CPAC Spring Members' Meeting

May 6–7, 2019 Agenda

Sunday, May 5, 2019 (5:30- 7:30 pm) Informal Reception at Watertown Hotel 4242 Roosevelt Way NE, Seattle 98105

APL-UW, Hardisty Conference Center, Henderson Hall

Monday, May 6

8:50-9:00	Welcome by Brian Marquardt, UW, APL, CPAC
9:00-9:10	Program Introduction by Mel Koch, UW, APL, CPAC *Comments on the Value of Multidisciplinary Activities – remembering Bruce Kowalski*
9:10-9:35	*Multi-Disciplinary Research-an Engine for Innovation* Dianna Blair, Sandia National Laboratory
9:35-10:00	*Industrial Case Study, 3-hydroxypropionic acid (3-HP) in the Shell Propanediol Process* Paul Weider, Shell
10:00-10:25	Break
10:25-10:50	*Handheld Terahertz Telecentric Scanner for 3D Imaging in Clinical Settings and Non-Destructive Testing Applications* Hassan Arbab, NYU Stonybrook, NY
10:50-11:15	New Technology Talk – *The Development of Portable Real-Time PCR Instruments for POC Testing* Bill Nelson, Tetracore
11:15-11:40	New Technology Talk *On-line Chiral Process Analysis by Molecular Rotational Resonance Spectroscopy* Rina Dukor, BrightSpec, Inc
11:40-12:00	Introduction of Meeting Participants
12;00 –1:00	Lunch
1:00 – 1:20	Update on CPAC Activities Mel Koch, CPAC

1:20 – 1:45	New Technology Talk - *Innovations in Process Raman* Giora Proskurowski, MarqMetrix
1:45 - 2:10	New Technology Talk *Fluidic Analyzers for Process Control* Jamin Hoggard and Ilkka Lahdesmaki, FIA Labs,
2:10 – 2:35	Industry Case Study *SIFT-MS, A Discontinuous Innovation to Replace Finished Product Release for Odor by Panelist* Brian Goodlander, Procter and Gamble,
2:45 -3:15	Break
3:15-4:15	Lightning (5 minute) talks by students to introduce their talks and / or posters. Paige E. Sudol: (Synovec UW Chemistry) *Impact of data bin size using Principal Component Analysis (PCA) to distinguish GC×GC chromatograms of diesel fuels* Sonia Schoneich: (Synovec UW Chemistry) *High Speed GCxGC-TOFMS with Chemometric Deconvolution* Timothy J. Trinklein: (Synovec UW Chemistry) *Defining the optimum pressure ratio in GC x GC with negative pulse partial modulation* Sep Makhsous: (Mamishev SEAL Laboratory, UW Electrical Engineering) *AeroSpec- Personal Air Monitoring Solutions* Andrew Hall: (Mamishev SEAL Laboratory Electrical Engineering) *Ammonia Sensing with Single-Walled Carbon Nanotubes* Sophia Fricke (Augustine UC Davis Chemistry) *MRI applied to process analysis* Daniele Pascoli (Bura UW Forestry) *Ethanol production from poplar clean chips and whole-tree chips: effects of biomass preprocessing on ethanol yield and overall process economics* Daniele Canzani (Bush UW Chemistry) *Quantifying the Relative Abundance of Interactions Partners with Proteins*
4:15-5:30	Poster session
6:00	Dinner at Ivar's Alaskan Salmon House

	Hardisty Conference Center **Tuesday, May 7**
8:15-8:20	CPAC meeting overview, Mel Koch, Brian Marquardt, UW, APL, CPAC
8:20-8:45	*Automated concentration ratio determination using Fisher Ratio assisted mass spectral selectivity* Sarah E. Prebihalo and Robert E. Synovec, UW Chemistry
8:45-9:10	*Gaining a fundamental understanding of fuel performance through advanced chemical composition measurements* Kelsey L Berrier and Robert E. Synovec, UW Chemistry
9:10-9:35	*Advancing pulse flow valve injection for ultrafast separations in gas chromatography* Derrick Gough and Robert E. Synovec, UW Chemistry
9:35-10:10	Break
10:10-10:35	*Magnetic Resonance Imaging applied to Process Analysis* Sophia Fricke, Matt Augustine Chemistry and Michael J. McCarthy Food Science, University of California, Davis
10:35-11:00	*Ammonia Sensing with Single-Walled Carbon Nanotubes* Andrew Hall and Alexander Mamishev, SEAL Laboratory Electrical Engineering, UW
11:00-11:25	*Continuous manufacturing system for pharmaceutically useful proteins, and monitoring with a NeSSI system and Surface Plasmon Resonance (SPR) Based Assays* Clement E. Furlong, Medical Genetics, UW
11:25-12:00	Questions for morning speakers and discussion
12:00-1:10	Lunch (dining with a student is encouraged)
1:10-1:35	*Ethanol production from poplar clean chips and whole-tree chips: effects of biomass preprocessing on ethanol yield and overall process economics* Renata Bura, Forest Resources

1:35-2:00	*New Characterization Tools for Biomolecules*, Matt Bush, UW Chemistry
2:00-2:25	*Advances in Micro-Chip Research* J Chris Rudell, UW, EE
2:25-3:00	*Implementing PAT Analysis for Continuous Flow Reaction Monitoring* Brian J. Marquardt, APL, CPAC
3:00-3:20	Break
3:20-3:50	*TBA*
4:00	General meeting concludes
4:30-7:00	Reception and Lab tour, MarqMetrix Inc, 2157 N. Northlake Way #240