

KY Nano + AM Symposium



DAY 1

"Strengthening Industry Collaborations with Academia"
Location: Speed Art Museum, University of Louisville

TIME		DATE: August 1, 2018
8:00 AM		Registration and Continental Breakfast (Atrium)
8:30 AM		Introduction and Kickoff (Grand Hall) UofL President Neeli Bendapudi , Professor Kevin Walsh (conf chair) and Professor Shamus McNamara (technical chair)
9:00 AM		Keynote Speaker (Grand Hall) <i>Transforming Entertainment Through 3D Printing/Additive Manufacturing/Materials into a Physical Reality</i> Jason Lopes , Production Studio Lead, Carbon
Session 1	Location: Grand Hall	Location: Speed Cinema
TIME	Additive Manufacturing and 3D Printing - Part 1 Chair: Tim Gornet	Academic Interactions with Industry Chair: Matt Hawthorne and John Naber
9:45 AM	<i>Melt Pool Analysis and Meso-Scale Simulation of Laser Powder Bed Fusion Process with Ti-6Al-4V Powder Particles</i> Santosh K. Rauniar	<i>The Benefits of University Partnerships</i> John Gant
10:00 AM	<i>Net-Shape Ambient Temperature Metal Additive Manufacturing Using Acoustic Energy</i> Anagh Deshpande	<i>Commercialization Opportunities with the University of Louisville</i> T. Allen Morris
10:15 AM	<i>Open-Architecture Metals Additive Manufacturing: An Emerging Disruptive Influence on an Already Disruptive Technology</i> Olga Ivanova	<i>Industry Coop Opportunities with Academia</i> Mary Andrade
10:30 AM	<i>Increasing the Piezoelectric Responses of Polyvinylidene Fluoride Additively Manufactured Components</i> Niknam Momenzadeh	<i>Capstone Opportunities for Industry</i> Erica Gabbard
10:45 AM	Break	
Session 2	Location: Grand Hall	Location: Speed Cinema
TIME	Nanotechnology Chair: Ali Oquz Er and John Balk	Accessing University-Affiliated Research Facilities - Part 1 Chair: Todd Hastings and Dan Popa
11:00 AM	<i>Microfabrication and Characterization of AlGaAs/GaAs heterojunction Bipolar Transistors (HBTs)</i> Qingzhou Xu	<i>The NSF NNCI KY Multiscale Manufacturing Site – Open for Business</i> Kevin Walsh
11:15 AM	<i>Characterization of Novel Microreactors for Breath Analysis</i> Qi Li	<i>MicroNano Technology Center</i> Julia Aebersold
11:30 AM	<i>Characterization of Self-Assembled Nanostructures from Evaporated Drops of Bourbon Whiskey</i> Stuart Williams	<i>Rapid Prototyping Center</i> Tim Gornet
11:45 AM	<i>Understanding the Photophysics, Synthesis, and Doping Effects of Graphene Quantum Dots</i> Rosemary Calabro	<i>Conn Center for Renewable Energy Research</i> Thad Druffel
Noon- LUNCH	<i>Location: Atrium and Grand Hall</i> Comments by UofL Speed School of Engineering Dean Emmanuel Collins followed by Flash Poster Presentations	
1:30 PM	Keynote Speaker (Grand Hall) <i>3D Printing at HP: Driving Manufacturing Transformation</i> David Tucker and David Woodlock , HP 3D Printing	
Session 3	Location: Grand Hall	Location: Speed Cinema
TIME	Micro-Electro Mechanical Systems (MEMS) Chair: Stuart Williams and Qingzhou Xu	Accessing University-Affiliated Research Facilities - Part 2 Chair: Julia Aebersold and Mahendra Sunkara
2:15 PM	<i>A Microfabricated Electrochemical Sensor for Continuous, On-Site Analysis of Arsenic in Water</i> Kelsey Kaht	<i>The University of Kentucky Center for Nanoscale Science and Engineering (CeNSE)</i> Todd Hastings
2:30 PM	<i>Wireless Incontinence Monitoring System for Improved Health</i> Saliya Kirigeegamage	<i>The UK Electron Microscopy Center (EMC)</i> John Balk
2:45 PM	<i>Dimensional Dependence of X-Ray Radiation Damage in MEMS Devices</i> Pranoy Deb Shuvra	<i>Partnering to Develop Healthcare Technology Solutions that Improve the Lives of the Aging Population</i> Pamela Adams
3:00 PM	<i>Reduced-Order Dynamical Models for Microrobots Driven by Laser Light</i> Zhong Yang	<i>First Build, GE Appliances Co-Creation Community</i> Larry Portaro
3:15 PM	Panel Discussion (Grand Hall) <i>Navigating the Industry University Landscapes</i> Panelists: Mehdi Yazdanpanah (CEO of Nauganneedles), John Naber (Entrepreneur/UofL ECE Professor) and Erica Gabbard (Director of Co-op and Industry Engagement) Moderated by Charles Helms (Economic Development Manager at Louisville Forward)	
4:00 PM	Break	
4:15 PM	Tours: MNTC, GE First Build, RPC, Conn Center	
5:00 PM	Reception, Poster Session and Networking (Atrium and Art Terrace) Introductory Comments by Louisville Mayor Greg Fischer	



