

ACADEMIC QUALIFICATION

PhD, Electronic Engineering NED University of Engineering and Technology CGPA: 3.9/4.00
December 2019

Supervisors: Dr. Muhammad Imran Aslam (NED UET) and Dr. Irfan Ahmed (NED UET)

Title: Uplink Performance of Decoupled Heterogeneous Networks in varying Pathloss Environment

M.Engg. Telecommunication Engineering, October 2010 Hamdard University (Usman Institute of Technology) CGPA: 4.00/4.00
Gold Medal Recipient

B.S. Telecommunication Engineering, July, 2008 NUCES-FAST, Karachi CGPA: 3.77/4.00
Bronze Medal Recipient

PROFESSIONAL / RESEARCH INTERESTS: Wireless Communication, Internet of Things, Analytical Modelling, Mentoring, Commercialization, Research and Academic Management

RESEARCH EXPERIENCE***Funded Projects*****In progress:**

- Principal Investigator, Sindh HEC funded SRSP Project: **“Mob-Air: Indigenously developed mobile air quality monitoring system for public health and safety”** worth **PKR 3.4 Million**, 2024-2026
- Co-supervisor for MoST Endowment Fund for research project, **“Analysis of Intelligent Reflective Surfaces in heterogeneous cellular network”**, **PKR 2.99 Million**, 2022

Completed:

- Co-Principal Investigator in HEC NRPU 2021 project: **NB-IoT ProSe: Proximity Services enabled NB-IoT for Reliable and Critical Communication in Low-Powered Applications**, worth **PKR 6.9 Million**, 2023-2025
- Co-Principal Investigator for British Council and HEC Going Global Partnership PAK-UK Education Gateway Mobility Partnership for Faculty Mobility Programme for Faculty members, **GBP 67,741 (Title: Mobility for bilateral stakeholder mapping for creating IoT networks for Climate Change)**, 2023
- Focal Person and manager of three **HEDP Innovator Seed Fund (ISF)** awards each worth USD 35,000 (total: USD 105,000~ PKR 22 Million) 2022-23
- Co-supervisor for PhD research project (Dr. Tahniyat Aslam), **“Performance Analysis of Terahertz Communication enabled Networks”**, **PKR 1.0 Million**, 2022-2024
- Co-supervisor for MoST Endowment Fund for research project (Dr. Syed Talib Abbas Jafri), **“Routing Reliability Improvement in IoT-based-MANET”**, **PKR 3.0 Million**, 2020-2022
- PhD research project grant from NEDUET, **PKR 1.0 Million**, 2017-2019
- Worked as PhD scholar on HEC funded NRPU-6054 project titled **“Flexible testbed for D2D communication in 5G cellular networks”**, **PKR. 6.59 Million**, 2017-2019
- **NEDAASC FYDP funded projects:**
 - Development of Mobile Outdoor Air Quality Monitoring System Using LoRaWAN (Supervisor, PKR 102,000, 2024-25)
 - ML-Enhanced IoT-based Electrocardiogram (ECG) Monitoring System for Patient-Centric Solution (Supervisor, PKR 73,000, 2023-24)

- IoT-Based Air Quality Monitoring and Control System (co-Supervisor, PKR 93,610, 2023-24)
- **NGIRI IGNITE FYDP funded projects:**
 - ML-Enhanced IoT-based Electrocardiogram (ECG) Monitoring System for Patient-Centric Solution (Supervisor, PKR 73,000, 2023-24)
 - IOT Enabled Smart Vertical Farming Monitoring System (Supervisor, PKR 56,454, 2022-23)
 - Adaptation of Smart contract in supply chain management using IOT (Supervisor, PKR 35,720, 2021-22)
 - IoT based Air Monitoring System (co-Supervisor, PKR 40,000, 2020-21)

Research Profile (Complete list has been provided at the end of the CV)

Journal Publications	Conference Proceedings	h-index	i10-index	Cumulative IF
28 (W=10, X=1, Y=2, Scopus=8, under review=7)	12	7	3	22

