



Arif Ullah Khan

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Khwaza Khela District

Swat, KPK 19130 Pakistan.

ARIF ULLAH KHAN

BS. EE., MS. EE., Ph.D.,

EDUCATION

2017 - 2020, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Topi, Pakistan

Ph.D. in Electronics Engineering

Study Emphasis: Wireless Communication and Networking.

PhD Thesis Topic/Title: Performance Analysis of Efficient Small Cells Deployment in Next Generation Cellular Network.

Supervisor: Dr. Ziaul Haq Abbas

2014 - 2016, COMSATS University, Abbotabad, Pakistan

Master of Science in Electrical Engineering

Study Emphasis: Wireless Communication and Signal Processing.

MS Thesis Topic/Title: Precise Estimation of Soft output for Sphere Decoding in MIMO OFDM System.

Supervisor: Prof. Dr. Shahid Khattak

2008 - 2012, Balochistan University of Information Technology, Engineering and Management Sciences, Quetta, Pakistan

Bachelor of Science in Electronics Engineering

BS Thesis Topic/Title: Real time Tracking, Monitoring and Controlling of Vehicles through GPS and GSM.

SPECIAL TRAINING/CERTIFICATION/LANGUAGE PROFICIENCY

Language Proficiency:

Fluent in English, Urdu and Pashto

Test Scores:

- IELTS (to be appeared soon)

RESEARCH INTEREST

- Statistical modeling of 5G and beyond 5G networks
- Heterogeneous cellular networks
- Millimeter wave communications

PROFESSIONAL/TEACHING EXPERIENCE

Feb 2017 - Aug 2021, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Topi, Pakistan. (Graduate Assistant/Lab Engineer)

Responsibilities:

- Assisted as Teaching Assistant (TA) in Linear Circuit Analysis (EE-211) course (Fall 2017)
- Assisted as lab instructor in Electronics Devices and Circuit Lab (EE-231L) (Spring 2018-2019)
- Assisted as lab instructor in Signal and System Lab (EE-351L) (Fall 2018-2019)

Jun 2015 - Feb 2016, COMWAVE Institute of Information Technology, Abbotabad, Pakistan. (Lecturer)

Responsibilities:

- Teaching and Departmental Responsibilities

Jun 2014 - Sep 2015, Egyptian-Pakistani Telecommunication Company Limited. (Engineer Trainee)

Projects:

- Deal with issues related to operation and maintenance of cellular network

RESEARCH AND PUBLICATION

Journals (Cumulative IF = 14.298)

- J1 Ziaul Haq Abbas, Arif Ullah, Ghulam Abbas, Fazal Muhammad, Frank Yong Li, "Outage Probability Analysis of User-Centric SBS based HCNets Under Hybrid Rician/Rayleigh Fading," In *IEEE Communication Letters*, pp. 1-1, Dec, 2019. DOI: <https://doi.org/10.1109/LCOMM.2019.2959578> (IF. 3.419)



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Swat, KPK 19130 Pakistan.

- J2 Arif Ullah, Ziaul Haq Abbas, Ghulam Abbas, Fazal Muhammad, Lei Jiao, "Performance Analysis of User-Centric SBS Deployment with Load Balancing in Heterogeneous Cellular Networks: A Thomas Cluster Process Approach," *Submitted to Computer Networks*. (IF. 3.11)
- J3 Arif Ullah, Ziaul Haq Abbas, Ghulam Abbas, Fazal Muhammad, Lei Jiao, "Capacity Driven SBS Deployment in Heterogeneous Cellular Networks: A Performance Analysis," In *Transaction on Emerging Telecommunications Technologies*, 2019. DOI: <https://doi.org/10.1002/ett.3876> (IF. 1.594)
- J4 Arif Ullah, Ziaul Haq Abbas, Fazal Muhammad, Irfanullah, Alam Zeb, Shahid Khat-tak, "Likelihood Ascent Search Aided Sphere Decoding Receiver for M-QAM based MIMO System," *Submitted to IET Communication*. (IF. 1.664)
- J5 Hammad Ahmad, Muhammad Mahmood Ali, Arif Ullah, Arbab Abdur Rahim, Hus-nul Maab, Mahmood Khan, "An Ultra-Thin Beam Splitter Design Using a-Si:H Based on Phase Gradient Metasurfaces," *Journal of Nanoelectronics and Optoelec-tronics*, V(14), pp. 1339-1343(5), September 2019.
DOI: <https://doi.org/10.1166/jno.2019.2614> (IF. 0.771)
- J6 Arif Ullah, Ziaul Haq Abbas, Fazal Muhammad, Ghulam Abbas, Sunghwan Kim "Uplink Performance Analysis of User-centric Small Cell Aided Dense HCNets with Up-link/Downlink Decoupling," *Under review in IEEE Access*. (IF. 3.74)

Conferences

- C1 Arif Ullah, Ziaul Haq Abbas, Ghulam Abbas, Fazal Muhammad, "Analysis of Outage Probability and Rate Coverage in Heterogeneous Cellular Networks with joint uni-form and clustered users," *2nd IEEE International Multi topic Conference (INMIC), Islamabad, Pakistan 29-30 January 2019*.

MEMBERSHIPS/FELLOWSHIPS/AWARDS

Membership, Pakistan Engineering Council

Registered Engineer with Pakistan Engineering Council, Reg #: ELECTRO/16479

Membership, Institute of Electrical and Electronics Engineers

Graduate student member Institute of Electrical and Electronics Engineers (IEE), Mem-ber-ship number: 95038221

Postgraduate Scholarship, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology

Awarded fully funded Scholarship with monthly stipend during PhD studies

Prime Minister Scholarship, COMSATS University, Abbotabad

Awarded with PM full fee reimbursement scholarship during master studies

SKILLS RELEVANT TO RESEARCH

- LaTeX, Microsoft Office, Power point and Excel, for Typesetting and Documents Preparation
- MATLAB for Simulation, Data Analysis and Visualisation
- C/C++ and Assembly Language for Programming
- Simulink, Advance Design System (ADS), High Frequency Structured Simulation (HFSS) and CST Microwave Studio for Microwave Application
- Pspice, Electronic Workbench and Ansys Workbench for circuit designing
- Mathematica for Numerical Analysis

REFERENCES

- **Dr. Ziaul Haq Abbas**
Associate Professor, Faculty of Electrical Engineering, GIK Institute of Engineering Sciences and Technology, Topi, 23640 Pakistan.
Email: ziaul.h.abbas@giki.edu.pk
- **Prof. Dr. Shahid Khattak**
Professor and Chairman, Department of Electrical Engineering, COMSATS Univer-sity, Abbotabad, 23640 Pakistan.
Email: skhattak@cusit-atd.edu.pk