RUTGERS
WINLAB | Wireless Information
Network Laboratory

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FALL 2021 WINLAB RESEARCH REVIEW
PRELIMINARY AGENDA
ONLINE EVENT: DECEMBER 9, 2021
10:00AM – 5:00PM US–EST

FOCUS THEME:
NEXT–GEN IoT AND 5G/EDGE COMPUTING AS KEY TECHNOLOGY ENABLERS

10:00AM – 12:00 NOON   SESSION 1: STATUS UPDATES ON WINLAB's 5G/IoT TESTBEDS

Welcoming Remarks	*D. Raychaudhuri*
Community-based Mobile Edge Sensing and Computing Testbeds (New Project)	*Yingying Chen and Ivan Seskar*
COSMOS 5G/Edge Testbed and COSM-IC International Interconnect Project	*Ivan Seskar and D. Raychaudhuri*
5G/O-RAN Test and Integration Facility at WINLAB	*Ivan Seskar*

KEYNOTE TALK
Mischa Dohler, Chief Architect, Ericsson

12:00 NOON   LUNCH BREAK

12:40 – 1:40 PM   SESSION II: EDGE COMPUTING THEORY

Edge Computing Service Capacity Region	*Emina Soljanin*
Principal Component Analysis in IoT Systems	*Waheed Bajwa*
AoI Framework for Real-time Edge Cloud Services	*Roy Yates*

1:40 – 2:40 PM   SESSION III: EDGE COMPUTING TECHNOLOGY & APPLICATIONS

Algorithm and Hardware Co-Design for Efficient Deep Learning: Sparse and Low-rank Perspective	*Bo Yuan*
Towards Practical Immersive Computing	*Yao Liu*
Intelligent Sensing Systems through AI and Interaction	*Jorge Ortiz*

2:40 – 3:00 PM   BREAK

3:00 – 5:00 PM   SESSION IV: IoT SECURITY & PRIVACY

IoT Security and Wi–Fi–enabled Smart Healthcare	*Yingying Chen*
Traffic Shaping for Event-level Privacy in IoT Systems	*Anand Sarwate*
Authentication of Voice Commands on Voice Assistant Systems Leveraging Speech Vibrations on Wearables	*Cong Shi*
EchoLock: Towards Low-effort Mobile User Identification Leveraging Structure-borne Echos	*Yilin Yang*
Closing Remarks and Q & A	