Research Supervision/Co-supervision

	Completed	In progress
Masters	5	1
PhD	2	2

PROFESSIONAL EXPERIENCE

- **Associate Professor, Department of Telecommunications Engineering, NEDUET (6th October 2025 to date)**
- **Assistant Professor, Department of Telecommunications Engineering, NEDUET (17th June 2021 to 5th October 2025)**
- **Manager, Business Incubation Center, ORIC, NED UET (17th April 2021 to date)**
 - Chairperson, Academia Industry Council, NIC Karachi
 - Focal Person and organizer, **1st Dawlance Sustainability Hackathon**, NEDUET, January 16th-17th 2025
 - Focal Person NEDUET, **Google Career Certification Programme**, 2024-date
 - Member, BIC Steering Committee, Jinnah University for Women BIC-JUBIC (2024-2026)
 - Focal Person, **Innovator Seed Fund (ISF)** by HEDP and World Bank 2021-2023
 - Focal Person, **National Idea Lab (NIL)** by HEC, SMEDA and NEDUET 2022-date
 - Facilitator, UNIDO six-week EU funded Cluster Development Agents training under the **Poverty Alleviation and Inclusive Development Across Rural Sindh (PAIDAR)** programme, January-February 2023
 - Member, Cohort Selection Committee, National Incubation Center Karachi, Cohorts 10, 11, 12
 - Focal Person, **National Idea Bank**, 2021-date
 - Conducting timely BIC Steering Committee meetings
 - Submit HEC compliance data and scorecard on Annual basis
 - Overseeing day-to-day operation of BIC facility
 - Conducting business counseling and trainings with startups, faculty, and students
 - Evaluating and seeking potential funding sources
 - Assisting in developing and implementing policies
 - Governing the operation of the facility including meeting performance metrics and goals
- **Assistant Professor, Department of Electronic Engineering, NEDUET (7th December 2019- 16th June 2021)**
- **Lecturer, Department of Electronic Engineering, NEDUET (8th April 2010 to 6th December 2019)**

Administrative Assignments

- Elected Member representing Assistant Professors in Syndicate, NEDUET (May 2025-October 2025)
- Focal Person, NED International Office (September 2025-date)
- Manager Business Incubation Center, ORIC, NEDUET (April 2021- date)
- Member/Secretary BIC Steering Committee, ORIC, NEDUET (April 2021-date)
- Member, Board of Review, Quality Enhancement Cell, NEDUET (January 2024-date)
- Member, Board of Review, Office of Research, Innovation and Commercialization (December 2021-date)
- Member, Committee for collection and submission of data to HEC for University Ranking (August 2023)
- Area/ISO Coordinator, Department of Telecommunications Engineering (17th June 2021- date)
- Member/Secretary, Industrial Advisory Board, Department of Telecommunications Engineering (July 2021-date)
- Member/Secretary, Board of Studies, Department of Telecommunications Engineering (July 2021-date)
- Member, Board of Faculty, Faculty of Electrical and Computer Engineering (November 2021-October 2024)
- LRQA Certified Lead Quality Auditor, Internal Lead Auditor for NED UET (2017 to date)
- Member, Departmental Outcome Based Education Team (April 2017 to October 2021)
- Class Advisor, Second Year Telecommunication Engineering (November 2019-June 2021)
- Learning Management System Facilitator Second Year Telecommunication Engineering (April' 20-June '21)
- Member Programme Team for development of SAR for MS Telecom Systems Programme (2020-2021)

Teaching Assignments

Post-graduate and Doctorate: Next Generation Networks, Heterogeneous Cellular Networks, Smart Grid Communication, Mobile Telephony Systems, Advance Communication systems, Telecommunication Network Operations

Undergraduate: Next Generation Networks, Telecommunication Switching Systems, Telecommunication Management Networks, Communication Systems, Signals and Systems

- **Lecturer at National University of Computer and Emerging Sciences (01st August 2009 to 7th April 2010)**
- **Lab Engineer at National University of Computer and Emerging Sciences (01st August 2008 to 31st July 2009)**
 - Conducted Laboratory Sessions of Various Telecommunication Engineering Courses
 - Worked as Lab In-charge of two Laboratories over the tenure
 - Invigilation duties in Semester Mid-Terms and Final Examinations, Students' Evaluation for Lab Courses

