

# Curriculum Vitae

**Dr. Haider Ali**  
**Assistant Professor/ HoD**  
**Electronics Engineering Technology Department**  
**University of Technology Nowshera**

**Objective** To, work in an environment that provides opportunities to learn and prosper as a person and professional. Utilize my learning for creating an impact both in research and society.

**Research Interests**

- Telecommunication Systems, RF/Microwave Front End & Antenna Design, Power Electronic Systems Power Management Systems, Control Systems, Soft Switching Resonant Converters.
- Small Satellite Subsystems Design & Development (RF Front End, Telecommunication, Antenna Array, Power Management, Attitude Determination & Control Subsystems),
- Thermal Modeling & Thermal Analysis of RF HEMTs, Electronic Systems, Renewable Energy Systems.
- Artificial intelligence and neural networks solutions for smart grids optimization.
- Advance material design and development for solar cells.

**Education**

**Doctor of Philosophy (PhD) Electronics & Communication Engineering** **2014**  
**Politecnico di Torino, Italy.**  
Small satellites design and development

**Masters of Science in Electronics Engineering** **2010**  
**Politecnico di Torino, Italy.**

**BS, Telecommunication Engineering** **2007**  
**National University of Computer & Emerging Sciences, Islamabad.**

**Work Experience** Total 16 years of Professional, Research and Teaching Experience after graduation and Post-PhD Teaching, Research and Academic experience of more than 9.5 years in the field of electrical, electronic engineering, artificial intelligence, solar cell devices, power electronic systems, power and RF & Microwave sub-systems designing, development and implementation.

**Assistant Professor/HOD (ET & ELT), Department of Electrical & Electronic Engineering Technology, University of Technology, Nowshera, Pakistan.** **Aug 2017 till Date**  
Head of Department (ET & ELT), Chairman Purchase Committee, Syndicate Member, F & P Committee, Academic Council,

**Research Projects Awarded and Completed**

**PI (PKR. 510,000/-)** **2015 - 17**  
Pakistan National Student Satellite -I Project (PNSS-I)  
Modules for the Telemetry Transmitter (TMT)  
& Telecommand Receiver (TCR)

**PI (PKR. 520,000/-)** **2015 - 17**  
Pakistan National Student Satellite -I Project (PNSS-I)  
Modules for the Ground Station Transmit Antenna Unit (GSTAU)  
& Ground Station Receive Antenna Unit (GSRAU)

**Project Supervisor (Rs. 44,700)** **2015-16**  
IGNITE National Grassroot ICT Research Initiative  
Microcontroller Based Protection System for Three Phase Induction Motor

(Selected among NGIRI National Championship Top 30 Projects)

- Project Member (10,000 Euros)** 2016 – 17  
“PoliTo at Pakistan (PAP) – Internationalization of academic affairs”, Italian University Grant by Politecnico di Torino, Italy
- Project Member/ Researcher (30,000 US \$)** 2016 – 17  
“An innovative demonstration for low energy buildings: components, energy techniques and ICT tools”, by U.S Pakistan Center for Advance Studies in Energy (U.S PCAS-E), University of Engineering & Technology, Peshawar.
- AraMiS Project/ Project Member (Italy) During PhD Research** 2011 – 14  
Developed complete telecommunication Subsystem CubeTCT, Onboard Power Management System CubePMT, Antenna Systems for a Small satellite together with performing reliability analysis, FMEA analysis, functional, electrical and other space qualification testing. Also developed trouble shooting and other test benches to perform these tests. Development was performed using Mil spec as well as extended range electronic components.
- RF Measurements Testbench /Project Member (Italy) During MS Research** 2009 – 10  
Developed complete RF Characterization and Thermal measurement automated testbench for RF Chips and Devices (GaN/GaAs pHEMTS). Also, performed EMC/EMI analyses for different electronic systems.

