Nano-Bio Manufacturing Consortium

Blood, Sweat & Tears III
November 2 - 3, 2016 – Arlington, VA

NBMC Workshop – Day 1 Agenda

END USERS & RELIABILITY ISSUES **Chair:** Melissa Grupen-Shemansky, Laura Rea, Laura Sowards		
8:00 – 8:30	**CONTINENTAL BREAKFAST**	
8:30 – 8:50	Welcome	Jeff Stuart, Ph.D. *Lockheed Martin*
8:50 – 9:15	Wearable Eccrine Sweat Biosensing: Uncovering The Real Challenges That Lie Ahead	Jason Heikenfeld, Ph.D. *University of Cincinnati*
9:15 – 9:40	Biomarkers for Biosensors: What do They Mean?	Dr. Esther Sternberg *University of Arizona Center for Integrative Medicine*
9:40 – 10:05	Host-Based ChemBio Exposure Monitoring	Dr. Christian Whitchurch *Defense Threat Reduction Agency*
10:05–10:30	NIST: Mission, Metrology, and Standards	Peter Vallone, Ph.D. *NIST*
10:30-10:50	**BREAK**	
10:45-11:10	FDA Oversight of Digital Health Including Wearables	Sonali Gunawardhana *Wiley Rein LLP*
CHEMISTRY/MICROFLUDICS **Chair:** Azar Alizadeh & Perry Skeath		
11:10-11:35	Bio-inspired Microfluidics	Prof. Dermot Diamond, DSc, Ph.D., MSc, BSc, FRSC, MRIA, MICI *Dublin City University*
11:35 -12:00	Biomarker Concentrations and Detection in Bodily Fluids	Andrew J. Steckl, Ph.D. *University of Cincinnati*
12:00-12:25	Lateral Flow Assays and Point of Car Devices – Detecting Infectious Diseases in Low Resource Settings	Ralf Lenigk, Ph.D. *General Electric*
12:25 - 1:25	**LUNCH**	
POWER, COMMUNICATION & ELECTRONICS **Chair:** Chuck Woychik & Doyle Edwards		
1:25 - 1:50	Considerations for FHE Architectures in Evolving Products	Girish Wable *Jabil Circuit*
1:50 - 2:15	Development of a Catheter: A Case Study in Material Selection, Design and Process Development for a High Yield and Reliable Medical Device	Denis Barbini, Ph.D. *Universal Instruments*
2:15 - 2:40	An Inverted-F Antenna Design for a Flexible Hybrid Electronic Human Performance Monitor	Vincent Baker *Lockheed Martin*
2:40 – 3:05	FlexTrate®: High Interconnect Density Fan-Out Wafer Level Processing for Flexible Bio-compatible Electronics	Subramanian Iyer, Ph.D. *UCLA*
3:05 - 3:20	**BREAK**	
SENSORS **Chair:** Melanie Tomczak & Heidi Hoffman		

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3:20 - 3:45	Mega Challenges Provide Mega Sensing Opportunities	Stephen Whalley *MEMS & Sensor Industry Group*
3:45 - 4:10	Low-cost Air Pollution Sensors for Environmental and Occupational Health	Kirsten Koehler, Ph.D. *John Hopkins University*
4:10 - 4:35	The Nanotechnology for Sensors and Sensors for Nanotechnology Signature Initiative	Dorothy Farrell, Ph.D. *National Institutes of Health, National Cancer Institute and NNCO Panel*
4:35 – 5:00	Closing Remarks	Dr. Melissa Grupen-Shemansky *NBMC*
5:30 - 8:30	**NETWORKING DINNER**	

NBMC Workshop – Day 2 Agenda

8:00 – 8:30	**CONTINENTAL BREAKFAST**			
8:30 – 8:40	Welcome			Rich Vaia, Ph.D. & Laura Rea *Air Force Research Laboratory*
8:40 – 9:10	Opportunities and Challenges for the National Nanotechnology Initiative			Lloyd Whitman, Ph.D. *White House Office of Science and Technology Policy*
9:10 – 10:10	**BREAK OUTS:**	Environment Monitoring Affecting Performance	Human Performance Under Extreme Conditions	Medical Monitoring
10:10–10:30	**BREAK**			
10:30-11:30	(cont.) Break Outs			
11:30-11:50	**LUNCH**			
11:50–12:50	Speaker Panel with Conclusions			
12:50-1:00	**CLOSING & ADJOURN**			Jeff Stuart, Ph.D., *Lockheed Martin* & Dr. Melissa Grupen-Shemansky, *NBMC*