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TOPIC	:	Semantic Communications: Transmitting Beyond Bits
SPEAKER	:	Asst Prof Zhijin Qin Queen Mary University of London
DATE	:	Thursday, 22 July 2021
TIME	:	5.00PM to 6.00PM
WEBINAR	:	Join Zoom Meeting https://nus-sg.zoom.us/j/81622957729?pwd=VUIJWHdTbnhLMVJ2cHpKOFRaZWVxUT09 Meeting ID: 816 2295 7729 Passcode: 736643

ABSTRACT

In the past decades, communications primarily focus on how to accurately and effectively transmit symbols from the transmitter to the receiver, in which bit-error rate or symbol-error rate is usually taken as the performance metrics. With the developments of cellular communication systems, the achieved transmission rate has been improved tens of thousands of times and the system capacity is gradually approaching to the Shannon limit. Inspired by powerful deep learning technologies, semantic communications have been regarded as a promising solution to further improve the system efficiency, which is recognized as the second level of communications by Shannon and Weaver. Semantic communications aim to realize the successful semantic information exchange rather than receive the transmitted bit sequences or symbols accurately. In this talk, the concept of semantic communications will be introduced first. Afterwards, the recent work on deep learning enabled semantic communications will be discussed. Potential research challenges will be discussed at the end of the talk.

BIOGRAPHY



Dr. Zhijin Qin is a Lecturer (Assistant Professor) at Queen Mary University of London. She was with Lancaster University as a Lecturer and Imperial College London as a research associate, respectively, from 2016 to 2018. Her research interests include semantic communications, compressive sensing, and low-power wide-area networks for smart cities. She is serving as an area editor of IEEE JSAC Series on Machine Learning in Communications and Networks, an associate editor of IEEE Transactions on Communications, IEEE Transactions on Cognitive Communications and Networking, and IEEE Communications Letters. She served as the symposium co-chair for IEEE VTC Fall 2019 and Globecom 2020, 2021. She received the IEEE Globecom Best Paper Award 2017, and the IEEE Signal Processing Society Young Author Best Paper Award 2018.

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