

Name: Prof. Dr. Engr. Ahmed Muddassir Khan
Designation: Professor and Dean, FEST, Indus University, Karachi

Qualification: **PhD Engineering** (EMF & MW Technology)
Beijing University of Posts & Telecommunication (BUPT), Beijing, China.
MBA, Federal Urdu University of Arts, Science and Technology, Karachi,
ME Electrical Engineering, NED UET, Karachi, Pakistan
BE Electronics Engineering, Mehran UET, Jamshoro, Pakistan
Diploma in IT, SBTE, Karachi, Pakistan

Email: ahmed.muddassir@indus.edu.pk, mail2muddassir@gmail.com

Research Sites/Links: Google Scholar: <https://scholar.google.com.pk/citations?user=bwLSEs0AAAAJ&hl=en>
LinkedIn: www.linkedin.com/in/dr-ahmed-muddassir-khan-4335761a
Research gate: <https://www.researchgate.net/profile/Ahmed-Khan-25>

Profile: Prof. Dr. Engr. Ahmed Muddassir Khan has completed his early education from reputable institutes of Pakistan with distinctions. He completed **BE, ME and MBA** from prestigious Universities of Pakistan. He completed his PhD from Beijing University of Posts and Telecommunication (BUPT), Beijing, China in 2013 with several research publications in esteemed international research journals. He started his professional career as a Telecom Engineer in Pakistan's leading Telecom organization (PTCL) and gained vast field and research experience in high capacity optical networks. He served around 10 Years on various international telecom projects such as SMW3, SMW4 and IMEWE and backhaul related to submarine and landline optical fiber communication system for the installation, testing and commissioning and O&M of Alcatel, Fujitsu, Ciena, ZTE and Huawei SDH and WDM systems.

Currently he is serving as a **Professor and Dean FEST** (Faculty of Engineering, Science and Technology), Indus University, Karachi. He also has other important academic role and responsibilities in Indus University such as Chair BOF, member of BOS, R&D Committee, BASR, Academic Council, and BoG. He is an **HEC approved PhD supervisor** and served as **PEC program evaluator**. He has been awarded with **Best University teacher award (BUTA) by HEC** in 2018. He served as **secretary of HEC/NTC National Curriculum Review Committee (NCRC)** of Electrical Engineering Technology. Actively served as **Program Evaluator on behalf of regulatory bodies PEC & NTC** at various HEIs.

He is also member of different national and internal societies and speaker in different research forums. He served as an organizing committee and technical Co-chair in IEEE ICIEECT 2017 and TPC members in several conferences such as KSSC-14, ICIEECT 2017, IEEC 2017, RTCSE, ICIEECT and APICEE conferences. He also has successfully **supervised several ICT R&D funded projects** in emerging areas in electrical and communication technologies related to health monitoring, smart sensing and hybrid transports. His core research areas are Optical Communication, DWDM, GPON, Hybrid WDM/TDM-PON, Submarine Optical Fiber Cable Networks, Advanced Modulation Formats and Next Generation Passive Optical Networks (NGPON).

Research Interest

- Next Generation Passive Optical Networks (NGPON)
- Advanced Modulation Formats for Optical Communication
- Radio over Fiber (RoF)
- Integration of Optical Access Networks and Wireless Access Networks
- Hybrid Electric Vehicles, IOT, ML, AI based systems etc