RELEVANT SKILLS

Programming Skills	Application Software Skills	Management Skills
▪ MATLAB (Advanced) ▪ LabView (Intermediate) ▪ OMNET++ (Intermediate) ▪ Communication Systems Design Suite (Intermediate) ▪ C++ (Intermediate) ▪ TCL Scripting (Basic)	▪ EndNote (Advance) ▪ LaTeX (Advance) ▪ Wireshark Protocol Analyzer (Medium) ▪ Cisco Packet Tracer (Medium) ▪ MRTG (Basic) ▪ MS Word, MS PowerPoint and MS Excel (Advance) ▪ Canva (Advance)	▪ Student Counselling ▪ Research Supervision ▪ Fund Management ▪ Project Design and Management ▪ Fund Raising for research ▪ Startup facilitation ▪ Industrial Liaison ▪ Monitoring and Evaluation ▪ Quality Audits

COMMUNITY SERVICE AND ENGAGEMENT

Events

- Head of Finance and Marketing team, **2nd International Conference on Technology-driven Climate Action (CLIMATECH)**, NEDUET, January 16th-17th 2025
- Co-chair Finance and Marketing, **2nd NED Women Conference**, 6th and 7th November 2024
- Organizing team member, **1st Industrial Liaison Conference**, 3rd August 2024

- Conference Secretary, **1st International Conference on Technology-driven Climate Action** (CLIMATECH), NEDUET, October 16th and 17th 2023
- Organizer, **Sindh HEC Research & Technology Showcase**, 2022, 2023
- Programme Secretary, **2nd International Conference on Emerging Trends in Electronics and Telecommunications Engineering** (INTERACT), NEDUET, 15th-16th March 2023
- Team member, **1st International Conference on Applied Physics and Engineering (ICAPE)**, November 2021
- Head of Documentation and Content, **International Conference on Emerging Trends in Telecommunication and Electronic Engineering**, NEDUET, August 2017 to March 2018
- Faculty Head, **Career Expo 2011**, Department of Electronic Engineering, August-September 2011
- Faculty Coordinator: **TE-Links**- Official Telecom Discussion Forum of NED UET, January 2011 to 2013
- In-charge **SENTEC** (Society for the Promotion of Science and Technology), June-August 2010

Trainings

- Speaker, **Synergy Summit 2025: Academia Meets Industry**, FPCCI Head Office, Karachi, October 23rd 2025
- Panelist, **Human-AI Collaboration redefining work and creativity**, 1st Annual Next Generation Awards, 7th May 2025
- Panelist, **STEM Education for Resilient Society**, organized by IEP KC Women Engineers Committee, 7th September 2024
- Panelist, **Academia Commercialization for Innovation**, Global Entrepreneurship Week, NIC Karachi, 14th November 2023
- Conducted two-day “**Entrepreneurship Bootcamp**” for Beaconhouse School A-levels students, 30th-31st July 2024
- Conducted session on “**EDI in Higher Education in Pakistan**”, UWS Scotland, UK, October 3rd 2023
- Conducted “**5 day capacity building training on Effective Data Collection, Management and submission for HEC Ranking**”, 07th -11th August 2023
- Conducted two-day boot camp on **Innovator Seed Fund Business Proposal** submission, 22nd-23rd February 2023
- Conducted faculty training on “**Startup Management and Incubation at NEDUET**”, 28th February 2022
- Conducted training on “**Assessing Data and Information Quality**”, on 12th December 2020, organized by Pakistan Academy of Engineering and Pakistan Science Foundation, Karachi.

