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With over 25 years of experience as a teacher and researcher, I am dedicated to empowering the youth for future leadership in technology. I thrive on tackling challenges head-on, embracing innovative approaches to creating and disseminating knowledge

Research Interests

Sensor Technologies, Instrumentation, Embedded AI, Non-Destructive Testing & Evaluation (NDT&E), System Modelling and Device Fabrication.

Publications

Journals

- Amir Ali, Wang Dong, Gui Yun Tian, **Ali Asif**, Xiaolong Lu, Chunwen Peng, Haining Xu, "Differential frequency-based digital interface for LVDT with enhanced sensitivity and linearity" Measurement, Volume 258, Part E, **(2026)**, 119461.
- Amir Ali, Gui Yun Tian, Dong Wang, **Ali Asif**, Xiaolong Lu, Chunwen Peng and Haining Xu, "Design and development of high-linearity of Trapezoidal Winding LVDT ", IEEE Transactions on Instrumentation and Measurement, Vol.74, **(2025)** pp. 1-14.
- Farah Aziz, M.M. Shoaib Idrees, **Ali Asif**, Fatima Bint-e-Munir, Abdul Sami, "Soliton generation under ambient charge variation", Chaos, Solitons and Fractals, 201 **(2025)** 117414.
- Muhammad Zain Ul Abdin, Abdul Sami, **Ali Asif** and Farah Aziz, "Performance evaluation of linearization strategies for a directly interfaced thermistor", Meas. Sci. Technol. 34 **(2023)** 125127
- Amir Ali, **Ali Asif**, Gui Yun Tian, Farah Aziz and Muhammad Zain Ul Abdin, "Directly-digitized pulsed eddy current based quantification of aluminum sheet thickness", Meas. Sci. Technol. 34 **(2023)** 125902
- Abdul Sami, **Ali Asif**, Muhammad Imran, Farah Aziz, Muhammad Yasir Noor, "Artificial neural network and dataset optimization for implementation of linear system models in resource constrained embedded systems", Expert Systems, **2022** <https://doi.org/10.1111/exsy.13142>
- Faran Baig, **Ali Asif**, Muhammad Waseem Ashraf, "UV Light-Induced Reversible Wettability and Sensing Performance for Ca/Mg-Doped ZnO Nanostructures via Chemical Bath Deposition" *Journal of Electronic Materials*, **(2021)**, 50:4016–4026.
- Faran Baig, **Ali Asif**, Muhammad Waseem Ashraf, Hafiz Muhammad Fahad, "Tailoring of optical, hydrophobic, and anti-icing properties of Ca–Mg co-doped ZnO thin films via sol–gel method" *Journal of Sol-Gel Science and Technology*, **(2021)**, 97:706–720.

- Hafiz Muhammad Fahad and **Ali Asif**, “A Simple FPP Device for Pulsed Measurement of Sheet Resistance”, *Instruments and Experimental Techniques*, (2021), Vol. 64, No. 6, pp. 898–904.
- Faran Baig, Muhammad Waseem Ashraf, **Ali Asif**, Muhammad Imran, “A comparative analysis for effects of solvents on optical properties of Mg doped ZnO thin films for optoelectronic applications”, *Optik - International Journal for Light and Electron Optics* 208, **2020**, 164534.
- Farah Aziz, **Ali Asif**, Fatima Bint-e-Munir, “Analytical modeling of electrical solitons in a nonlinear transmission line using Schamel–Korteweg deVries equation”, *Chaos, Solitons and Fractals* 134, **2020**, 109737.
- Salah-ud-Din khokhar, Qinke peng, **Ali Asif**, Muhammad Yasir Noor and Aaqib Inam, “A Simple Tuning Algorithm of Augmented Fuzzy Membership Functions”, *IEEE ACCESS*, Vol. 8, 35805-35814, **2020**
- Faran Baig, **Ali Asif**, Muhammad Waseem Ashraf and Muhammad Imran, “Comparative study for seed layer solvent effects on structural and optical properties of MgZnO thin films deposited by chemical bath deposition technique” *Mater. Res. Express* 7, **2020**, 026417
- **A. Asif**, Amir Ali, and Muhammad Zain Ul Abidin, “Resolution Enhancement in Directly Interfaced System for Inductive Sensors”, *IEEE Transactions on Instrumentation and Measurement*, Vol. 68, NO.10, 4104 – 4111, **2019**.
- **A. Asif**, H. Richter and J. N. Burghartz “High-voltage (100V) Chipfilm™ single-crystal silicon LDMOS transistor for integrated driver circuits in flexible displays”. *Adv. Radio Science* 7: 1 – 6, **2009**.
- **A. Asif**, M. Z. Butt, “Analysis of observations on solid-solution hardening in KBr–KCl single crystals”, *J. Mater Sci.* 42: 2862-2866, **2007**.
- **A. Asif**, M. Z. Butt, “Analysis of temperature and concentration dependence of flow stress in KCl–KBr single crystals with special reference to solute distribution” *Philosophical Magazine*, vol. 87, No. 12, 1811-1820, **2007**.

