B-1/1 Block 'A' Kazimabad,
Model Colony Karachi-75100
Phone: 0334-1027474
E-mail: iaslam@neduet.edu.pk

Dr. Muhammad Imran Aslam

OBJECTIVE:

To provides summary of my academic and professional activities.

QUALIFICATION:

Doctor of Philosophy (Electrical Engineering)	April 2012	**CGPA: 4.0**
Michigan Technological University, Houghton MI-49931.		
Master of Engineering in Electrical Engineering	June 2005	**CGPA: 3.9**
NED University of Engineering and Technology, Karachi, Pakistan.		
Bachelor of Engineering in Electrical Engineering	April 2001	**82%** with distinction
NED University of Engineering and Technology, Karachi, Pakistan.		
Higher Secondary Certificate (Pre Engineering)	1996	**77.7%**
Secondary School Certificate (Science Group)	1994	**82.3%**
Higher Education Teaching Certificate	2019	**98.8%**
Harvard University (HarvardX Online)		

WORK EXPERIENCE:

NED University of Engineering and Technology, Karachi **August 2001 to Date**

Faculty Positions

Professor	Telecommunications Engg. Dept.	January 2022 to date
Associate Professor	Electronic Engg. Dept. (Telecom faculty)	October 2012 to date
Assistant Professor	Electronic Engg. Dept. (Telecom faculty)	May 2007 to September 2012
Assistant Professor	Electrical Engineering Department	June 2005 to May 2007
Lecturer	Electrical Engineering Department	August 2001 to June 2005

Administrative Responsibilities

Chairman	Department of Telecommunications Engg.	June 2021 to date
Acting Chairman	Department of Electronic Engg.	March 2022 to date
Coordinator to VC	Provide assistance to Vice Chancellor	August 2017 to date
M. Engg. Coordinator	Electronic Engg. Dept. (Telecom faculty)	December 2013 to Nov. 2019
Co-chairman	Electronic Engg. Dept. (Telecom faculty)	October 2012 to Dec. 2013
Class Advisor	various Batches	Various Semesters
Factotum, Head invigilator, and Head Examiner		Various Semesters
Statutory bodies	Served as member of Board of Studies (Electronic Engg. Dept., IIEE, UIT) and Board of Faculty (ECE & CEA), Syndicate, & Senate	

NOTE: NED is an ISO 9001:2015 certified university.

RESEARCH / SCHOLARLY ACTIVITIES:

HEC Approved PhD Supervisor: Three PhD projects completed; Five PhD projects in progress.

Completed PhD Research on: Negative index metamaterials and metaspacers for optical frequencies.

Research Interests: Optical Metamaterials, Wireless channel Modeling, Reconfigurable Intelligent Surfaces (RIS), RIS-Assisted wireless systems

Scholarly Participations: Participated in various conferences, workshops, invited talks, Research projects, reviewer for journals and conferences etc.

Research Publications: 28 peer reviewed Journal publications; 22 Peer reviewed conference publications; Cumulative JCR impact factor: 38.312; Total number of Citations: 500+; h-index: 9, i10-index: 9; List of publications is attached.

FUNDED RESEARCH PROJECTS:

1. Flexible testbed for D2D communication in 5G cellular network (completed)	HEC funded PKR 6.5 M
2. Uplink Performance of Decoupled Heterogeneous Networks in varying Pathloss Environment (completed)	NED Funded PKR 1.0 M
3. Design, modeling and performance evaluation of efficient radio access network algorithms for evolved wireless network (completed)	NED Funded PKR 1.0 M
4. Uplink Performance Analysis of Millimeter Wave in Heterogeneous Cellular Network (as Co-PI) (completed)	NED Funded PKR 1.0 M
5. Deep Learning based Dental Caries Identification (In progress)	NED Funded PKR 1.0 M
6. Analytical Design and Performance Analysis of Intelligent Reflecting Surface based Heterogeneous Networks (In progress)	MoST Funded PKR 2.99 M
7. Bandwidth Efficient Inter ONU Communication Enabled Physical and MAC Layer Architecture for Next Generation PON (as Co-PI) (In progress)	NED Funded PKR 1.0 M
8. NB-IoT ProSe: Proximity Services enabled NB-IoT for Reliable and Critical Communication in Low-Powered Applications (Approved)	HEC Funded PKR 6.98 M
9. Mobility for bilateral stakeholder mapping for creating IoT networks for Climate Change under PAK-UK Education Gateway Mobility Partnership for Faculty (Approved)	British Council Funded PKR 9.07 M

