

CURRICULUM VITAE**PERSONAL INFORMATION**

Name, Surname	Ahsan Ali
Address	[REDACTED]
Telephone	[REDACTED]
E-mail	[REDACTED]
Sito web/Website	[REDACTED]
Nationality	[REDACTED]
Place and Date of birth	[REDACTED]

WORK EXPERIENCE

Date:	Feb 2024 – Present
Name and address of employer	Air University, Pakistan; Department of Mechanical and Aerospace, Engineering, Institute of Avionics & Aeronautical (IAA), Air University, 44000, Islamabad, Pakistan
Type of business or sector	Public University
Occupation or position held	Lecturer
Main activities and responsibilities	Teaching undergraduate-level courses (Artificial Intelligence, Machine Learning with Applications, and Control Systems); Supervising undergraduate students in their final year research projects, which include developing An innovative crack detection system utilizing infrared camera technology with AI integration, Computer vision based path planning and motion control of a prototype ground-based robot, and Investigation of the electrical performance of piezoelectric trapezoidal and triangular arrays using analytical, numerical, and experimental approaches; Writing research articles and project grants to secure funding and contribute to the academic community.
Date:	Feb 2023 – Feb 2024
Name and address of employer	University of Wah, Pakistan; Department of Mechatronics Engineering, Wah Engineering College, Wah Cantt, Pakistan
Type of business or sector	Private University
Occupation or position held	Lecturer
Main activities and responsibilities	Teaching Undergraduate level courses (Artificial Intelligence, Control Systems-I, and Actuating Systems); Developing and implementing innovative teaching methods, such as project-based learning and interactive discussions, to foster student engagement and deepen their understanding of complex engineering concepts; Supervising undergraduate students in their final year research projects (SmartSizing: Artificial Intelligence Enabled Body Measurement System for Customized Clothing and IoT-Driven Smart Helmets: Redefining the Landscape of Motorbike Safety), providing guidance and support in experimental design, data analysis, and presentation of results; Conducting research in the field of electromechanical systems, focusing on Piezoelectric Energy Harvesting.

Date:	June 2020 – January 2023
Name and address of employer	Sino-Pak Center for Artificial Intelligence (SPCAI), Pak-Austria Fachhochschule: institute of applied sciences and technology (PAF-IAST), Haripur, Pakistan
Type of business or sector	Public University
Occupation or position held	Assistant Engineer/ Junior Researcher
Main activities and responsibilities	Research Work: Immersed in different research projects utilizing diverse AI Algorithms, and Statistical Data Analysis Utilizing different AI Techniques to optimize the data obtained from piezoelectric energy harvesting; Supervising undergraduate students in their research work. Technical Responsibilities: 3D Printing and Prototyping (ULTIMAKER S5); Designing, repairing, and modifying 3D CAD data; 3D model optimization and slicing for 3D Printing; Managing multiple materials, shipments, machines, orders, etc.; 3D Printer Maintenance. High-Performance Computing (HPC): Core part of the team responsible for configuring equipment/components for the facility's optimum and efficient output; Core part of the team responsible for the testing and commissioning the setup; Establishment of specialized. AI-based workstations lab: Server Installation and Configuration; Gitlab Server (www.gitlab.paf-iaast.edu.pk); Configuration Management; Project Planning and Monitoring; Issue Tracking; Repository Creation; Continuous Integration; Documentation Integration; Master Branching; Version Control; Source Code Management; Code/Document Review. Member of the Organizing Committee: National Artificial Intelligence Forum (NAIF 2021); International Exhibition and Workshop on the Role of Artificial Intelligence (AI) in Healthcare, Agriculture and Energy Sectors (IW-RAI); Special Technology Zone Authority; First AI Industrial Event (How Artificial Intelligence is Revolutionizing the Pakistani Industry).
Date:	September 2017 – April 2019
Name and address of employer	University of Engineering and Technology Taxila, Pakistan; Department of Mechanical Engineering, UET Taxila, Taxila, Pakistan
Type of business or sector	Public University
Occupation or position held	Research Assistant/ Lab Engineer
Main activities and responsibilities	Taught Undergraduate Level Labs Engineering Drawing and Control Systems; Helped Laboratory Faculty Members and Staff in Research related activities.

