



The Institute of Radiocommunications
of Poznan University of Technology
and RIMEDO Labs

invite you for a talk on:

6G and Machine Learning at the Wireless Edge

by

H. Vincent Poor, Princeton University, USA

on the 16th of May, 2022, 16:00 CET, Cyberspace

Wireless networks can be used as platforms for machine learning, taking advantage of the fact that data is often collected at the edges of the network, and also mitigating the latency and privacy concerns that backhauling data to the cloud can entail. This talk will present an overview of some results on distributed learning at the edges of wireless networks, in which machine learning algorithms interact with the physical limitations of the wireless medium. Two topics will be considered: federated learning, in which end-user devices interact with edge devices such as access points to implement joint learning algorithms; and decentralized learning, in which end-user devices learn by interacting in a peer-to-peer fashion without the benefit of an aggregating edge device. Open topics for future research will also be discussed briefly.

H. Vincent Poor is the Michael Henry Strater University Professor at Princeton University, where his interests include information theory, machine learning and network science, and their applications in wireless networks, energy systems, and related areas. His publications in these areas include the forthcoming book *Machine Learning and Wireless Communications* (Cambridge University Press). Dr. Poor is a Member of U.S. National Academy of Engineering and U.S. National Academy of Sciences, and a foreign member of the Royal Society and other national and international academies. He received the IEEE Alexander Graham Bell Medal in 2017.

This talk is addressed to graduate students, PhD students, researchers and engineers.

