

Machine Learning in Scanning Transmission Electron Microscopy

AReMS

Workshop in Knoxville, TN
June 3-7, 2024



THE UNIVERSITY OF
TENNESSEE
KNOXVILLE

INSTITUTE FOR ADVANCED
MATERIALS & MANUFACTURING

at

Institute of Advanced Materials and Manufacturing

2641 Osprey Vista Way

Knoxville, TN 37996

Learn how Modern Electron Microscopy
and
Advanced Machine Learning
benefit your research!

Register here



by May 23rd

Tentative Program (<https://github.com/gduscher/MLSTEM2024>)

June 3rd:

8:00 Registration Opens

9:00-12:00 Aberration Correction

12:0-1:00 Lunch (provided)

1:00: 500 Atom Finding and Segmentation of Atomic Resolution Micrographs

June 4th:

9:00-12:00 Diffraction

12:0-1:00 Lunch (provided)

1:00: 500 4D STEM

June 5th:

9:00-12:00 Spectroscopy in STEM: EELS, EDS, and others

12:0-1:00 Lunch (provided)

1:00: 500 EDS Analysis with Machine Learning

June 6th:

9:00-12:00 Advanced Machine Learning Tools: Deep Convolutional Networks and Autoencoders

12:0-1:00 Lunch (provided)

1:00: 500 EELS Analysis with Machine Learning

June 7th:

9:00-12:00 ML + STEM = Automated STEM!

12:0-1:00 Lunch (provided)

1:00: 300 Bayesian Optimization for active learning

This is a hybrid workshop (online and in-person)

Details on Github