Conferences

- “Direct Interfacing of Sensors with Embedded Systems”, 1st National Conference on Emerging Horizons in Science and Technology (NCEHST-2022) 26-27 December, 2022, University of Central Punjab (UCP) Lahore, Pakistan
- “Realization of 100 V Ultra-Thin Single-Crystal Silicon LDMOS” Semiconductor Conference Dresden, 27-28 September 2011.
- “Ultra-thin Flexible 100 V Chipfilm™ N-LDMOS”, European Solid-State Device Research Conference (ESSDERC), 12-16 September 2011.
- “High-voltage thin-film LDMOS transistor for integrated driver circuits in flexible displays”. Klein heubacher tagung 22 – 25 September 2008, Miltenberg Germany.
- “Analysis of observations on solid-solution hardening in KCl - KBr single crystals”, Pakistan Institute of Physics International Conference-2006, 13-16 March 2006, Lahore, Pakistan.
- “Solid-solution hardening in KBr-KCl Alkali Halide crystals.” International Symposium on Advanced Materials (ISAM-2005), 19-22 September 2005, Islamabad, Pakistan.

Chapters: Books/Edited Volumes

- **A. Asif** and Harald Richter, “Flexible display driver chips”, *Ultra-thin Chip technology and applications*, Springer, pp. 413–424, **2011**.

Thesis / Dissertations

- Laterally diffused metal oxide semiconductor transistors on ultra-thin single-crystal silicon (Ph.D.)

- Design, analysis and optimization of a high-voltage power switch to be integrated into smart power structured ASICs. (MS thesis - Germany)
- Solid solution hardening in nonmetallic system with Alkali Halide structure. (M.Phil.)

Academic Presentations/ Seminars/ Trainings

- Technology in Teaching and Learning: An introduction to the use of technology to enhance teaching and learning.
Advanced Teaching and Learning Programme, GCU Lahore 17, 19 July 2023
- Laterally diffused metal oxide semiconductor transistors on ultra-thin single crystalline silicon Departmental Seminar, Department of Physics GCU Lahore, Pakistan, 17 Jan, 2012

Professional Development: Courses/Workshops/Seminars/Trainings

- “Mastering Digital Tools for Engineering Works”, Professional Development Programme, one-day CPD Webinar, Pakistan Engineering Council, 30 April 2025.
- “Ethical Hacking & Cybersecurity for Industrial Control Systems”, Professional Development Programme, one-day CPD Webinar, Pakistan Engineering Council, 28 April 2025.
- “Entrepreneurship for Engineers”, Professional Development Programme, one-day CPD Webinar, Pakistan Engineering Council, 20 March 2025.
- “Potential of Hydrogen as energy source for industry in Pakistan”, Professional Development Programme, one day CPD Webinar, Pakistan Engineering Council, 01 March 2025.
- “Digitalization of Electricity Grids Smart metering and Energy Monitoring in Pakistan”, Professional Development Programme, one day CPD Webinar, Pakistan Engineering Council, 28 February 2025
- “Leadership Skills for Engineers”, Professional Development Programme, one-day CPD Webinar, Pakistan Engineering Council, 27 February 2025
- “Emotional Intelligence and Stress Management”, Professional Development Programme, one-day CPD Webinar, Pakistan Engineering Council, 12 February 2025
- “Productivity Tools and Techniques” Professional Development Programme, one-day CPD Webinar, Pakistan Engineering Council, 26 February 2024.
- “Chat GPT and Professional Integrity” Professional Development Programme, one-day CPD Webinar, Pakistan Engineering Council, 23 June 2023.
- “Cellular Networks (2G to 5G Technology): Future Applications”, Professional Development Programme, one-day CPD Webinar, Pakistan Engineering Council, 18 April 2023.
- “ARTIFICIAL INTELLIGENCE: Implications for Technologies & Business Strategy”, Professional Development Programme, one-day CPD Webinar, Pakistan Engineering Council, 6 April 2023.
- Problem Solving Using Computational Thinking, Coursera, Course Certificate: 27 December 2022
- “Navigating the pathways of publishing in high-quality journals by using scopus”, Elsevier, Pakistan 15, Nov, 2022.
- “E-course on HEC policy on protection against sexual harassment” at higher education institutions National Academy of higher education (NAHE), HEC, Pakistan

- “Training of Govt. Officers to handle Harassment Complaints” according to the Act Social Office of the Ombudsperson Government of Pakistan
- “Advanced CMOS Devices and Technology ”, Institute for Nano and Micro electronics Systems (INES), Germany, 2007.
- Entwurf Integrierter Schaltungen, Institute for Nano and Micro electronics Systems (INES), Germany, 2007
- “Deutsch als Fremdsprache“ (B1), Deutsch institute (did), Germany, Feb/March 2007.
- “START DEUTSCH 2” (A2), Goethe Institut, Pakistan, Nov/Dec, 2006
- Joint ICTP-INFM School and Workshop on “Spectroscopic Investigation of the collective Dynamics in Disordered Systems” Miramare, Trieste Italy, 17-28 June 2002