Journals, Showcases, and Conferences

- Session chair, **10th International Electrical Engineering Conference**, August 29th-30th 2025
- Session chair, **4th International Biomedical and Digital Health Conference 2025**, May 2nd-3rd 2025
- Co-Editor for Book, “**Improving Quality of Life for People with Disabilities Through Smart Technologies**”, IGI Global Scientific Publishing, 2025, <https://www.igi-global.com/publish/call-for-papers/call-details/8433>
- Project Exhibitor, 3rd Sindh Higher Education Commission Research and Technology Showcase for project: “**Air Quality Monitoring and Control System**”, 1st June 2024
- Editor, MDPI Engineering Proceedings, **2nd INTERACT 2023**, 32, <https://doi.org/10.3390/engproc2023032027>
- Session Chair, **2nd NED Women Conference**, 6th-7th November 2024
- Moderator, Panel discussion on “**Women-Led Social Impact and Philanthropy**”, **2nd NED Women Conference**, 6th-7th November 2024
- Session Chair, **8th International Electrical Engineering Conference**, 25th- 26th August, 2023
- Session Chair, **1st International Biomedical and Digital Health Conference**, 22nd-23rd November, 2022
- Keynote speaker on “**Prospects of Cellular IoT Research and Commercialization in Pakistan**”, Third International Conference On Latest trends in Electrical Engineering and Computing Technologies (INTELLECT), 16th-17th November 2022
- Session Chair, **18th IEEE HONET Conference**, symposium on “**From 5G to 6G: Secure, Automated and Intelligent Networks**”, 11th October 2021
- Reviewer for **Wireless Communication Letters, Telecommunication Systems, Technology Forces Journal of Engineering and Sciences** (2019-date)

- Technical Program Committee member (as reviewer) in **IEEE EUROCON 2025**
- Technical Program Committee member (as reviewer) in **IEEE GLOBECOM 2018, 2019, 2020 and 2021**
- Technical Program Committee member (as reviewer) in **IEEE HONET 2025, 2024, 2023, 2022, 2021**
- Track Chair and Session Chair, **IEEE Smart Cities Conference 2021** workshop on “**5G enabled Smart Cities**”, 7th September 2021

PROFESSIONAL TRAININGS AND WORKSHOPS

- **Lead Auditor Training Course** on Quality Management Systems (QMS) ISO 9001:2015, 13th to 16th October 2025
- QEC training on "**Pedagogical Innovation and Active Learning**", October 1st 2025
- Sindh HEC and International Center for Excellence workshop on “**Qualitative research for Decision Makers**”, 26th August 2025
- QEC training on “**Modernizing Quality Assurance: Leveraging Digital Tools for Academic Excellence**”, 25th June 2025
- Sindh HEC training on “**Enabling Universities through Skilled-Based Incubation Ecosystems**”, May 20th 2025, IoBM Campus
