Hashim **Safdar**

Academic/Researcher/Engineer

CONTACT

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ABOUT ME

I have an exceptional academic track record in higher education, with a strong emphasis on Electrical Engineering. My research interests span various exciting areas, including Electronics, Wireless Communication (5G & 6G Technologies), Machine to Machine Communication, Artificial Intelligence, Game Theory, Learning methods, and the Internet of Things (IoT). Currently, I am honored to serve as the Head of Department (HoD) and Assistant Professor in the Department of Electrical Engineering at FUUAST, Islamabad. In this role, I actively contribute to the academic and professional growth of students in the field.

SKILLS

Written & Oral Communication	5/5
Self Management & Work Habits	4/5
Research & Information Management	4/5
Analysis & Problem Solving	5/5

EDUCATION

PH. D ELECTRICAL ENGINEERING (WES CANADIAN EQUIVALENCE -EARNED DOCTRATE) 2017

UNIVERSITI TEKNOLOGI MALAYSIA, MALAYSIA

Thesis: Distributed Resource Allocation for Inter Cell Interference Mitigation in Irregular Geometry Multicell Network

MS ELECTRICAL ENGINEERING 2008

BLEKINGE INSTITUTE OF TECHNOLOGY, SWEDEN

Thesis: Performance Evaluation of Rake Receivers Using Ultra Wideband Multipath Channels

B.E. TELECOMMUNICATION 2004

ALLAMA IQBAL OPEN UNIVERSITY (AIOU), ISLAMABAD

Final Year Design Project: Linux based ISP setup

DIPLOMA OF ASSOCIATE ENGINEERING (ELECTRONICS TECHNOLOGY) 1999

PUNJAB BOARD OF TECHNICAL EDUCATION, LAHORE

WORK EXPERIENCE

INCHARGE/HEAD OF ELECTRICAL ENGINEERING DEPARTMENT

FUUAST, ISLAMABAD 2021-2024

- Contributed to development of curriculum for Computer Engineering and Ph.D. Electrical Engineering program.
- Interacting with faculty, lab engineers and staff to achieve goals.
- Maintaining relationship with HEC/PEC.

ASSISTANT PROFESSOR

FUUAST, ISLAMABAD 2011-Present

- Teaching Courses for undergraduate, graduate and post graduate programs.
- Introduced Complex Engineering Problems and Activities in Digital Signal Processing course.
- Supervising undergraduate and graduate students.
- Conducting research and publishing its results in academic journals.
- Writing proposals to secure funding for research.

ASSISTANT PROFESSOR (CONTRACT) 2010-2011

FUUAST, ISLAMABAD

- Teaching and supervising undergraduate students

ASSISTANT PROFESSOR/FACULTY MEMBER

UNIVERSITY OF SOUTH ASIA, LAHORE 2008-2010

- Teaching Courses.
- Supervising undergraduate students.

MAINTENANCE ENGINEER/PROJECT ENGINEER 2005-2006

ETECHS, RIYADH, SAUDI ARABIA

- Installation/Maintenance of security/safety systems.
- Trainer for security equipment's

RESEARCH GRANTS

STARTUP RESEARCH GRANT PROJECT 2018
HEC RESEARCH GRANT

- Secure a Research Grant of Pkr. 489900

WORK ACHIEVEMENT

ACCREDITATION FOR B.SC. ELECTRICAL ENGINEERING PROGRAM
FUUAST, ISLAMABAD 2023

- In 2023, as Head of the Electrical Engineering department, I successfully implemented a Level-2 outcome-based education system to meet the Washington Accord's accreditation requirements. This initiative improved the quality of education, aligned with international standards, and boosted our department's reputation. Our graduates are now well-prepared to excel in the competitive global engineering industry.

START OF NEW COMPUTER ENGINEERING PROGRAM
FUUAST, ISLAMABAD 2023

- Starting Fall 2024, I will lead the creation of a new Computer Engineering program to address growing demand for skilled professionals. With expertise, teamwork, and industry collaborations, we will develop a comprehensive curriculum, selected top faculty, and form strategic partnerships. This achievement will expand educational opportunities for aspiring computer engineers and position our institution as a major influencer in shaping the future of technology.

START OF NEW PH.D ELECTRICAL ENGINEERING PROGRAM
FUUAST, ISLAMABAD 2023

- I led the launch of a new Ph.D. program in Electrical Engineering, starting Fall 2023, to foster scholars and researchers. With careful planning, we developed a rigorous curriculum, partnered with esteemed researchers, and selected top faculty.

AWARDS

HEC/FUUAST FACULTY DEVELOPMENT PROGRAM, OVERSEAS SCHOLARSHIP FOR PHD 2012

MEMBERSHIPS

- Institute of Electrical and Electronics Engineer (IEEE). (Membership No. 92702706)
- Pakistan Engineering Council (PEC). (Membership No. TELE/01467).

