40th IEEE Sarnoff Symposium, NJIT, Newark, NJ, Sep. 23-24, 2019
SCHEDULE OF KEYNOTE AND INVITED PRESENTATIONS

MONDAY, SEPTEMBER 23, 2019

08:00-08:45 **Breakfast & Registration**

08:45-09:00 **Opening Remarks and Welcome Messages**

09:00-09:20 **Optical Stealth Communication based on Amplified Spontaneous Emission Noise**
Ben Wu, Assistant Professor
Rowan University

09:20-09:40 **Toward Cyber-Physical/Human Systems that are Responsive and Scalable**
Jing Li, Assistant Professor, Department of Computer Science
New Jersey Institute of Technology

09:40-10:00 **Deep Graph Learning: Techniques and Applications**
Haifeng Chen, Head of Data Science and Systems Research Department
NEC Labs America

10:00-10:20 **Combinatorial Sleeping Bandits with Fairness Constraints**
Bo Ji, Assistant Professor, Department of Computer and Information Sciences
Temple University

09:00– 10:20 **Technical Program I – Applications**

10:20-10:30 **Coffee Break**

10:30-11:00 **Keynote Presentation**
Data for Good: Data Science at Columbia
Jeannette M. Wing, Avanessians Director of the Data Science Institute and Professor of Computer Science
Columbia University

11:00-11:20 **Achieving Low Latency Mobile Edge Cloud Services in Next-Generation Wireless Networks**
Dipankar Raychaudhuri, Distinguished Professor, Electrical & Computer Engineering and Director, WINLAB (Wireless Information Network Lab)
Rutgers University

11:20-11:40 **Programming tomorrow's 5G networks today – the anatomy of a flexible RAN Intelligent Controller (RIC) and its applications**
Rittwik Jana
Director of Inventive Science
AT&T Labs Research

11:40-12:00 **Optimizing Service Delivery at the Mobile Network Edge**
Leandros Tassiulas
John C. Malone Professor of Electrical Engineering
Yale University

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12:00-1:00 Lunch & Networking

Lunch Talk: What did he have in Mind? David Sarnoff's Visions for Wireless Communications
   Alexander B. Magoun, Outreach Historian - IEEE History Center
   Stevens Institute of Technology

1:00-1:30 Keynote Presentation
   New value creation with the Future X Network
   Peter Vetter
   Head of Access Research lab
   Nokia Bell Labs

1:30-1:50 Network Orchestration for 5G
   Raquel Morera, Associate Fellow
   Verizon

1:50-2:10 Next Generation Automation: Enabling the acceleration of Advanced Technology Adoption
   Cengiz Alaettinoglu, Chief Technology Officer of Blue Planet
   Ciena

2:10-2:30 Challenges and New Technologies for 5G Millimeter Wave Cellular Systems
   Sundeep Rangan, Associate Director
   NYU Wireless

2:30-2:50 Reconfigurable Distributed MIMO for Physical-layer Security in Mobile Networks
   Zygmunt J. Haas, Professor and Distinguished Chair in Computer Science
   University of Texas, Dallas

2:50-3:10 Michael J. Freedman
   Professor, Computer Science Department & Co-founder and CTO of Timescale
   Princeton University

3:10-3:30 Eliminate Operational Legacy. Forever.
   Sasha Ratkovic, Co-founder and CTO
   Apstra

3:30-3:40 Coffee Break

3:40-4:00 Chameleon: A Scientific Instrument for Computer Science and Networking Research at Scale
   Paul Ruth, Senior Research Scientist at RENCI
   University of North Carolina-Chapel Hill

4:00-4:20 Edge-supported Drones in the Construction Industry
   Padmanabhan (Babu) Pillai
   Senior Research Engineer at Intel Science and Technology Center on Cloud Computing
   Intel Labs

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4:20-4:40 Integrated Access and Backhaul in 5G – Challenges and Opportunities
  Navid Abedini, Senior Staff Systems Engineer
  Qualcomm Technologies Inc.

4:40-5:00 5G Virtual RAN Network Architectures – the Realities
  Olufemi (Femi) Adeyemi, Lead LTE Solutions Architect
  Fujitsu Network Communications

3:40-5:00 Technical Program II – Resource Allocation

TUESDAY, SEPTEMBER 24, 2019

08:00-09:00 Breakfast & Registration

09:00-09:20 Building Fast and Reliable Services for 5G Networks with Derecho
  Edward Tremel, Department of Computer Science
  Cornell University

09:20-09:40 A Closer Look at NFV Execution Models in Multi-Core Commodity Servers
  Zhi-Li Zhang, Professor, Department of Computer Science and Engineering
  University of Minnesota

09:40-10:00 Computing Strategies in the Era of 5G
  Soma Velayutham, Head of AI and Accelerated Computing
  NVIDIA

10:00-10:20 Rudra Dutta
  Professor, Department of Computer Science
  North Carolina State University

09:00– 10:20 Technical Program III – Wireless Networks

10:20-10:30 Coffee Break

10:30-11:00 Keynote Presentation
  5G and the Role of AI
  Jennifer Yates, Assistant Vice President, Inventive Science
  AT&T Labs

11:00-11:20 Leveraging Quantum Annealing for Large MIMO Processing in Centralized Radio Access Networks
  Kyle Jamieson, Associate Professor, Dept. of Computer Science
  Princeton University

11:20-11:40 Driving Community Engagement as Part of Open Innovation
  Nithya A. Ruff, Head of Open Source Practice
  Comcast

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11:40-12:00 **Evolution of Cyber-Physical Security**
Jonathan M. Smith, Professor of Computer and Information Science & Olga and Alberico Pompa Professor of Engineering and Applied Science
DARPA & University of Pennsylvania

12:00-1:00 **Lunch & Networking**

Lunch Talk: The Origins of Silicon Valley: Why and How It Happened
Paul Wesling, Life Fellow of the IEEE

1:00-1:30 **Keynote Presentation**
Practical Steps Towards Self-Driving Networks
Kireeti Kompella, Senior Vice President and Chief Technology Officer (CTO)
Juniper Networks

1:30-1:50 Nagesh Nandiraju
Executive Director of Network Services and Software
Comcast

1:50-2:10 **Key Enablers and Obstacles to a successful 5G deployment**
Mark T. Watts, Distinguished Member of the Technical Staff Architect
Verizon Communications

2:10-2:30 **5G: Millimeter waves, millisecond delays?**
Shivendra S. Panwar, Professor, Electrical and Computer Engineering Department
Tandon School of Engineering (Polytechnic Institute)
New York University

2:30-2:50 **Federated Learning for Networking**
Anwar Walid, Director of Network Intelligence and Distributed Systems Research & Distinguished Member of the Research Staff
Nokia Bell Labs

2:50-3:10 Steve Vandris, Director for NFV Solutions Planning, Datacenter Solutions Group
Intel Corporation

3:10-3:30 **Challenges and Opportunities of opening the RAN interfaces**
Haseeb Akhtar, Principal Solutions Architect
Ericsson

3:30-3:40 **Coffee Break**

3:40-5:00 **Technical Program IV – Security & Automation**

5:00- 5:15 **Closing Remarks**