Selected Publications

- Wang Long, Jie Zhang, Daobin Wang, Jiawei Han, Sai Chen, **Ahmed Muddassir Khan**, Guanjun Gao, Haijun Leng, Lei Liu, Wei Zhu, Yongli Zhao, and Wanyi Gu “[Mitigation of the Interference Between Odd and Even Terms in Optical Fast OFDM Scheme Based on Interleaved Multiplexing](#)” IEEE, Photonics Technology Letters (PTL), London, UK , Vol. 24 No. 13 (2012).
- Yousaf Khan, Xiangjun Xin, Aftab Husain, Abdul Latif, Liu Bo, **Ahmad Mudassir Khan** “[A Cost-effective architecture for Full-duplex Hybrid WDM/TDM-PON using DPSK](#)” Advances in Information Science and Services Science (AISS), Korea , Vol. 04 No. 18 (2012).
- Muhammad Idrees AFRIDI, Jie ZHANG, Yousaf KHAN, Amjad ALI, Aftab HUSSAIN, Yongli ZHAO, Shahab NIAZI, **Ahmad Muddasir KHAN** “[A Full Duplex Broadcasting enabled Centralized Light Source WDM-PON Architecture](#)” Journal of Computational Information Systems (JCIS) Hong Kong, Vol. 08 No. 21 (2012).
- **Ahmed Muddassir Khan**, Jie ZHANG, Yongli ZHAO, Yousaf Khan, Muhammad Idrees, Long WANG, Manzoor Ahmed “[A Cost-effective and Rayleigh Backscattering Noise-resilient Design of Single Fiber Centralized Light Source WDM-PON with Improved Receiver Sensitivity](#)” Journal of Computational Information Systems (JCIS) Hong Kong, Vol. 09 No. 02 (2013).
- **Ahmed Muddassir Khan**, Jie Zhang, Yongli Zhao, Yousaf Khan, Abdul Latif, Jiawei Han “[A Cost-effective and Spectrally-efficient Design of Centralized Light Source WDM-PON using aggregated 160 Gbit/s DQPSK Modulation for Downstream and Re-modulated IRZ for Upstream Transmission](#)” Advances in Information Science and Services Science (AISS), Korea , Vol. 05 No. 03 (2013).
- **KHAN Ahmed Muddassir** , ZHANG Jie, ZHAO Yong-li, GAO Guan-jun, CHEN Sai, WANG Dao-bin “[A Simple and Spectrally-efficient Design of High Capacity Hybrid WDM/TDM-PON with Improved Receiver Sensitivity](#)” Journal of Chinese Universities of Posts& Telecommunication, China , Vol. 20 No. 03 (2013).
- **Ahmed Muddassir Khan**, Zhang Jie, Yousaf Khan, Muhammad Idrees, Yongli Zhao, Shahab Niazi, Aftab Husein, Abid Munir, Ishtiaq Ahmed and Junyan Liu, “[A Simple and Cost-effective Design For Simultaneous Transmission of Point-to-point and Broadcast Services in WDM-PON](#)” International Journal of Future Generation Communication and Networking (IJFCN), Australia , Vol. 06 No. 03 (2013).
- Yongli Zhao *, Ruiying He, Hui Yang, **Ahmed Muddassir Khan**, Jie Zhang, “[Data center application oriented control architecture in multi-domain optical networks](#)” Optik - International Journal for Light and Electron Optics, Germany, Vol. 124 No. 20 (2013).
- Yousaf Khan*, Muhammad Idrees Afridi, **Ahmed Mudassir Khan**, Waheed Ur Rehman and Jahanzeb Khan, “[Power Budget Analysis of Colorless Hybrid WDM/TDM-PON Scheme Using Downstream DPSK and Re-modulated Upstream OOK Data](#)” Journal of Optical Communications (JOC), Germany, Vol. 35 No. 03 (2014).
- Areez Khalil Memon, **Ahmed Muddassir Khan**, Ganesh Kumar, Syed Rizwan Matin “Study and Implementation of Passive Optical Network for Next Generation Solution” Indus Journal of Computing & Communication Technology (IJCCT), Pakistan, Vol.01 No. 01 (2015).

