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EDUCATION:

- **PhD in Electrical Engineering** (Nanosystems), University of Naples "Federico II", Naples, Italy. (2010-2013).
 - **Thesis title:** Investigation of Fano Resonances in Symmetric and Asymmetric Three Dimensional Plasmonic Nanostructures.
 - **Master in Electrical Engineering** (Microelectronics & Photonics), Halmstad University, Halmstad, Sweden. (2008-2009).
 - **Thesis title:** Photonic Crystal Designs (PCD).
 - **Bachelors of Information and Communication System Engineering** (Telecommunication), School of Electrical Engineering & computer Science (SEECs), National University of Sciences & Technology (NUST), Islamabad, Pakistan. (2003-2007).
 - **Thesis title:** Simulation of WCDMA Rake receiver.
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WORK EXPERIENCE:

- Associate Professor in Center for Advanced Studies in Energy (CAS-E), University of Engineering & Technology (UET), Peshawar, December 2017 till date.
- Assistant Professor in Sarhad University of Science and Information Technology, May 2013 to November 2017.
- Worked as a PhD student in Electrical Engineering and Information Technology Department at University of Naples in the field of nanoplasmonics for metal nanostructures.
- Participate in National School of Electrical Students "Ferdinando Gasparini", October, 2010, 2011, 2012.
- Lecturer in Sarhad University of Science and Information Technology, Pakistan, September 2009 to February 2010.
- Worked for master thesis in photonic crystals at Halmstad University, Sweden.
- Three months internship at the Telephone Industries of Pakistan (PVT) LTD, in the following areas: Digital Electronic Switching System, Quality Assurance Department, Cable Assy, Rack and Frame Assembly, PCB and HYBRID Production, EWSD Training Exchange.
- Two months internship at the Coherent Design & Test (PVT) LTD. Major responsibilities was to design Circular Recursive Systematic Convolution Turbo Decoder for WiMAX.

PROFESSIONAL ACTIVITIES

- Reviewer of Springer Plasmonic Journal having an impact factor of **2.36** (ISI indexed), 2014-Present.
- Reviewer of American Chemical Society, The Journal of Physical Chemistry Letters having an impact factor of **7.458** (ISI indexed), 2015-Present.
- Reviewer of Nanoscale, Royal Society of Chemistry having an impact factor of **7.394** (ISI indexed), 2015-Present.
- Reviewer of Physical Chemistry Chemical Physics, Royal Society of Chemistry having an impact factor of **4.50** (ISI indexed), 2015-Present.
- Reviewer of Annalen der Physik (Wiley Online Library) having an impact factor of **3.443** (ISI indexed), 2016-Present.
- Reviewer of RSC Advances having an impact factor of **3.289** (ISI indexed), 2016-Present.
- Reviewer of International Journal of Modern Physics B having an impact factor of **0.79** (ISI indexed), 2017-Present.
- Reviewer of Opto-Electronics Review Journal (Elsevier) having an impact factor of **1.449** (ISI indexed), 2017-Present.
- Reviewer of Nanoscale Research Letters (Springer) having an impact factor of **2.833** (ISI indexed), 2017-Present.
- Reviewer of Zeitschrift für Naturforschung A: A Journal of Physical Sciences having an impact factor of **0.88** (ISI indexed), 2018-Present.
- Reviewer of International Journal of Modern Physics B (INT J MOD PHYS B) having an impact factor of **0.79** (ISI indexed), 2018-Present.
- Reviewer of Materials Research Express (IOP Science) having an impact factor of **1.151** (ISI indexed), 2018-Present.
- **Member, Technical Program Committee**, International Conference on Communications Technologies (ComTech-2017), 19-21 April, 2017 at MCS-NUST, Rawalpindi.
- **Member, Steering Committee**, 11th IEEE International Conference on Emerging Technologies (ICET-2015), December 19 – 20, 2015, Peshawar, Pakistan.
- **Chair, Logistics Committee**, 11th IEEE International Conference on Emerging Technologies jointly organized by Sarhad University and CECOS University held on December 19 – 20, 2015 at Peshawar Garrison Club, Peshawar.
- **Co-Chair, Technical Program Committee**, 11th IEEE International Conference on Emerging Technologies (ICET-2015), December 19 – 20, 2015, Peshawar, Pakistan.
- **Co-Chair, Technical Session Coordination Committee**, 11th IEEE International Conference on Emerging Technologies (ICET-2015), December 19 – 20, 2015, Peshawar, Pakistan.
- **Co-Chair, Local Arrangements**, 11th IEEE International Conference on Emerging Technologies (ICET-2015), December 19 – 20, 2015, Peshawar, Pakistan.
- **Member, Publicity Committee**, 11th IEEE International Conference on Emerging Technologies (ICET-2015), December 19 – 20, 2015, Peshawar, Pakistan.
- **Member, Publication Committee**, 11th IEEE International Conference on Emerging Technologies (ICET-2015), December 19 – 20, 2015, Peshawar, Pakistan.
- **Technical Session Chair** (Photonics & Electromagnetics Track), 11th IEEE International Conference on Emerging Technologies (ICET-2015), December 19 – 20, 2015, Peshawar, Pakistan.
- **Technical Session Co-Chair** (Power Systems Track), 11th IEEE International Conference on Emerging Technologies (ICET-2015), December 19 – 20, 2015, Peshawar, Pakistan.

