Machine Learning in
Scanning Transmission Electron Microscopy

AReMS

Supported by NSF

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

Details on Github

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