- QEC training on “**Women in Leadership: Rise & Lead/ Conceptualizing and Navigating Women's Leadership and Leadership Development in Higher Education**”, 14th May 2025
- HEC's **Editorial Team Training Workshop**, April 10th 2025, NEDUET
- QEC training on “**Root Cause Analysis**” 26th June 2024
- WIPO DL-101 Course Certificate, **General Course of IP**, June 2024
- Training on “**Entrepreneurship in Higher Education**”, IBA-CED, November 16th and 17th 2023
- Participated in Pak-UK Education Gateway Mobility Partnership for Faculty: “**Mobility for Bilateral Stakeholder mapping for creating IoT networks for climate change**”, at University of the West of Scotland, UK, 25th September to 6th October 2023
- 2-day **BIC Master Trainer** by i2i and HEDP, Kinnaird College for Women, Lahore, 9th and 10th February 2023
- 3-day **BIC Training by i2i and HEDP-HEC** in Daftarkhwan, Lahore, Pakistan, 10th-12th November 2022
- 3-day **Training on incubation and business management** by GRASP, ITC, Marriott, Karachi, August 2022
- ORIC Training on: “**The Role of ORIC In Line of University & HEC Guidelines**”, 28th February 2022
- ORIC Training on: “**Writing Research Grants: National and International: Practices and Experiences**”, 28th February 2022
- ORIC Training on: “**Filing Patents and IP Policy**”, 28th February 2022
- ISF Focal Persons training on “**Innovator Seed Fund**”, HEC Islamabad, 29th December 2021
- **Entrepreneurship for Engineers**, organized by PEC (1.0 CPD), 10th March 2021
- **Learning Management System Training** sessions, March 2020 onwards
- **OBE based student evaluation**, 7th January 2020, QEC
- **Development of SAR as per PEC guidelines**, January 2020, QEC
- **Examination Paper setting as per OBE system**, 31st December 2019, QEC
- **Intellectual Property and Patents Laws in Pakistan**, November 2019, QEC
- **OBE System Design**, 29th Nov 2017, QEC
- **Awareness Session on Transition to ISO 9001: 2015**, 18th Oct 2017, ISO
- **HEI Ranking QA through IPE**, 25th July 2017, QEC
- **IRCA Registered Lead Assessor, LRQA**, conducted by Mr. Raheel Ehsan, 24th-28th April 2017, ISO
- **National Instruments, RF and Microwave Symposium**, 09th February 2017, Karachi
- **Development of Self-Assessment Report (SAR)**, 01st February 2017, QEC
- **Supply Chain Management**, 23th to 26th January 2017, ISO
- **Procedure of Assessment of SAR**, 06th March 2017, QEC
- **Quality Management, control, and assurance**, 27th -29th January 2016, QEC
- **Quality Assurance in Education**, 17th April, 2015, QEC
- **Effective Teaching Methodologies and Outcome Based Education Trainings**, QEC, 2015
- Huawei Training on **Advance GSM Equipment** (NSS and BSS), UET Lahore, July 2010
- 2-Day Training on **FPGA Programming**, Department of Electronic Engineering, June 2010