## Publications

### Journals (Published): Total JCR IF = 50+

- [1] **Haider Ali**, Anwar Ali, M. Rizwan Mughal, Leonardo Reyneri, Claudio Sansoe, and Jaan Praks, “Modular Design of RF Front End for a Nanosatellite Communication Subsystem Tile Using Low-Cost Commercial Components,” *International Journal of Aerospace Engineering*, vol. 2019, Article ID 8174158, 11 pages, 2019. <https://doi.org/10.1155/2019/8174158> (JCR (2020) IF: 1.158 Published)
- [2] **Ali, H.**; Ren, X.-C.; Hashmi, A.M.; Anjum, M.R.; Bari, I.; Majid, S.I.; Jan, N.; Tareen, W.U.K.; Iqbal, A.; Khan, M.A. An Eight Element Dual Band Antenna for Future 5G Smartphones. *Electronics* 2021, 10, 3022. <https://doi.org/10.3390/electronics10233022> (JCR (2022) IF: 2.397 Published)
- [3] **Ali, H.**; Ren, X.-C.; Bari, I.; Bashir, M.A.; Hashmi, A.M.; Khan, M.A.; Majid, S.I.; Jan, N.; Tareen, W.U.K.; Anjum, M.R. Four-Port MIMO Antenna System for 5G n79 Band RF Devices. *Electronics* 2022, 11, 35. <https://doi.org/10.3390/electronics11010035> (JCR (2022) IF: 2.397 Published)
- [4] A. Ali, **H. Ali\***, M. Pirola, J. Tong, "Analysis & Development of Automated System for On-Wafer Channel Thermal Measurement of RF Power Devices Using Ordinary Lab Instruments," *Measurement*, 2021. doi: <https://doi.org/10.1016/j.measurement.2021.109052> (JCR (2021) IF: 3.927 Published)
- [5] A. Ali, **H. Ali\***, J. Tong, M. Rizwan Mughal and S. U. Rehman, "Modular Design and Thermal Modeling Techniques for the Power Distribution Module (PDM) of a Micro Satellite," in *IEEE Access*, 2020. doi: <https://doi.org/10.1109/ACCESS.2020.3020865> (JCR (2020) IF: 3.367 Published)
- [6] Bari, I.; Iqbal, J.; **Ali, H.**; Rauf, A.; Bilal, M.; Jan, N.; Illahi, U.; Arif, M.; Khan, M.A.; Ghoniem, R.M. Bandwidth Enhancement and Generation of CP of Yagi-Uda-Shape Feed on a Rectangular DRA for 5G Applications. *Micromachines* 2022, 13, 1913. <https://doi.org/10.3390/mi13111913>
- [7] Khan, S., Bashir, A., **Ali, H.**, Rauf, A., Marey, M. et al. (2022). A Compact 28 GHz Millimeter Wave Antenna for Future Wireless Communication. *CMC-Computers, Materials & Continua*, 72(1), 301–314. 2022 <https://www.techscience.com/cmc/v72n1/46855> (JCR (2020) IF: 3.772 Published)
- [8] S. Khan, X. C. Ren, **H. Ali**, C. Tanougast, A. Rauf et al., "Reconfigurable compact wideband circularly polarised dielectric resonator antenna for wireless applications," *Computers, Materials & Continua*, vol. 68, no.2, pp. 2095–2109, 2021. doi: <https://dx.doi.org/10.32604/cmc.2022.023397> (JCR (2020) IF: 3.772 Published)
- [9] A. Ali, M. R. Mughal, **H. Ali**, L. M. Reyneri and M. N. Aman, "Design, implementation, and thermal modeling of embedded reconfigurable magnetorquer system for nanosatellites," in *IEEE Transactions on Aerospace and Electronic Systems*, vol. 51, no. 4, pp. 2669-2679, Oct. 2015.

