

**Tenure-track Assistant Professor - Artificial Intelligence in Agricultural and Forestry Informatics
University of Tennessee**

9-month joint faculty appointment in Biosystems Engineering & Soil Science and in Electrical Engineering
Computer Science

Closing date: Open until filled

The University of Tennessee's (UT) Institute of Agriculture (UTIA) and Tickle College of Engineering (TCE) are searching for faculty members to strengthen the university's position as a global leader in Artificial Intelligence (AI)-related research. As such, the Department of Biosystems Engineering and Soil Science (BESS) within UTIA and the Department of Electrical Engineering & Computer Science (EECS) within TCE invite qualified applicants to apply for an Assistant Professor tenure-track position in agricultural informatics, appointed primarily in BESS and secondarily in EECS. The Herbert College of Agriculture (HCA), the academic arm of UTIA, has a student body of 1,800 undergraduate and graduate students, dedicated staff, and nationally renowned faculty who are committed to fulfilling the twenty-first century land-grant mission to increase the well-being of our nation and our planet. HCA has seven academic departments and one school, offering many bachelor's, master's, and doctoral degree programs.

Recruitment into the Climate-Smart Agriculture and Forestry Cluster creates opportunities to build bold agendas that advance big ideas. The chosen applicant will join a group of nearly 30 seasoned and successful professors who collaborate and enhance each other's areas of expertise in soil sciences, agricultural informatics, sciences and engineering, computer science and engineering, and machine learning (ML). The team is deeply driven to broaden the academic and instructional influence of their research. The cluster also offers a unique framework for professional development and mentorship within a rich transdisciplinary environment for the candidate who fills this position.

The ideal candidate for this position has a collaborative and interdisciplinary mindset and prioritizes working with colleagues to realize shared research and educational achievements, including large-scale proposals, joint publications, and new transdisciplinary curricular programming. The candidate will also collaborate with BESS and EECS faculty members to develop integrated approaches to address these grand challenges in agriculture. As Tennessee's flagship and land-grant institution, UT is particularly interested in recruiting candidates who are deeply connected to the organizations and communities in which their work will have translational impact. UT is seeking candidates who can contribute in meaningful ways to the diversity and intercultural goals of the University.

The joint position will apply computation and information technologies, such as AI/ML-based data analytics for establishing data systems and scalable modeling platforms to address major challenges in agriculture and forestry at the systems level, such as:

- quantifying and controlling carbon-nutrient-water relationships at field-to-landscape-to-regional scales,
- optimizing cover crop usage and crop rotations for profitable and sustainable carbon-neutral climate-resilient production and soil health,
- applying heterogeneous biosensor-generated data for decision-making and control of crop, animal, and forestry-related production systems,
- addressing response of agricultural systems to climate change and long-term weather forecasting, and
- developing innovative Internet of Things (IoT) and low-power sensing systems for the integration of embedded electronics that serve as data collection platforms to support the above-described AI/ML-based data analytics.

Research Expectations

The successful candidate will develop a thriving internationally recognized research program, evidenced by successful and sustained grants activity, a strong publication record, regional / national / international recognition by peers as an expert in this research area, active mentoring of graduate and undergraduate students and /or post-doctoral researchers, and outreach to stakeholders. Candidates' research programs for both positions should integrate strongly with the objectives of the Climate-Smart Agriculture and Forestry Cluster, as described above.

Teaching Expectations

Successful candidates should be passionate and dedicated educators capable of teaching undergraduate and graduate students from a wide range of academic backgrounds, such as engineering, life sciences, and computer science. Specific courses will be developed as the transdisciplinary Climate-Smart Cluster program evolves.

Required Qualifications

The candidate will hold a doctorate in Biosystems Engineering, Computer Science, Computer Engineering, Environmental Science, Soil Science, or other closely related disciplines and possess excellent verbal and written communication skills and exhibit the ability to sustain their own vibrant research program and the willingness to work in an interdisciplinary environment.

Desired Additional Qualifications

Relevant postdoctoral and/or teaching experience; understanding of the Land Grant mission and experience in communication to farmers and other stakeholder groups of relevance; experience in creating decision-support tools; experience in data analytics and high computational modeling; contextual knowledge of agroecosystem dynamics.

Application Instructions

Applicants should electronically submit their cover letter, vita, teaching and research statement, optional representative publications, and three letters of recommendation to Interfolio (<http://apply.interfolio.com/138845>). Review of applications will begin on February 2, 2024 and continue until the position is filled.

Equal Employment Opportunity Statement

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 accommodations of a disability should be directed to the Office of Equity & Diversity, 1840 Melrose Avenue Knoxville, Tennessee 37996-3560 or oed@utk.edu or (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 & Resolution 216 Business Incubator Building 2450 E.J. Chapman Drive Knoxville, Tennessee 37996 or (865)974-0717 or investigations@utk.edu.

Questions?

Please contact Douglas Hayes (dhayes1@utk.edu) or Gregory Peterson (gdp@utk.edu)