AWARDS:

- Best Researcher Award by NED University. (Year 2022)
- Best University Teacher Award (University Level) by HEC/NED University Year (2021)
- Best Researcher Award by NED Alumni Association of Southern California, USA. (Year 2020)
- Best Researcher Award by NED University. (Year 2020)
- Best Paper Award by NED Alumni Association of Southern California, USA. (Year 2014)
- Best paper award for communication stream in the 3rd IEEE International Conference on Computer, Control & Communication (IEEE-IC4). (Year 2013)
- John Miles Fellowship Award at Michigan Technological University, USA. (Year 2012)
- PhD Scholarship by NED University under faculty development program to pursue PhD studies at Michigan Technological University. (Year 2007)

COMMUNITY SERVICES:

- Serving as member of IEEE Future Networks Massive MIMO working group.
- Serving as member of Scientific Review Panel for Engineering and Technology at Higher Education Commission (HEC), Pakistan.
- Served as the technical committee member for TETRA communication Project at Sindh Police.
- Served as member of National Curriculum Revision Committee (NCRC) for HEC for upgradation of curriculum of Electrical Engineering.
- Served as member of several standardization committees at Pakistan Standards and Quality Control Authority (PSQCA).
- Served as Technical Program Committee member and reviewer for several scientific conferences.
- Served as reviewer for several international journals.

PROFESSIONAL MEMBERSHIPS:

Life Member Pakistan Engineering Council (ELECT/17379); Fellow Pakistan Academy of Engineering; Member Institute of Engineers, Pakistan.

COMPUTER LITERACY:

Engineering: COMSOL Multiphysics, CST studio suite, ANSOFT HFSS, Labview, MULTISIM, Electronic Workbench, MIT Photonics Bands, MATLAB, SIMULINK, etc.
Programming/Computation: C Programming, MATLAB. Mathematica.
Application Software: All general purpose software packages for windows and linux.

LIST OF PUBLICATIONS BY DR. MUHAMMAD IMRAN ASLAM

Journal Publications:

[J28] 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 and Technology, Transactions of Electrical Engineering, Published online, 2022. DOI: https://doi.org/10.1007/s40998-022-00570-w [JCR Impact Factor: 1.890]

[J27] Sundus Ali, Muhammad Imran Aslam, Irfan Ahmed, "Impact of fractional power control on downlink uplink decoupled-based HetNets in varying path loss exponent environment," Transactions on Emerging Telecommunications Technologies, Vol. 33, no. 7, p. e4491, 2022. DOI: https://doi.org/10.1002/ett.4491 [JCR Impact Factor: 3.31]

[J26] Hira Mariam, Irfan Ahmed, Sundus Ali, Muhammad Imran Aslam, Ikram Ur Rehman, "Performance of Millimeter Wave Dense Cellular Network Using Stretched Exponential Path Loss Model," Electronics, Vol. 11, no. 24, p.4226, 2022. DOI: https://doi.org/10.3390/electronics11244226 [JCR Impact Factor: 2.690]

[J25] Tariq Mumtaz, Shahabuddin Muhammad, Muhammad Imran Aslam, Irfan Ahmed, "Inter-slice resource management for 5G radio access network using markov decision process," Telecommunication Systems, Vol. 79, no. 4, pp. 541-557, 2022. DOI: https://doi.org/10.1007/s11235-021-00877-9 [JCR Impact Factor: 2.236]

NOTE: NED University of Engineering and Technology awarded Best Researcher Award for year 2022 based on three JCR publications listed at [J25, J27, & J28].

[J24] Syeda Messan, Asra Shahud, Amna Anis, Roma Kalam, Sundus Ali, Muhammad Imran Aslam, "Air-MIT: Air Quality Monitoring Using Internet of Things," Engineering Proceedings, Vol. 20, no. 1, p.45, 2022. DOI: https://doi.org/10.3390/engproc2022020045 [Scopus indexed]

[J23] Hira Mariam, Irfan Ahmed, Muhammad Imran Aslam, "Impact of Multiple Beams and Mobility-Based Beam Alignment Error on Millimeter Wave Communication," Engineering Proceedings, Vol. 20, no. 1, p.42, 2022. DOI: https://doi.org/10.3390/engproc2022020042 [Scopus indexed]

[J22] Hira Mariam, Irfan Ahmed, **Muhammad Imran Aslam**, "Coverage probability of uplink millimeter wave cellular network with non-homogeneous interferers' point process," *Physical Communication*, Vol. 45, p. 101274, 2021. DOI: https://doi.org/10.1016/j.phycom.2021.101274 [JCR Impact Factor: 1.594]