EDUCATION AND TRAINING

Date	November 2024 - Present
Name and type of education institution	University of Bologna, Italy; Public University
Main subjects / professional skills covered by the study	Artificial Intelligence algorithms to enhance the modeling, monitoring, and control of complex mechatronic structures and systems
Qualification achieved	Ph.D. in Mechanics and Advanced Engineering Sciences
Date	September 2017 – December 2019
Name and type of education institution	University of Engineering and Technology Taxila, Pakistan; Public University
Main subjects / professional skills covered by the study	Applied Mechanics and Design
Qualification achieved	MS Mechanical Engineering

Date	October 2013 – July 2017
Name and type of education institution	University of Engineering and Technology Taxila, Pakistan; Public University
Main subjects / professional skills covered by the study	Artificial Intelligence, Machine Learning, Mechatronics System Design, Industrial Automation Robotics, and Control Systems
Qualification achieved	BS Mechatronics Engineering

PERSONAL SKILLS

First Language	Urdu
Other Languages	English
	Reading: Excellent, Writing: Excellent, Speaking: Good

TECHNICAL SKILLS

Softwares	MS OFFICE; LABVIEW; COMSOL; AUTOCAD; MATLAB
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PUBLICATIONS

- Ali, A., Ali, S., Shaukat, H., Khalid, E., Behram, L., Rani, H., Altabey, W. A., Kouritem, S. A., & Noori, M. (2024). Advancements in piezoelectric wind energy harvesting: A review. *Results in Engineering*, 21, 101777. <https://doi.org/10.1016/j.rineng.2024.101777>
- Ali, A., Ashfaq, M., Qureshi, A., Muzammil, U., Shaukat, H., Ali, S., Altabey, W. A., Noori, M., & Kouritem, S. A. (2023). Smart Detecting and Versatile Wearable Electrical Sensing Mediums for Healthcare. In *Sensors* (Vol. 23, Issue 14). Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/s23146586>
- Ali, A., Iqbal, S., & Chen, X. (2024). Recent advances in piezoelectric wearable energy harvesting based on human motion: Materials, design, and applications. In *Energy Strategy Reviews* (Vol. 53). Elsevier Ltd. <https://doi.org/10.1016/j.esr.2024.101422>
- Ali, A., Pasha, R. A., Elahi, H., Sheeraz, M. A., Bibi, S., Hassan, Z. U., Eugeni, M., & Gaudenzi, P. (2019). Investigation of Deformation in Bimorph Piezoelectric Actuator: Analytical, Numerical and Experimental Approach. *Integrated Ferroelectrics*, 201(1), 94–109. <https://doi.org/10.1080/10584587.2019.1668694>
- Ali, A., Pasha, R. A., Sheeraz, M. A., Butt, Z., Elahi, H., & Ahmed Khan, A. (2019). Investigation of Electrical Properties for Cantilever-Based Piezoelectric Energy Harvester. *Advances in Science and Technology Research Journal*, 13(3), 76–85. <https://doi.org/10.12913/22998624/110175>
- Ali, A., Shaukat, H., Bibi, S., Altabey, W. A., Noori, M., & Kouritem, S. A. (2023). Recent progress in energy harvesting systems for wearable technology. In *Energy Strategy Reviews* (Vol. 49). Elsevier Ltd. <https://doi.org/10.1016/j.esr.2023.101124>
- Ali, A., Shaukat, H., Elahi, H., Taimur, S., Manan, M. Q., Altabey, W. A., Kouritem, S. A., & Noori, M. (2025). Advancements in energy harvesting techniques for sustainable IoT devices. *Results in Engineering*, 26, 104820. <https://doi.org/https://doi.org/10.1016/j.rineng.2025.104820>