<https://doi.org/10.1109/TAES.2015.130621> (JCR (2020) IF: 4.102 Published)

- [10] Anwar Ali, M. Rizwan Mughal, **Haider Ali**, Leonardo M.Reyneri; "Innovative Power Management, Attitude Determination and Control Tile for CubeSat Standard NanoSatellites", *Acta Astronautica*, vol. 96, March-April 2014, pp 116-127. <https://doi.org/10.1016/j.actaastro.2013.11.013> (JCR (2020) IF: 2.413 Published)
- [11] S. Mir, I. Bari, M. Kamal and **H. Ali**, "Constraint Waveform Design for Spectrum Sharing Under Coexistence of Radar and Communication Systems," in *IEEE Access*, vol. 9, pp. 46093-46105, 2021, doi: <https://doi.org/10.1109/ACCESS.2021.3068070> (JCR (2020) IF: 3.367)
- [12] A. Ali, J. Tong, **H. Ali**, M. R. Mughal and L. M. Reyneri, "A Detailed Thermal and Effective Induced Residual Spin Rate Analysis for LEO Small Satellites," in *IEEE Access*, vol. 8, pp. 146196-146207, 2020, doi: <https://doi.org/10.1109/ACCESS.2020.3014643> (JCR (2020) IF: 3.367 Published)
- [13] M. A. Aman, X. C. Ren, W. U. K. Tareen, M. A. Khan, M. R. Anjum, A. M. Hashmi, **H. Ali**, I. Bari, J. Khan, S. Ahmad, Optimal Siting of Distributed Generation Unit in Power Distribution System considering Voltage Profile and Power Losses, *Mathematical Problems in Engineering*, vol 2022, Article ID 5638407, 14 pages, 2022, <https://doi.org/10.1155/2022/5638407> (JCR (2022) IF: 1.305 Published)
- [14] S. H. Kiani, X. C. Ren, M. R. Anjum, K. Mahmood, **H. Ali**, N. Jan, M. A. Bashir, M. A. Khan, "A Novel Shape Compact Antenna for Ultrawideband Applications", *International Journal of Antennas and Propagation*, vol. 2021, 7 pages, 2021. <https://doi.org/10.1155/2021/7004799> (JCR (2021) IF: 1.174 Published)
- [15] Shahid Khan, Hazrat Ali, Syed Usman Shah, **Haider Ali** and Camel Tanougast, "Artificial Magnetic Conductor Based Miniaturized Frequency Re-configurable Dielectric Resonator Antenna for WiMAX and WBAN Applications," *Applied Comp. Electromag. Soc. Journal*, vol. 35(9), 2020. <https://doi.org/10.47037/2020.ACESJ.350913> (JCR 2021 IF: 0.68 Published)
- [16] Amin, A.; Tareen, W.U.K.; Usman, M.; **Ali, H.**; Bari, I.; Horan, B.; Mekhilef, S.; Asif, M.; Ahmed, S.; Mahmood, A. A Review of Optimal Charging Strategy for Electric Vehicles under Dynamic Pricing Schemes in the Distribution Charging Network. *Sustainability* 2020, 12, 10160. <https://doi.org/10.3390/su122310160> (JCR (2020) IF: 3.251)
- [17] K Khan, A Basit, T Ahmad, **H Ali**, K Mahmood, Modeling and Simulation of Grid Synchronized DC Microgrid with Wind and Solar Resources, *Technical Journal* 25 (03), 32-38. <https://tj.uettaxila.edu.pk/index.php/technical-journal/article/view/879> (HJRS Category Y)
- [18] Wahid, A.; Iqbal, J.; Qamar, A.; Ahmed, S.; Basit, A.; **Ali, H.**; Aldossary, O.M. A Novel Power Scheduling Mechanism for Islanded DC Microgrid Cluster. *Sustainability* 2020, 12, 6918. <https://doi.org/10.3390/su12176918> (JCR (2020) IF: 3.251 Published)
- [19] M. Salman; I. U. Haq; T. Ahmad; **H. Ali**; A. Qamar; A. Basit; M. Khan; J. Iqbal, Minimization of total harmonic distortions of cascaded H-bridge multilevel inverter by utilizing bio inspired AI algorithm. *EURASIP Journal of Wireless Communications and Networking*, 2020, 66 (2020). <https://doi.org/10.1186/s13638-020-01686-5> (JCR (2020) IF: 1.408 Published)
- [20] Farooq, W., Khan, A.D., Rauf, A., Khan, S.D., **Ali, H.**, Iqbal, J., Khan, R.U., and Noman, M.: 'Thin-film tandem organic solar cells with improved efficiency', *IEEE Access*, 2020, 8, pp. 74093-74100. <https://doi.org/10.1109/ACCESS.2020.2988325> (JCR (2020) IF: 3.367 Published)
- [21] Khan, S., **Ali, H.**, Khalily, M., Shah, S.U.A., Kazim, J.U.R., Ali, H., and Tanougast, C.: 'Miniaturization of dielectric resonator antenna by using artificial magnetic conductor surface', *IEEE Access*, 2020, 8, pp. 68548-68558. <https://doi.org/10.1109/ACCESS.2020.2986048> (JCR (2020) IF: 3.367 Published)
- [22] Khan, K.; Kamal, A.; Basit, A.; Ahmad, T.; **Ali, H.**; Ali, A., Economic Load Dispatch of a GridTied DC Microgrid Using the Interior Search Algorithm. *Energies* 2019, 12, 634. (JCR (2020) IF: 3.004 Published) <https://doi.org/10.3390/en12040634>
- [23] A. Ali, S. A. Khan, M. U. Khan, **Haider Ali**, M. R. Mughal, J. Praks, "Design of Modular Power Management and Attitude Control Subsystems for a Microsatellite," *International Journal of Aerospace Engineering*, vol. 2018, Article ID 2515036, 13 pages, 2018. <https://doi.org/10.1155/2018/2515036> (JCR (2020) IF: 1.158 Published)
- [24] Ali A, Khan SA, Dildar MA, **Ali H**, Ullah N (2018) Design & thermal modeling of solar panel module with embedded reconfigurable Air-Coil for micro-satellites. *PLOS ONE* 13(7): <https://doi.org/10.1371/journal.pone.0199145> (JCR (2020) IF: 3.240 Published)
- [25] W. A. Imtiaz, A. Qamar, A. U. Rehman, **H. Ali**, A. R. Chaudhry, J. Iqbal, "Design and Analysis of Self-Healing Tree-Based Hybrid Spectral Amplitude Coding OCDMA System," *Security and*

