

# 6<sup>th</sup> Midwest Imaging and Microanalysis Workshop at Notre Dame

*New Trends in In-situ and High Resolution Electron Microscopy for Nanotechnology, Materials and Bio-Sciences*

**Monday, May 6<sup>th</sup>, 2019**

Location: McKenna Hall - Room 100-104 (Lectures); Stinson-Remick Hall - Room B03 (TEM Tours)

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## **1<sup>st</sup> Day: May 6<sup>th</sup>, 2019**

8:30 am – Registration, NDIIF EM Facility Tour sign-up, Poster set-up (McKenna Hall, 1<sup>st</sup> Floor Atrium)

### **Session 1. Chair Sergei Rouvimov** (McKenna Hall – Room 100–104)

9:00 – 9:05 am Welcome to Notre Dame, Bradley Smith, Director, NDIIF

9:05 – 9:10 am Opening: Sergei Rouvimov, TEM Program Director, NDIIF, Workshop Organizer

9:10 – 9:40 am "Discovering Hidden Material Properties of Ziegler-Natta Catalysts at Atomic Resolution with Structured Temporal Electron Illumination of Picosecond Time Resolution", Christian Kisielowski, Lawrence Berkeley National Laboratory

9:40 – 10:10 am "Probing Structures and Properties in Materials Using Scanning Electron Diffraction", Roberto Reis, Northwestern University

10:10 – 10:40 am "Imaging and Diffraction Experiments on Quantum Computing Materials", Michael Capano, Purdue University

### **10:40 – 11:00 am – COFFEE BREAK**

### **Session 2. Chair: Alex Mukasyan** (McKenna Hall – Room 100-104)

11:00 – 11:25 am "STEM-EDS with Aztec: Fast Acquire & Fast TRU Interpretation", Warren MoberlyChan, Oxford Instruments Nanoanalysis

11:25 – 11:50 am "Electron Detectors for Imaging and Spectroscopy", Ray D. Twesten, Gatan Inc.

11:50 – 12:15 pm "World of Microanalysis - Advances in EDS", Mark Kelsey, Bruker Nano Analytics

12:15 – 12:40 pm "New Detectors for Faster/Better Data in S/TEM Systems", Jan Ringnalda, Thermo Fisher Scientific, Inc.

### **12:40 – 1:40 pm LUNCH and POSTER SETUP/VIEWING – McKenna - Lower Level Banquet Room**

### **Session 3. Chair: Sarah Chapman** (McKenna Hall – Room 100–104)

1:40 – 2:10 pm "Cryo-EM: Single Particle Imaging with Phase Plate and Improved 3D Tomographic Reconstruction Method", Wen Jiang, Purdue Cryo-EM Facility

2:10 – 2:35 pm New Trends in Cryo-TEM" Jeff Lengyel, Thermo Fisher Scientific, Inc.

2:35 – 2:55 pm "DENS solutions - The value of In Situ TEM", David Westmoreland, DENS Solutions

2:55- 3:15 pm "Effects of Bisphosphonate Ligands and PEGylation on Targeted Delivery of Gold Nanoparticles for Contrast-Enhanced Radiographic Detection of Breast Microcalcifications", Tracie McGinnity, University of Notre Dame

3:15 - 3:30 pm "Best Biological Imaging Publication Award 2018", Yide Zhang, University of Notre Dame

3:30 - 3:45 pm "Best Electron Beam Imaging Publication Award 2018", Michael Brennan, University of Notre Dame

3:45- 4:00 pm Tribute to Bill Archer, Optical Microscopy Manager

### **4:00 – 5:25 pm POSTER SESSION** (McKenna Hall – Posters – Lower Level Banquet Room)

5:25 pm **POSTER Awards and Prizes Announcements**

5:40 pm – 6:00 pm **MWIM AND NDIIF Business Meeting**

### **7:00 pm DINNER for Speakers**

## **2<sup>nd</sup> Day: May 7<sup>th</sup>, 2019**

9:00 am – 12:00 noon **Tour of NDIIF EM Facility and Oxford EDS Demo**

12:00 – 1:00 pm **Lunch/Discussion Female Students in Microscopy, NDEMC President, Location: "Legends".**

1:00 – 3:00 pm **Tour and DENS Demo at NDIIF EM Facility**

Note: A detailed schedule will be provided at the registration.

For additional workshop information and campus map visit: <http://imaging.nd.edu> Sponsors: Thermo Fisher Scientific, Inc., Gatan, Bruker, DENS Solutions, NDIIF, ND Energy, ND Nano, EE Department, AME Department, ND Research, ND College of Engineering, ND College of Science