

2017 Duke ECE Graduate Student Workshop and Distinguished Lecture

Friday, September 8, 2017

Registration

11:00 am **Registration Begins** (*Registration available all day*)

Welcome and Outstanding Dissertation Presentation

11:30 am – 1:00 pm Lunch

11:30	Lunch service begins
12:00 – 12:10	Dr. Drew Hilton, ECE Director of Graduate Studies: Welcome
12:10 – 12:15	Dr. Ben Lee: Introduction of Alumni Speaker Qiuyun Llull
12:15 – 12:45	Dr. Qiuyun Llull, 2016-17 Outstanding ECE PhD Dissertation Winner: “Microeconomic Models for Managing Shared Datacenters”

5-minute Oral Presentations (with brief Q&A)

1:00 – 2:30 pm **Session 1: Signal and Information Processing and Robotics**

1:00 – 1:10	Dr. Missy Cummings: "Research in the Humans and Autonomy Laboratory"
1:10 – 1:20	Ehsan Abadi (Samei): “Virtual Clinical Trials in Medical Imaging”
1:20 – 1:30	Adam Konneker (Hauser): “Online Volumetric Segmentation: Computation and Evaluation”
1:30 – 1:40	Fan Wang (Hauser): “Robot Button Pressing in Human Environments”
1:40 – 1:50	Daniel Reichman (Collins): “A Big Picture Look at Applying Artificial Intelligence and Deep Learning to Finding Landmines”
1:50 – 2:00	Kedar Prabhudesai (Collins): “A Topic Model for Clustering Sleep EEG Signals”
2:00 – 2:10	Dr. Guillermo Sapiro: "Democratizing Health Care? The Solution Is in Your Pocket"
2:10 – 2:20	Dr. Galen Reeves: “Information Theory + Big Data”
2:20 – 2:30	Break – Coffee, tea, and water available

2:30 – 3:45 pm **Session 2: Computer Engineering & Microelectronics, Photonics and Nanotechnology**

2:30 – 2:40	Dr. Miroslav Pajic: “Design of High-Assurance Cyber-Physical Systems”
2:40 – 2:50	Vuk Lesi (Pajic): “Security-Aware Scheduling of Embedded Control Tasks”
2:50 – 3:00	Zhanwei Zhong (Chakrabarty): “Adaptive Error Recovery in MEDA Biochips”
3:00 – 3:10	Shalin Shah (Reif): “Localized DNA Hybridization Chain Reactions on DNA Origami”
3:10 – 3:20	Joseph Andrews (Franklin): “Fully-Printed Electronic Biosensors for the Assessment of Severe Acute Malnutrition”
3:20 – 3:30	Dr. Yiran Chen: “What is Neuromorphic Computing?”
3:30 – 3:45	Break – Coffee, tea, and water available

3:45 – 4:45 pm Session 3: Engineering Physics & Team Design Challenge	
3:45 – 3:55	Dr. Edgard Ngaboyamahina: “Reinventing the Toilet: Improving Waste Management in Developing Regions”
3:55 – 4:05	Roberto Zecca (Smith): “Metamaterial Design of Volume Holograms”
4:05 – 4:15	Mike Boyarsky (Smith): “Metasurface Antenna Constellations for Multistatic Spaceborne Synthetic Aperture Radar”
4:15 – 4:25	Insang Yoo (Smith): “Tailoring Radiation Pattern of a Cavity-Backed Metasurface Antenna”
4:25 – 4:35	Tripp Spivey (Kim): “Characterization of a Compact Cryogenic Package Approach to Ion Trap Quantum Computing”
4:35 – 4:45	Dr. Martin Brooke: “ECE 590 Team Design Challenge”

Evening Poster Session

4:45 – 6:00 pm Light hors d’oeuvres and beverages	
4:45	Bar open, passed hors d’oeuvres
4:45 – 6:00	Poster Session
Zhanwei Zhong (Chakrabarty) Vuk Lesi (Pajic) Mahmoud Elfar (Pajic) Evan Stump (Smith) Xander Deputy (Smith) Joseph Andrews (Franklin) Jorge Cardenas (Franklin) Zhihui Cheng (Franklin) Tomas Barraza (Stiff-Roberts) Ben LaRiviere (Jokerst) Tasso Von Windheim (Glass)	Edgard Ngaboyamahina (Glass) Kedar Prabhudesai (Collins) Fan Wang (Hauser) Lidea Shahidi (Collins) Narayanan Rengaswamy (Pfister) Dmitry Kalika (Collins) Ilija Jovanov (Pajic) Haibei Zhu (Cummings) Zhongxi Li (Peterchev/Goetz) Martin Brooke (Team Design Challenge)

Evening Banquet

6:00 – 8:00 pm Dinner, drinks, and dessert	
6:00	Dinner service begins
6:30 – 6:40	Dr. Aaron Franklin, ECE Director of Graduate Studies: The State of the ECE Department
6:40 – 6:45	Dr. Krish Chakrabarty, ECE Department Chair: Introduction of Distinguished Lecturer Dr. Lou Scheffer
6:45 – 8:00	Dr. Lou Scheffer, Janelia Research Campus - Howard Hughes Medical Institute: Distinguished Lecture, "Brain Research and the Internet of Things" Q&A