Multi-Institutional Postdoc Position in Machine Learning for CT

Applications are invited for a postdoctoral position involving work on numerous challenges at the intersection of machine learning, CT imaging, and theory. The postdoc will work on multiple problems in these domains. Potential topics include learning-based algorithms and theory for extremely limited-view tomographic reconstructions, machine learning for dynamic tomography in the presence of scatter, physics-informed machine learning and network architectures, etc. The research will include developing and analyzing new mathematical and learning-based models and algorithms and solving related fundamental questions. The postdoc will work jointly with multi-institutional teams including with Prof. Saiprasad Ravishankar at Michigan State University, Prof. Jeffrey Fessler at the University of Michigan, and Dr. Marc Klasky in the Theoretical Division at Los Alamos National Laboratory, to achieve breakthroughs on the key problems above.

Candidates must have a background in machine learning as well as some of the above areas and should be highly motivated to perform rigorous scientific research both independently and collaboratively and have a strong vision for leadership in research. Candidates should have (or expect to have soon) a PhD degree in Electrical or Computer Engineering, Computer Science, Biomedical Engineering, Mathematics, or related fields, and should have good programming skills.

Interested candidates should email Prof. Ravishankar (ravisha3@msu.edu) and include their main interests and a CV with their publication and academic record.

Postdoc Position in Unsupervised Deep Learning for Imaging

We invite applications for a postdoctoral position involving work on numerous challenges at the intersection of unsupervised deep learning, low-dimensional modeling, and computational imaging. The postdoc will work on multiple problems in these domains, to develop mathematical and algorithmic foundations for deep unsupervised learning for scientific imaging with improved efficiency and guaranteed correctness, by leveraging modern tools from high-dimensional geometry, harmonic analysis, and numerical optimization. The postdoc will work collaboratively with multi-institutional teams including with Prof. Saiprasad Ravishankar and Prof. Rongrong Wang at Michigan State University, and Prof. Qing Qu and Prof. Jeffrey Fessler at the University of Michigan. The postdoc will have joint appointments at these institutions.

Candidates must have a strong background in machine learning and optimization as well as some of the above areas and should be highly motivated to perform rigorous scientific research both independently and collaboratively and have a strong vision for leadership in research. Candidates should have (or expect to have soon) a PhD degree in Electrical & Computer Engineering, Computer Science, Biomedical Engineering, Applied Mathematics, or related fields, and should have strong programming skills.

Interested candidates should email Prof. Ravishankar (ravisha3@msu.edu) or Prof. Qu (qingqu@umich.edu) and include their main interests and a CV with their publication and academic record, along with a brief research statement (of past research and future plans) and contact information for two or three references. We will contact candidates for interview after initial review.