Webinar on Next-Generation IoT
The Sixth Edition

IEEE Communication Society
Technical Committee on Communications Software
Special Interest Group on "NFV and SDN Technologies"

The Sustainability of Mobile AI: An Energy Perspective

Abstract: Mobile devices are heavily invested in AI-enabled applications nowadays, with the support of a mobile system including wireless networks, edge, and cloud computing. However, AI applications consume considerably high energy of mobile devices. Energy efficiency has become one of the biggest bottlenecks for running AI-enabled applications on resource-constrained mobile devices. How AI uses the energy resources defines a device's potential and sustainability.

In this talk, the sustainability of mobile AI applications and systems is investigated from an energy's perspective. Comprehensive energy measurement, benchmark, energy model development, and energy-efficient/energy-aware algorithm design will be presented to achieve a sustainable mobile AI experience.

Prof. Jiang (Linda) Xie
The University of North Carolina at Charlotte, USA

Resilient Virtualized Edge Computing

Abstract: We discuss challenges and opportunities of distributed data management solutions ranging from the mobile edge to the data centers. Modern 5G networks promise to provide all means for communication in this domain, particularly when integrating mobile edge computing. However, it turns out that despite the many advantages, it is unlikely that such services will be provided with sufficient coverage. As a novel concept, we proposed virtualized edge computing (V-Edge) that bridges this gap. We present a learning-based approach to make such a V-Edge resilient to network dynamics and system failures.

Prof. Falko Dressler
Technical University Berlin, Germany

Semantic Text Classification for 6G and Beyond

Abstract: Next generation wireless connectivity (6G) is on track to be realized in a decade. A distinguishing feature of 6G is realizing human-machine interaction at the edge. Semantic communications arises as a key enabler of this goal. Semantic communications aims to convey the meanings of messages between network nodes, and as such is a departure from conventional communications that requires conveying the messages themselves reliably. Such flexibility has the potential for significant resource savings while simultaneously bringing machine to machine communication close to natural communication. In this talk, we will review the origins of this direction, and present our recent findings on semantic text classification that provide orders of magnitude resource savings in communication and training costs.

Prof. Aylin Yener
The Ohio State University, USA

Dr. Arijit Roy, IIT Patna, India
Dr. Ayan Mondal, IIT Indore, India
Prof. Sudip Misra, IIT Kharagpur, India

More details can be found **here**
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