ADMINISTRATIVE DUTIES:

- Chief organizer & Focal Person of 2nd International Conference on Sustainable Energy Technologies at CAS-E, UET Peshawar.
- Focal Person of organizing local workshops and trainings at CAS-E, UET Peshawar.
- Organizing Secretary & Focal Person of 2nd National Conference on Green Energy Technologies at CAS-E, UET Peshawar.
- Postgraduate Coordinator/Adviser of EE department at SUIT.
- Member of 'Board of Study' at Sarhad University of Science & IT (SUIT).
- Member of 'Quality Enhancement Cell (QEC)' at SUIT.
- Member of postgraduate studies committee at SUIT.
- Member of Research Evaluation Committee (REC) at SUIT.
- Head of "Nanomaterials and energy research group (NERG)" at SUIT.
- Head of "Research Lab" in EED department at SUIT.
- BE/MS Viva Voce Internal Examiner at SUIT.
- Head of PEC committee at SUIT.
- Member of HEC committee at SUIT.
- Member of IEEE committee at SUIT.

Memberships

- Pakistan Engineering Council (PEC) membership No: TELE/1111
- IEEE membership No: 94196577
- Member IEEE Photonics Society
- Member National Curriculum Revision Committee (NCRC) – Energy System Engineering

COURSES TAUGHT at CAS-E, UET Peshawar

- Electrical & Optical Properties of Materials
- Power Electronics & Machines
- Solar Thermal Energy
- Advanced Materials for Renewable Energy Systems

COURSES TAUGHT at SUIT

- **Undergraduate level:**
 - Signals & Systems
 - Communication Systems
 - Microwave Engineering
 - Digital Signal Processing
 - Wave Propagation & Antenna
 - Optoelectronics
 - Transmission Lines and Waveguides
- **Postgraduate level:**
 - Semiconductor Materials & Nanotechnology
 - Theory of Lasers
 - Advanced Electronic Devices
 - Advanced Engineering Electromagnetics
 - Modelling & Simulation of Semiconductor devices
 - Research Methodology
 - Solid state electronics
 - Optimization Techniques in Engineering

- Plasmonics: Principles & Applications
- Solar Cell Technology
- Advanced Photonics
- Optical Terahertz Technology
- Advance System Modelling & Simulation

STUDENT SUPERVISION:

- **Undergraduate Students:** Seven research projects are supervised.
- **MS Students:** Three research projects are supervised.
- **PhD Students:** The following PhD students are currently under supervision:
 - Ihsan Ullah, Research Area: Plasmonic slow light devices.
 - Anees Ur Rehman, Research Area: Dye synthesise solar cell
 - Rehan Shafiq, Research Area: Extraordinary optical transmission (EOT).
 - Saqib Jamil, Research Area: Nanolasers

HONOURS AND DISTINCTIONS:

- Seven times winner of research award at Sarhad University of Science & Technology, Pakistan.
- University of Naples “Federico II” Fellowship Award worth € 13,638.47/ year for PhD program in Electrical Engineering and Information Technology Department.
- Secured 1st position in Master's.
- HEC Approved Supervisor

PUBLICATIONS:

