

Faculty Position
Department of Systems and Industrial Engineering
The University of Arizona

The Department of Systems and Industrial Engineering (SIE) at the University of Arizona invites applications and nominations for a tenure-track position at all levels (Assistant, Associate, and Full) in Space Domain Awareness (SDA) with an anticipated start date of August 2022. Within SDA, specific areas of interest are (1) space systems engineering, (2) statistical inference and estimation theory, (3) optimization, (4) artificial intelligence, (5) machine learning, and (6) formal methods. More specifically, we seek expertise in theoretical and systems-level methodologies as applied to SDA for space object identification, characterization, and tracking (attitude and orbit determination). Such methodologies include, but not limited to, classical and probabilistic inference theory, methods for filtering and smoothing, machine learning, formal verification, and image processing algorithms for SDA. Expertise in space-based sensors and related algorithms development for Space Traffic Management (STM) applications is of particular interest. Demonstrated ability to conjugate theoretical methodologies with operational SDA is desired. Candidates for senior ranks must have a distinguished record of published research, demonstrated significant impact on the profession, and proven success at securing funding to support a research program. Due to the nature of the SDA research program, the successful candidate must be a U.S. Citizen or hold permanent resident status.

The successful candidate will be expected to establish a strong research program, teach 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 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.

The Department was founded in 1960 as the first degree-granting Department of Systems Engineering in the world. The Department now houses three integrated academic programs leading to Accredited BS degrees in Systems Engineering, Industrial Engineering, and Engineering Management, as well as MS degrees in Systems Engineering, Industrial Engineering, and Engineering Management, and a PhD degree in Systems and Industrial Engineering. Additionally, the Department co-leads the newly established BS degree program in Software Engineering in collaboration with the Electrical and Computer Engineering Department, and also participates in the nationally ranked interdisciplinary MS degree program in Cybersecurity, in partnership with the Eller College of Management.

The University of Arizona, a Research I, Land-grant, Hispanic Serving institution, ranks 20th among public institutions in annual research expenditures, while the Department of Systems and Industrial Engineering is ranked among the top 25 programs by the US News and World Report. The Department has strong programs in the fundamentals of systems engineering, operations research and industrial engineering, including optimization, stochastic systems, data analytics, systems engineering and design, modeling and simulation, informatics, and is involved in several interdisciplinary programs, such as Space Situational Awareness Arizona Initiative, Transportation Research Institute, Defense

and Security Research Institute, Data Science Institute, Institute for Energy Solutions, Arizona Institutes for Resilience, BIO5 Institute, Institute on Place, Wellbeing & Performance, and Additive Manufacturing Initiative. Additional details can be found on the department web page: <http://sie.arizona.edu/>.

Applications must be submitted online at <https://talent.arizona.edu/> (posting #: req7298; [direct link](#)). Candidates should include a curriculum vitae, statement of research and teaching interests, cover letter, and list of references.

At the University of Arizona, we value our inclusive climate because we know that diversity in experiences and perspectives is vital to advancing innovation, critical thinking, solving complex problems, and creating an inclusive academic community. We translate these values into action by seeking individuals who have experience and expertise working with diverse students, colleagues and constituencies. Because we seek a workforce with diverse perspectives and experiences, we encourage minorities, women, veterans, and individuals with disabilities to apply. As an Employer of National Service, we also welcome alumni of AmeriCorps, Peace Corps, and other national service programs.

Applications will be reviewed starting November 15, 2021 and will be accepted until the open position is filled.

Questions should be directed to Professor Roberto Furfaro, Chair of the Search Committee (robertof@arizona.edu), and Professor Young-Jun Son, Head of the Department of Systems and Industrial Engineering (son@sie.arizona.edu) at the University of Arizona.