consideration, candidates are encouraged to submit all application material electronically to the University of Arizona's on-line application system at <http://talent.arizona.edu> (Position Posting Numbers above). Review of applications will begin on **January 17, 2023**; however, applications will be accepted until the position is filled. For questions about the positions, please contact Dr. Farzad Mashayek, Professor and Department Head of the Department of Aerospace and Mechanical Engineering ([mashayek@arizona.edu](mailto:mashayek@arizona.edu)). Please note: You will be required to provide contact information for a minimum of three professional references within your application. Should you be selected as a finalist for this position, your references may receive an automatic email. This email will ask your references to complete a brief questionnaire in regard to your suitability for the position as well as request the attachment of a letter of recommendation. The selected candidate will be required to provide higher education credentials during the offer discussions.