DR. INSHA ISHTEYAQ (PH.D.)

Assistant Professor
Department of ECE
Islamic University of Science and Technology
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PROFESSIONAL EXPERIENCE

1. **Assistant Professor** (On Contract)
   Department: **Electronics and Communication Engineering**
   Organization: Islamic University of Science and Technology, Awantipora, J & K, India
   Duration: 27-02-2023 to *present*

2. **Assistant Professor** (On Contract)
   Department: **Computer Science and Engineering**
   Organization: Islamic University of Science and Technology, Awantipora, J & K, India
   Duration: 23-04-2018 to 31-12-2018

3. Senior Faculty
   Organization: **NIELIT Chandigarh and NCPUL New Delhi**
   Duration: 12-02-2014 to 21-12-2014

EDUCATION

PhD **Electronics and Communication Engineering** 2019-2022
Institute: Islamic University of Science and Technology, J & K, India
Dissertation: "*Design and Development of 5G Antennas for Handheld Mobile Applications*"
Supervisor(s): Dr. Khalid Muzaffar

M. Tech. **ECE (74.28%)** 2015-2017
Institute: Kurukshetra University, Haryana, India
Dissertation: "*Design and Implementation of Low Power Floating Point Multiply Add Unit and MAC Unit for Floating Point Operation"*
Supervisor(s): Dr. Kantesh Kumar

B. Tech. **Electronics and Communication Engineering (79.8%)** 2008-2013
Institute: University of Kashmir, India
Dissertation: "*Advanced Vehicle Accident Detection and Prevention System*"
Supervisor(s): Mr. Rouf Alam Bhat

EXPERTISE AND TECHNICAL SKILLS

- **Antenna fabrication using photolithography**
- **Experimental characterization of single element antennas and MIMOs for Sub-6GhZ applications**
- **Design of antenna systems using CST Studio and HFSS.**
- **Digital design using XILINX tool.**
- **Tools:** Mentor Graphics, XILINX, CST, MATLAB
- **Programming Languages:** C, Verilog, VHDL and Assembly Language: 8085.
- **Proficient in:** Microsoft Office (Word, Excel, PowerPoint), LaTeX, Origin, Visio
- **Operating Systems:** Windows and Linux.

COURSES

- Antenna Design and Radiating Systems, Communication Systems, Microwave Systems and Devices, Analog and Digital Communications, Advance Computer Architecture, C-Programing, Digital IC Design, Analog Electronics, Digital Electronics, Control System, Embedded Systems.

RESEARCH EXPERIENCE

- January 1, 2019- to Present
  Research Fellow
  Communication Systems Lab
  Islamic University of Science and Technology, J & K, India
  Major Project: "Design and Development of Performance Projected Antennas for 5G Applications"
  Funding Agency: Technical Education Quality Improvement Program (TEQIP)-India

  - Design and fabrication a compact double-band planar printed slot antenna for sub-6 GHz 5G wireless
  - Design, proposal and fabrication of an eight-Port Double Band Printed MIMO Antenna Investigated for Mutual-Coupling and SAR Effects for Sub-6 GHz 5G Mobile Applications.
  - Design and fabrication of orthogonally polarized meandered fed MIMO antenna array for unlicensed WiFi applications.
  - Design and simulation of wideband printed Quasi-Yagi MIMO antenna for milli-meter wave applications.
  - Design and simulation of Six-Element MIMO Antenna With Slot Ring Radiators for Future 5G Hand-Held Mobile Applications.
  - Design and simulation of Meta-material loaded Dipole Antenna for mm-Wave Wireless 5G Applications

- December 2019 to January 2020
  Visiting Research Scholar
  Antenna Design Lab
  Indian Institute of Technology, Kanpur, India
  Supervisor: Prof. M. J. Akhter
  Project Title: "Design and Development of 5G Antennas for Sub-6GhZ Applications"
  Funding Agency: TEQIP- IIT-Kanpur

GRANTS AND AWARDS

- Research grant for Ph.D. by TEQIP Scheme, IUST, Awantipora (2017-2022)
- TEQIP grant for research work presentation in IEEE InCAP at Ahmedabad 2019.
- IEEE travel grant to attend IEEE-BHTC 2020 in Bangalore.
- Selected as visiting research scholar under TEQIP to IIT Kanpur in 2019-2020.

PUBLICATIONS

Articles in Refereed SCI Journals [First Author]

1. **I. Ishteyaq**, I.S. Masoodi and K. Muzaffar, "A compact double-band planar printed slot antenna for sub-6 GHz 5G wireless applications," in **International Journal of Microwave and Wireless Technologies, Cambridge Press**, 13(5), 469-477. doi:10.1017/S1759078720001269.
2. **I. Ishteyaq**, I.S. Masoodi and K. Muzaffar, "Eight-Port Double Band Printed MIMO Antenna Investigated for Mutual-Coupling and SAR Effects for Sub-6 GHz 5G Mobile Applications," in **Progress In Electromagnetics Research C**, Vol. 113, 111-122, 2021 doi:10.2528/PIERC21050305.
3. **I. Ishteyaq**, I.S. Masoodi and K. Muzaffar, "Multiple Input Multiple Output (MIMO) and Fifth Generation (5G): An Indispensable Technology for Sub-6GHz and Millimeter Wave Future Generation Mobile Terminal Applications.," in **International Journal of Microwave and Wireless Technologies, Cambridge** , 1-17. doi:10.1017/S1759078721001100
4. **I. Ishteyaq**, Masoodi, IS, Muzaffar, K. Orthogonally polarized meandered fed multiple input multiple output antenna array for C-band sub-6GHz 5G and unlicensed Wi-Fi smart-phone applications. *Int J RF Microw Comput Aided Eng*. 2021;e23041. doi:10.1002/mmce.23041
5. **I. Ishteyaq**, K. Muzaffar, "Performance characterization of (Pt,Au,Pd)/ZnO/n-Si/Al Schottky structures for varied temperature and UV illumination conditions," in **Superlattices and Microstructures, Elsevier**, Volume 145, 2020, 106604, ISSN 0749-6036, doi.org/10.1016/j.spmi.2020.106604