Reviewer Services to Journals

- Journal of Electronic Science and Technology, Elsevier.
- Solid State Electronics, Elsevier
- Measurement, Elsevier
- Engineering applications of artificial intelligence
- Nondestructive testing and evaluation
- IEEE Sensors Journal

Conference Organizer

- International Conference on Physics and Contemporary Needs (ICPCN-14), Government College University Lahore, Pakistan, 19-21 November, 2014
- 17th National Symposium on Frontiers in Physics, Government College University Lahore, Pakistan, 1-3 Dec 2022.

Professional Software Skills



Academic positions

Assistant Professor	Government College University Lahore Department of Physics (7/2004 – 9/2022) (9/2024 – Present) Department of Electronics (9/2022 – 9/2024)
Lecturer	Government College University Lahore Department of Physics (7/2000 – 7/2004)
Research Assistant	Government College Lahore Department of Physics (10/1999 – 6/2000)

Education

2011 Ph.D. (Dr.-Ing)	Institute for nano- and microelectronic systems (INES) University of Stuttgart, Germany
2003 M.Phil. (Physics)	Government College University Lahore
1999 M.Sc. (Physics, <i>Specialization: Electronics</i>)	Government College Lahore

Professional Experience

Teaching

Electronics at M.Phil. level	2012 - 2024.
Electronics at BS/M.Sc. level	1999 - till-date.
Physics at Intermediate level	1999 - 2002

Courses Taught

Post-Graduation Level

Design of Electronic Systems	Digital Instrumentation Systems
Semiconductor Devices and Technology	CMOS Devices and Technology
Modeling and Simulation of Semiconductor Devices	

Under Graduation Level

Digital Circuits Design by VHDL	Transducers and Instrumentation
Artificial Intelligence	Machine Learning
Experimental Techniques	Optical Electronics
Solid State Electronics	Basic Electronics
Analog Devices and Circuits	Digital Electronics
Circuit Analysis	Physics of Natural Phenomena

Thesis/ Dissertation Supervision

- **Ph.D:** Supervised 1 student.
(Faran Baig **2021** “Synthesis and Characterization of Group II Elements doped ZnO Thin Films”)
- **Post Graduation:** Supervised more than 25 students
- **Under Graduation:** Supervised Final Year Projects of more than 40 students

Achievements

- **New Academic Program:** M.Phil. Electronics (2019).

- **Curriculum Design** M.Phil. Electronics (2016)
B.Sc. (HONS.) Electronics (2004/5)
- **Course Design:** CMOS Devices and Technology
- **New Lab Development:** Instrumentation R&D lab in Electronics Program (2014)
- **New Department:** Department of Electronics, GC University Lahore (2022)

Honors and Awards

HEC Overseas scholarship for Ph.D.	(2007 – 2011)
Funding: DAAD Germany (German language course)	(11/2006 -3/2007)
Funding for Workshop from ICTP Italy,	(2002)
Academic Roll of Honor	(1999)
Gold Medal (Academic)	(1999)
Co-curricular Certificate of Merit	(1999)

Management Experience

- Look After Charge Directorate of IT (11/2022- 2024)
- Incharge Department of Electronics (10/2022- 9/2024)
- Incharge Electronics programme (2015 -2022)
- Course Co-ordinator BS (HONS.) Electronics (2012 -2022)
- Program Co-ordinator M.Phil. Electronics (2019 -2022)
- Time Table Incharge BS (HONS.) Electronics (2012 -2022)

Other Services (at Government College University Lahore)

Focal Person, Anti Harassment team	27.08.2020 – date
Convener sub-committee for Purchase and	02.11.2022 - 2023
Repair of Computer, Machinery and Equipment	
Deputy Chief Proctor (Sector CASP)	02.12.2021 - 2024
Member Board of Studies	25.10.2022 - 2024
(Electronics Department)	
Member University Purchase Committee	2022 - 2023
Member Advisory Council for the	2021 – 2022
Welfare of Faculty and Staff	
Admission Committee (M.Phil Electronics)	2019
Member Technical committee	2022 - 2023
Member Board of Studies (Institute of Physics)	9/2020 – 9 /2023
Co-opted Member Board of Studies	2014/15
(Physics Department)	
Member Board of Studies (Physics Department)	2015, 2016-2019,
	2019 – 2022,
Proctor (Department of Physics)	2017
Advisor Jones Physics Society	2004-06
Incharge Board Examination Result	2003
Incharge Class Attendance Statements	2003
Member University Class-Work team	2002