[J21] Kamran-ul-Haq Khan, **Muhammad Imran Aslam**, Muhammad Naeem, Imran Ahmad Siddiqui, "Analytical Estimate of Effective Charge and Ground State Energy of Beryllium Atom Utilizing Variational Method", *Indian Journal of Physics*, Vol. 95, no. 7, pp. 1317–1323, 2020. DOI: https://doi.org/10.1007/s12648-020-01824-1 [JCR Impact Factor: 1.407]

[J20] Tariq Mumtaz, Shahabuddin Muhammad, **Muhammad Imran Aslam**, Nazeeruddin Mohammad, "Dual Connectivity Based Mobility Management and Data Split Mechanism in 4G/5G Cellular Networks", *IEEE Access*, vol. 8, pp. 86495-86509, 2020. DOI: https://doi.org/10.1109/ACCESS.2020.2992805 [JCR Impact Factor: 3.745]

[J19] 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*, Vol. 74, no. 4, pp. 497-510, 2020. DOI: https://doi.org/10.1007/s11235-020-00661-1 [JCR Impact Factor: 1.734]

NOTE: NED University of Engineering and Technology awarded Best Researcher Award for year 2020 based on three JCR publications listed at [J19, J20, & J21].

[J18] Kubra Bashir, Rabia Zaman, Irfan Ahmed, **Muhammad Imran Aslam**, "Designing Dispersion Flattened Photonic Crystal Fiber for Wideband Applications", Journal of Independent Studies and Research-Computing, Vol. 11, no.1, pp. 1-5, 2019. [National Journal]

[J17] 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: https://doi.org/10.1007/s11235-019-00587-3 [JCR Impact Factor: 1.734]

[J16] 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: http://dx.doi.org/10.4316/AECE.2019.02006 [JCR Impact Factor: 1.102]

[J15] Um e Rabab, Irfan Ahmed, **Muhammad Imran Aslam** and Muhammad Usman, "FPGA Implementation of Secure Internet of Things (SIT) Algorithm for High Throughput Area Ratio", *International Journal of Future Generation Communication and Networking*, Vol. 11, No. 5, pp. 63-72, 2018. DOI: http://dx.doi.org/10.14257/ijfgcn.2018.11.5.06 [ISI-indexed]

[J14] Tahniyat Aslam, Irfan Ahmed, **Muhammad I. Aslam**, Syed M. Usman Ali, Tahir Malik, "Direction of Arrival Estimation in the presence of Scatterer in noisy environment", *Advanced Electromagnetics*, Vol. 6, no. 3, pp.33-40, 2017. DOI: https://doi.org/10.7716/aem.v6i3.525 [ISI-indexed]

[J13] Akhter Saeed, Irfan Ahmed, **Muhamad I. Aslam**, Tahir Maik, Syed M. Usman Ali, "Improving energy efficiency of Wireless Sensor Network through optimum selection of cluster heads," *Bahria University Journal of Information & Communication Technologies*, Vol. 10, No. 1, pp. 29-37, 2017. [National Journal]

[J12] Muhammad Sohail Ibrahim, Irfan Ahmed, **Muhammad I. Aslam**, Muhammad Ghazaal, Muhammad Usman, Kamran Raza and Shujaat Khan, "A Low Cost FPGA based Cryptosystem Design for High Throughput Area Ratio" *International Journal of Advanced Computer Science and Applications (IJACSA)*, Vol. 8, no. 2, pp-385-393, 2017. DOI: https://dx.doi.org/10.14569/IJACSA.2017.080249 [ISI-indexed]

[J11] Muhammad Usman, Irfan Ahmed, **Muhammad I. Aslam**, Shujaat Khan, and S. M. Usman Ali, "SIT: A Lightweight Encryption Algorithm for Secure Internet of Things" *International Journal of Advanced Computer Science and Applications (IJACSA)*, Vol. 8, no. 1, pp-402-411, 2017. DOI: https://dx.doi.org/10.14569/IJACSA.2017.080151 [ISI-indexed]

[J10] Md. Abdullah al Farooqui, Justin Breeland, **Muhammad I. Aslam**, Mehdi Sadatgol, Şahin K. Özdemir, Mark Tame, Lan Yang, and Durdu Ö. Güney, "Quantum Entanglement Distillation with Metamaterials," *Optics Express*, Vol. 23, No. 14, pp. 17941-17954, 2015. DOI: https://doi.org/10.1364/OE.23.017941 [JCR Impact Factor: 3.669]

