

# Tenure-Track Assistant Professor in the Resilient Agriculture and Forest Systems Fall 2025

The University of Tennessee – Knoxville (UTK): Knoxville Academic Units: Tickle College of Engineering: Department of Industrial and Systems Engineering

## Location

Knoxville, Tennessee

## Open Date

September 01, 2025

## Description

The Industrial and Systems Engineering (ISE) Department (<https://tikcle.utk.edu/ise/>) at UTK is seeking exceptional candidates to fill one tenure-track position at the Assistant Professor level starting August 1, 2026. This search is part of a cluster hire to add faculty across multiple departments with expertise in resilience in agricultural and forest systems (RAFS). The successful candidate may have a joint appointment with the School of Natural Resources. The RAFS cluster is part of the “*It takes a Volunteer*” cluster hiring initiative at the University of Tennessee, Knoxville (<https://research.utk.edu/cluster-hire/>). The RAFS Cluster will support the resilience of AFS under environmental and economic constraints through research and education collaborations across disciplines and sectors. As part of this institutional priority initiative, new hires will part of an innovation hub that attracts and integrates existing faculty, researchers, and students from dozens of disciplines to develop economically viable and environmentally resilient AFS. Available effective August 1, 2026, the positions will include competitive compensation and a startup package. The Knoxville campus of the University of Tennessee is seeking candidates who have the ability to promote an atmosphere where all members of the university community feel welcome and can thrive.

This new hire will work on complex modeling and digitalization of agricultural/forest product supply systems with a focus on prediction and optimization of production-market-environment interactions. Examples of applications include modeling and optimization of AFS operations under uncertainty, design, development, and optimization of AFS supply chains (including closed loops), and byproduct value maximization.

UTK is the flagship campus of the UT system, land-grant university, and a public Carnegie Research 1 institution. As an 1862 land-grant university and as Volunteers, serving our state and nation is key to our mission. UT enrolls approximately 39,000 students at its Knoxville campus. Under a united leadership across the UT system, university campuses, and colleges, UTK is undergoing transformational changes focused on solving some of the most audacious, pressing problems our country and world face today.

The Tickle College of Engineering (TCE) is in the midst of an unprecedented period of growth and success, including adding over 30 new faculty to the college as part of ambitious hiring campaigns led by Chancellor Donde Plowman and Dean Matthew Mench. The college has set records in research expenditures, enrollment, incoming student GPA, diversity, intellectual property development, and USNWR rank in the past three years. New facilities include the state-of-the-art Zeanah Engineering Complex, the University of Tennessee Manufacturing and Design Enterprise (TN-MADE) facility, and the Innovation South building, now under construction, that will house UTK’s Fibers and Composites Manufacturing Facility (FCMF). TCE currently has 203 tenure/tenure track and 79 non-tenure track faculty in its nine academic departments and offers 11 undergraduate, 16 MS, and 15 PhD/DE degree programs. Affiliated with TCE and located in Tullahoma, Tennessee, the UT Space Institute is a hub of aerospace and defense research. The college is also home to eight research centers and three interdisciplinary institutes. With approximately 4,300 undergraduate and 1,500 graduate students, the college sits 29th among public universities in the most recent U.S. News and World Report graduate rankings. Faculty in the college have won 29 early career awards (NSF, DOE, DARPA, AFOSR, and ARO) since 2016. In FY24, the college had annual research expenditures of \$113.6M.

The ISE Department offers BS, MS, and Ph.D. degrees in Industrial Engineering and MS and Doctor of Engineering degrees in Engineering Management. The Department currently has 13 tenured or tenure-track faculty members and an enrollment of more than 560 students, including 268 UG, 172 MS, and 121 Doctoral students. The Department will increase its faculty size to 25 by 2026, including 16 tenured or tenure-track faculty members and nine full-time teaching or research faculty members. ISE actively interacts with on-campus centers, including the Institute for a Secure and Sustainable Environment, the Reliability and Maintainability Center, the Center for Transportation Research, the state's Institute for Public Service, and so on. Departmental strengths include optimization, data analytics, machine learning, quantum computing, reliability and maintainability, and operational excellence, and their applications in manufacturing, logistics and transportation, supply chain, energy systems, sustainability, and healthcare systems. The annual externally funded research expenditure is more than \$5.4M. The department was ranked 26<sup>th</sup> among all public institutions in the 2025 U.S. News Best Graduate School Ranking. For additional information about the Department, please visit <https://tickle.utk.edu/ise>.

