

Dr. Adnan Iftikhar, PhD.

Senior Member, IEEE, Marie Skłodowska-Curie Fellow

Personal Details

Address **Tenured Associate Professor**
Electrical and Computer Engineering Department, Islamabad Campus,
COMSATS University Islamabad, Pakistan, 45550. (ON POST. DOC leave)

Office +92 (0) 51 9049117

Mobile +92 (0) 333 5221773

Email adnaniftikhar@comsats.edu.pk

Career Objective

Experienced researcher and university instructor in applied Electromagnetics, antennas, microwave passive components, frequency selective surfaces, metamaterial RF absorbers, reflectarray antennas, phased arrays, biomedical and on-body antennas, and leaky wave antennas. Expert in implementing modern and effective teaching strategies to promote class engagement. More than 8 years of practical hands-on experience on antenna testing systems. Seeking research scientist and teaching role in Electromagnetic research group to undertake innovation in complementary research and to contribute to research led teaching along with capitalizing on major research funding opportunities.

Education

- 2012-2016 PhD in Electrical and Computer Engineering from the North Dakota State University, Fargo, ND, 58102, United State of America (USA).
- 2008-2010 Masters in Personal Mobile and Satellite Communication from the University of Bradford, West Yorkshire, BD7 1DP, United Kingdom (UK)
- 2004-2008 Bachelor of Science in Electrical Engineering (Specialization in Telecommunication) from the COMSATS University Islamabad, Islamabad Campus, 45550, Pakistan.

Professional Experience

1. Tenured Associate Professor (October 2023 to Present)

Electrical and Computer Engineering Department, **COMSATS University Islamabad**, Pakistan

Responsibilities

- Emphasis on research and publication
- Winning research grants and projects
- Teach, advise, and supervise undergraduate and graduate students.

- Full-fill any additional administrative duties assigned by the department head.

2. Marie Skłodowska-Curie Post-Doctoral Research fellow (October 2022 to October 2023)

Department of Electrical and Electronics Engineering, HACETTEPE University, Beytepe Campus, 06800 Ankara/Turkey.

Responsibilities

- Design and investigation of novel flexible substrate for antennas in biomedical application
- Dielectric characterization of cost-effective flexible substrates for the RF industry
- Writing research grants for the development of biomedical antennas
- Assist and supervise MS/PhD. students in solving antenna related problems in simulations and modeling.

3. Assistant Professor (August 2016 to October 2022) – On Post. Doc. leave

Electrical and Computer Engineering Department, COMSATS University Islamabad, Pakistan

Responsibilities

- Performed cutting edge applied electromagnetic research to meet industrial requirements.
- Writing and winning competitive research grants to design and develop novel antennas for the industry.
- Timely completion of research grants as a principal investigator.
- Technical management of research associates and other team hired in the research project.
- Train graduate RF engineers to meet the professional standards and inculcate practical RF knowledge to students by supervising them in completing tasks of the funded projects.
- Demonstrate active role in research training.
- Teaching and supervision of students and pedagogical training.
- Timely completion of assigned departmental duties and training programs.

4. Graduate Research Engineer (August 2012 to August 2016)

Electrical and Computer Engineering Department, North Dakota State University (NDSU), USA.

During four years of research engineer a NDSU, I was actively involved in following funded project as Principal Researcher.

- **Principal Researcher in US Air Force Funded Project** for the investigation of applications of novel magnetostatic microscopic conductive particles for frequency reconfigurable antennas and passive components.

Responsibilities

- ✓ Design and development of characterization mechanism of novel particles for RF switching.

- ✓ EM modeling of novel switch consisting of novel magnetostatic responsive conductive particles.
- ✓ Demonstration of novel RF switch as alternative of PIN diodes using numerical and practical demonstration of reconfigurable microstrip patch antenna.
- ✓ Propose applications of novel magnetostatic responsive structures in reconfigurable antenna and microwave passive components

- **Principal Researcher in ND NASA EPSCoR** funded project. “A Mobile Health System (mHealth) for Monitoring the Physiological Response of an Astronaut Performing Tasks in the NDX-2 Planetary Space Suit”.

Responsibilities

- ✓ Investigation and design of wireless health monitoring system for observing vitals (Temperature, heartbeat) of astronaut in space suit.
- ✓ Developing wireless transmission channel using Bluetooth low power energy for the transmission of data from space costume to the monitoring team.

- **Lead Researcher** in "Sensing Earth Directly - Phase 1," funded by ND Department of Commerce.

Responsibilities

- ✓ Design and development of UHF RFID antennas for sub-soil temperature sensing in precision agriculture.
- ✓ Field testing of the designed UHF RFID antennas.
- ✓ Compilation of the results weekly and present investigation results to the industrial team.
- ✓ Integration of the UHF RFID antennas with the temperature sensor to verify the read range of designed antenna buried under soil.