[J9] Sana Aijaz, Irfan Ahmed, **Muhammad I. Aslam**, and Syed M. Usman Ali, "Spectrum Sensing in Cognitive Radios - Techniques, Issues and Challenges," I*nternational Journal of Information and Communication Technology Trends*, Vol. 2, No. 1, pp. 1-4, 2015. [National Journal]

[J8] Immad Girach, **Muhammad I. Aslam**, Irfan Ahmed, Syed M. Usman Ali and Muhammad Khalid, "Photonic Band Gap Materials- Theory, Techniques and Application," *Bahria University Journal of Information & Communication Technologies*, Vol. 8, No. 1, pp. 126-129, 2015. [National Journal]

[J7] Shakil Ahmad, Muhammad Khalid, **Muhammad I. Aslam**, and Haroon Rasheed, "Analysis of Schemes to Improve Efficiency of Solar Cells," *Bahria University Journal of Information & Communication Technologies*, Vol. 8, No. 1, pp. 105-109, 2015. [National Journal]

[J6] **Muhammad I. Aslam** and Durdu Ö. Güney, "Optimizing low loss negative index metamaterial for visible spectrum using differential evolution: comment," *Optics Express*, Vol. 22, no. 4, pp. 3773-3774, 2014. DOI: https://doi.org/10.1364/OE.22.003773 [JCR Impact Factor: 3.669]

NOTE: This work received commendation from NED Alumni Association of Southern California

[J5] **Muhammad I. Aslam** and Durdu Ö. Güney, "On negative index metamaterial spacers and their unusual optical properties," *Progress in Electromagnetics Research B*, Vol. 47, pp. 203-217, 2013. DOI: http://dx.doi.org/10.2528/PIERB12111908 [Scopus/ Compendex-indexed]

[J4] Durdu Ö. Güney and **Muhammad I. Aslam**; "Comment on "Silver/silicon dioxide/silver sandwich films in the blue-to-red spectral regime with negative-real refractive index" Appl. Phys. Lett. 99, 181117 (2011)]," *Applied Physics Letters*, Vol. 101, no. 15, Article ID 156101, October 2012. DOI: http://dx.doi.org/10.1063/1.4760233 [JCR Impact Factor: 3.597]

[J3] **Muhammad I. Aslam** and Durdu Ö. Güney ; "Dual-band, double-negative, polarization-independent metamaterial for the visible spectrum" *Journal of Optical Society of America B*, Vol. 29, no. 10, pp.2839-2847, October 2012. DOI: https://doi.org/10.1364/JOSAB.29.002839 [JCR Impact Factor: 2.180]

NOTE: This work received honorary mention in the research highlights of world's top journal of the field "Nature Photonics". [Reference: S. Armstrong, "Metamaterials: Negative in two bands," Nature Photonics, Vol. 6, No. 12, p. 800 December 2012.vol. 6, p. 800, 2012]

[J2] **Muhammad I. Aslam** and Seyed A. Zekavat; "New channel Path loss Model for Near-ground Antenna Sensor networks" *IET Wireless Sensor System*, vol.2, no.2, pp.103-107, June 2012. DOI: https://doi.org/10.1049/iet-wss.2011.0096 [ISI-indexed]

[J1] **Muhammad I. Aslam** and Durdu Ö. Güney, "Surface plasmon driven scalable low-loss negative-index metamaterial at visible spectrum" *Physical Review B*, Vol. 84, No. 19, p. 195465, 2011. DOI: http://dx.doi.org/10.1103/PhysRevB.84.195465 [JCR Impact Factor: 3.575]

NOTE: The work in this paper received wide appreciation from the research community worldwide and has been reported as major breakthrough in the field by different reputed journals (Namely (1) Optics and Photonics News, (2) Biophotonics) and many technical websites (Such as: LaserFocusWorld.com, ScienceDaily.com, Photonics.com etc). Related references are given below:

a. Y. Carts-Powell, "Metamaterial Superlenses for the Visible and UV", Optics and Photonics News, Vol.23, No.4, p. 6, April 2012
b. A. N. Paddock, "Superlens nears reality–in theory", Biophotonics, p. 11, March 2012
c. http://www.laserfocusworld.com/articles/2012/01/surface-plasmon-drive-superlens.html
d. http://www.sciencedaily.com/releases/2012/01/120109102916.htm

Conference Publications:

[C23] Tahniyat Aslam, Irfan Ahmed, Sundus Ali, and Muhammad Imran Aslam, "TeraHertz Communication and Associated Challenges in 6G Cellular Networks," 2021 4th International Conference on Computing & Information Sciences (ICCIS), Karachi, Pakistan, 2021, pp. 1-6, DOI: https://doi.org/10.1109/ICCIS54243.2021.9676382

[C22] Nehan Abdul Ghani, Yumna Shahid, Zahra Mubeen, Mahnoor Khursheed, Sundus Ali, and Muhammad Imran Aslam, "Prototype Implementation of Device-to-Device Communication," 2021 4th International Conference on Computing & Information Sciences (ICCIS), Karachi, Pakistan, 2021, pp. 1-5, DOI: https://doi.org/10.1109/ICCIS54243.2021.9676389

[C21] Aisha Danish, Sundus Ali, **Muhammad Imran Aslam** and Irfan Ahmed, "Future prospects and challenges associated with intelligent reflecting surfaces enabled wireless communication," 2021 IEEE 18th International Conference on Smart Communities: Improving Quality of Life Using ICT, IoT and AI (HONET), Karachi, Pakistan, pp. 121-125, 11-13 Oct. 2021, DOI: https://doi.org/10.1109/HONET53078.2021.9615389

[C20] Sundus Ali, **Muhammad Imran Aslam**, Irfan Ahmed, "Performance Analysis of Single-Hop Device to Device Communication," 18th International Bhurban Conference on Applied Sciences and Technology, Islamabad, Pakistan, pp. 974-978, 12-16 January 2021. DOI: https://doi.org/10.1109/IBCAST51254.2021.9393266

[C19] Talib Abbas, Faizan Qamar, MHD Nour Hindia, Rosilah Hassan, Irfan Ahmed and **Muhammad Imran Aslam**, "Performance Analysis of Ad Hoc on-Demand Distance Vector Routing Protocol for MANET," 2020 IEEE Student Conference on Research and Development (SCOReD), Batu Pahat, Malaysia , pp. 194-199, 2020. DOI: https://doi.org/10.1109/SCOReD50371.2020.9250989

[C18] Sundus Ali, **Muhammad Imran Aslam**, Irfan Ahmed and Hira Mariam, "Device-to-Device Communication Prototyping using Software Defined Radios," Proceedings of the 5th International Electrical Engineering Conference (IEEC-2020), Karachi, 21-22 February, 2020.

[C17] Hasan Rafae, Syed Waqar Jamil, **Muhammad I. Aslam** and Irfan Ahmed, "Internet of Nano Things: Next Step for Future of Nanotechnology," *Proceedings of the 4th International Electrical Engineering Conference*, Karachi, 25-26 January, 2019.

[C16] Hasan Rafae, **Muhammad I. Aslam**, Irfan Ahmed, Furqan Alam, Syed Waqar Jamil, "Awareness of Green Computing among Students of NED University of Engineering and Technology," *First International Conference on Carbon Neutral Built Environment (CNBT–I)*, Karachi, Pakistan, 20-21 December 2018.

[C15] Hasan Rafae, **Muhammad I. Aslam**, Irfan Ahmed, "Green Computing: Techniques and Challenges," *First International Conference on Carbon Neutral Built Environment (CNBT–I)*, Karachi, Pakistan, 20-21 December 2018.

[C14] Tariq Mumtaz, Shahabuddin Muhammad, Nazeeruddin Mohammad, **Muhammad Imran Aslam** and Irfan Ahmed, "Modeling and Evaluation of Mobility Management in mmWave Cellular

Networks", *21st IEEE International Multi Topic Conference*, Karachi, Pakistan, 1-2 November 2018. DOI: https://doi.org/10.1109/INMIC.2018.8595649

[C13] Hira Mariam, **Muhammad I. Aslam**, Irfan Ahmed, "Device-to-Device Communication in Cellular Networks: A Survey", I*nternational Conference on Emerging trends in Telecommunication and Electronics Engineering*, Karachi, Pakistan, February 27 - 28, 2018.