HONOURS AND AWARDS

- Winner of NEDAASC Best Teacher Award 2022
- NEDUET Best Researcher Award 2022
- First Position and Academic Excellence Award Recipient, M.Engg. Telecommunications Engineering (2010)
- Third Position in BS Telecommunication Engineering (2008)
- Member of the Dean's List since 2005

PUBLICATIONS

Journal Publications

1. Ayesha Urooj, **Sundus Ali**, Irfan Ahmed, Muhammad Imran Aslam, **Proximity service for vehicular passengers: modeling and analyzing D2D implementation for VoIP application using vehicular mobility models**, Annals of Telecommunications. June 2025, <https://doi.org/10.1007/s12243-025-01101-4> [IF:2.2]
2. Hira Mariam, Ghulam Fiza, **Sundus Ali**, Irfan Ahmed, Muhammad Imran Aslam, Muhammad Zeeshan Shakir, **Exploiting Internet of Things to address climate change: Case study and analysis on the perception of stakeholders in Pakistan**, Journal of Climate and Community Development, 3(2), 264-285. <https://joccd.com/index.php/joccd/article/view/66>, 2025 [Y category]
3. Tahniyat Aslam, Irfan Ahmed, **Sundus Ali**, **Analysis of User Association in Multi-Tier, Multi-Band Heterogeneous Cellular Networks**, Telecommunication Systems, 88(8) 2024. <https://doi.org/10.1007/s11235-024-01248-w> [IF:2.3]
4. Abul Khair Muhammad Shafaat Ali, Irfan Ahmed, **Sundus Ali**, Mobin Khalid, **Gain Enhancement of Patch Antenna using Novel Glass Fiber Reinforced Polymer (GFRP) based Metasurface**, Advanced Electromagnetics, 13(3), 10–18, 2024, <https://doi.org/10.7716/aem.v13i3.2273> [IF:0.8]
5. **Sundus Ali**, Ashar Shakeel, Filza Hassan Khan, Ghulam Fiza, Khalid Kamran, Fatima Tanoli, and Muhammad Imran Aslam. **Development and Evaluation of a Sensor-Based Non-Invasive Blood Glucose Monitoring System Using Near-Infrared Spectroscopy**, Engineering Proceedings, 2024, 82, no. 1: 19. <https://doi.org/10.3390/ecsa-11-20395> [Scopus Indexed]
6. Syed Talib Abbas Jafri, Syeda Rabia Amin, Fariha Amanat, Tahniyat Aslam, **Sundus Ali**, Irfan Ahmed, Muhammad Imran Aslam, 2024. **Development of Narrow Band Internet of Things Testbed for Proximity Services**. International Journal of Innovations in Science & Technology, 6(7), 146–157., 2024. <https://journal.50sea.com/index.php/IJIST/article/view/1101> [Y category]
7. Syed Talib Abbas Jafri, Irfan Ahmed, **Sundus Ali**, Jamaiah Yahaya, Faizan Qamar, Zuriani Hayati Abdullah, **Split Hop Penalty for Transmission Quality Metric in Better Approach to Mobile Ad-hoc Networking (BATMAN) for IoT-based MANET**, MDPI Symmetry, 15(5), 969. 2023; <https://doi.org/10.3390/sym15050969> [IF:2.2]
8. Fatima Haider Naqvi, **Sundus Ali**, Binish Haseeb, Namra Khan, Soomal Qureshi, Taha Sajid and Muhammad Imran Aslam, **Design and implementation of Smart Contract in supply chain management using Blockchain and Internet of Things**, Engineering Proceedings, 2023, 32(1), 3; <https://doi.org/10.3390/engproc2023032015> [Scopus Indexed]
9. Syed Talib Abbas Jafri, Irfan Ahmed, **Sundus Ali**, and Faizan Qamar, **Analysis of AgRED performance in LR-WPAN dense ad-hoc networks**, Engineering Proceedings, 2023, 32(1), 3; <https://doi.org/10.3390/engproc2023032005> [Scopus Indexed]
10. Moazzam Shah Bukhari Syed, Hafiz Muhammad Attaullah, **Sundus Ali** and Muhammad Imran Aslam, **Wireless Communications Beyond Antennas: The Role of Intelligent Reconfigurable Surfaces**, Engineering Proceedings, 2023, 32(1), 3; <https://doi.org/10.3390/engproc2023032010> [Scopus Indexed]
11. Fasih Ur Rehman, Hafiz Muhammad Attaullah, Faisal Ahmed and **Sundus Ali**, **Data Defense: Examine Fintech's Security and Privacy Strategies**, Engineering Proceedings, 2023, 32(1), 3; <https://doi.org/10.3390/engproc2023032003> [Scopus Indexed]
12. **Sundus Ali**, Muhammad Imran Aslam, Irfan Ahmed, Attaullah Khawaja, **Uplink performance of narrowband Internet-of-Things devices in Downlink Uplink Decoupled based Heterogeneous**