Articles in Refereed SCI Journals [Collaborations]

1. I.S. Masoodi, **I.Ishteyaq**, K. Muzaffar, ”Low Cost Substrate Based Compact Antennas for 4G/5G Side-Edge Panel Smartphone Applications,” in **Progress In Electromagnetics Research Letters**, Vol. 91, 145-152, 2020 doi:10.2528/PIERL20041003.
2. I.S. Masoodi, **I.Ishteyaq**, K. Muzaffar, ”A compact band-notched antenna with high isolation for UWB MIMO applications,” in **International Journal of Microwave and Wireless Technologies**, pp. 1 - 7 doi.org/10.1017/S1759078720001427
3. Masoodi, I. S., **Ishteyaq, I.,** & Muzaffar, K. (2022). Extra Compact Two Element Sub 6 GHz MIMO Antenna for Future 5G Wireless Applications. *Progress In Electromagnetics Research Letters*, *102*, 37-45.

Non-SCI Journal Publications

1. **I. Ishteyaq**, K. Guarav, H. Gupta,”A Low Power Design Of Floating Point Multiply Add Unit”. IJEDR1703037 International Journal of Engineering Development and Research 243, 5(3), 243-247, September-2017.
2. **I. Ishteyaq**, K. Guarav, H. Gupta,”An Efcient CSA implementation of MAC unit for floating point operation”. In International Journal of Research in Electronics and Computer Engineering, Vol 5, Issue 2 Apr- June 2017.

IEEE Conference Publications

1. **I. Ishteyaq**, I.S. Masoodi, K. Muzaffar. ”Wideband Printed Quasi-Yagi MIMO Antenna for Milli-meter Wave Applications”, IEEE Indian Conference on Antennas and Propagation, InCAP - 2019.
2. **I. Ishteyaq**, I.S.Masoodi, K.Muzaffar. ”Six-Element MIMO Antenna With Slot Ring Radiators for Future 5G Hand-Held Mobile Applications”, IEEE Bangalore Humanitarian Technology Conference, B-HTC 2020.
3. **I. Ishteyaq**, I.S.Masoodi, K.Muzaffar. ”Metamaterial loaded Dipole Antenna for mm-Wave Wireless 5G Applications”, IEEE Bangalore Humanitarian Technology Conference, B-HTC 2020.
4. I.S. Masoodi, **I. Ishteyaq**, K. Muzaffar. ”Cup-Shaped Notch-Band Monopole Antenna Loaded with C-Type SRR for UWB Applications”, 2020 IEEE International Conference on Communication, Networks and Satellite (Comnetsat).
5. I.S. Masoodi, **I. Ishteyaq**, K. Muzaffar. ”Enhanced Gain Compact Millimetre Wave Dipole Antenna for 5G Communication with Meta-Material Loading”, 2020 IEEE International Conference on Communication, Networks and Satellite (Comnetsat).

TEACHING AND MENTORING EXPERIENCE

- 2023-present
  Dept. of Electronics and Communication Engineering
  Assistant Professor
  Digital electronics Theory and Lab, Electronic Measurements

- 2018-2019
  Dept. of CSE
  Assistant Professor
  Digital electronics Theory and Lab, Embedded systems, Theory and Lab, C-Programming Theory and Lab.

- 2019-2022
  Dept. of ECE
  Senior Research Scholar
  IUST, India
  Microwave device and systems Lab

- 2013-2014
  NEILIT Chandigarh
  Assistant Professor

PROFESSIONAL AFFILIATIONS

- Student member IEEE
- Reviewer IEEE Access Journal.
- Reviewer Advanced Electromagnetics Journal.

CONFERENCES, CERTIFIED TRAINING AND WORKSHOPS

1. One month "KIT Winter Internship and Visiting Researcher Program" conducted by TEQIP **IIT Kanpur**.
2. One week workshop on "FPGA Programming in Power and Control Applications" organized by department of Electrical Engineering **IUST Kashmir**.
3. 3-day national workshop on"5G: An Evolution to Revolution" organized by department of ECE, **IUST**.
4. "NPTEL Awareness Workshop" conducted by **Indian Institute of Technology Kanpur**.
5. One week workshop on "Data Science and Information Security bootcamp" organized by IUST in collaboration with MAKAUT West Bengal.
6. One week faculty development program on "Machine Learning using Python" conducted by **IIT Roorkee**.
7. One week faculty development program on "Research trends in Information Technology (RTIT-2018)" organized by department of CSE **IUST**.

FUTURE AREAS OF RESEARCH

- Machine learning for antenna design optimization
- 6G-wireless communication

LINKS TO PROFESSIONAL ACCOUNTS

- **Google Scholar:** https://scholar.google.com/citations?hl=en&user=dpGMp6kAAAAJ
- **Research gate:** https://www.researchgate.net/profle/Insha-Ishteyaq

PERSONAL INFORMATION

D/O: Mohammad Ishteyaq
R/O: Natipora, Srinagar, Jammu and Kashmir, India
DOB: 07-July 1989
Marital Status: Married
Languages: English, Hindi, Urdu, Kashmiri

REFERENCES

1. **Dr. Khalid Muzaffar**
   Assistant Professor and HOD
   Phone No.: 9873099896
   Email ID: khalid.muzaffar@islamicuniversity.edu.in
   Islamic University of Science and Technology
   Jammu and Kashmir, India