Journal Papers

1. A. D. Khan, and **A. D. Khan**, “*Optimization of highly efficient GaAs – Silicon hybrid solar cell*”, Applied Physics A: Materials Science and Processing, Springer, 2018. **(Impact Factor: 1.694)**
2. A. Shamim, M. Noman, M. Zubair, **A. D. Khan**, S. Saher, “*A facile approach to determine the unknown refractive index (n) and extinction coefficient (k) of novel encapsulant materials used in Back contact PV modules*,” Applied Physics A, 2018 DOI: 10.1007/s00339-018-1974-x. **(Impact Factor: 1.694)**
3. **A. D. Khan**, A. D. Khan, S. D. Khan, and M. Noman, “*Light absorption enhancement in tri-layered composite metasurface absorber for solar cell applications*,” Optical Materials, 2018, 84, 195 – 198 **(Impact Factor: 2.32)**
4. **A. D. Khan**, “*Refractive index sensing with Fano resonant L-shaped metasurface*,” Optical Materials, 2018, 82, 168 – 174 **(Impact Factor: 2.32)**
5. **A. D. Khan** and M. Amin, “*Multispectral broadband PIT and sharp asymmetric Fano effects in a skewed dipolar nanostructure*,” Optical Materials, 2018, 79, 480 – 487. **(Impact Factor: 2.32)**
6. A. Ali, A. Khan, Kh. S. Karimov, A. Ali, and **A. D. Khan**, “*Pressure Sensitive Sensors Based on Carbon Nanotubes, Graphene, and Its Composites*,” Journal of Nanomaterials, 2018 DOI: 10.1155/2018/9592610 **(Impact Factor: 2.207)**.
7. H. Ullah, **A. D. Khan**, M. Noman, and A. Rehman, “*Novel Multi-broadband Plasmonic Absorber based on a metal-dielectric-metal square ring array*,” Plasmonics, 2018, 13(2), 591-597. **(Impact Factor: 2.366)**
8. N. Muhammad, **A. D. Khan**, Zi. L. Deng, K. Khan, A. Yadav, Q. Liu, and Z. Ouyang, “*Plasmonic spectral splitting in ring/rod metasurface*,” Nanomaterials, 2017, 7(11), 397 **(Impact Factor: 3.504)**.

9. **A. D. Khan**, M. Amin, "Polarization selective multiple Fano resonances in coupled T-shaped metasurface," IEEE Photonics Technology Letters, 2017, 29(19), 1611-1614 (**Impact Factor: 2.375**).
10. N. Ahmad, **A. D. Khan**, "Electromagnetically Induced Transparency and Sharp Asymmetric Fano Line Shapes in All-Dielectric Nanodimer," Plasmonics, 2017, 12(5), 1399-1407. (**Impact Factor: 2.366**).
11. **A. D. Khan** and M. Amin, "Broadband Salisbury screen absorber using square lattice of plasmonic nanodisk," Plasmonics, 2017, 12(2), 257-262. (**Impact Factor: 2.366**)
12. **A. D. Khan**, "Enhanced plasmonic Fano-like resonances in multilayered nanoellipsoid," Applied Physics A, 2016, 122(4), DOI:10.1007/s00339-016-9816-1. (**Impact Factor: 1.604**)
13. M. Amin and **A. D. Khan**, "Polarization Selective Electromagnetic-Induced Transparency in the Disordered Plasmonic Quasicrystal Structure," J. Phys. Chem. C, 2015, 119 (37), 21633-21638. (**Impact Factor: 4.484**)
14. N. Ahmad, **A. D. Khan**, "Tunable Fano Resonances and Electromagnetically Induced Transparency in All-Dielectric Holey Block," Plasmonics, 2015, 10(6), 1687-1693. (**Impact Factor: 2.366**).
15. **A. D. Khan**, M. Y. Iqbal, M. Amin, A. Ali, S. D. Khan and R. Khan, "Multiple higher order Fano resonances in plasmonic hollow cylindrical nanodimer," Applied Physics A, 2015, 120(2), 641-649. (**Impact Factor: 1.604**)
16. **A. D. Khan**, M. Amin, R. Khan and S. D. Khan, "Twin Dipole Fano Resonances in Symmetric Three Layered Plasmonic Nano-Cylinder," Plasmonics, 2015, 10(4), 963-970. (**Impact Factor: 2.366**)
17. N. Ahmad, F. Ahmad, I. Khan and **A. D. Khan**, "Studies on the oxidative removal of sodium thiosulfate from aqueous solution," Springer, AJSE, (2015), 40(8), 289-293 (**Impact factor: 1.092**)
18. **A. D. Khan**, "Multiple Fano Resonances in Bimetallic Layered Nanostructures," International Nano Letters, 2014, DOI: 10.1007/s40089-014-0110-y.
19. **A. D. Khan**, S. D. Khan, R. Khan and N. Ahmad, "Excitation of Multiple Fano-Like Resonances Induced by Higher Order Plasmon modes in Three-Layered Bimetallic Nanoshell Dimer," Plasmonics, 2014, 9(2), 461-475. (**Impact Factor: 2.366**)
20. **A. D. Khan**, S. D. Khan, R. Khan, N. Ahmad, A. Ali, A. Khalil and F. A. Khan "Generation of Multiple Fano Resonances in Plasmonic Split Nanoring Dimer," Plasmonics, 2014, 9(5), 1091-1102. (**Impact Factor: 2.366**)
21. **A. D. Khan** and G. Miano, "Investigation of Plasmonic Resonances in Mismatched Gold Nanocone Dimers," Plasmonics, 2014, 9(1), 35-45. (**Impact Factor: 2.366**)
22. **A. D. Khan**, and G. Miano, "Higher Order Tunable Fano Resonances in Multilayer Nanocones," Plasmonics, 2013, 8(2), 1023-1034. (**Impact Factor: 2.366**)
23. **A. D. Khan** and G. Miano, "Plasmonic Fano Resonances in Single-Layer Gold Conical Nanoshells," Plasmonics, 2013, 8(3), 1429-1437. (**Impact Factor: 2.366**)

