

Agenda

DAY 1 – Tues, March 21, 2017

Location: Days Inn Penn State, Room: Centre/Arbor

- 7:30-8:00a** **Breakfast / Registration**
- 8:00-8:15a** **Opening Address**
Neil Sharkey, Vice President of Research, Penn State University
- 8:15-8:25a** **Programmable and Wearable Molecular Composites – Welcome**
Mauricio Terrones, Professor of Physics, Chemistry and Materials Science & Engineering, Department of Physics; Co-Director for Center for Research on Advanced Fiber Technologies, Materials Research Institute, Penn State University
- 8:25-8:35a** **Center for Research on Advanced Fiber Technologies Intro**
Melik Demirel, Professor of Engineering Science and Mechanics, Department of Engineering Science and Mechanics; Director for Center for Research on Advanced Fiber Technologies, Materials Research Institute, Penn State University
- 8:35-9:05a** **Quantified Walk: Knitted Prototype for Gait Monitoring**
Felecia Davis, Assistant Professor at the Stuckeman Center for Design and Computation, Penn State University
- 9:05-9:35a** **Metatextiles: Challenges and Opportunities**
Genevieve Dion, Associate Professor in the Antoinette Westphal College of Media Arts & Design; Director of the Shima Seiki Haute Technology Laboratory, Drexel University
- 9:35-9:50a** **Break**
- 9:50-10:20a** **Reaching Down and Up From 2D: The 1D Growth Edge and Property Tuning Through 3D Deformations**
Vincent Crespi, Distinguished Professor of Physics, Materials Science and Engineering, and Chemistry, Penn State University

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- 10:20-10:50a** **Self-Dispersed Ultrafine Particles with Crumpled Paper Ball-Like Shape**
Jiaxing Huang, Associate Professor of Materials Science and Engineering,
Northwestern University
- 10:50-11:20a** **2D Materials for Electronics Applications in Solution**
Marija Drndic, Professor of Physics and Astronomy, University of Pennsylvania
- 11:20a-12:20p** **Lunch** (Linden/Grove)
- 12:30-2:30p** **Laboratory / Facility tours**
- 2:30-3:00p** **Computation Modeling of Knitted Textiles using the Finite Elements Method**
Antonios Kontsos, Associate Professor, Mechanical Engineering & Mechanics
Dept.; Director of Theoretical & Applied Mechanics Group; Assistant Director for
Center for Functional Fabrics, Drexel University
- 3:00-3:30p** **Mapping Physical, Chemical and Electronic Structure of 2D Materials at the Atomic Scale**
Lena Kourkoutis, Assistant Professor of Applied and Engineering Physics, Cornell
University
- 3:30-4:00p** **Smart Fabrics – What to Sense and How to Sense**
Srinivas Tadigadapa, Professor of Electrical Engineering, Penn State University
- 4:00-5:10p** **Panel Discussion: The State of the Advanced Textile Industry**
- David Fecko, Penn State, Moderator
 - John Siggins, Ben Franklin Technology Partners of Central & Northern PA
 - Dr. Pravin Sitaram, Haartz Corporation
 - Prof. Genevieve Dion, Drexel University
 - Dr. Mahai Ibanescu, AFFOA Project Engineer
- 5:10-5:30p** **Break**
- 5:30-6:15p** **Poster Reception** (Town Square Atrium)
- 6:15-8:30p** **Dinner** (Linden/Grove)

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DAY 2 – Wed, March 22, 2017

Location: Days Inn Penn State, Room: Centre/Arbor

- 7:30-8:00a** **Breakfast** (Linden/Grove)
- 8:00-8:30a** **Modeling Biological Interactions with 2D Materials**
Binquan Luan, Research Staff Member, IBM Computational Biology Center
- 8:30-9:00a** **Applications of the Reaxff Force Field for Identifying Reactive Properties of 2D-Materials and Their Interfaces**
Adri van Duin, Kenneth Kuan-You Kuo Early Career Professor, Professor of Mechanical and Nuclear Engineering, and Chemical Engineering, Director of the Materials Computation Center, Penn State University
- 9:00-9:30a** **Energy Efficient Electronics Based on 2D Materials**
Saptarshi Das, Assistant Professor of Engineering Science and Mechanics, Penn State University
- 9:30-9:50a** **Break**
- 9:50-10:20a** **Assembly and Disassembly of Layered Materials**
Tom Mallouk, Evan Pugh University Professor of Chemistry, Biochemistry and Molecular Biology, Physics, and Engineering Science and Mechanics; Department Head of Chemistry; Associate Director of Penn State MRSEC; Director of the Center for Solar Nanomaterials, Penn State University
- 10:20-10:50a** **Animals as Models for Robot Mobility and Autonomy: Crawling, Walking, Running, Climbing and Flying**
Roger Quinn, Arthur P. Armington Professor of Engineering, Case Western Reserve University
- 10:50-11:20a** **2D Materials Beyond Graphene**
Mauricio Terrones, Professor of Physics, Chemistry and Materials Science & Engineering, Department of Physics; Co-Director for Center for Research on Advanced Fiber Technologies, Materials Research Institute, Penn State University

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- 11:20-11:50a** **Ultrafast Pump-Probe Laser Thermometry on Proteins**
Patrick Hopkins, Associate Professor of Mechanical and Aerospace Engineering,
University of Virginia
- 11:50a-12:20p** **2D Biomolecular Composites in Terahertz Region**
Melik Demirel, Professor of Engineering Science and Mechanics, Department of
Engineering Science and Mechanics; Director for Center for Research on
Advanced Fiber Technologies, Materials Research Institute, Penn State University
- 12:20p** **Wrap-Up / Adjourn**

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