



Usman Ali



● **EDUCATION AND TRAINING**

01/11/2020 – CURRENT – Rome, Italy

PH.D IN INFORMATION AND COMMUNICATIONS TECHNOLOGIES – Sapienza Università di Roma

Research Topics: Rate-Splitting Multiple Access, Non-orthogonal Multiples access techniques, Massive MIMO system for B5G/6G Networks, Channel Modeling

Address Rome, Italy

31/08/2016 – 12/06/2018 – Lahore, Pakistan

MASTER OF SCIENCE IN ELECTRICAL ENGINEERING – COMSATS University Islamabad

Research Topics: OFDM, Non-orthogonal Multiples access techniques, Waveform Shaping techniques, and MIMO system for 5G Networks

Address Lahore, Pakistan | **Final grade** CGPA: 3.66/4.00 |

Thesis Thesis: Discrete Wavelet Transform for Downlink Non-Orthogonal Multiple Access in 5G Networks

31/08/2011 – 17/09/2015 – Islamabad, Pakistan

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING – Federal Urdu University of Arts, Science and Technology

Research Topics: OFDM, PAPR reduction schemes in OFDM, waveform shaping techniques for 4G Networks

Address Islamabad, Pakistan | **Final grade** CGPA: 3.07/4.00 |

Thesis Thesis: Design and implementation of Orthogonal Frequency Division Multiplexing (OFDM) system.

● **WORK EXPERIENCE**

06/09/2021 – 11/01/2022 – Rome, Italy

TEACHING ASSISTANT – SAPIENZA UNIVERSITY OF ROME

- Taught course at Master Level.
- Conducted classes of the practice work for the course of Ultrawide-band Radio Fundamentals.

02/2019 – 05/2019 – Lahore, Pakistan

INTERNEE BSS ENGINEER – HI-TEL. TECHNOLOGIES

- Installation and commissioning of ZTE Product Family.
- 2G, 3G, and 4G installation and troubleshooting.
- Rectifier commissioning.
- External Alarm patching, troubleshooting, and verifying.

- Rectifying all the Technical Issues in the reports.

12/2015 – 05/2016 – Farooqabad, Pakistan

TEACHER – AL-FAJAR LYCIUM SCHOOL

- Taught courses at Metric Level.
- Course Taught: Physics, Mathematics, and Computer.

06/2014 – 08/2014 – Islamabad, Pakistan

INTERNEE ENGINEER – PAKISTAN TELECOMMUNICATION COMPANY LIMITED (PTCL)

- Networking Switching Subsystem Department
- Troubleshooting connectivity problems of the customers.
- Management of backbone telecommunication network.
- Worked at Department's sales management software to manage devices data.

● **CERTIFICATIONS**

10/2018 – 12/2018

"Internet Connection: How to Get Online?" CISCO, Coursera Inc.

08/2019 – 10/2019

"AutoCad" DigiSkills Training Program by MOIT Pakistan

08/2019 – 10/2019

"Creative writing" DigiSkills Training Program by MOIT Pakistan

01/2021 – 03/2021

"MATLAB Onramp" by Mathworks

● **JOB-RELATED SKILLS**

Technical Skills (Engineering Tools)

- Matlab
- C++
- Turbo C
- AutoCad
- Proteus and Keil

● **REVIEWING ACTIVITIES**

Journal Reviewer

- IEEE Wireless Communication Letters
- IEEE Communication Letters

● ORGANIZATION SKILLS

Organization Skills

- Able to exceed expectations and willing to work efficiently and effectively.
- Strong interpersonal communications, organizational, and presentation skills
- Capable of achieving immediate and long-term goals and meeting operational deadlines.
- Attentive to detail with a practical approach to problem
- Enjoys being part of a successful and productive team and thrives in highly pressurized and challenging working environments

● LANGUAGE SKILLS

Mother tongue(s): **URDU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C2	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● PUBLICATIONS

Journal Publications

1. Ali U, Caso G, De Nardis L, Kousias K, Rajiullah M, Alay Ö, Neri M, Brunstrom A, Di Benedetto MG. "Data-Driven Analysis of Outdoor-to-Indoor Propagation for 5G Mid-Band Operational Networks." *Future Internet* 14, no. 8 (2022): 239.

2. Ali U, Caso G, De Nardis L, Kousias K, Rajiullah M, Alay Ö, Neri M, Brunstrom A, Di Benedetto MG. Large-Scale Dataset for the Analysis of Outdoor-to-Indoor Propagation for 5G Mid-Band Operational Networks. *Data*. 2022 Mar 15;7(3):34.

3. De Nardis L, Mohammadpour A, Caso G, **Ali U**, Di Benedetto MG. Internet of Things Platforms for Academic Research and Development: A Critical Review. *Applied Sciences*. 2022 Feb 19;12(4):2172.

4. De Nardis, L., Caso, G., Alay, Ö., **Ali, U.**, Neri, M., Brunstrom, A. and Di Benedetto, M.G., 2022, June. Positioning by fingerprinting with multiple cells in NB-IoT networks. In *2022 International Conference on Localization and GNSS (ICL-GNSS)* (pp. 01-07). IEEE.

5. Kousias, K., Rajiullah, M., Caso, G., Alay, O., Brunstorm, A., De Nardis, L., Neri, M., **Ali, U.** and Di Benedetto, M.G., 2022, October. Coverage and performance analysis of 5G non-standalone deployments. In *Proceedings of the 16th ACM Workshop on Wireless Network Testbeds, Experimental evaluation & Characterization* (pp. 61-68).

6. Kousias, K., Rajiullah, M., Caso, G., Alay, O., Brunstrom, A., De Nardis, L., Neri, M., **Ali, U.** and Di Benedetto, M.G., 2022, August. Implications of handover events in commercial 5G non-standalone deployments in Rome. In *Proceedings of the ACM SIGCOMM Workshop on 5G and Beyond Network Measurements, Modeling, and Use Cases* (pp. 22-27).

7. Ali, U., Baig, S., Umer, T. and Ding, Z., 2020. Performance analysis of discrete wavelet transform for downlink non-orthogonal multiple access in 5G networks. *IET Communications*, 14(10), pp.1666-1674.

8. Baig, S., Ali, U., Asif, H.M., Khan, A.A. and Mumtaz, S., 2019. Closed-form BER expression for Fourier and wavelet transform-based pulse-shaped data in downlink NOMA. *IEEE Communications Letters*, 23(4), pp. 592-595.

9. U. Ali, Imran Ullah "Comparative study of PAPR reduction techniques in an OFDM System" ITEE International Journal. Vol.4, No.3, June 2015.

● **RECOMMENDATIONS**

1. Name: Maria-Gabriella DI BENEDETTO

Position: Professor

Organization: Sapienza Università di Roma

Email: mariagabriella.dibenedetto@uniroma1.it

2. Name: Dr. Sobia Baig

Position: Associate Professor

Organization: COMSATS University Islamabad

Email: drsobia@cuilahore.edu.pk

3. Name: Dr. Hafiz Muhammad Asif

Position: Assistant Professor

Organization: Sultan Qaboos University

Email: hafiz.asif@gmail.com