5. Lecturer (September 2010 to August 2012)

Electrical and Computer Engineering Department, **COMSATS University Islamabad**, Pakistan

Responsibilities

- Teach Electromagnetic theory, Antenna and Wave Propagation, and Microwave Engineering to undergraduate students.
- Develop and design undergraduate curriculum for the accreditation from Pakistan Engineering Council.
- Supervising undergraduate students in their final year projects.
- Design lab manuals of Antenna and microwave subjects.

Research Grants

S #	Role	Title	Funding Agency	Amount
1	Principal Researcher	Design and Analysis of Antennas and Passive Microwave Circuit Elements on Flexible Substrate for the Biomedical Applications	Marie Skłodowska-Curie Fellowship Grant managed by TUBITEK Turkey	71,760.00 Euros

2	Principal Investigator	Restoration of Prototyping Facility for Microwave Components Fabrication at Undergraduate Level	IEEE Antenna and Propagation Society	5000.00 USD
3	Principal Investigator	Highly Compact Multilayer Antennas for Microwave Applications	Higher Education Commission (HEC) Pakistan	13206.00 Euros
4	Principal Investigator	8 × 8 Stacked Phased Array Antenna with Enhanced Bandwidth for C – Band Applications	COMSATS	300,000.00 PKR
5	Co-Principal Investigator	Triband Frequency Selective Surfaces for WiFi Shielding	COMSATS	300,000.00 PKR
6	Co-Principal Investigator	Low Profile Reflectarray Antennas for X Band Satellite Communication	COMSATS	300,000.00 PKR

Research Contribution

Patent

1. M. Junaid Mughal and **Adnan Iftikhar**, “A surveillance system with enhanced Sound Receiving Method Integrated with Video Surveillance Equipment,” US patent (US patent (US **10873727**)).

Book Chapter

1. Book chapter, “[Antennas for 5G: state-of-the-art and open challenges](#) in Antennas and Propagation for 5G and Beyond, IET Publisher (2020).

I have published (as authors and co-author) **journal** and **conference** papers in reputed journals and conferences, respectively. Details of my scholarly work are available on google scholar, <https://scholar.google.com/citations?user=4KodywMAAAAJ&hl=en>

Total Citations: 1330 (November 2023)

Journal Papers: 46 (Impact Factor = 100+)

Conference Proceedings: 44

List of Journal Publications

1. M. Nasir, **A. Iftikhar**, S. M. Abbas, R. Saleem, M. F. Shafique, and M. Alathbah, “A Wideband Broadside Coupled Yagi Antenna and Arrays System for Ku Band Applications,” Accepted for publication in IEEE access.
2. **A. Iftikhar**, N. Naseer, S. K. Yildiz, D. Gokcen, A. Fida, M. F. Shafique and B. Saka, “Silicone Elastomer as Flexible Substrate: Dielectric Characterization and Applications for Wearable Antenna,” *Flexible and Printed Electronics*, Vol. 8, No. 4, December 2023.
3. Tariq, N. Naseer, **A. Iftikhar**, M. F. Shafique, J. Nasir, M. H. Dahri, A. Fida, and B Saka, “Direct Printable X-band Low Profile Broadband Reflectarray Antenna Using Copper Foils,” *AEU-International Journal of Electronics and Communications*, pp. 154901, 2023.