- [26] Usman, M.; Tareen, W.U.K.; Amin, A.; **Ali, H.**; Bari, I.; Sajid, M.; Seyedmahmoudian, M.; Stojcevski, A.; Mahmood, A.; Mekhilef, S. A Coordinated Charging Scheduling of Electric Vehicles Considering Optimal Charging Time for Network Power Loss Minimization. *Energies* 2021, 14, 5336. (JCR (2020) IF: 3.004 Published) <https://doi.org/10.3390/en14175336>
- [27] Majid, S. I., Shah, S. W., Marwat, S. N. K., Hafeez, A., **Ali, H.**, & Jan, N. (2021). Using an Efficient Technique Based on Dynamic Learning Period for Improving Delay in AI-Based Handover. *Mobile Information Systems*, 2021, 2775278. (JCR (2020) IF: 1.802 Published) <https://doi:10.1155/2021/2775278>
- [28] Shah, P.M.A., S.S. Qureshi, R.A. Butt, **H. Ali** and S. Khan. 2021. Orthogonal frequency division multiple access passive optical network for 5G deployment. *Journal of Engineering and Applied Sciences*, 40(1): 37-43. 2021 <https://dx.doi.org/10.17582/journal.jeas/40.1.37.43> (HJRS: Category Y)
- [29] Ali, A.; Tong, J.; Iqbal, J.; Illahi, U.; Rauf, A.; Rehman, S.U.; **Ali, H.**; Qadir, M.M.; Khan, M.A.; Ghoniem, R.M. Mutual Coupling Reduction through Defected Ground Structure in Circularly Polarized, Dielectric Resonator-Based MIMO Antennas for Sub-6 GHz 5G Applications, *Micromachines* 2022, 13, 1082. <https://doi.org/10.3390/mi13071082> (JCR(2022) IF: 3.523)
- [30] Iqbal, J.; Illahi, U.; Khan, M.A.; Rauf, A.; Ali, E.M.; Bari, I.; **Ali, H.**; Khan, M.A.; Alibakhshikenari, M.; Dalarsson, M. A Novel Single-Fed Dual-Band Dual-Circularly Polarized Dielectric Resonator Antenna for 5G Sub-6GHz Applications. *Appl. Sci.* 2022, 12, 5222. <https://doi.org/10.3390/app12105222>(JCR (2022) IF: 2.838)
- [31] Khan, M.A.; Khan, J.; Mahmood, K.; Bari, I.; **Ali, H.**; Jan, N.; Ghoniem, R.M. Algorithm for Increasing Network Lifetime in Wireless Sensor Networks Using Jumping and Mobile Sensor Nodes. *Electronics* 2022, 11, 2913. <https://doi.org/10.3390/electronics11182913>
- [32] Khan, M.A.; Khan, J.; Sehito, N.; Mahmood, K.; **Ali, H.**; Bari, I.; Arif, M.; Ghoniem, R.M. An Adaptive Enhanced Technique for Locked Target Detection and Data Transmission over Internet of Healthcare Things. *Electronics* 2022, 11, 2726. <https://doi.org/10.3390/electronics11172726>

