

2017 MOSAIC MURI Review

Dr. Ali Sayir | December 18-19, 2017 | Arlington, VA

Basic Research Innovation and Collaboration Center (BRICC)
4075 Wilson Blvd., Suite 350 | Liberty Room
Arlington, VA 22203

Agenda Day 1 | Monday, December 18, 2017

Time	Topic	Speaker
8:00-8:30	Registration	
8:30-9:00	Intro and Review	Marc DeGraef, Carnegie Mellon University
9:00-10:00	New Insights into the Dynamics of Solidification Through 4D Tomography	Peter Vorhees, Northwestern University Charlie Bouman/ Mary Comer Purdue University
10:00-11:00	Statistical Analytics for 4D datasets / Quantifying Microstructural Evolution	Peter Vorhees, Northwestern University Ahmet Cecen, ExxonMobil Chemicals
11:00-11:20	BREAK	
11:20-12:20	Deep Learning for Structure-property Linkages in high contrast composites	Ankit Agrawal, Northwestern University Alok Choudhary, Northwestern University Ahmet Cecen, ExxonMobil Chemicals
12:20-1:30	LUNCH	
1:30-2:30	A CNN Architecture for the Indexing of Electron Diffraction Patterns	Ankit Agrawal/ Alok Choudhary Northwestern University Marc DeGraef, Carnegie Mellon University
2:30-3:30	Vector Field Electron Tomography	Charlie Bouman Purdue University Marc DeGraef, Carnegie Mellon University
3:30-3:50	BREAK	
3:50-4:50	Data Sampling Schemes for Microstructure Design with Vibrational Tuning Constraints	Ankit Agrawal, Northwestern University Alok Choudhary, Northwestern University Veera Sundararaghavan, University of Michigan

5:00	MEETING ADJOURN
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Agenda Day 2 Tuesday, December 19, 2017		
Time	Topic	Speaker
8:00-8:30	Registration	
8:30- 9:30	Software Presentation [EMsoft/MBIR/...]	Marc, Carnegie Mellon University Ahmet Cecen, ExxonMobil Chemicals, Charlie Bouman, Purdue University Veera Sundararaghavan, University of Michigan
9:30-10:30	Algorithms for the Discovery of Functional Materials	Richard James, University of Minnesota Kaushik Bhattacharya, Caltech Marc De Graef, Carnegie Mellon University
10:30-10:50	BREAK	
10:50-11:50	Markov Random Fields for Microstructure Synthesis: Examples and Validation	Veera Sundararaghavan, University of Michigan Ahmet Cecen, ExxonMobil Chemicals Marc De Graef, Carnegie Mellon University
11:50-12:50	Microstructure Representation and Data Compression	Kaushik Bhattacharya, Caltech Richard James, University of Minnesota
12:50-1:00	Wrap-up	Marc De Graef, Carnegie Mellon University Jean-Luc Cambier, AFOSR Ali Sayir, AFOSR
1:00	MEETING ADJOURN	