4. U. Farooq, **A. Iftikhar**, A. I. Najam, S. A. Khan, and M. F. Shafique, "An optically transparent dual-band frequency selective surface for polarization independent RF shielding," *Optics Communication*, pp. 129824, 2023.
5. M. Nasir, A. Iftikhar, M. F. Shafique, B. Saka, S. Nikolaou, and D. E. Anagnostou, "Broadband dual-podal multilayer Vivaldi antenna array for remote sensing applications," *IET Microwave, Antennas & Propagation*, May 2023.
6. U. Farooq, M. F. Shafique, **A. Iftikhar** and M. J. Mughal, "Polarization Insensitive Tri-Band FSS for RF Shielding at Normal and Higher Temperatures by Retrofitting on Ordinary Glass Windows" *IEEE Transactions on Antennas and Propagation*, doi: 10.1109/TAP.2022.3217881.
7. I. Ullah, B. D. Braaten, **A. Iftikhar**, S. Nikolaou, and D. E. Anagnostou, "Beamforming with $1 \times N$ Conformal Array," *MDPI Sensors*, vol. 22, Issue 17, 2022.
8. S. A. Naqvi, M. A. Baqir, G. Grouley, **A. Iftikhar**, M. S. Khan, and D. E. Anagnostou, "A novel meander line metamaterial absorber operating at 24 GHz and 28 GHz for the 5G application," *MDPI Sensor*, Vol. 22, Issue 10, 2022.
9. R. M. H Bilal, M. A. Baqir, **A. Iftikhar**, S. A. Naqvi, M. J. Mughal, M.M. Ali, "Polarization-controllable and angle-insensitive multiband Yagi-Uda-shaped metamaterial absorber in the microwave regime," *Optik Material Express*, vol. 12, Issue 2, pp. 798 – 810, 2022.
10. R. M. H. Bilal, M. A. Baqir, **A. Iftikhar**, M. M. Ali, A. A. Rahim, M. N. Akhtar, M. J. Mughal, and S. A. Naqvi, "A Novel Omega Shaped Microwave Absorber with Wideband Negative Refractive Index for C-Band Applications," *Optik*, vol. 242, September 2021.
11. U. Farooq, **A. Iftikhar**, M. F. Shafique, M. S. Khan, A. Fida, M. J. Mughal, and D. E. Anagnostou, "C-Band and X-Band Switchable Frequency-Selective Surface," *MDPI Electronics*, vol. 10, 2021.
12. N. Hussain, A. Ghaffar, S. I. Naqvi, **A. Iftikhar**, D. E. Anagnostou, and H. H. Tran, "A conformal frequency reconfigurable antenna with multiband and wideband characteristics," *MDPI sensors*, vol. 22, Issue 7, 2022.
13. U. Farooq, **A. Iftikhar**, M. F. Shafique, M. J. Mughal, A. Fida, and S. Khalid, "Polarization insensitive penta-bandstop frequency selective surface for closely placed bands," *Microwave Optical Technology Letters*, vol. 63, pp. 271 – 278, 2021.
14. M. A. Baig, J. Ikram, **A. Iftikhar**, S. S. H. Bukhari, N. Khan and J. -S. Ro, "Minimization of Cogging Torque in Axial Field Flux Switching Machine Using Arc Shaped Triangular Magnets," in *IEEE Access*, vol. 8, pp. 227193-227201, 2020.
15. R. Karim, **A. Iftikhar** and R. Ramzan, "Performance-Issues-Mitigation-Techniques for On-Chip-Antennas – Recent Developments in RF, MM-Wave, and THz Bands with Future Directions," in *IEEE Access*, vol. 8, pp. 219577-219610, 2020, doi: 10.1109/ACCESS.2020.3042928.
16. M. S Khan, **A. Iftikhar**, R. M Shubair, A. D. Capobianco, B. D Braaten, and D. E. Anagnostou, "A four element, planar, compact UWB MIMO antenna with WLAN band rejection capabilities," *Microwave Optical Technology Letters*, vol. 62, pp. 3124 – 3131, 2020.
17. N. Hussain, W. A. Awan, S. I. Naqvi, A. Ghaffar, A. Zaidi, S. A. Naqvi, and **A. Iftikhar**, X. J. Li, "A Compact Flexible Frequency Reconfigurable Antenna for Heterogeneous Applications," in *IEEE Access*, vol. 8, pp. 173298-173307, 2020.
18. M. Rasool, A. Khan, F. Bhatti, B. Ijaz, and **A. Iftikhar**, "A Compact Circular Loop Inspired Frequency and Bandwidth Reconfigurable Antenna for 4G, 5G, and X-Band Applications," *Radioengineering*, vol. 29, Issue 3, 2020.
19. M. S. Khan, S. A. Naqvi, **A. Iftikhar**, S. M. Asif, A. Fida, R. M. Shubair, "A WLAN band-notched compact four element UWB MIMO antenna," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 30, Issue 9, 2020.
20. A. Fida, **A. Iftikhar**, M. A. Yaqub, and D. Kim, "Coordinated throughput optimization for mobile sensor networks under heterogeneous fading conditions," *Transactions on Emerging Telecommunications Technologies*, 2020.