#### **Conference Proceedings:**

- [33] S. Khan, M. Khalily, A. Ali, H. Ali and C. Tanougast, "A Wideband Circularly Polarized Linear Parasitic Dielectric Resonators Antenna Array for 5G Applications," 2020 IEEE 5th International Symposium on Smart and Wireless Systems within the Conferences on Intelligent Data Acquisition and Advanced Computing Systems (IDAACS-SWS), Dortmund, 2020, pp. 1-5, doi: 10.1109/IDAACS-SWS50031.2020.9297105.
- [34] M. U. Khan, A. Ali, H. Ali, M. S. Khattak and I. Ahmad, "Designing efficient Electric Power Supply System for Micro-Satellite," 2016 International Conference on Computing, Electronic and Electrical Engineering (ICE Cube), Quetta, 2016, pp. 207-212, doi: 10.1109/ICECUBE.2016.7495225
- [35] Wasi Ullah, Haider Ali, A. Wajid Ullah Khan, Arshad Farhad, Adnan Khan, Baseer Ahmad; "Performance Assessment of Reactive Routing Protocols in Mobile Ad-hoc Networks under CBR Traffic using NS2", WISPNET, IEEE Intl. Conference 23-25 Mar 2016.
- [36] Muhammad Musiab Aleem Dildar, Anwar Ali, Haider Ali, M. Sadiq Khattak, Farhan Pervez; "Embedded Magnetorquer Coil Design for Micro-Satellite" ICEET Int. Conference April 7-8, 2016.
- [37] Mughal M.R, Ali A., Ali H., Reyneri L.M, Del Corso D.;" Free space and glass fiber based infrared communication system on board AraMiS satellite" 12th International Workshop on Advanced Infrared Technology and Applications,11-13 SEP 2013, Torino Italy.
- [38] M. Rizwan Mughal, Anwar Ali, Haider Ali, Leonardo M. Reyneri; "UML for Space Systems: From Specification to Design and Implementation" 64th International Astronautical Congress , IAC-13,D1.3,7x18418, Beijing , China , 23-27 SEP 2013.
- [39] Mughal M.R, Ali A., Ali H., Reyneri L.M.; "Smart Honeycomb Tile for Small Satellites" 35th IEEE aerospace conference, Big Sky, Montana , USA, 1-8 MAR 2014.
- [40] Ali H., Aru A., Sansoe C., Ali A., Mughal R., Reconfigurable Antenna Design for Nanosatellites, Intl. ESTEL Conference, 2012, Rome, Italy, Sep, 2012.