- Ali, A., Sheeraz, M. A., Bibi, S., Khan, M. Z., Malik, M. S., & Ali, W. (2021). Artificial neural network (ANN)-based optimization of a numerically analyzed m-shaped piezoelectric energy harvester. *Functional Materials Letters*, 14(8). <https://doi.org/10.1142/S1793604721510462>
- Amin, A. R., Ali, A., & Ali, H. M. (2022). Application of Nanofluids for Machining Processes: A Comprehensive Review. In *Nanomaterials* (Vol. 12, Issue 23). MDPI. <https://doi.org/10.3390/nano12234214>
- Elahi, H., Rizwan Mughal, M., Eugeni, M., Qayyum, F., Israr, A., Ali, A., Munir, K., Praks, J., & Gaudenzi, P. (2020). Characterization and Implementation of a Piezoelectric Energy Harvester Configuration: Analytical, Numerical and Experimental Approach. *Integrated Ferroelectrics*, 212(1), 39–60. <https://doi.org/10.1080/10584587.2020.1819034>
- Mangi, M. A., Elahi, H., Ali, A., Jabbar, H., Aqeel, A. Bin, Farrukh, A., Bibi, S., Altabey, W. A., Kouritem, S. A., & Noori, M. (2025). Applications of piezoelectric-based sensors, actuators, and energy harvesters. *Sensors and Actuators Reports*, 9, 100302. <https://doi.org/https://doi.org/10.1016/j.snr.2025.100302>
- Mateen, N., Naeem, M., Khan, M. J., Yousaf, T., Ali, A., Altabey, W. A., Noori, M., & Kouritem, S. A. (2025). Subject based feature selection for hybrid brain computer interface using genetic algorithm and support vector machine. *Results in Engineering*, 27, 105649. <https://doi.org/https://doi.org/10.1016/j.rineng.2025.105649>
- Naqvi, A., Ali, A., Altabey, W. A., & Kouritem, S. A. (2022). Energy Harvesting from Fluid Flow Using Piezoelectric Materials: A Review. In *Energies* (Vol. 15, Issue 19). MDPI. <https://doi.org/10.3390/en15197424>
- Noreen, T., Ali, A., Anwar, S., Farooq, S., Altabey, W. A., Kouritem, S. A., & Noori, M. (2025). Implementation of fruit plucking robot in apple harvesting: A review. *Results in Engineering*, 27, 106575. <https://doi.org/https://doi.org/10.1016/j.rineng.2025.106575>
- Shaukat, H., Ali, A., Ali, S., Altabey, W. A., Noori, M., & Kouritem, S. A. (2023). Applications of Sustainable Hybrid Energy Harvesting: A Review. In *Journal of Low Power Electronics and Applications* (Vol. 13, Issue 4). Multidisciplinary Digital Publishing Institute (MDPI). <https://doi.org/10.3390/jlpea13040062>
- Shaukat, H., Ali, A., Bibi, S., Altabey, W. A., Noori, M., & Kouritem, S. A. (2023). A Review of the Recent Advances in Piezoelectric Materials, Energy Harvester Structures, and Their Applications in Analytical Chemistry. In *Applied Sciences (Switzerland)* (Vol. 13, Issue 3). MDPI. <https://doi.org/10.3390/app13031300>
- Shaukat, H., Ali, A., Bibi, S., Mehmood, S., Altabey, W. A., Noori, M., & Kouritem, S. A. (2023). Piezoelectric materials: Advanced applications in electro-chemical processes. In *Energy Reports* (Vol. 9, pp. 4306–4324). Elsevier Ltd. <https://doi.org/10.1016/j.egyr.2023.03.077>
- Sheeraz, M. A., Butt, Z., Khan, A. M., Mehmood, S., Ali, A., Azeem, M., Nasir, A., & Imtiaz, T. (2019). Design and Optimization of Piezoelectric Transducer (PZT-5H Stack). *Journal of Electronic Materials*, 48(10), 6487–6502. <https://doi.org/10.1007/s11664-019-07453-7>
- Sohail, A., Ali, A., Shaukat, H., Bhatti, F. M., Ali, S., Kouritem, S. A., Noori, M., & Altabey, W. A. (2024). Integrating self-powered medical devices with advanced energy harvesting: A review. In *Energy Strategy Reviews* (Vol. 52). Elsevier Ltd. <https://doi.org/10.1016/j.esr.2024.101328>

Tanveer, H., Taimur, S., Ellahi, M., Baig, T., Alkayal, N. S., Ali, A., Yasin, T., Altabey, W. A., Noori, M., & Kouritem, S. A. (2025). Advanced antistatic composites for electrostatic Dissipation: Development of EPDM based conductive elastomeric nanocomposites. *Polymer Testing*, 150, 108917. <https://doi.org/https://doi.org/10.1016/j.polymertesting.2025.108917>

RECOMMENDATIONS

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21-10-2025
DATE



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