

Fully Funded PhD/Postdoc Positions Computer Science

Computer Science · Biomedical Engineering · Electrical & Computer Engineering
Medical Foundation Models · Agentic Medical AI · Brain-Inspired AI

ABOUT THE SMILE LAB

The UF Smart Medical Informatics Learning and Evaluation (SMILE) Lab is a leading research group at the intersection of artificial intelligence and biomedicine. Our work has produced landmark contributions including the first publicly released brain foundation models (BrainSegFounder), whole-head segmentation and modeling for brain stimulation digital twins, and landmark neurodegenerative disease prediction and precision intervention systems. Our research appears in top-tier venues including Nature Computational Science, JAMA Neurology, The Lancet Digital Health, npj Digital Medicine, Medical Image Analysis, IEEE TMI, PNAS Nexus, ICCV, and MICCAI. The lab is continuously funded by NSF, NIH, Meta, NVIDIA, and AFRL, and maintains deep collaborative networks spanning Harvard Medical School, Stanford, Massachusetts General Brigham, Mayo Clinic, Indiana University, NYU, and NVIDIA Research.

WHAT YOU WILL ACCESS


- **Computing Power:** UF HiPerGator — one of the nation’s most powerful academic GPU supercomputers, featuring 500+ NVIDIA B200 GPUs and 60,000+ CPUs.
- **Exclusive Data:** Rare multimodal clinical datasets from UF Health, including MRI, fMRI, diffusion MRI, deep brain stimulation (LFP/EEG), non-invasive brain stimulation (tDCS), cognitive assessments, and rich clinical narratives.
- **Global Collaborations:** Active collaborations with Harvard, Stanford, Mayo Clinic, MGH, Indiana University, NYU, NVIDIA, Meta, and Sakana AI. Internship and visiting scholar opportunities available at Harvard, Mayo Clinic, and NVIDIA.


PRINCIPAL INVESTIGATOR


Ruogo Fang, Ph.D. | Pruitt Family Endowed Associate Professor, UF Biomedical Engineering

- Research featured in Forbes, Washington Post, and ABC News
- President, Women in MICCAI (2023–2025)
- MICCAI Area Chair
- Associate Editor, Medical Image Analysis and Frontiers in Human Neuroscience
- NAM Emerging Leaders in Health and Medicine (ELHM) Scholar
- Recipient, UF Doctoral Dissertation Advisor/Mentoring Award

ALUMNI OUTCOMES

 Faculty & postdocs at Mayo Clinic and Ivy League institutions

 Researchers at major medical centers and clinical institutes

 Applied Scientists & Engineers at Microsoft and Amazon

 Leaders in medical AI startups and research labs



RESEARCH THEMES

- Multimodal Medical Foundation Models
- Brain-Inspired and Neuroscience-Guided AI
- Agentic AI for Brain Health and Clinical Decision Support
- Trustworthy and Equitable AI for Neurodegenerative Disease

QUALIFICATIONS

Postdoctoral Researcher

- Publication record in top venues: NeurIPS, ICLR, CVPR, ICCV, ICML, MICCAI, and/or leading journals in medical image analysis, computer vision, or machine learning
- Strong self-motivation and demonstrated ability to independently acquire new skills and drive research projects

PhD Student

- Solid foundation in programming and computational methods; proficiency in Python, PyTorch, or related frameworks
- Background in machine learning, computer vision, medical imaging, neuroscience, or a closely related area
- Prior research experience through undergraduate projects, summer programs, or a master's thesis
- Strong written and oral communication skills for paper writing and conference presentations
- Collaborative spirit and enthusiasm for interdisciplinary, translational research

WHAT WE OFFER

- Fully funded PhD package covering tuition, stipend, and health insurance
- Competitive postdoctoral salary and benefits package
- Conference travel support to leading AI and medical imaging venues
- Access to top-tier GPU computing resources and rare clinical datasets
- Structured mentorship, career development planning, and a collaborative lab culture
- Opportunities to work on high-impact translational research bridging AI and medicine

HOW TO APPLY

Please compile the following into a single email:

- CV with full publication list
- Unofficial transcripts (PhD applicants)
- Research statement (1–2 pages)
- Contact information for 2–3 references
- Links to code repositories or representative papers (optional)

Send to: ruogu.fang@ufl.edu with subject line: **SMILE Lab Postdoc/PhD Application — [Your Name]**

Informal inquiries are warmly welcomed.