- [41] Ali H., Aru A., Sansoe C., Reyneri L., Design & Development of the Telecommunication Protocol for AraMiS Nanosatellites, 63rd International Astronautical Congress (IAC-2012), Naples, Italy, Sep, 2012.
- [42] Mughal R., Reyneri L., De los Rios C., Ali H., Development of Optical Wireless Transceiver for Data Communication in Small Satellites, Intl. ESTEL Conference, 2012, Rome, Italy, Sep, 2012.
- [43] Ali A., Reyneri L., De los Rios C., Ali H., Innovative Power Management Tile for Nano Satellites, 63rd International Astronautical Congress (IAC-2012), Naples, Italy, Sep, 2012.
- [44] Ali A., Reyneri L., De los Rios J., Ali H., Mughal R., Reconfigurable Magnetorquer for the CubePMT Module of CubeSat Satellites, IEEE 15th International Multi Topic Conference 2012 (INMIC-2012), Islamabad, Pakistan, Dec 2012.
- [45] Anwar Ali, Leonardo M. Reyneri, Haider Ali, M. Rizwan Mughal, "Components selection for a simple boost converter on the basis of power loss analysis", 63rd International Astronautical Congress (IAC), IAC-12-C3.4.3, Naples, Italy, 1-5 OCT 2012.

**Workshops:**

- [46] Anwar Ali, M. Rizwan Mughal, Haider Ali, Leonardo M. Reyneri, "Thermal Modeling of CubeSat standard NanoSatellite", 27th annual European Space Thermal Analysis Workshop, 3-4 December 2013 at ESTEC, Noordwijk, the Netherlands.

**Books Chapters**

- [1] Waqas Ahmed Imtiaz, Javed Iqbal, Affaq Qamar, **Haider Ali** and Sevia M. Idrus (June 21, 2017). Impact of Fiber Duplication on Protection Architectures Feasibility for Passive Optical Networks, Optical Fiber and Wireless Communications, Rastislav Roka, IntechOpen, <https://doi.org/10.5772/intechopen.68237>.
- [2] N. Ullah, A. Ali, **H. Ali**, K. Mahmood, "Frequency Stability and Synthetic Inertia" IET book 'Variability, Scalability, and Stability of MicroGrids' edited by "S. M. Muyeen & Syed Islam" 2018. [https://doi.org/10.1049/PBPO139E\\_ch11](https://doi.org/10.1049/PBPO139E_ch11)
- [3] N. Ullah, A. Ali, **H. Ali**, A. Ibeas and J. Herrera (November 5th 2018). Static Var Compensator with Fractional Order Dynamics for Enhanced Stability and Control [Online First], IntechOpen, DOI: 10.5772/intechopen.79615. Available from: <https://www.intechopen.com/online-first/static-var-compensator-with-fractional-order-dynamics-for-enhanced-stability-and-control>

**Conference Keynote and Session co-chair**

- Electrical technologies session Co chair and keynote speaker at 4<sup>th</sup> Abasyn International Conference on Technology & Business Management (4<sup>th</sup> AICTBM) 2019.
- Electrical technologies session Co chair and keynote speaker at 3<sup>rd</sup> Abasyn International Conference on Technology & Business Management (3<sup>rd</sup> AICTBM) 2018.
- Electrical technologies session Co chair at 2<sup>nd</sup> Abasyn International Conference on Technology & Business Management (2<sup>nd</sup> AICTBM) 2014.