[C12] Zaheer Abbas Balouch, **Muhammad I. Aslam**, Irfan Ahmed, "Energy Efficient Image Encryption Algorithm" *International conference on Innovations in Electrical Engineering and Computational Technologies*, Karachi, Pakistan, April 2017. DOI: https://doi.org/10.1109/ICIEECT.2017.7916541

[C11] Sundus Ali, **Muhammad I. Aslam**, Irfan Ahmed, "MIMO channel modeling and capacity analysis using 3-D Spatial Statistical Channel Model for Millimeter Wave Outdoor Communication," *14th International Bhurban Conf. on Applied Sciences and Technology*, Islamabad, Pakistan, pp. 735-740, 10-14 January 2017. DOI: https://doi.org/10.1109/IBCAST.2017.7868135

[C10] Maliha Arif, **Muhammad I. Aslam**, "Sonar Based Assistive Device for Visually Impaired Individuals" *Student Conference on Engineering Sciences & Technology*, Karachi, 14-15 December, 2016.

[C9] Rana Khan, Tehzeb Jamal, **Muhammad I. Aslam**, Irfan Ahmed, "Comparative Analysis of Different Patch Antennas", *Proceedings of the 1st International Electrical Engineering Congress*, Karachi, 13-14 May, 2016.

[C8] Usama Fareed Ahmad, Muhammad ShahRukh Khan, Muneeb ur Rahman, S.M. Daniyal Hasan Shah, Irfan Ahmad, and **Muhammad I. Aslam**, "Wireless System Based Smart Wheelchair ", *Proceedings of the 1st International Electrical Engineering Congress*, Karachi, 13-14 May, 2016.

[C7] Sundus Ali, **Muhammed I. Aslam**, Irfan Ahmed, "Analysis of Proportional Fairness Utility Function and Interference Mitigation in Heterogeneous Cellular Networks", *31st IEEEP Multi-topic International Symposium*, Karachi, 16th-17th March 2016.

[C6] Radha Mohanlal, **Muhammad I. Aslam**, Irfan Ahmed, "Radio resource allocation techniques for downlink transmission in LTE-Advanced", *4th International Conference on Electrical, Computer, Mechanical and Mechatronics Engineering (ICE2016)*, Dubai, Emirates, 4-5 February 2016,

[C5] Shafaq Mustafa, **Muhammad I. Aslam**, Irfan Ahmed, "Analysis of Electromagnetic Wave Propagation through Photonic Crystal Fibers," *International Conference on Advanced Materials and Process Engineering*, Karachi, 14-15 December, 2015.

[C4] Syed Asad Ali Shah, **Muhammad I. Aslam**, Irfan Ahmed, and Syed M. Usman Ali, "Near-Perfect Metamaterial Absorber for the Visible Spectrum," *International Conference on Advanced Materials and Process Engineering*, Karachi, 14-15 December, 2015.

[C3] **Muhammad I. Aslam** and Aamir Z. Shaikh, "Joint and Marginal Probabilities for Time of Arrival and Angle of Arrival using Ellipsoidal Model," *Proceedings of the 3rd IEEE International Conference on Computer, Control & Communication (IEEE-IC4)*, Karachi, 25-26 September 2013. DOI: https://doi.org/10.1109/IC4.2013.6653764

NOTE: The paper won best paper award for communication stream in the conference.

[C2] Muhammad M. Rahman, **Muhammad I. Aslam**, Durdu Ö. Güney, and Philip G. Evans, "Experimentally feasible green-light negative index metamaterial," *7th International Congress on Advanced Electromagnetic Materials in Microwaves and Optics (METAMATERIALS)*, Talence, pp. 262-264, 16-21 Sept. 2013. DOI: https://doi.org/10.1109/MetaMaterials.2013.6809020

[C1] **Muhammad I. Aslam** and Syed M. Ali, "A Wideband Metamaterial Absorber for Solar Cell Applications," *Proceedings of the international conference on energy and sustainability*, pp. 113-116, Karachi, April 2013.

Invited Talks:

1. "*Electromagnetic Metamaterials*" tutorial session at 6th International Multi-topic ICT conference at Mehran University of Engineering and Technology Jamshoro on 10-12 November 2021.
2. "*Metamaterials-Manipulating light*" at the Symposium of Pakistan Academy of Engineering on "Emerging Technologies" June 27, 2020, Karachi.
3. "*METAMATERIALS- Achieving super natural properties using composite materials*" at the National Conference on Emerging Technologies at Sir Syed University of Engineering and Technology, Karachi on 11th October 2017.
4. "*Metaspacer- A New Perspective on Metamaterial Application*" at the 1st International Conference on Information and Communication Technology Trends, 2-5 September 2013.
5. "*Achieving Supernatural Optical Properties through Composite Materials*" at the multi-speaker session on "trends in optical engineering and applied optics" held at NED university of Engineering and Technology, Karachi on 08th May 2013.