21. U. Farooq, **A. Iftikhar**, M. F. Shafique, M. A. B. Abbasi, S. Clendinning, A. Fida, M. J. Mughal, and M. S. Khan, "Ultraminiaturized Polarization Selective Surface (PSS) for dual-band Wi-Fi and WLAN shielding applications," *IET Microwaves, Antennas & Propagation*, vol. 13, pp. 1513 – 1521, 2020.
22. **A. Iftikhar**, J. M. Parrow, S. M. Asif, A. Fida, J. Allen, M. Allen, B. D. Braaten, D. E. Anagnostou, "Characterization of novel structures consisting of micron-sized conductive particles that respond to static magnetic field lines for 4G/5G (Sub-6 GHz) reconfigurable antennas," *MDPI Electronics*, vol. 9, 2020.
23. M. S. Khan, **A. Iftikhar**, R. M. Shubair, A. Capobianco, B. D. Braaten and D. E. Anagnostou, "Eight-Element Compact UWB-MIMO/Diversity Antenna with WLAN band Rejection for 3G/4G/5G Communications," *IEEE Open Journal of Antennas and Propagation*, vol. 1, pp. 196-206, 2020.
24. **A. Iftikhar** et al., "Changing the Operation of Small Geometrically Complex EBG- Based Antennas with Micron-Sized Particles That Respond to Magneto-Static Fields," *IEEE Access*, vol. 8, pp. 78956-78964, 2020.
25. M. S. Khan, **A. Iftikhar**, R. M. Shubair, A.-D. Capobianco, S. M. Asif, B. D. Braaten, and D. E. Anagnostou, "Ultra-compact reconfigurable band reject UWB MIMO antenna with four radiators," *MDPI Electronics*, vol. 9, 2020.
26. M. S. Khan, **A. Iftikhar**, S. A. Naqvi, B. Ijaz, A. Fida, R. M. Shubair, and S. A. Khan, "Circularly polarized 4×8 stacked patch antenna phased array with enhanced bandwidth for commercial drones," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 30, 2020.
27. R. Karim, **A. Iftikhar**, B. Ijaz and I. Ben Mabrouk, "The Potentials, Challenges, and Future Directions of On-Chip-Antennas for Emerging Wireless Applications—A Comprehensive Survey," *IEEE Access*, vol. 7, pp. 173897-173934, 2019.
28. **A. Iftikhar** et al., "Planar SIW Leaky Wave Antenna with Electronically Reconfigurable E- and H-Plane Scanning," in *IEEE Access*, vol. 7, pp. 171206- 171213, 2019.
29. M. S. Khan, **A. Iftikhar**, A. Fayyaz, S. M. Asif, B. Ijaz, R. M. Shubair, S. A. Khan, "Circularly polarized stacked patch antenna array with enhanced bandwidth for S-band applications," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 29, 2019.
30. U. Farooq, **A. Iftikhar**, M. F. Shafique, and M. J. Mughal, "A miniaturized and polarization insensitive FSS and CFSS for dual band WLAN applications," *AEU- International Journal of Electronics and Communications*, vol. 105, pp. 124 – 134, 2019.
31. S. M. Asif, **A. Iftikhar**, B. D. Braaten, D. L. Ewert and K. Maile, "A Wide-Band Tissue Numerical Model for Deeply Implantable Antennas for RF-Powered Leadless Pacemakers," in *IEEE Access*, vol. 7, pp. 31031-31042, 2019.
32. S. M. Asif, J. W. Hansen, **A. Iftikhar**, D. L. Ewert, and B. D. Braaten, "Computation of available RF power inside the body and path loss using in vivo experiments," *IET Microwaves, Antennas & Propagation*, vol. 13, pp. 122 – 126, 2019.
33. S. M. Asif, **A. Iftikhar**, J. W. Hansen, M. S. Khan, D. L. Ewert and B. D. Braaten, "A Novel RF-Powered Wireless Pacing via a Rectenna-Based Pacemaker and a Wearable Transmit-Antenna Array," *IEEE Access*, vol. 7, pp. 1139-1148, 2019.
34. S. M. Asif, **A. Iftikhar**, K. Maile, D. L. Ewert, and B. D. Braaten, "On the computation and comparison of specific absorption rate (SAR) in a skin tissue using analytical and numerical methods," *Microwave and Optical Technology Letters*, vol. 60, pp. 2277 – 2284, 2018.
35. M. U. Anjum, A. Fida, I. Ahmad, and **A. Iftikhar**, "A broadband electromagnetic type energy harvester for smart sensor devices in biomedical applications," *Sensors and Actuators A: Physical*, vol. 277, pp. 52 – 59, 2018.
36. M. Rasool, R. Farooq, M. H. Rashid, A. Zafar, H. Afzal, K. S. Alimgeer, B. Ijaz, and **A. Iftikhar**, "A compact open complementary split ring resonator inspired triband reconfigurable coplanar waveguide fed antenna," *Microwave and Optical Technology Letters*, vol. 60, pp. 1454 – 1459, 2018.

