

Research Faculty - AI for Surgical Simulation and Skill
Assessment
Florida A&M University - Florida State University College
of Engineering

Direct Link: <https://www.AcademicKeys.com/r?job=268481>

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Posted Nov. 19, 2025, set to expire Apr. 2, 2026

Job Title	Research Faculty - AI for Surgical Simulation and Skill Assessment
Department	Office of the Dean https://eng.famu.fsu.edu/
Institution	Florida A&M University - Florida State University College of Engineering Tallahassee, Florida
Date Posted	Nov. 19, 2025
Application Deadline	Open until filled
Position Start Date	Available Immediately
Job Categories	Research Scientist/Associate Research Professor
Academic Field(s)	Mechanical Engineering Computer Science Engineering - Other
Job Website	https://jobs.fsu.edu
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Job Description	

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Office of the Dean, FAMU-FSU College of Engineering

(12- Month, Permanent, Non-Tenure Track Position)

Position Overview:

Artificial intelligence (AI) and immersive simulation are redefining how surgeons learn—enhancing training outcomes, reducing errors, and improving patient safety.

Florida State University (FSU) invites applications for a Research Faculty position in AI for Surgical Simulation and Skill Assessment, housed within the FAMU-FSU College of Engineering.

This position offers an exciting opportunity to join a growing interdisciplinary research program that integrates AI, computer vision, and virtual reality (VR) to create next-generation systems for surgical training and evaluation. The successful candidate will help design AI-driven, data-informed simulation platforms that objectively assess performance, accelerate skill acquisition, and enable adaptive, personalized learning.

The position is ideally suited for a researcher passionate about combining machine learning, real-time simulation, and human performance modeling to create intelligent, interactive environments that enhance both technical precision and decision-making in surgery. The candidate will collaborate across departments and research centers, publish in leading journals, mentor students, and play an active role in securing competitive external funding to expand this rapidly advancing area.

Responsibilities:

- Conduct research in AI-enabled surgical simulation and video-based skill assessment.
- Develop novel algorithms and techniques for real-time simulation, workflow analysis, and performance evaluation.
- Integrate deep learning and computer vision approaches into VR/AR surgical training systems.
- Collaborate with faculty members and researchers from medical schools to advance the field of surgical simulation and assessment.
- Design and execute human subjects studies, in partnership with clinicians and human factors experts, to evaluate system effectiveness and training outcomes.
- Prepare and submit competitive research proposals for external funding.
- Publish research findings in high-quality journals and present them at leading conferences.
- Mentor graduate students and postdoctoral researchers.

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Qualifications:

- Doctoral degree in Computer Science, Mechanical Engineering, or a related discipline.
- Experience in C/C++ and Python programming, computer graphics, haptics, or physics-based real-time computing.
- Proficiency in machine learning and deep learning frameworks such as TensorFlow, PyTorch, or Scikit-learn.
- Experience in video-based assessment, computer vision, or VR/AR simulation development is strongly preferred.
- Excellent communication and interpersonal skills
- Demonstrated ability to work collaboratively with other faculty members and researchers from diverse backgrounds.
- Strong publication record in relevant areas of research
- Demonstrated ability to secure external funding
- Experience in mentoring graduate students and postdoctoral researchers is preferred

About the College

The FAMU-FSU College of Engineering is a joint college of two nationally recognized universities, Florida A&M University and Florida State University, located in Tallahassee, Florida. The college offers undergraduate and graduate degree programs across six departments.

The successful candidate will have the opportunity to collaborate with world-class researchers through the College's many interdisciplinary centers, including the High-Performance Materials Institute, Center for Advanced Power Systems, and the InSPIRE Institute. The position will be based in the Artificial Intelligence, Imaging, and Medical Simulation (AIMS) Laboratory, a state-of-the-art facility at FSU dedicated to advancing AI-driven surgical simulation, video-based skill assessment, and intelligent training technologies.

Appointment and Application

This is a **12-month, permanent, non-tenure-track** faculty appointment at **Florida State University** with a competitive salary and benefits package. The starting date for this position is negotiable.

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If qualified and interested in the position, **apply to Florida State University at <https://jobs.fsu.edu>** (**Job ID: 61578**), with (i) a letter of interest, (ii) most current curriculum vitae, (iii) a research statement, (iv) the names and contact information of three references, and (v) An Equal Employment Opportunity Survey for Faculty Applicants ([An Equal Employment Opportunity Survey for Faculty Applicants](#)).

Review of applications will begin immediately and will continue until the position is filled. Questions about the position should be directed to Dr. Suvranu De, Search Committee Chair, at sde@eng.famu.fsu.edu.

Criminal Background Check

This position requires the successful completion of a criminal history background check. The background check will be conducted as authorized and in accordance with FSU Policy 4-OP-C-7-B11.

Equal Employment Opportunity

Florida State University is an Equal Employment Opportunity Employer.

Contact Information

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

Contact Dr. Suvranu De, Search Committee Chair
Office of the Dean
Florida A&M University - Florida State University
College of Engineering
2525 Pottsdamer Street
Tallahassee, FL 32310

Contact E-mail sde@eng.famu.fsu.edu