- Networks**, Iranian Journal of Science Technology Transactions of Electrical Engineering, 47, 385–399, 2023. <https://doi.org/10.1007/s40998-022-00570-w> [IF:1.4]
13. Mariam, Hira, Irfan Ahmed, **Sundus Ali**, Muhammad Imran Aslam, and Ikram Ur Rehman. 2022, **Performance of Millimeter Wave Dense Cellular Network Using Stretched Exponential Path Loss Model**, Electronics, 11, no. 24: 4226.2022. <https://doi.org/10.3390/electronics11244226> [IF:2.6]
 14. Syed Talib Abbas Jafri, Irfan Ahmed, and **Sundus Ali**, **Queue-Buffer Optimization Based on Aggressive Random Early Detection in Massive NB-IoT MANET for 5G Applications**, Electronics, 11, no. 18: 2955. 2022 <https://doi.org/10.3390/electronics11182955> [IF:2.6]
 15. **Sundus Ali**, Muhammad Imran Aslam, Irfan Ahmed, **Impact of Fractional Power Control on DUDe based HetNets in varying Path Loss Exponent Environment**, Transactions on Emerging Telecommunications Technologies, 2022. doi: 10.1002/ett.4491 [IF:2.5]
 16. Syeda Messan, Asra Shahud, Amna Anis, Roma Kalam, **Sundus Ali** and Muhammad Imran Aslam, **Air-MIT: Air Quality Monitoring using Internet of Things**, Engineering Proceedings, 2022, 20(1), 45; <https://doi.org/10.3390/engproc2022020045> [Scopus Indexed]
 17. **Sundus Ali**, Muhammad Imran Aslam, Irfan Ahmed and Tayyaba Khurshid, **Analysis of the Decoupled Uplink Downlink Technique for Varying PLE in Multi-Tier HetNet**, Telecommunication Systems, 74, 497–510 2020. <https://doi.org/10.1007/s11235-020-00661-1> [IF:2.3]
 18. **Sundus Ali**, Muhammad Imran Aslam, and Irfan Ahmed. **Uplink Coverage Probability and Spectral Efficiency for Downlink Uplink Decoupled Dense Heterogeneous Cellular Network using multi-slope pathloss model**, Telecommunication Systems, vol. 72, no. 4, pp. 505-516, 2019. DOI:10.1007/s11235-019-00587-3 [IF:2.3]
 19. **Sundus Ali**, Muhammad Imran Aslam, and Irfan Ahmed, **Analysis of Downlink Uplink Decoupled Dense Heterogeneous Cellular Network based on User Association using Multi-Slope Pathloss Model**, Advances in Electrical and Computer Engineering, vol. 19, no. 2, pp. 45-52, 2019. DOI:10.4316/AECE.2019.02006 [IF:0.7]
 20. Tanzila, **Sundus Ali**, Muhammad Imran Aslam, Irfan Ahmed, Ayesha Ahmed, Prototyping **LoRaWAN-Based Mobile Air Quality Monitoring System for Public Health and Safety**, Engineering Proceedings, Accepted [Scopus Indexed]
 21. Muhammad Abdullah, Ghada Noor, **Sundus Ali**, Irfan Ahmed, and Muhammad Imran Aslam, **Development of cellular IoT-based, portable outdoor air quality monitoring system for pollution mapping**, Engineering Proceedings, Accepted [Scopus Indexed]
 22. Tahniyat Aslam, Irfan Ahmed, **Sundus Ali**, Faizan Qamar, **Analytical modelling and performance analysis of uplink coverage and capacity of multi-tier, multi-band HetNets incorporating Terahertz communication**, Arabian journal of Science and Engineering, revision submitted [W Category]
 23. Syed Talib Abbas Jafri, **Sundus Ali**, Irfan Ahmed, Muhammad Imran Aslam, **SDR-based experimental evaluation of NB-IoT testbed in outdoor environment using open source software stack**, Advances in Electrical and Electronic Engineering, under revision [X category]
 24. **Sundus Ali**, Syed Talib Abbas Jafri, Ghulam Fiza, Cezar Anicai, Yingbo Zhu, Muhammad Imran Aslam, Muhammad Zeeshan Shakir, et al, **IoT-enabled, real-time, remote, outdoor environment monitoring system**, EMITTER International Journal of Engineering Technology, under review [X category]
 25. Tanzila, **Sundus Ali**, Muhammad Imran Aslam, Irfan Ahmed, Syeda Kashaf Kulsoom, Maria Hussain, Mahnoor Asif, **Design, Development, and Evaluation of ML-IoT enabled Environment Quality Monitoring System**, International Journal on Environmental Quality, under review [X category]
 26. Hafiz Muhammad Attaullah; **Sundus Ali**; Muhammad Imran Aslam; Irfan Ahmed; Al-Sakib Khan Pathan, **An Efficient Risk Impact and Vulnerability Assessment Framework for NB-IoT Networks**, Sukkur IBA Journal of Computing and Mathematical Sciences, under review [Y category]
 27. Tahniyat Aslam, Irfan Ahmed, **Sundus Ali**, **Comparative Uplink Performance Analysis of 3D and 2D Antenna Models in THz Networks with Joint Human and Wall Blockages**, Advances in Electrical and Computer Engineering, submitted in October 2025 [W category]

28. Syeda Mahum Arif, **Sundus Ali**, Irfan Ahmed, Noor us Sabah, Adnia Nosheen, Zainab Ishtiaq, Muhammad Imran Aslam, **Design, development and evaluation of proactive threat detection framework in NB-IoT networks**, Acta Informatica Pragensia, submitted in September 2025 [X category]