**Workshops Conducted as Resource Person**

**Conducted as resource person:** One Day CPD Workshop on Modular Architecture Design for Nano Satellites, Abasyn University, Peshawar, December 2016.

**Conducted as resource person:** One Day CPD Workshop on Multi-Layer PCB Schematic and Layout designing using Modular Approach, November 2017.

**Workshops/ Seminars/ Short Course Attended**

- International CST Workshop on EM Solver and Antenna Design, RIMMS, NUST, Islamabad, September 26-28, 2017
- Practicing Outcome Based Education (OBE): A step towards Washington Accord, Abasyn University, Peshawar, April 12-13, 2017.
- National Workshop on Power Electronics with Renewable Integration, IIUI, October 8-9, 2016.
- Resonant and Soft Switching Techniques in Power Electronics, LUMS Lahore, July 14-17, 2016.
- ISNET/SUPARCO Workshop on Student Satellite, Lahore, November 4-5, 2015.
- Workshop on Outcome Based Education & Assessment System of Accreditation, UET Peshawar, October 29-30, 2015.
- Novel Approach to first course in Circuits, FAST-NU, Peshawar, June 16-19, 2015.
- Antennas for Aerospace Applications by European School of Antennas ESTEC-ESA, ESTEC, Noordwijk, the Netherlands, March 12-16, 2012.

**MS Students**

- [1] Performance Assessment of Reactive Routing Protocols in Mobile Ad-Hoc Networks under CBR Traffic using NS2.

## Supervised

- [2] Magnetorquer Coil Design for Micro-Satellites.
- [3] Designing of C Band Circular Polarized Phased Array Patch Antenna (Co-supervision)

## Senior Design Projects Supervision

- More than 20 undergraduate senior design project groups supervised
- Project nominated for National Grassroots ICT Research initiative FYP Competition May 19, 2017

## Teaching interests and Courses Taught

### Interests

Advanced Power Electronic Systems, Wireless Communication Systems, Electronic Systems Development and Modular Design, RF Front End & Antenna Design, Power Management Systems, Soft Switching Resonant Converters, Statistical Signal Analysis. Instrumentation and Measurements, RF Devices, RF Design, RF Measurements Techniques.

### Taught at Undergraduate Level

Power Electronics, Linear Control Systems, Electrical Network Analysis, Electromagnetic Field Theory, Communication Systems, Instrumentation and measurements

### Taught at Post Graduate Level

- Antenna Engineering
- Advanced Wireless Communication
- Advanced Power Electronics
- (FACTS) Flexible AC Transmission Systems

## Evaluation Responsibilities

- Technical evaluator for USPCAS-E Applied research projects
- External Examiner for MS and PhD Students at various Universities over the years

## Computer Skills/Tools

### --PCB Design & Development Tools:

Mentor Graphics (Schematic Capture, Expedition PCB, PADs)

Altium Designer (Complete Suite)

### --Antenna and RF Design Tools:

CST Studio Suite (Micro-Strip Design, Microwave Studio)

Ansoft HFSS (Electromagnetic CAD)

AWR Microwave Office (RF Circuit Design)

### --Circuit Design Tools:

LTSPICE

Multisim

### --Microcontroller programming:

Arduino electronic prototyping platform

IAR Embedded WorkBench

### --Languages:

C, C++, MATLAB, SystemC, Verilog/VHDL

## Honours/Achievements

MS leading to PhD scholarship at Politecnico di Torino, Italy from Higher Education Commission of Pakistan under the project of UESTP-Italy.

2008 - 14

## Volunteers

- Under the role of senior member of student society "Organization of Pakistani Students" at Politecnico di Torino, Italy.
- FAST Adventure Society President
- IEEE Member (Student/Professional/ Senior Professional)

2013 - 14

2005 - 06

2005 - till date

## Language Skills

Fluent in English, Urdu, Hindi, Pushto while can understand and speak Italian