
Personal Profile

A fourth year electrical engineering Ph.D. student at New York University Tandon School of Engineering under the supervision of Prof. Sundeep Rangan. Currently working on power saving discontinuous reception (DRX) for THz communications (6G), channel modeling for beamformed systems at 60 GHz and channel quality prediction using deep learning.

Education

- Jan.2018 **Ph.D in Electrical Engineering**
New York University, NY, USA.
- GPA: **3.83/4.0**
 - **Relevant Courses** • Probability and Stochastic Processes • Digital Signal Processing I • Digital Communications • Wireless Communications • RF Microwave and Engineering • Network Design and Algorithms • Digital Signal Processing Lab • Machine Learning • Estimation and Detection • Internet Architectures and Protocols • Scientific Computing
- Aug.2013– **B.S. in Electrical Engineering**
July.2017 **Lahore University of Management Sciences, Lahore, Pakistan.**
- GPA:**3.61/4.0**

Research Interests

- Wireless Communications • Signal Processing • Machine Learning • Detection and Estimation

Work and Research Experiences

- Fall 2020 Power-efficient beam tracking during connected mode DRX in mmWave and sub-THz systems accepted at IEEE JSAC 2020 in THz communications and networking SI, as first author with Sundeep Rangan.
- Summer 2020 Filed an IDF with Qualcomm during the course of my summer internship.
- Spring 2020 60 GHz Multipath Propagation Analysis and Inference for an Indoor Scenario accepted at VTC 2020 Fall as the second author.
- Fall 2019 LSTM based Multi-Link Prediction for mmWave and THz wireless systems accepted at ICC 2020 with Sundeep Rangan as the first author.
- Fall 2019 Beamformed mmWave System Propagation at 60 GHz in an Office Environment accepted at ICC 2020 in collaboration with SONY as the first author.
- Spring 2019 Power Efficient Discontinuous Reception in THz and mmWave Wireless with Sundeep Rangan at SPAWC 2019 as a first author.
- 2018-Present Part of the systems thrust at ComSenTer for the JUMP program funded by SRC.
- Fall 2018 Scattering Mechanisms and Modeling for Terahertz Wireless Communications, accepted in ICC 2019 as 2nd Author in collaboration with Prof. T.S Rappaport.
- 2018 Detailed research project on "Bringing back FSK for NextGen networks".
- 2018 Summer research on NR initial access which included PSS detection and estimation using MATLAB 5G NR toolbox.

Professional Experiences

- Summer 2020 5G-NR standards group Intern at Qualcomm. .
- Summer 2019 Wireless Research Engineering Intern at Sony.
- Fall 2017 Assistant Manager Operations, Mansehra Urban, Pakistan Telecommunications Company Limited.
- Spring 2017 Teaching Assistant, Communications Systems Lab under Prof. Zartash Uzmi, Lahore University of Management Sciences, Pakistan.

- Spring 2016 Teaching Assistant, Linear Algebra with differential equations under Prof. Adnan Khan, Lahore University of Management Sciences, Pakistan.
- Fall 2015 Teaching Assistant, Calculus II under Prof. Masood H. Shah, Lahore University of Management Sciences, Pakistan.
- Summer 2015 Intern, National Engineering and Scientific Commission (NESCOM), Pakistan.