MRS/Kavli Future of Materials: Biosensors and Biodiagnostics Workshop

Presented by MRS Bulletin
8 am-5 pm, December 3, 2016
Commonwealth Room, Boston Sheraton Hotel, Boston, MA

PROGRAM

AM Session: In Vivo Sensors and Probes (8 am-noon)
8:00 Breakfast and registration
9:00 Introduction – Nathan Gianneschi (Chair)
9:10 Summary of opportunity space for biosensor research – David Walt (Chair)

AM Talks: Clinical Perspectives, multimodal imaging opportunities, cellular tracking and expression profiling, imaging cellular processes
9:30 Robert Mattrey
10:00 Eric Ahrens: Designing Novel Imaging Probes and Methods for Clinical Fluorine-19 MRI Cell Tracking
10:30 Break
10:40 Adam Cohen: Engineering Electrically Active Tissues
11:10 Panel Discussion – Trends, challenges, opportunities, and high impact collaborations
11:50 Wrap-up of AM Session

Working Lunch (12:15-1:15 pm)
Talk by Hongkun Park: CMOS Nanoelectrode Array for All-Electrical Intracellular Electrophysiological Imaging

PM Session: Ex Vivo or In vitro Sensors and Probes (1:30-5 pm)
1:30 Summary of opportunity space for Ex Vivo or In vitro Sensors and Probes - Nathan Gianneschi

PM Talks: In vitro diagnostics with advanced nanomaterials, Novel detection strategies, Portable, sensitive detection strategies
1:45 Tim Swager: Dynamic Droplets for Biosensing
2:15 Charles Mace: Using Paper-Based Microfluidic Devices to Bring Hematology to the Point-of Care
2:45 Shana Kelley: Biomolecular Detection using 3D Electrodes
3:15 Break
3:30 Panel Discussion – Trends, challenges, opportunities, and high impact collaborations
4:30 Wrap-up of PM Session

4:45 Concluding Remarks & Wrap-Up of Workshop
- Nathan Gianneschi and David Walt