Agenda

Day 1, Wednesday, August 17, 2022

08:45 – 09:00  Greg Rohrer, Carnegie Mellon University
Introductions and overview of the workshop

09:00 – 10:00  Amanda Krause, Carnegie Mellon University, Observations of grain
growth with 4D x-ray diffraction microscopy
Jerard Gordon, University of Michigan, Evaluating grain scale
deformation behaviors in complex concentrated alloys via synchrotron
high energy diffraction microscopy

10:00 – 10:30  Sean Donegan, Air Force Research Laboratory
Overview of Dream.3D

10:30 – 10:45  Break

10:45 – 11:30  Krzysztof Stopka, Purdue, Modeling fatigue using digital
microstructures: Applications of DREAM.3D

11:30 – 12:15  Tony Rollett, Carnegie Mellon University, Microscale Structure - to -
Properties Challenge with the MIDAS Data Set.

12:15 – 1:30  Lunch Break (boxed lunches provided)
1:00 – 1:30  Betsy Clark, Carnegie Mellon University
Tour of Microscopy Lab (optional)

1:30 – 2:45  Sean Donegan, Air Force Research Laboratory
Analysis of serial section data using DREAM.3D

2:45 – 4:00  Sean Donegan, Air Force Research Laboratory
Meshing & Smoothing microstructures using DREAM.3D

4:00 – 4:15  Break / Workshop Picture
4:15 – 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 18, 2022

9:00 – 10:00  Sean Donegan, Air Force Research Laboratory
Generating 3D microstructures with DREAM.3D, part 1

10:00 – 10:15  Break

10:15 – 11:15  Sean Donegan, Air Force Research Laboratory
Generating 3D microstructures with DREAM.3D, part 2

11:15 – 12:00  Greg Rohrer
Grain Boundary Crystallography and Grain Boundary Properties

12:00 – 1:30  Lunch Break (boxed lunches provided)

1:30 – 2:15  Long-Qing Chen, Penn State, An efficient software tool for computing effective properties of 3D microstructures

2:15 – 3:00  Victoria M Miller, University of Florida, Capturing crystallographic texture and its evolution during processing

3:00 – 3:15  Break

3:15 – 5:00  Sean Donegan and others, Air Force Research Laboratory
Hands on help session: time to practice running Dream.3D, problem solving, time to work on your own 3D data sets, with experts available for assistance.

6:00 – 8:00  All  Optional no-host dinner at the Porch

Day 3, Friday, August 19, 2022

9:00 – 10:30  Mike Jackson, BlueQuartz Software
Translating Software Tools into Plug-ins for DREAM.3D

10:30 – 10:45  Break

10:45 – 12:15  Mike Jackson and other, BlueQuartz Software
Hands on help session

12:15: Adjourn