

## ECE Faculty Opening in Robotics/Autonomous Systems Area at UMKC

apply for Job ID 44473 at: <https://info.umkc.edu/hr/careers/academic-positions/>

To support the remarkable developments and future growth opportunities, UMKC has launched a cluster hiring initiative within the Division of Energy, Matter and Systems (EMS). The EMS Division includes the Faculties of Electrical and Computer Engineering (ECE), Mechanical Engineering (ME), Chemistry (CHEM), and Physics & Astronomy (P&A). As part of this cluster hiring, the EMS Division is seeking applications for one (1) tenure-track/tenured faculty positions in Robotics & Autonomous Systems jointly under the Faculties of ME and ECE at the Assistant, Associate, or Full Professor level, starting in Fall 2023.

**Areas of interest** for the *Robotics & Autonomous Systems* Position: We encourage candidates with experience and interest in all areas of Robotics & Autonomous Systems to apply with particular emphasis on: Biomechanical Robotics; Unmanned Aircraft; Human-Machine Teaming; Multi-Agent Systems; Automated Manufacturing; and others. Successful applicants will have access to the state-of-the-art labs and centers related to Motion Capture, Robotics, UAV & Drone, Augmented & Virtual Reality, and other facilities at the SSE and the Missouri Institute of defense and Energy (MIDE). These facilities have been used to support \$50M in externally awarded grants and contracts from various federal agencies including DOD, NSF, and NIH.

**About the Faculties of ME and ECE and the EMS Division:** The Faculties of ME and ECE under the EMS Division of the School of Science and Engineering (SSE) at UMKC have undergone exciting growth in recent years. The Faculty of ECE currently holds the record of the highest active research grants per tenure-system faculty on the UMKC Campus. In addition to individual single-PI grants and projects, the Faculties of ME and ECE currently have many collaborative grants and multidisciplinary projects with the School of Pharmacy, School of Medicine, School of Dentistry, and other STEM and non-STEM units across the campus and beyond. The Faculties of Me and ECE have been instrumental behind the establishment and continued success of the Missouri Institute of Defense and Energy (MIDE), which has become one of the most successful platforms in the entire University of Missouri System in terms of sponsored research and academia-industry-government agency collaboration. MIDE is founded on bridging fundamental physics with applied engineering to solve longstanding challenges in the defense, energy, and related commercial sectors. As of 2021, MIDE has secured \$50M in externally awarded grants and contracts. In 2015, MIDE was presented with the R&D100 award for a defense technology that led to two small businesses and two licensed patents. Two MIDE faculty received the Intel Outstanding Researcher award for their work on next-generation transistors. They are the only recipients from the University of Missouri System since the award's inauguration in 2012.

The EMS Division has been involved in the University of Missouri System's NextGen Data Science and Analytics Innovation Center (dSAIC), which supports university research across the state and plays a critical role in health, business, and workforce development across Kansas City and the region. The EMS Division is the home to the NSF IUCRC Center of Big Learning (CBL), which focuses on deep learning acceleration, model compression, image and video compression, remote sensing, and vision. CBL currently has several transdisciplinary projects sponsored by NSF programs, such as Smart Connected Community (SCC) and Improving Undergraduate STEM Education (IUSE) and aims to improve AI and Data Science research and education. The interdisciplinary and multi-campus collaboration activities have created an open, collaborative research and education platform. Examples include NIH and NSF funded research projects in AI/Machine Learning for Virtual Surgery, Bioinformatics and more with the Schools of Medicine, Dentistry, Pharmacy, and Nursing as well as St Luke's Medical Center, Children's Mercy Research Institute, and Stowers Institute for Medical Research. The Faculty of ME has been leading UMKC's efforts to establish new programs in Aeronautical Engineering, Robotics, Remote Surgery, and Sustainable Manufacturing.

The SSE recently added a new 58,000 sq. ft. state-of-the-art facility at the cost of \$40 million to support multidisciplinary education, research, and economic development initiatives. Some of the key components of this new facility are NextGen Data Science and Analytics Innovation Center (dSAIC), Augmented and Virtual Reality Lab, Robotics Lab, Motion Capture Lab, UAV & Drone Lab, Innovation Studio & 3D Printing Lab, and High-Performance Computing Lab. In addition to the BS (ABET-accredited), MS, and Ph.D. programs, the Faculties of ME and ECE are playing key roles in several new interdisciplinary degree programs in Biomedical Engineering and Cybersecurity.

### Minimum Qualifications

The candidates must have a Ph.D. in Mechanical Engineering, Electrical and Computer Engineering or a closely related discipline.

The successful candidates are expected to:

- (1) develop and sustain an extramurally funded research program;
- (2) have a strong commitment to teaching courses in the department's undergraduate and graduate programs to a diverse student body;
- (3) engage in departmental, school, or university services appropriate to the position;
- (4) demonstrate the ability to collaborate effectively with students, colleagues, and community partners from diverse backgrounds and experiences; and
- (5) advance the goals and strategic plan of UMKC and the School of Science and Engineering.

### Full Time/Part Time

This is a 9-month, full-time benefit-eligible, tenure-eligible ranked faculty appointment to begin in the Fall 2023 semester. The salary is negotiable and commensurate with rank, qualifications, success in research funding and experience.

### Application Deadline:

To be considered, you must apply online by Jan 15<sup>th</sup>, 2023 through this UMKC online recruitment portal and use as follows:

Applicants should compile all application materials in one PDF file (not to exceed 8 MB), including a cover letter highlighting qualifications, a curriculum vitae, a research statement and success in external funding, a teaching statement (including teaching experience), demonstrated commitment to diversity, equity and inclusion through scholarship and teaching, and contact information of three references.

Comments

UMKC is in the heart of Kansas City, a world-class computing and engineering hub home to companies such as Cerner, Ericsson, IBM, SS&C, Garmin, and Honeywell (defense contracts) that provide enriching educational partnerships for SSE students and faculty. Kansas City is a vibrant, diverse, urban community with championship professional sports teams, a rich history of cultural arts and music, some great barbeque and ethnic cuisine, and a dedicated community support for higher education.