37. A. Sohail, K. S. Alimgeer, **A. Iftikhar**, B. Ijaz, K. W. Kim, and W. Mohyuddin, "Dual notch band UWB antenna with improved notch characteristics," *Microwave and Optical Technology Letters*, vol. 60, pp. 925 – 930, 2018.
38. M. S. Khan, **A. Iftikhar**, A.-D. Capobianco, R. M. Shubair, and B. Ijaz, "Pattern and frequency reconfiguration of patch antenna using PIN diodes," *Microwave and Optical Technology Letters*, vol. 59, pp. 2180 – 2185, 2017.
39. M. S. Khan, A.-D. Capobianco, A. Iftikhar, R. M. Shubair, D. E. Anagnostou, B. D. Braaten, "Ultra-compact dual-polarised UWB MIMO antenna with meandered feeding lines," *IET Microwaves, Antennas & Propagation*, vol. 11, pp. 997 – 1002, 2017.
40. G. Mansutti, M. S. Khan, A. D. Capobianco, **A. Iftikhar**, and S. Asif, "Self-adapting conformal phased array antennas for complex changing surfaces," *Microwave and Optical Technology Letters*, vol. 59, pp. 393 – 399, 2017.
41. J. M. Parrow, **A. Iftikhar**, S. M. Asif, J. W. Allen, M. S. Allen, B. R. Wenner, and B.D. Braaten, "On the bandwidth of a microparticle-based component responsive to magnetostatic fields," *IEEE Transactions on Electromagnetic Compatibility*, vol. 59, pp. 1053 – 1059, 2017.
42. **A. Iftikhar**, J. Parrow, S. Asif, J. Allen, M. Allen, B. D. Braaten, "Improving the efficiency of a reconfigurable microstrip patch using magneto-static field responsive structures," *IET, Electronics Letters*, vol. 52, pp. 1194 – 1196, 2016.
43. S. M Asif, **A. Iftikhar**, M. S. Khan, M. Usman, and B. D. Braaten, "An E-shaped microstrip patch antenna for reconfigurable dual-band operation," *Microwave and Optical Technology Letters*, vol. 58, pp. 1485 – 1490, 2016.
44. M. S. Khan, **A. Iftikhar**, S. M. Asif, A.-D. Capobianco, B. D. Braaten, "A compact four elements UWB MIMO antenna with on-demand WLAN rejection," *Microwave and Optical Technology Letters*, vol. 58, pp. 270 – 276, 2016.
45. M. S. Khan, A.-D. Capobianco, **A. Iftikhar**, S. Asif, and B. D. Braaten, "A compact dual polarized ultrawideband multiple-input-multiple-output antenna," *Microwave and Optical Technology Letters*, vol. 58, pp. 163 – 166, 2016. M. S. Khan, A. D. Capobianco, S. Asif, A. Iftikhar, B. Ijaz, and B. D. Braaten, "Compact 4×4 UWB-MIMO antenna with WLAN band rejected operation," *IET Electronic Letters*, vol. 51, pp. 1048 – 1050, 2015.
46. M. S. Khan, A.-D. Capobianco, A. Iftikhar, S. Asif, B. Ijaz, and B. D. Braaten, "A frequency-reconfigurable series-fed microstrip patch array with interconnecting CRLH transmission lines," *IEEE Antennas and Wireless Propagation Letters*, vol. 15, pp. 242 – 245, 2015.

List of Conference Proceeding

1. **A. Iftikhar**, N. Naseer, D. Gokcen, S. Ozdemir, and B. Saka, "Dielectric Characterization of Ultrathin Softwear Flexible Substrates Intended for Wearable Biomedical Applications", *2023 7th International Electromagnetic Compatibility Conference (EMC Turkiye)*, 17-20 September 2023, Bahçeşehir University, Istanbul Turkey.
2. **A. Iftikhar**, N. Naseer, D. Gokcen, B. Saka, and M. F. Shafique, "Near-End and Far-End Coupling Investigations of Conductive Fiber Transmission Lines (TLs) on an Ultrathin Denim Substrate", *2023 7th International Electromagnetic Compatibility Conference (EMC Turkiye)*, 17-20 September 2023, Bahçeşehir University, Istanbul Turkey.
3. **A. Iftikhar**, N. Naseer, D. Gokcen, and B. Saka, "Performance Analysis of a Conductive Cloth-based Wideband Slot Flexenna for Artificial Heart Bag in Health Monitoring Applications", *XI. URSI-TR 23 BILIMSE KONGRESI ULUSAL GENEL KURUL TOPLANTI*, 31 August 2023.
4. U. Farooq *et al.*, "An Angularly Stable Linear to Linear Polarization Conversion Metasurface for X-Band Applications," *2022 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI)*, Denver, CO, USA, 2022, pp. 908-909.
5. U. Farooq *et al.*, "A Compact Polarization Selective Surface (PSS) for Dual-Band Wi-Fi and Wi-Max Shielding Applications," *2022 IEEE International Symposium on Antennas and*

