

IIT Kanpur PYTHON and MATLAB/ OCTAVE-Based Extensive Training Schools in 5G Wireless Technologies

S1: Massive MIMO, mmWave MIMO, Spatial Modulation (3rd to 16th December, 2022)

S2: NOMA, Cooperative Comm., OFDM, FBMC (21st January to 3rd February, 2023)

Organized by Prof. Aditya K. Jagannatham, EE Department, IIT Kanpur

PYTHON and MATLAB/ OCTAVE-Based Extensive Training Schools in 5G Wireless Technologies



Important Dates

School Dates

03rd to 16th December, 2022

21st January to 3rd February, 2023

Last Date for Registration

28th November, 2022

16th January, 2023

Venue

To be conducted online via
Zoom

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Welcome to the **IIT Kanpur PYTHON and MATLAB-Based Winter Training School in 5G Wireless Technologies**. This is a unique cutting edge project based training school that will feature exhaustive lecture modules and several PYTHON/ MATLAB projects/ case-studies on the latest MIMO, Massive MIMO, mmWave MIMO, NOMA, Cooperative, Cognitive Radio, OFDM, MIMO-OFDM and FBMC technologies for 5G. Participants will be able to gain in-depth knowledge of PYTHON/ MATLAB programming and practical hands-on experience of working on state-of-the-art **5G projects**. This in-depth school is the first of its kind that will feature comprehensive and extensive coverage of all the 5G technologies with intensive projects and detailed analysis.

All modules will be held on evenings and weekends for the convenience of participants. **PYTHON + MATLAB** programming will be explained in detail along with methodologies for building complex 5G research projects and case studies.

How does this program benefit YOU?

UG/ PG students: Learn the *latest 5G technologies* through PYTHON/ MATLAB projects to prepare for placements in top tech companies!

PhD Scholars/ Faculty members: Create PYTHON and MATLAB-based courses, online labs or use the knowledge for *projects/ thesis in 5G* MIMO, Massive MIMO, mmWave MIMO, NOMA, Cooperative, Cognitive Radio, OFDM, MIMO-OFDM and FBMC technologies!

Industry Professionals: Learn practical PYTHON + MATLAB implementation for simulation and analysis of modern 5G systems via extensive lecture modules and complementary projects!

About the Trainer



Prof. Aditya K. Jagannatham is a Professor in the Electrical Engineering department at IIT Kanpur, where he holds the Arun Kumar Chair Professorship, and is a well known expert and trainer on 5G, Optimization and Machine Learning. He received his Bachelors degree from the Indian Institute of Technology, Bombay and M.S. and Ph.D. degrees from the University of California, San Diego, U.S.A. From April '07 to May '09 he was employed as a senior wireless systems engineer at Qualcomm Inc., San Diego, California, where he was a part of the Qualcomm CDMA technologies (QCT) division. His research interests are in the area of next-generation wireless networks, with special emphasis on various 5G technologies such as massive MIMO, mmWave MIMO, FBMC, NOMA, Full Duplex and others. He has published extensively in leading international journals and conferences. He has been recognized with several awards including the CAL(IT)2 fellowship at the University of California San Diego, Upendra Patel Achievement Award at Qualcomm, P.K. Kelkar Young Faculty Research Fellowship, Qualcomm Innovation Fellowship (QInF), Arun Kumar Chair and the IITK Excellence in Teaching Award.

Target Audience

- Ph.D. scholars pursuing research in 5G technologies
- M.Tech/ B.Tech students undertaking thesis/ projects in 5G technology
- Faculty members of Engineering Institutions/ Universities
- Engineers from Wireless Industry and R&D Organizations

For more details and registration information, visit the website
<http://www.iitk.ac.in/mwn/IITK5G>