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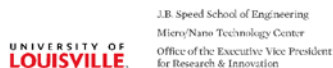
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DAY 2

"Strengthening Industry Collaborations with Academia"
Location: Speed Art Museum, University of Louisville

TIME		DATE: August 2, 2018	
8:00 AM		Registration and Continental Breakfast (Atrium)	
8:30 AM		Introduction (Grand Hall)	
8:45 AM		Keynote Speaker (Grand Hall) <i>3D Printing of Multi-Functional Structures</i> Eric MacDonald , Youngstown State University and America Makes	
Session 4 TIME		Location: Grand Hall Additive Manufacturing and 3D Printing - Part 2 Chairs: Tom Berfield and Tom Starr	Location: Speed Cinema BioEngineering and Life Sciences Chair: Jill Steinbach-Rankins and Michael Martin
9:30 AM	<i>Materials and Process Design for Metal Fused Filament Fabrication</i> Paramjot Singh	<i>An Ultrasound-Integrated Microfluidic Platform to Enhance Intracellular Molecular Delivery</i> Johathan Kopechek	
9:45 AM	<i>Embedding Sensing Capabilities in an FDM-Printed Object</i> Garrett McGrady	<i>Fast Nanoscale Imaging of Live Cells Using an Adaptive Hopping Probe Ion Conductance Microscope</i> A Catalina Velez-Ortega	
10:00 AM	<i>Exploring Structural Metamaterials: From Single to Multiple Scales</i> Li Yang	<i>Structural and Functional Characterization of ATP Nanoliposomes with Potential for Accelerating Delayed Diabetic Wound Healing and Injured Spinal Cord Regeneration</i> Girish Kotwal	
10:15 AM	<i>Mechanistic Insights of the Acid-Catalyzed Synthesis of Diphenolic Acid as a Plastic Precursor for 3D Printing Applications</i> Md Shahin Rahaman	<i>BAR-Encapsulated Nanoparticles against P. Gingivalis Biofilm Formation</i> Mohamed Mahmoud	
10:30 AM	<i>Vat Photopolymerization of All-Aromatic Polyimides</i> Jana Herzberger	<i>Ultrasound-Enhanced Molecular Delivery to Red Blood Cells in a Microfluidic System for Dry Storage</i> Emily Murphy	
10:45 AM		Break	
Session 5 TIME		Location: Grand Hall Opportunities for Industry Chair: John Gant and Mary Andrade	Location: Speed Cinema Processing and Fabrication - Part 1 Chair: Thad Druffel and Hui Wang
11:00 AM	<i>Manufacturing Economic Growth</i> Scott Herrmann	<i>Laser-Assisted Micro-Patterning on NiTi Shape Memory Alloys</i> Saidjafarzoda Ilhom	
11:15 AM	<i>Workforce Education and Training for Production of Additive Metals</i> Ed Tackett	<i>Ion Channels Reconstituted in Synthetic Block Copolymers</i> Michael D. Martin	
11:30 AM	<i>Additive Manufacturing and its Economic Impact on Kentucky</i> Eric Wooldridge	<i>Amphiphilic Janus Gold Nanoplates for Supramolecular Assembly</i> Emtias Chowdhury	
11:45 AM	<i>Louisville's Entrepreneurial Resources</i> Lisa Bajorinas	<i>Roll-to-Roll Fabrication of Solar Cells Through Process and Chemistry Engineering</i> Amir H. Ghahremani	
Noon- LUNCH		Keynote Speaker (Grand Hall) <i>Merging Scales: Nanoscale Principles, Additive Technologies</i> Mitchell Meinhold CS Draper Laboratories	
1:30 PM		Keynote Speaker (Grand Hall) <i>Think Like an Innovator, Act Like an Entrepreneur</i> Dr. Angeliqe Johnson CEO/Founder of MEMStim LLC	
Session 6 TIME		Location: Grand Hall Processing and Fabrication - Part 2 Chair: Xiao-An Fu and Li Yang	Location: Speed Cinema Energy Chair: Noppadon Sathitsuksanoh
2:15 PM	<i>Rapid Photonic Processing of Films in Roll-to-Roll Applications</i> Thad Druffel	<i>New Liquid Synthesis of Solid-State Electrolytes for the Next Generation Batteries</i> Hui Wang	
2:30 PM	<i>Electron-Beam Induced Deposition and Etching Using Liquids: A Path to Nanoscale Rapid Prototyping with Functional Materials</i> Todd Hastings	<i>Novel Bio-Derived Solvents for Biofuels Production</i> Anwar Hossain	
2:45 PM	<i>Laser Metals Additive Manufacturing Process Simulation Software Landscape</i> Tim Gornet	<i>Advanced Materials and Processes for Addressing Renewable Energy Challenges</i> Mahendra Sunkara	
3:00 PM		Panel Discussion (Grand Hall) <i>Frontiers in Additive Manufacturing: 3D Printing the Human Body</i> Panelists: Jerry Grant (UofL Dental School) and Stuart Williams (UofL Medical School) Moderated by Ed Tackett (UofL Speed School of Engineering)	
3:45 PM		Break	
4:00 PM		Tours: MNTC, GE First Build, RPC, Conn Center	



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