- Propagation and USNC-URSI Radio Science Meeting (AP-S/URSI)*, Denver, CO, USA, 2022, pp. 1258-1259.
6. M. N. Rafiq, D. Mitra, **A. Iftikhar**, A. M. Kirmani and B. D. Braaten, "On the Shielding Properties of Woven Microfiber Materials for Potential EMC Applications of IoT Devices," *2022 IEEE International Conference on Electro Information Technology (EIT)*, Mankato, MN, USA, 2022, pp. 188-192.
 7. M. Rasool, Z. B. Tariq, B. Ijaz, **A. Iftikhar** and F. A. Bhatti, "A Compact Multi-slotted Quadband Antenna Array for 5G mm Wave Applications," *2021 International Conference on Engineering and Emerging Technologies (ICEET)*, Istanbul, Turkey, 2021, pp. 1-4.
 8. **A. Iftikhar et al.**, "A Compact UHF RFID Tag Antenna for Sub-soil Temperature Sensing in Precision Agriculture," *2020 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting*, 2020, pp. 1453-1454.
 9. U. Farooq, M. Nasir, A. Iftikhar *et al.*, "A Compact Monopole Patch Antenna for Future Sub 6 GHz 5G Wireless Applications," *2020 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting*, 2020, pp. 1715-1716.
 10. U. Farooq, M. Nasir, **A. Iftikhar et al.**, "Split Ring Resonator Based Metamaterial Absorber for Antenna Radar Cross Section Reduction Applications in Ku Band," *2020 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting*, 2020, pp. 1283-1284.
 11. U. Farooq, M. Nasir, **A. Iftikhar et al.**, "A Polarization Insensitive Frequency Selective Surface for Triband GSM Shielding Applications," *2020 IEEE International Symposium on Antennas and Propagation and North American Radio Science Meeting*, 2020, pp. 989-990.
 12. U. Farooq, **A. Iftikhar**, A. Fida, M. F. Shafique, S. M. Asif, and R. Shubair, "UWB Antenna Printing on Glass Substrates Using Cost Effective Copper Foils," *2019 IEEE International Symposium on Antennas and Propagation*, Jul. 7 - 12, 2019, Georgia, Atlanta USA.
 13. U. Farooq, **A. Iftikhar**, M. F. Shafique, M. S. Khan, and R. Shubair, "A Compact Metasurface Based Cross Polarization Converter for X Band Applications," *2019 IEEE International Symposium on Antennas and Propagation*, Jul. 7 - 12, 2019, Georgia, Atlanta USA.
 14. S. M. Asif, **A. Iftikhar**, U. Farooq, J. Hansen, R. Striker, B. D. Braaten, R. Striker, and K. Maile "Experimental Initial Results of RF Propagation in Human Subjects," presentation *2019 IEEE International Symposium on Antennas and Propagation*, Jul. 7 - 12, 2019, Georgia, Atlanta USA.
 15. U. Farooq, **A. Iftikhar**, M. F. Shafique, S. M. Asif, and R. Shubair, "Design of a 1x4 CPW Microstrip Antenna Array on PET substrate for Biomedical Applications," *2019 IEEE International Symposium on Antennas and Propagation*, Jul. 7 - 12, 2019, Georgia, Atlanta USA.
 16. B. Ijaz, **A. Iftikhar**, K. S. Alimgeer, M. S. Khan and R. Shubair, "A Frequency Reconfigurable Dual-Band Monopole Antenna for Wireless Applications," *2018 International Symposium on Networks, Computers, and Communications (ISNCC)*, Rome, 2018, pp. 1-5.
 17. S. M. Asif, A. Iftikhar, B. D. Braaten, D. L. Ewert and K. Maile, "A Deeply Implantable Conformal Antenna for Leadless Pacing Applications," *2018 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting*, Boston, MA, 2018, pp. 1193- 1194.
 18. S. Asif, B. D. Braaten and **A. Iftikhar**, "Effectiveness of a Dielectric Probe Calibration using Deionized, Distilled and Tap Water," *2017 IEEE International Symposium on Antennas and Propagation*, Jul. 9 - 14, 2017, San Diego, CA USA.
 19. J. M. Parrow, **A. Iftikhar**, S. M. Asif, B. D. Braaten, J. W. Allen, M. S. Allen and B.R. Wenner, "On Controlling the Propagation Characteristics of Microstrip Transmission Lines using