MS THESIS SUPERVISED

- Dynamic Power Allocation for Interference Mitigation in Cellular Network

JOURNAL PUBLICATIONS

- A. Umar, Z. Khalid, M. Ali, M. Abazeed, A. Alqahtani, R. Ullah, H. Safdar “A Review on Congestion Mitigation Techniques in Ultra- Dense Wireless Sensor Networks: State-of-the-Art Future Emerging Artificial Intelligence-Based Solutions” Appl. Sci. 2023, 13, [ISSN 2076-3417]
- H. Safdar, R. Ullah, Z. Khalid “Game Theoretic based Distributed Dynamic Power Allocation in Irregular Geometry Multicellular Network” International Journal of Computer Science and Network Security, VOL.22 (7), July 2022 [ISSN: 1738-7906]
- R. Ullah, S.M. Bilal, Z. Khalid, H. Safdar “Soft Frequency Reuse-based Interference Mitigation in Irregular Geometry Heterogeneous Networks” International Journal of Computer Science and Network Security, VOL.22 (6),, June 2022 [ISSN: 1738-7906]
- A. Umar, R. Ullah, H. Safdar, Z. Khalid “Non-Orthogonal Multiple Access for Future Emerging Ad- Hoc Networks” International Journal of Computer Science and Network Security, VOL.22 (6), June 2022 [ISSN: 1738-7906]
- R. Ullah, F. Ullah, Z. Khalid, H. Safdar “A Review Of Inter Cell Interference Management In Regular And Irregular Geometry Cellular Networks,” Jurnal Teknologi (Sciences and Engineering), vol. 83 (5), 2021 [ISSN: 2180-3722]
- R. Ullah, H. Ullah, Z. Khalid, H. Safdar “Irregular Geometry Based Sectored FFR Scheme for ICI Mitigation in Multicellular Networks.,” Journal of Communications., vol. 15,(11) pp. 796–807, 2020 [ISSN: 1796-2021]
- H. Safdar, N. Fisal, R. Ullah, Z. Khalid, and W. Maqbool, “Resource Allocation for M2M Communication in Heterogeneous Network: Coalitional Game Theory Approach,” Jurnal Teknologi (Sciences and Engineering), vol. 67 (1), pp. 83–88, 2014 [ISSN: 2180-3722]
- R. Ullah, N. Fisal, and H. Safdar, “Stochastic Geometry Based Dynamic Fractional Frequency Reuse for OFDMA Systems,” Jurnal Teknologi (Sciences and Engineering), vol. 67(1), pp. 61–67, 2014 [ISSN: 2180-3722]
- A. Khan, N. Fisal, Z. Bakar, R.Ullah and H.Safdar “Secure Authentication and Key Management Protocols for Mobile Multihop WiMAX Networks,” Indian Journal of Science and Technology, vol. 7 (3), March, pp. 282–295, 2014 [ISSN: 0974-6846 / 0974-5645]
- Z. Khalid, N. Fisal, R. Ullah, H. Safdar, W. Maqbool, S. Zubair, and A. S. Khan, “M2M Communication in Virtual Sensor Network for SHAAL,” Jurnal Teknologi (Sciences and Engineering), vol. 65 (1), pp. 99–105, 2013 [ISSN: 2180-3722]
- W Maqbool, SK Syed Yusof, A Latiff, H Safdar, R Ullah, Z Khalid. “Link Capacity Based Channel Assignment (LCCA) for Cognitive Radio Networks,” Jurnal Teknologi (Sciences and Engineering), vol. 65 (1), pp. 93–97, 2011 [ISSN: 2180-3722]

CONFERENCE PUBLICATIONS

- Z. Khalid, U. Khalid, MA. Sarijari, H. Safdar, R. Ullah, M. Qureshi, SU. Rehman “Sensor virtualization Middleware design for Ambient Assisted Living based on the Priority packet processing,” Elsevier The 10th International Conference on Ambient Systems, Networks and Technologies (ANT), Belgium. 2019

- Z. Khalid, N. Fisal, H. Safdar, R. Ullah, and W. Maqbool “Multi-Thread based Middleware for Sensor Network Virtualization” 5th National Symposium on Information Technology: Towards New Smart World (NSITNSW), Riyadh, KSA. 2015
- R. Ullah, N. Fisal, H. Safdar and Z. Khalid “Fractional Frequency Reuse for Irregular Geometry Based Heterogeneous Cellular Networks” 5th National Symposium on Information Technology: Towards New Smart World (NSITNSW), Riyadh, KSA. 2015
- H. Safdar, N. Fisal, and R. Ullah, “Distributed Resource Allocation For Spatialy Distributed Irregular Cells,” IEEE 2nd international symposium on telecommunication technologies (ISTT), Langkawi, Malaysia. 2014
- R. Ullah, N. Fisal and H. Safdar “Fractional Frequency Reuse for Irregular Cell Geometry OFDMA Systems,” IEEE 2nd international symposium on telecommunication technologies (ISTT), Langkawi, Malaysia. 2014
- Z. Khalid, N. Fisal, H. Safdar, R. Ullah, and W. Maqbool, “Middleware Framework for Network Virtualization in SHAAL,” IEEE Symposium on Computer Applications and Industrial Electronics (ISCAIE). 2014
- Z. Khalid, N. Fisal, H. Safdar, R. Ullah, and W. Maqbool, “System Design in Sensor Network Virtualization for SHAAL,” 5th International Conference on Intelligent Systems, Modelling and Simulation. 2014
- R. Ullah, N. Fisal, H. Safdar and Z. Khalid “Interference management for irregular cell geometry heterogeneous networks,” IEEE Malaysia International Conference on Communications. (MICC), November, pp. 523–527. 2013
- H. Safdar, N. Fisal, R. Ullah and Z. Khalid “Resource allocation for uplink M2M communication in multi-tier network,” 2013 IEEE Malaysia International Conference on Communications. (MICC), November, pp. 538–543. 2013
- R. Ullah, N. Fisal, H. Safdar, W. Maqbool, Z. Khalid, and a. S. Khan, “Voronoi cell geometry based dynamic Fractional Frequency Reuse for OFDMA cellular networks,” IEEE International Conference on Signal and Image Processing Applications, pp. 435–440, Oct. 2013
- H. Safdar, N. Fisal, R. Ullah, W. Maqbool, F. Asraf, Z. Khalid, and A. S. Khan, “Resource allocation for uplink M2M communication: A game theory approach,” 2013 IEEE Symposium on Wireless Technology & Applications (ISWTA), pp. 48–52, Sep. 2013