Conference Publications

29. Tanzila, **Sundus Ali**, Muhammad Imran Aslam, Irfan Ahmed, **Development of a LoRaWAN-Based Mobile Air Quality Monitoring System for Public Health and Safety**, 10th International Electrical Engineering Conference (IEEC 2025), 9th-10th May 2025, IEP Centre, Karachi, Pakistan
30. **Sundus Ali**, Muhammad Imran Aslam, Zaryab Ahmed Khan, Asma Khalid, Arhamna Ayub Khan, Hania Ali Shaikh, **ML-Enhanced IoMT-based Electrocardiogram Monitoring System for Patient-Centric Solution**, 2024 26th International Multi-Topic Conference (INMIC), Karachi, Pakistan, 2024, pp. 1-5, doi: 10.1109/INMIC64792.2024.11004334
31. **Sundus Ali**, Muhammad Imran Aslam, Irfan Ahmed, Syed Talib Abbas Jafri, Tahniyat Aslam, **Development of a novel OMNET++ framework for analysis of an NB-IoT uplink network**, International Conference on Emerging Trends in Smart Technologies (ICETST), Karachi, Pakistan, 2024, pp. 1-4, doi: 10.1109/ICETST62952.2024.10737960
32. Muhammad Imran Aslam, **Sundus Ali**, Hamza Kaleem Shah, Samima Siddiq, Eisha Shoukat and Yahya Ahmed Khan, **Development and implementation of AI-enabled, remote vitals monitoring system using LoRaWAN**, 4th International Conference on Innovations in Computer Science (ICONICS), Karachi, Pakistan, 2024, pp. 1-5, doi: 10.1109/ICONICS64289.2024.10824314.
33. Tahniyat Aslam, Irfan Ahmed, **Sundus Ali** and Muhammad Imran Aslam, **“Tera Hertz Communication and Associated Challenges in 6G Cellular Networks”**, 4th International Conference on Computing & Information Sciences, November 29-30, 2021, Karachi, Pakistan, DOI: 10.1109/ICCIS54243.2021.9676382
34. Nehan Abdul Ghani, Yumna Shahid, Zahra Mubeen, Mahnoor Khursheed, **Sundus Ali** and Muhammad Imran Aslam, **“Prototype Implementation of Device-to-Device Communication”**, 4th International Conference on Computing & Information Sciences, November 29-30, 2021, Karachi, Pakistan, DOI: 10.1109/ICCIS54243.2021.9676389
35. Aisha Danish, **Sundus Ali**, Muhammad Imran Aslam, Irfan Ahmed, **“Future prospects and challenges associated with intelligent reflecting surfaces enabled wireless communication”**, 18th International IEEE HONET Conference, October 11-13 2021, DOI: 10.1109/HONET53078.2021.9615389
36. **Sundus Ali** et al., **"Performance Analysis of Single-Hop Device to Device Communication,"** IEEE International Bhurban Conference on Applied Sciences and Technologies (IBCAST), 2021, pp. 974-978, doi: 10.1109/IBCAST51254.2021.9393266.
37. **Sundus Ali**, Muhammad Imran Aslam, Irfan Ahmed and Hira Mariam, **“Device-to-Device Communication Prototyping using Software Defined Radios”**, IEEC, Karachi, Pakistan, February 2020
38. **Sundus Ali**, M. Imran Aslam, Irfan Ahmed, **“Multi-frequency MIMO channel modeling and capacity analysis using 3-D Spatial Statistical Channel Model for Millimeter Wave Outdoor Communication”**, 14th International Bhurban Conference on Applied Sciences and Technology (IBCAST), Islamabad, 10th-14th January 2017, doi: 10.1109/IBCAST.2017.7868135.
39. **Sundus Ali**, M. Imran Aslam, Irfan Ahmed, **Analysis of Proportional Fairness Utility and Interference Mitigation in Heterogeneous Cellular Networks**, 31st IEEE International Multi-Topic Symposium, Karachi, March 2016
40. Abdul Moiz, A.K.M. Shafaat Ali, **Sundus Ali** et al, **“Design & development of linearly polarized C-Band Phased Array Antenna for Air-borne & Space-borne SAR payloads”**, 11th International Bhurban Conference on Applied Sciences and Technology (IBCAST), 2014, doi: 10.1109/IBCAST.2014.6778195.