- Areez Khalil Memon, **Ahmed Muddassir Khan**, Syed Hyder Abbas Musavi and Anwar Ali Gaho “[Viable Solution for Next Generation Passive Optical Network 2 \(NG-PON 2\) Supporting 40Gbps Downstream DQPSK and 10Gbps Upstream OOK](#)” International Journal of Future Generation Communication and Networking (IJFCN), Australia, Vol. 10 No. **08 (2017)**.
- **Ahmed Muddassir Khan**, Sayed Hyder Abbas Musavi, Areez Khalil Memon, Munsif Ali Jatoi, Syed Shahzeb Sami and Faizan-ur-Rehman “[Design & Analysis of Noise-Resilient Mix Data Rate Passive Optical Network Supporting Simultaneous Transmission of Both NGPON Standards](#)” International Journal of Future Generation Communication and Networking (IJFCN), Australia, Vol. 10 No. 09 **(2017)**.
- F. Rehman*, **A. M. Khan**, S. H. A. Musavi, A. K. Memon, A. Mehmood, S. Ahmad, Z. Ali, S. Hussain “[Analytical Study of Existing XG-PON and Proposed NG-PON Networks with DQPSK Downstream & IRZ upstream Modulation](#)” Journal of Fundamental and Applied Sciences, USA, Vol. 10 No. 38 **(2018)**.
- M. T. Khan, M. T. Jilani, A. M. Khan, F. Hafeez, **A. M. Khan**, A. K. Memon “[Effects of defected ground structure slot tuning on frequency and circuit parameters of bandpass filter](#)” Journal Of Optoelectronics And Advanced Materials (JOAM), Romania, Vol. 20 No. 09-10 **(2018)**.
- Areez Khalil Memon, Ahmed Muddassir Khan, Syed Hyder Abbas Musavi, Faizan ur Rehman, Atif Mehmood, Sajid Hussain “[Simulative Investigation of Transmission Performance for Proposed NG-PON 2 Based on DPQSK Downstream with Two different Intensity modulated Upstream](#)” 3C Tecnología Spain , Vol. 20 No. 09-10 **(2019)**.
- **Ahmed Muddassir Khan**, Syed Hyder Abbas, Musavi, Areez Khalil Memon, Zahid Ali Arain, Syed Shahzaib Sami “[Power Budget Analysis of Proposed High Data Rate Based Next Generation PON 2 Architecture Supporting High Split Ratio](#)” International Journal of Information Technology , Vol. FEB No. 19 **(2019)**.
- F. Rehman, **A.M. Khan**, R.R.A. Khan, Z. Mukhtiar and M.A. Qazi “[Receiver Sensitivity Analysis of Proposed Four Channel WDM Passive Optical Network With 40 GBPS Downstream & 10 Gbps Upstream Data Rate](#)” Pakistan Journal of Science (PJS), Pakistan, Vol. 17 No. 04 **(2019)**.
- **A.M. Khan**, F.Ur. Rehman, A.L. Shah, S. Ahmed, S.F. ul Huda and M.A. Noman “[A Feasible Solution for Long-Reach Next Generation Passive Optical Network \(LR-NGPON\)](#)” Pakistan Journal of Science (PJS), Pakistan, Vol. 17 No. 04 **(2019)**.
- Anwar Ali Gaho, **Ahmed Muddassir Khan**, Muhammad Abul Hasan “[Functional MRI Based Brain Mapping in Occipital Gyrus using Face Stimuli](#)” Pakistan Journal of Engineering and Technology (PakJET) , Vol. 03 No. 03 **(2020)**.
- Waqar Ahmed, Rizwan Ali, **Ahmed Muddassir Khan**, Shafquat Hussain⁴, Faisal Hussain “[Simulative Analysis of Power Conversion System for Hybrid Electric Vehicles Based on Dual Input Sources Including Charging from Solar Panel](#)” Pakistan Journal of Engineering and Technology (PakJET) , Vol. 03 No. 03 **(2020)**.
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- Danish Khan, Abdul Rehman, Muhammad Zahid Rafiq, **Ahmed Muddassir Khan**, Mohsin Ali “[Improving the optical properties of SnO₂ nanoparticles through Ni doping by sol-gel technique](#)” Current Research in Green and Sustainable Chemistry, Vol. 04 No 21 (2021).
- Waqar Ahmed, Rizwan Ali, **Ahmed Muddassir Khan**, Shafquat Hussain, Faisal Hussain “[Simulation Analysis of Single-Phase Transformer less H6 Inverter based Dual Input buck-boost Converter to mitigate leakage current](#)” Pakistan Journal of Engineering and Technology (PakJET) , Vol. 04 No 2 (2021).
- Muhammad Hamza* and **Ahmed Muddassir Khan** “[Challenges and Opportunities of Industrial Revolution 4.0 in Renewable Energy Sector of Pakistan](#)” Pakistan Journal of Engineering and Technology (PakJET) , Vol. 04 No 2 (2021).
- Shafquat Hussain, Waqar Ahmed, **Ahmed Muddassir Khan**, Rizwan Ali “ [Challenges and Opportunities of Industrial Revolution 4.0 in Renewable Energy Sector of Pakistan](#) ” Sukkur IBA Journal of Emerging Technologies (SJET) Vol. 04 No 2 (2021).
- Adeel Ahmed, Danish Khan, , **Ahmed Muddassir Khan**, Muhammad Umair Mustafa , Manoj Kumar Panjwani “ [Modeling of Efficient Control Strategies for LCC-HVDC Systems: A Case Study of Matiari–Lahore HVDC Power Transmission Line](#) ” Sensors MDPI, Switzerland Vol. 21 No 07 (2022).
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