- Embedded Micron-Sized Particles and Static H-Fields," *2017 IEEE International Symposium on Antennas and Propagation*, Jul. 9 - 14, 2017, San Diego, CA USA.
20. **A. Iftikhar**, J. M. Parrow, S. M. Asif, S. Z. Sajal, B. D. Braaten, J. Allen, M. Allen and B. Wenner, "A Printed Dipole Reconfigured with Magneto-Static Responsive Structures that do not Require a Directly Connected Biasing Circuit," presented at the *2016 IEEE International Symposium on Antennas and Propagation*, Jun. 26 - Jul. 1, 2016, Fajardo, Puerto Rico.
 21. M. S. Khan, A.-D. Capobianco, S. M. Asif, **A. Iftikhar**, B. D. Braaten and R. M. Shubair, "A Properties Comparison Between Copper and Graphene-Based UWB MIMO Planar Antennas," presented at the *2016 IEEE International Symposium on Antennas and Propagation*, Jun. 26 - Jul. 1, 2016, Fajardo, Puerto Rico.
 22. S. Asif, **A. Iftikhar**, B. D. Braaten and M. S. Khan, "Design of an Ultra-Wideband Antenna using Flexible Graphene-Based Conductor Sheets," presented at the *2016 IEEE International Symposium on Antennas and Propagation*, Jun. 26 - Jul. 1, 2016, Fajardo, Puerto Rico.
 23. S. Asif, **A. Iftikhar**, J. M. Parrow, B. D. Braaten and M. S. Khan, "On Using the Electrical Characteristics of Carbon Microfibers for Designing a Monopole Antenna," presented at the *2016 IEEE International Symposium on Antennas and Propagation*, Jun. 26 - Jul. 1, 2016, Fajardo, Puerto Rico.
 24. S. Asif, **A. Iftikhar**, B. D. Braaten and M. S. Khan, "Wave Propagation and Coupling of Graphene-Based Conductor Transmission Lines on a Conformal Surface -An Experimental Study," presented at the *2016 IEEE International Symposium on Antennas and Propagation*, Jun. 26 - Jul. 1, 2016, Fajardo, Puerto Rico.
 25. M. S. Khan, A.-D. Capobianco, S. M. Asif, **A. Iftikhar**, B. D. Braaten and R. M. Shubair, "A Pattern Reconfigurable Printed Patch Antenna," presented at the *2016 IEEE International Symposium on Antennas and Propagation*, Jun. 26 - Jul. 1, 2016, Fajardo, Puerto Rico.
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37. S. Asif, **A. Iftikhar**, J. Wandler, A. Taylor, B. D. Braaten, D. L. Ewert and Kyle Hackney, "A Mobile Health System (mHealth) for Planetary Space Suit Applications," *2015 ND EPSCoR State Conference*, April 22, 2015, Fargo ND, USA.
38. S. Asif, **A. Iftikhar**, S. Z. Sajal, B. D. Braaten and M. S. Khan, "On Using Graphene- Based Conductors as Transmission Lines for Feed Networks in Printed Antenna Arrays",*2015 IEEE International Conference on Electro/Information Technology*, May 21 - 23, 2015, Northern Illinois University, DeKalb IL, USA.
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42. B. Ijaz, S. Roy, M. M. Masud, **A. Iftikhar**, S. Nariyal, I. Ullah, K. Asirvatham, B.Booth and B. D. Braaten, "A Series-fed Microstrip Patch Array with Interconnecting CRLH Transmission Lines for WLAN Applications,"*7th European Conference on Antennas and Propagation (EuCAP 2013)*, pp. 2023 - 2026, Apr. 12 - 18, 2013, Gothenburg, Sweden.
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Career Summary

Expertise in Electrical Engineering Subjects and Innovative Teaching Methods: In August 2016, I have held the position of Assistant Professor at the Electrical and Computer Engineering Department of COMSATS University Islamabad (CUI), Pakistan and recently promoted to Tenured Associate Professor. Throughout my tenure, I have actively contributed to both research and teaching at the undergraduate and graduate levels. My teaching portfolio encompasses a diverse range of courses, including Electromagnetic Theory, Antenna and Wave Propagation, Electric Circuit Analysis, Microwave Engineering, RF Electronics, Electromagnetic Compatibility, and Interference, as well as RF System Engineering and Design.

Mentoring and Leadership: During my services as a faculty member, I have successfully supervised over 50 final-year projects at the undergraduate level and provided guidance to 8 graduate-level students. Presently, I am also serving as a co-supervisor for three Ph.D. researchers. The projects I offer emphasize a multidisciplinary engineering approach, allowing students to acquire both hardware and software skills while engaging in hands-on learning. My relevant mentoring and advising experience of 6 years can help shape the students' development towards success.

Research Integration, Collaboration, and Interdisciplinary Initiatives: As a researcher at CUI, I always promoted an independent research approach by involving research groups. My research areas include novel antenna technologies, applied electromagnetics, reconfigurable and tunable antennas, energy harvesting for biomedical applications, inquiring electromagnetic behavior of artificial engineering materials for highly efficient antennas, phased array antennas, biomedical implantable antennas, Ultra-Wideband (UWB) Multiple Input and Multiple Output (MIMO) Antennas for 4G and 5G, Frequency Selective Surfaces (FSS) of Electromagnetic Shielding, and antenna of chip.

With regards to writing grant proposals and securing grants, I have received more than 300K USD research grants as PI, which include my current funding from Skłodowska-Curie Fellowship, CUI, National Research Program for Universities (NRPU) by Higher Education Commission (HEC), COMSATS Research Grant Program (CGRP), and IEEE Antenna and Propagation Symposium (APS).

I have also established research collaboration with University of Sheffield U.K., Heriot-Watt University U.K, James Watt School of Engineering, University of Glasgow, Glasgow U.K., and North Dakota State University USA for various research projects.

My research contributions are evident from my 83 peer-reviewed journal papers and conference proceedings, one book chapter, and a US patent. My research work has received a total citation of 1255 (h-index of 19; source: Google Scholar - August 2023). I have also successfully established an antenna and RF measurement facility including an anechoic chamber at CUI, which has enabled me to receive various funding grants. I have more than 6 years of hands-on experience of Agilent's and Rhodes and Schwarz RF test equipment, Milling Machine, CNC machine, and Laith machine. I have more than 7 years of experience in RF software such as Ansys HFSS, CST Microwave Studio, COMSOL Multiphysics, MATLAB, Advanced Design System (Keysight), and Sim4life.

