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Job Title Department Institution	Tenure Track Faculty Manufacturing & Mechanical Eng Tech Rochester Institute of Technology Rochester, New York
Date Posted	Oct. 3, 2024
Application Deadline Position Start Date	Open until filled August 2025
Job Categories	Assistant Professor
Academic Field(s)	Robotics Mechatronics Mechanical Engineering Manufacturing & Quality Engineering
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Job Description

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Tenure Track Faculty 9206BR College of Engineering Technology CET Manufacturing & Mechanical Eng Tech

Faculty Type (Tenure Status): Tenure-Track Faculty Discipline: Faculty Rank: Assistant Professor, Associate Professor Employment Category:



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Fulltime
Anticipated Start Date: 13-Aug-2025

Detailed Job Description

The Manufacturing and Mechanical Engineering Technology (MMET) department in RIT's College of Engineering Technology (CET) is currently seeking applications from exceptional candidates for a fulltime, tenure-track position to support the Mechanical, Robotics & Manufacturing, and Mechatronics Engineering Technology programs. This position is open at the level of tenure-track Assistant or Associate Professor. Salary range will adjust if hired at Associate Professor level.

Position Overview:

Candidates for this position will be expected to teach, publish, and conduct externally funded research in areas related to Mechatronic Systems, with a strong emphasis on Automated Manufacturing Systems, and Artificial Intelligence (AI) & Machine Learning (ML) related to the manufacturing enterprise. Key expertise areas include:

- Mechatronic Systems: Expertise in the design, analysis, and control of mechatronic systems, integrating mechanical, electrical, and computer engineering principles.
- Control Theory and Applications: Strong understanding of control theory and its applications, including feedback control, PID controllers, state-space control, and advanced control techniques for mechatronic systems.
- Sensors and Actuators: Knowledge of various types of sensors and actuators used in mechatronic systems, such as position sensors, force/torque sensors, encoders, motors, and pneumatic/hydraulic actuators.
- Embedded Systems: Proficiency in embedded systems design and programming, including microcontrollers, real-time operating systems, firmware development, and interfacing with sensors and actuators.
- Machine Learning and Artificial Intelligence: Experience in applying ML and AI techniques to mechatronic systems. This includes data-driven modeling, pattern recognition, predictive maintenance, and intelligent control strategies. Proficiency in using ML/AI tools and frameworks to enhance the performance and capabilities of mechatronic systems.
- Industrial/Manufacturing Experience: Practical experience in industrial or manufacturing settings is valued but not required.

Responsibilities:

• Teaching: Develop and deliver undergraduate and graduate courses and laboratories, with a focus on integrating AI and ML into mechatronic systems education. Engage in curriculum



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development to ensure the programs stay current with industry trends and technological advancements. Student engagement in the classroom using activity based pedagogical strategies is expected. Participation in KEEN and other effective teaching workshops is required.

- Research: Conduct research in a well-defined focus area related to mechatronic systems and AI/ML, secure external funding, and publish findings in peer-reviewed journals. Areas of research could include intelligent mechatronic system design, development and implementation, AI-driven control systems, digital twin technologies, and predictive analytics in manufacturing. CET has invested in the development and growth of Research Impact Areas: Forging our Future; Toward a Safer Society, Expanding Human Capacity. These faculty-led collaborative research groups leverage existing expertise and nurture the next generation of faculty leadership.
- Service: Contribute to the department, college, and university through committee work and other service activities. Maintain a clear professional development agenda to support the department's growth and keep abreast of advancements in AI and ML applications in engineering technology.

Candidates for this position will be expected to teach, publish, and conduct externally funded research in areas related to Mechatronic Systems. Successful candidates will be expected to have a strong emphasis on using artificial intelligence (AI) and machine learning (ML) tools and frameworks to enhance the performance and capabilities of mechatronic systems. This includes data-driven modeling, pattern recognition, predictive maintenance, and intelligent control strategies.

We invite candidates who are passionate about teaching and research in the field of mechatronic systems with a significant focus on AI and ML. We are looking for individuals committed to advancing the integration of these cutting-edge technologies in our programs and contributing to the growth and success of our department.

We are seeking an individual who has the ability and interest in contributing to RIT's <u>core values</u>, <u>honor</u> <u>code</u>, and <u>statement of diversity</u>.

Department/College Description

The College of Engineering Technology (CET) is home to nine undergraduate and six graduate programs. It is one of RIT's nine colleges and enrolls approximately 12% percent of the university's students. CET prides itself on its constant evolution, innovation, and global outreach via online learning, corporate education, and international programs. CET is known throughout the RIT, national, and international communities as an excellent choice for an education that embraces the integration of "hands-on-minds-on learning" and application-based instruction grounded in science, technology, engineering, and mathematics (STEM) (www.rit.edu/cet). CET supports all students in an inclusive



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learning environment and welcomes a diverse student body where first generation and AALANA (African American, Latin American and Native American) represent greater than 20% of our undergraduate population.

The Department of Manufacturing and Mechanical Engineering Technology (MMET) is home to approximately 850 students and offers three Bachelors of Science and one Master of Science Degree Programs. Each program specializes in providing an experiential learning environment through integrated laboratory activities, innovative projects, and applied research. To gain real world experience, each student completes a year of co-operative work experience in industry. Our programs are strongly career focused and hence the department enjoys an outstanding record of successfully preparing students for industry.: (www.rit.edu/mmet).

Required Minimum Qualifications

- A Ph.D. in Mechanical, Mechatronics, Micro-Electronics, Robotics Engineering, or an earned doctorate in a related field.
- Demonstrated knowledge and potential to teach in one or more of the following areas: Mechatronics system design and development, Instrumentation, Sensors, or Applied Control Systems.
- A strong publication record in reputable, peer-reviewed journals.
- Previous experience in securing external funding for research is highly desirable.
- Ability to contribute in meaningful ways to the college's continuing commitment to cultural diversity, pluralism, and individual differences.



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Required Minimum Education Level

PhD

Required Application Documents

Cover Letter, Curriculum Vitae or Resume, List of References, Research Statement, Statement of Diversity Contribution, Statement of Teaching Philosophy

How To Apply

HOW TO APPLY:

Apply online at <u>http://careers.rit.edu/faculty</u>; search openings, then Keyword Search 9206BR. . Please submit your application, curriculum vitae, cover letter addressing the listed qualifications and upload the following attachments:

- A brief teaching philosophy
- The names, addresses and phone numbers for three references
- <u>Contribution to Diversity Statement</u>
- A research statement

You can contact the search committee with questions on the position at: Rachel Mathews, rkfsss@rit.edu

The direct link to this posting can be found here: https://sjobs.brassring.com/

Additional Details

RIT does not discriminate. RIT is an equal opportunity employer that promotes and values diversity, pluralism, and inclusion. For more information or inquiries, please visit RIT/TitleIX or the U.S. Department of Education at ED.Gov.

Hourly/Salary Minimum: 92000 Hourly/Salary Maximum:100000



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Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

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Manufacturing & Mechanical Eng Tech Rochester Institute of Technology