Conference papers

1. M. Noman, A. Shamim, H. Rehman, S. Saher , and **A. D. Khan**, "Solar Cells - Recent Developments and Trends," 4th International Conference on Energy, Environment and Sustainable Development 2016 (EESD 2016).
2. H. Ullah, **A. D. Khan**, A. Ullah, and I. Ullah, "Plasmonic Perfect Absorber for Solar Cell Applications," 12th IEEE International Conference on Emerging Technologies, (ICET-2016), Islamabad, 2016.
3. R. Shafiq, I. Ullah, and **A. D. Khan**, "Plasmonic properties of cylindrical nanoparticle," 3rd International Multidisciplinary Conference, SUIT, 2016.
4. A. D. Khan, and **A. D. Khan**, "High Q photonic crystal cavities," 11th IEEE International Conference on Emerging Technologies, (ICET-2015), Peshawar, 2015.

5. **A. D. Khan**, and G. Miano, "*Observation of Fano resonance in a dimer based on metallic nanocones*," 45th IEP Convention, Karachi, 2012.
6. **A. D. Khan**, and G. Miano, "*Fano resonance by symmetry breaking in silver-silica-gold multilayer nanoshells*," 8th International Conference on High Speed Optical Networking Enabling Technologies, (HONET), IEEE, Riyadh, 2011.

Poster presentations

1. A. Saboor, M. Khan, **A. D. Khan**, "*Comparative Analysis on Optical Losses for Back Contact PV Module with Aluminum foil having Glass-Glass Structure*", 2nd National Conference on Green Energy Technologies at Peshawar, 2018.
2. S. A. Kazmi, and **A. D. Khan**, "*Solar Dish Receiver*," 2nd National Conference on Green Energy Technologies at Peshawar, 2018.
3. **A. D. Khan**, A. D. Khan, J. Iqbal, and M. Noman, "*Plasmonic Nanostructure for Light-Absorption Enhancement in Solar Cells*," International conference on "Sustainable Energy Technologies", Serena Hotel, Islamabad, Sep. 12-13, 2017.
4. **A. D. Khan**, and G. Miano, "*Fano resonance in Multilayered nanodice*," 3rd International Conference on Metamaterials, Photonic Crystals and Plasmonics (META), Paris, 2012.

Books

Adnan Daud Khan, Muhammad Naseer, "*EIT Resonances in All-Dielectric Nanostructures*", ISBN-13: 978-620-2-30831-1, ISBN-10: 6202308311, EAN: 9786202308311, Publishing house: Scholars' Press, 2018-05-25.