### Qualifications

This hire at the assistant professor level is expected to propose, advocate, shape, and implement the roadmap to establish a strong footprint and nationwide presence in the crosscutting field of Industrial Engineering and AFS. An earned doctorate in Industrial Engineering, Systems Engineering, Operations Research, Agriculture Engineering, Environmental Engineering, or a closely related field is required, and the PhD must be in hand by the time of appointment. The successful applicants will have strong problem-solving and communication skills and the ability to work in an interdisciplinary environment. A strong commitment to teaching excellence and publications in leading journals are expected. Preferred qualifications are teaching experience, industrial experience, and demonstrated ability to attract external funding.

Candidates with the following expertise and experience are preferred:

1. Developing and implementing predictive models to forecast crop and forest system needs (e.g., water, nutrients, pest management) and generating dynamic "prescription maps" for variable-rate technology equipment.
2. Integrating specialized models from different domains (e.g., hydrological, agronomic, economic, ecological) to create holistic decision-support systems that enable comprehensive trade-off analysis for land and resource managers.
3. Applying advanced operations research techniques, such as multi-objective optimization, stochastic programming, and simulation, to integrated decision support systems and digital twins that help stakeholders navigate complex interactions between production, economic, and environmental goals.
4. Creating user-centric visualization tools, interfaces, and dashboards within an integrated decision support system to make business analysis more accessible and present complex data and model outputs in an intuitive and actionable format for decision-makers.

### Application Instructions

Review of applications will begin on October 1, 2025, and will continue until the position is filled. Individuals interested in applying for this position should submit electronically at [apply.interfolio.com/172609](https://apply.interfolio.com/172609).

Applications should include

1. Cover Letter articulating the applicant's interest in and qualifications for this position,
2. Curriculum vitae,
3. Research statement outlining previous and future directions,
4. Teaching and mentoring statement, and
5. Names of three to five references.

For any additional questions, please contact the Search Committee Contact: Dr. Xueping Li , ISE, University of Tennessee, Knoxville, [xli27@utk.edu](mailto:xli27@utk.edu).

## Additional Information

The City of Knoxville is a hidden gem with an elegant and walkable downtown, rich and varied nightlife, intercultural events, vibrant neighborhoods, eclectic restaurants, and amazing access to outdoor activities of all kinds as well as exciting cultural events throughout the year. From Knoxville's TYS Airport, Knoxville has nonstop flights to 22 major airports in the US, including direct flights to cities such as DC, NYC, Atlanta, Chicago, Denver, and Miami, and the surrounding counties have a population of more than 850,000 people. UTK is in Knoxville TN, within an easy driving distance to Nashville, Atlanta, Asheville, and the Great Smoky Mountains National Park.

In addition, the City of Knoxville and the surrounding areas boast great K-12 schools and one of the most highly educated populations in the entire US. From 2007 to 2017, Tennessee's overall economy growth ranked #7 among all 50 US states. In 2019, US News ranked the State of Tennessee in the US as the #1 in fiscal stability, #12 in economy, and #13 in infrastructure.

*All qualified applicants will receive equal consideration for employment and admission without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, gender identity, age, physical or mental disability, genetic information, veteran status, and parental status, or any other characteristic protected by federal or state law. In accordance with the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, the University of Tennessee affirmatively states that it does not discriminate on the basis of race, sex, or disability in its education programs and activities, and this policy extends to employment by the university. Requests for accommodation of a disability should be directed to the ADA Coordinator at the Office of Equity and Diversity, 1840 Melrose Avenue, Knoxville, TN 37996-3560, by email to [oad@utk.edu](mailto:oad@utk.edu), or by phone at 865-974-2498. Inquiries and charges of violation of Title VI (race, color, and national origin), Title IX (sex), Section 504 (disability), the ADA (disability), the Age Discrimination in Employment Act (age), sexual orientation, or veteran status should be directed to the Office of Investigation and Resolution, 216 Business Incubator Building – 2450 E. J. Chapman Drive, by email to [investigations@utk.edu](mailto:investigations@utk.edu), or by phone at 865-974-0717.*