Artificial Intelligence Initiative (Aii)

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Invited Speaker

Dr. Pegah Khosravi, City University of New York



"From Vision to Translation: Advancing Biomedical AI for Multimodal Diagnostics and Precision Medicine"

Monday, June 30, 2025 • 2:00PM • R1 101 • Zoom

Abstract:
Artificial Intelligence has become central to innovation in medical diagnostics, offering unprecedented potential for precision, scalability, and clinical relevance. In this seminar, I will share my research journey at the intersection of deep learning, biomedical imaging, and translational medicine, from foundational modeling to the development of deployable, explainable AI systems.

I will present AutoRadAI, the latest translational output from my lab, a modular artificial intelligence framework developed to enhance preoperative staging in prostate cancer by predicting extracapsular extension (ECE) using T2-weighted MRI with ground truth labels derived from postoperative histopathology. Designed to support intraoperative decision-making, AutoRadAI provides probabilistic assessments that can guide surgeons in determining the appropriate surgical margin and extent of dissection. The system was trained and validated on a cohort of 1,001 patients and outperforms human-level benchmarks.

Beyond current applications, I will outline my vision for collaborative AI-driven healthcare innovation, including efforts in cancer diagnostics, reproductive medicine, digital pathology, and neurologic disease detection. My goal is to contribute to UCF's AI Initiative through interdisciplinary research that translates into meaningful clinical impact across diagnostic and educational domains.

Bio:
Dr. Pegah Khosravi is an Assistant Professor of Biomedical AI at the City University of New York, with joint appointments at New York City College of Technology and the CUNY Graduate Center. She teaches courses in machine learning, programming, and data analytics across undergraduate and graduate levels, bridging theory with real-world clinical applications. Her research focuses on developing advanced AI algorithms for the analysis of complex medical data, with a particular emphasis on radiology, pathology, and multimodal imaging.

Dr. Khosravi is the founder of the BioMind AI Lab, which fosters student-led innovation in biomedical AI. She serves as Co-Chair of AI for the Society of Robotic Surgery (SRS) Annual Meeting and as Senior Deputy Editor for the Journal of Magnetic Resonance Imaging (JMRI), where she curates high-impact AI research. Outside of academia, she enjoys storytelling as a way to humanize science and inspire new ways of thinking.