Assessment and Curriculum Development: Besides teaching and research engagements at CUI, I have also prepared laboratory manuals of Microwave Engineering, Antenna and Wave Propagations, and RF electronics for undergraduate students. I also performed duties as an international liaison officer in the Electrical and Computer Engineering Department at CUI to bridge the gap between industry and academia. I have been a member of Graduate Admission Committee (2017-18) and effectively conducted interviews for MS/PhD candidates in addition to their technical and personal assessments. I have served as a Convener of Final Year Project Evaluation Committee (2016-18) to successfully conduct presentations, arrange internal examiners, and compile results. Also, I have been a member of Interest Free Loan Committee (2017) in ECE Department at CUI. As a member, my major role was to interview the applicants, verify authenticity of their documents, and to decide on the loan applications.

Community Engagement and Outreach: Throughout the past decade, both as a researcher and an academic, I have actively served as a reviewer for esteemed journals, including IEEE Transactions on Electromagnetic Compatibility, Elsevier AEU, IEEE Transactions on Microwave Theory and Techniques, and Optics. Furthermore, I have also contributed as a reviewer for research grant proposals submitted to the National Research Program for Universities, under the Higher Education Commission of Pakistan. My participation in this capacity reflects my dedication to promoting high-quality research and supporting the advancement of knowledge in academia. Currently, I am a Senior member of IEEE and also the IEEE Antennas and Propagation Society since 2016.

In conclusion, as an academician and researcher, I am committed to making meaningful contributions to teaching across the Department. With my subject expertise, engaging teaching methods, mentorship skills, and research integration, I aim to create an inclusive and dynamic learning environment that fosters student growth and success. By actively participating in curriculum development, interdisciplinary collaborations, and continuous professional development, I strive to stay at the forefront of educational practices and provide students with a comprehensive and relevant educational experience. I am dedicated to nurturing a passion for lifelong learning, critical thinking, and academic excellence among students.

Skills Summary

- Expert in using 3D Electromagnetic Software (Ansys HFSS, Keysight Agilent, CST Microwave Studio, Sim4life, and COMSOL Multiphysics) for the modeling and optimization of various antenna categories such as aperture, reflectors, travelling waves, and array antennas.
- Practical hands on experience of LPKF Rapid Prototyping Machine S103, Standard chemical etching process, Vector Network Analyzer, and antenna measurement system for the RF passive component's fabrication and characterizations.
- Strong working knowledge of antenna measurements, anechoic chamber, reverberation chamber, and RF test equipment including RF signal generator, Spectrum analyzer etc.
- I am skilled in executing strategic work management, preparing simulations, developing proposals, and handling development of future concepts related to antennas.
- In-depth knowledge of servicing and handling RF testing components.
- Skilled in conducting research on novel antenna design techniques.

- Arranging meetings and liaising with team engineers and customers to discuss and negotiate appropriate production processes.
- Possesses theoretical knowledge of Microwave engineering, antenna and wave propagation, electromagnetic compatibility, and signal integrity.
- Ability to work and collaborate with different support and developments group to complete multidisciplinary tasks in given time slot.
- Proficient in analyzing complex antenna related technical problems quickly and independently using design troubleshoot, results observations, research, and testing.
- Professional proficiency in MS word, Excel, Microsoft Project, MS Visio, Adobe Illustrator software.
- Always give meticulous, thorough, and positive approach in completing assigned tasks.
- Possesses strong team and collaborative inter team working skills.
- Strong knowledge of MIMO and multiband antennas in sub – 6 GHz and 5G.
- Experience in RF matching and ability to construct antenna prototypes in-house.

Supervision

During my research career, I have supervised:

Undergraduate final year projects: 40	MS Students: 10
PhD Students: 2	

Workshops/Certifications and Memberships

Workshops and Participations

1. RF and Microwave Measurement Workshop
2. CCNA-Networking Basics Workshops
3. Conference Presentations and participations
4. Workshop on ‘Students’ Counseling for Teachers
5. Conducted workshops on Commercial EM Software

Memberships

1. IEEE Student Member (2012)
2. IEEE member (2016)
3. IEEE Senior Member (2023)
4. IET Member (2018)
5. Registered Engineer – Pakistan Engineering Council

Subjects Taught:

Undergraduate Courses	Graduate Courses
<ol style="list-style-type: none">6. Electromagnetic Theory7. Antenna and Wave Propagation8. Microwave Engineering9. Electric Circuit Analysis I10. Digital Communication Systems	<ol style="list-style-type: none">1. Electromagnetic Interference and Compatibility2. Engineering Mathematics3. Antenna Theory, Design, and Applications4. RF System Engineering and Design

Other Interests and Extra Curricular Activities

- Solar and PV System Consultancy for installation of On-Grid, Off-Grid, and Hybrid Systems (Successfully provide consultancy for installation of 200KW On-Grid and 50 KW Hybrid PV system.
- Watching Movies, Playing Badminton.