Learning at the Wireless Edge

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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.