

Beyond 5G Communications: Questions And Some Answers



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Abstract

This talk will provide an overview of some of my recent research activities in the area of beyond-5G communications. I will briefly discuss the following topics: cell-free massive MIMO communications, mmWave channel estimation, channel tracking in massive MIMO systems, grant-free random access for massive machine-type communications, intelligent reflecting surfaces, new waveforms for 5G and beyond, and the IISc 5G testbed. The presentation will focus on the key questions and provide answers to some of them. The talk will be accessible to most graduate students in EECS.

Bio

Chandra R. Murthy is a Professor in the department of Electrical Communication Engineering at the Indian Institute of Science, Bangalore, India. His research interests are in sparse signal recovery, energy harvesting-based communication, performance analysis, and optimization of 5G and beyond communications. Papers coauthored by him have received Student/Best Paper Awards at the NCC 2014, IEEE ICASSP 2018, IEEE ISIT 2021, IEEE SPAWC 2022, and NCC 2023. He is a senior area editor for the IEEE Transactions on Signal Processing and the IEEE Transactions on Information Theory. He is an elected member of the IEEE SPS SAM Technical Committee. He is a fellow of IEEE and the Indian National Academy of Engineering (INAE).

Host

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