SEMINARS/ WORKSHOPS:

- Participation in international workshop on "HYDRO POWER" organized by Arizona State University, USA on September 24 – 26, 2018 at NUST, Islamabad
- Participation in international training on "Corporate Engagement" by Prof. Dr. Lou Farina on April 19 – 20, 2018 - NUST, Islamabad.
- Organize a 2nd National Conference on Green Energy Technologies at UET Peshawar on 12th April, 2018.
- Participation in International Workshop on "Energy Materials: Research Opportunities in Photovoltaics " presented by Dr. Zachary Holman on February 7 – 9, 2018 at Serena Hotel, Islamabad.
- Participation in Workshop on "Pakistan Green building guideline & rating system" presented by Aqrab Ali Rana, Muneeb Haider, Umair Cheema, on January 31, to February 1, 2018.
- Participation in Workshop on "Solar Design, Installation, and Performance measurement" presented by Engr. Faiz Muhammad Bhutta, on January 24, 2018.
- Participation in International conference on "Sustainable Energy Technologies" organized by Centre for Advance Studies in Energy - UET Peshawar at Serena Hotel, Islamabad, Sep. 12-13, 2017.
- Visit to FAST-National University of Computers & Emerging Sciences, Peshawar Campus on Friday 26th May, 2017 as Assessment Team (AT) member to conduct the assessment and evaluation of Self-Assessment Report (SAR) of BS Electrical Engineering.
- Participation in National Conference on Green Energy Technologies organized by Centre for Advance Studies in Energy - UET Peshawar at PC-Hotel, Peshawar, May 18, 2017.

- Attend an international IEEE conference on “Communications Technologies (ComTech-2017)” at Military College of Signals, NUST, 19th-21st April, 2017.
- Participated in one day Workshop on “Nano-Satellite Design using Modular Architecture Approach” at Abasyn University, Peshawar, December 27, 2016.
- Attend a national conference on “ELEMENTS OF NATIONAL POWER”, Pak China Center, Islamabad, 8th December, 2016.
- Attend a 2-day Invention To Innovation Summit at Centre for Advance Studies in Energy - UET Peshawar, 16th November, 2016.
- Organize a workshop on “Scientific Research Paper Writing” at Abasyn University, Peshawar, October 19, 2016.
- Attend a seminar on “Ray Optics Simulations with COMSOL Multiphysics” by Dr. Edmund Dickinson on 29th June, 2016.
- **Guest Speaker** on “Advances in Nanotechnology Research and Application” at International Workshop on "Research Avenues: ICT Potential Applications for Pakistan", sponsored by National ICT R&D Fund, Pakistan, held at CECOS University, November 18, 2015, Peshawar.
- **Conduct a seminar** on “Nanotechnology and its Applications” at Sarhad University of Science and Information Technology, Jan 2014.
- **Conduct a seminar** on Nano-Plasmonics and its Applications at City University, Peshawar, Feb 2014.
- Participated in National School of Electrical Engineering "Ferdinand Gasparini", Oct 2010, Oct 2011 & Oct 2012.
- Series of lectures on Frequency domain analysis of the scattered electromagnetic field based on integral formulation by Prof. Antonello Tamburrino, February, 2011.
- “Multiphysics Solution for Nanoelectronics” by Professor WenBYan Yin, Qiu Shi Chair Professor, Centre for Optical and Electromagnetic Research, Zhejiang University, China, may 12, 2011.
- Cycle of Seminars on “Homogenization in Electrodynamics” by Prof. Grigory Slepyan, Institute for Nuclear Problems, Belarus State University, Minsk, 21st to 28 September, 2011.
- "The Importance of Humanities for Students of Engineering" by Dr. J. Casey Hammond, Singapore University of Technology and Design, 20th October 2011.
- "Introducing COMSOL Multiphysics Version 4.2a", by COMSOL and NASA Tech Briefs, Thursday, 3rd November 2011.
- Series of lectures on Nanoplasmonics, Metamaterials and Transformation Optics: Fundamentals and Device Applications by Prof. Luca Dal Negro, Boston University & Photonics Center Boston, MA, USA.

RESEARCH INTEREST:

3D plasmonic and all-dielectric nanoparticles for sensing, slow-light, solar cells, display devices, optical filters, and nanolaser applications.

TECHNICAL SKILLS:

Electronics tools	COMSOL Multiphysics, MEEP (MIT Electromagnetics and Photonics Research Software), MPB (MIT Photonic Bands), Matlab simulation tools etc.
Operating systems	Windows, Fedora core (Linux), Ubuntu
Programming Languages	Scheme (MIT built software language), C/C++, Matlab.
Databases	Endnote, MS Access

LANGUAGES:

Pashto, Urdu, English.

REFERENCES:

- 1. Prof. Giovanni Miano**
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- 2. Prof. Guglielmo Rubinacci**
Department of Electrical Engineering and Information Technology,
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Naples, 80125, Italy
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Email: rubinacci@unina.it
- 3. Prof. Jörgen Carlsson**
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Halmstad University,
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S-301 18 Halmstad, Sweden
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