

Curriculum Vitae

Saba Ahmed

Assistant Professor – Telecommunications Engineering Department
NED University of Engineering & Technology
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Career Summary

Dedicated academician and researcher with over 15 years of teaching and research experience in telecommunications engineering. Specialized in optical networks, wireless communication, and communication systems, with expertise in MATLAB and OptiSystem. Proven track record in teaching at both undergraduate and postgraduate levels, supervising undergraduate projects, and securing competitive research funding. Research interests span passive optical networks, optical communication, and advanced wireless technologies.

Education

PhD (Ongoing) – Electronic Engineering (Passive Optical Networks)

NED University of Engineering & Technology

MEngg (2007) – Electrical Engineering (Specialization: Telecommunications)

NED University of Engineering & Technology

BE (2005) – Electrical Engineering

NED University of Engineering & Technology

Academic Experience

Assistant Professor – Telecommunications Engineering Department
NED University of Engineering & Technology | 2008 – Present

- Teach undergraduate and postgraduate courses including:

- Communication Systems
- Wireless Communication
- Telecom Networks
- Digital Communication & Information Theory
- Antenna & Microwave Engineering
- Circuit Theory

- Optical Fiber Communication
 - Communication Security
 - Satellite Communication (also taught in MEngg Telecom program)
 - Navigational Aids
 - Radar Systems
- Supervised numerous undergraduate projects in image processing, wireless communication, and optical communication.
- Secured Ignite Funding for the project Vertical Farming.

Lecturer – Electrical Engineering Department
NED University of Engineering & Technology | 2005 – 2008

- Delivered core courses in electrical and communication engineering.
- Mentored undergraduate students in design and research projects.

Industry Experience

OTS Executive – Multinet Pakistan

- Worked in operations and technical support for telecom infrastructure and network services.

Research Interests

- Passive Optical Networks (PON)
- Wireless Communication Systems
- Optical Fiber Communication
- Digital Signal Processing
- Next-Generation Network Architectures

Skills

- Technical Tools: MATLAB, OptiSystem
- Domains: Optical Communication, Wireless Communication, Communication Security, Antenna & Microwave Engineering, Satellite Communication
- Soft Skills: Research Supervision (UG level), Curriculum Development, Academic Leadership

Research Publications

[1] S. Abbas, W. A. Khan, T. A. Khan, and S. Ahmed, "Implementation of OFDM Baseband Transmitter Compliant IEEE Std 802.16d on FPGA," Proc. 2nd Int. Conf. Communication Software and Networks (ICCSN), Singapore, 2010, pp. 22–26. doi: 10.1109/ICCSN.2010.83.

[2] S. Ahmed, R. A. Butt, and M. I. Aslam, "Simultaneous upstream and inter optical network unit communication for long reach PON using single transmitter and self-phase modulation," Opt. Fiber Technol., vol. 82, Jan. 2024, Art. 103639. doi: 10.1016/j.yofte.2023.103639.

[3] S. Ahmed, R. A. Butt, and M. I. Aslam, "Simultaneous Upstream and Inter Optical Network Unit Communication for Next Generation PON," in Proc. 2nd Int. Conf. Emerging Trends in Telecommunication Engineering (ETTE), 2023.

Notable Achievements

- Secured Ignite National Technology Fund for innovative project on Vertical Farming.
- Supervised undergraduate projects leading to practical solutions in image processing, optical communication, and wireless networks.

Personal Information

- Marital Status: Married