



भारतीय प्रौद्योगिकी संस्थान मंडी

INDIAN INSTITUTE OF TECHNOLOGY MANDI

Institute Colloquium

“Beyond 5G Communications: Questions and Some Answers”



21st April, 2025



05:00PM



Auditorium, North
Campus

Prof. Chandra R. Murthy
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Communication Engineering
Indian Institute of Science
Bangalore, India

Beyond 5G Communications: Questions and Some Answers

Prof. Chandra R. Murthy

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Indian Institute of Science Bangalore, India

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. It will be accessible to most UG and PG students in EECS.

Brief CV of Prof. Chandra R. Murthy:

Dr. 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 the areas of 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 and 2023, IEEE ICASSP 2018, IEEE ISIT 2021, and IEEE SPAWC 2022.

He is a senior area editor for the IEEE Transactions on Information Theory and an elected member of the IEEE SPS SAM Technical Committee. Previously, he has served on the editor board of the IEEE Signal Processing Letters, the IEEE Transactions on Signal Processing, the IEEE Transactions on Communications, and on the IEEE SPCOM Technical Committee. He is a Fellow of the IEEE and INAE.