Learning at the Wireless Edge

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Zoom

Abstract: Wireless networks can be used as platforms for machine learning, taking advantage of the fact that data is often collected at the edges of networks, and also mitigating the latency and privacy concerns that backhauling data to the cloud can entail. Focusing primarily on federated learning, this talk will discuss several issues arising in this context including the effects of wireless transmission on learning performance, the allocation of wireless resources to learning, and privacy leakage. A number of open problems will also be discussed.

Bio: 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. Among his publications in these areas is the recent book Machine Learning and Wireless Communications, published by Cambridge University Press. Dr. Poor is a member of the U.S. National Academy of Engineering and the U.S. National Academy of Sciences and is a foreign member of the Royal Society, and other national and international academies. He received the IEEE Alexander Graham Bell Medal in 2017, and holds honorary doctorates and professorships from a number of universities in Asia, Europe and North America.