2024 Workshop on Methods for 3D Microstructure Studies

August 14-16, 2024

Agenda

Day 1, Wednesday, August 14, 2024

8:45 – 9:00	**Greg Rohrer**, Carnegie Mellon University Introductions and overview of the workshop
	Invited Speakers 1
9:00 – 9:45	**David Rowenhorst**, US Naval Research Laboratory, 3D Characterization using serial sectioning
9:45 – 10:30	**Michael D. Uchic**, Air Force Research Laboratory, Correlative multi-modal analysis in 3D
10:30 – 10:40	Break
	Invited Speakers 2
10:40 – 11:20	**Kiana Naghibzadeh,** MIT, Simulating grain growth in 3D using grain boundary energies that vary with five grain boundary parameters
11:20 – 12:00	**Sean Donegan**, Air Force Research Laboratory, Overview of Dream3D
12:00 – 1:00	Lunch Break (boxed lunches provided)
1:30 – 2:15	**Sean Donegan,** Air Force Research Laboratory Analysis of serial section data using DREAM3D
2:15 – 3:45	**Sean Donegan**, Air Force Research Laboratory Meshing & Smoothing microstructures using DREAM3D
3:45 – 4:00	Break / Workshop Picture
4:00 – 4:30	**Greg Rohrer**, Carnegie Mellon University, Extracting grain boundary properties from 3D data
4:30 – 5:00	**Marc DeGraef**, Carnegie Mellon University, EMsoft Overview
5:15 – 7:00	**All** Refreshments provided on the MSE Deck

Note for day 1. For those planning to participate in the tutorial for plugin development on Day 3, it is recommended that you set up the development environment on your computer in advance. A representative of BlueQuartz Software will be available throughout Day 1 to assist with this. If you prefer to begin this prior to the workshop, contact Mike Jackson at mike.jackson@bluequartz.net.

Day 2, Thursday, August 15, 2024

9:00 – 10:00	**Sean Donegan**, Air Force Research Laboratory Generating 3D microstructures with DREAM3D, part 1
10:00 – 10:10	Break
10:10 – 11:20	**Sean Donegan**, Air Force Research Laboratory Generating 3D microstructures with DREAM3D, part 2
	Invited speakers 3
11:20 – 12:05	**Reeju Pokharel**, Los Alamos National Laboratory, 3D Characterization using X-ray Microscopy
12:05 – 1:00	Lunch Break (boxed lunches provided)
1:00 – 1:30	**Hemant Sharma,** Argonne National Laboratory, MIDAS: High Energy X-ray Diffraction Analysis Software Package
1:30 – 2:00	**Jonathan D. Almer**, Argonne National Laboratory, Opportunities for 3D Studies at the Upgraded APS
2:00 – 2:15	Break
	Enter parallel sessions for the remainder of the day
2:15 – 5:00	**Scott Hall 5201: Sean Donegan et al.**, Air Force Research Laboratory Hands on help session: time to practice running Dream3D, problem solving, time to work on your own 3D data sets, with experts available for assistance.
2:15 – 5:00	**Scott 6142: Mike Jackson**, Bluequartz Software Translating Software Tools into Plug-ins for DREAM3D using Python bindings
6:00 – 8:00	All Optional no-host dinner at the Porch (https://www.dineattheporch.com/schenley)

Day 3, Friday, August 16, 2024

9:00 – 10:30	**Mike Jackson**, BlueQuartz Software Advanced DREAM3D-NX features
10:30 – 10:45	Break
10:45 – 12:15	**Mike Jackson and others**, BlueQuartz Software Hands on help session

12:15: Adjourn