

Muhammad Danish Saleem

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Personal Details

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Qualification

Ph.D. in Industrial & Manufacturing Engineering (In Progress)

NED University of Engineering and Technology
Cumulative GPA: 3.93 / 4.00

Masters in Mechanical Engineering

NED University of Engineering and Technology
Cumulative GPA: 3.54 / 4.00

Bachelors in Industrial and Manufacturing Engineering

NED University of Engineering and Technology
Cumulative GPA: 3.54 / 4.00

Career & Experience

Lecturer in the Department of Industrial and Manufacturing Engineering at NED University of Engineering and Technology, Karachi since 2023 to date

- Teaching undergraduate courses from first to final year
- Member, Departmental OBE Committee (DOBEC), contributing to the successful implementation of Outcome-Based Education (OBE) in compliance with PEC accreditation requirements
- Supervising undergraduate Final Year Design Projects
- Preparing and maintaining documentation related to the departmental OBE Cell
- Contributing to curriculum development and enhancement in alignment with industry trends and ECRDC guidelines
- Managing and overseeing industrial and research projects, providing academic and technical guidance to ensure successful completion
- Reviewer, 14th and 15th International Mechanical Engineering Conference
- Conducted training: “Embracing Industry 4.0: Transforming the Future of Manufacturing” through the platform of the Society of Manufacturing Engineers (SME)
- Assisted in Training on Arduino

Teaching Assistant in the Department of Industrial and Manufacturing Engineering at NED University of Engineering and Technology, Karachi from 2022 to 2023

- Deliver lectures and laboratory sessions for undergraduate courses, including Health, Safety & Environment, Finite Element Analysis, and Metrology & Quality Control

- Support students in technical understanding, skill development, and application of course concepts
- Provide timely feedback on assignments, tests, and practical work to facilitate student learning
- Conduct demonstrations and practical exercises, advising on methods, techniques, and required skills
- Participate in assessment activities, including marking, invigilation, and grading
- Contribute to the development, updating, and documentation of course materials and curriculum
- Conduct laboratory research and review relevant academic literature to support teaching and departmental projects

Assistant Manager (Production Division) at Pak Suzuki Motors Company Limited

- Analyze and forecast shop data to support achievement of monthly and annual production targets
- Monitor departmental KPIs and resolve critical issues related to Safety, Quality, Productivity, and Cost
- Identify process weaknesses, investigate defects, and implement corrective and preventive measures
- Interpret and analyze monthly and yearly quality and production data
- Ensure compliance with standard operating procedures and implement health & safety standards
- Support production process activities and oversee ERP (LX) and parts rejection management systems
- Conduct continuous improvement initiatives, including Kaizen and 5S activities, to optimize efficiency and reduce waste
- Develop action plans and departmental budget proposals to support operational goals

SAP Stream Champion (Production Planning Module) at Pak Suzuki Motors Company Limited from 2020 to 2022

- Led PP module implementation in SAP S/4 HANA for both global and local Suzuki operations
- Prepared SAP master data at the departmental level to support successful module deployment
- Conducted simulations and staff training sessions, focusing on SAP implementation and management policies

Integrated Management System (IMS) Coordinator at Pak Suzuki Motors Company Limited

- Coordinated IMS activities for the Motorcycle Division, ensuring compliance with internal and external standards
- Prepared, updated, and maintained IMS documentation, including SOPs, POS, OPS, and shop floor datasheets
- Participated in IMS audits, quality webinars, and hearings, providing necessary data and reports
- Supported continuous improvement initiatives through IMS-related activities and process standardization

Management Trainee at Pak Suzuki Motors Company Limited

- Completed brief OJT (On Job Training) across all sections of the Production Division to gain hands-on operational experience
- Attended training programs on 5S techniques, Kaizen, Safety, and Integrated Management System (IMS)
- Prepared daily reports and presented weekly progress updates to supervisors

Engineering Intern in Production & Mechanical Maintenance Department at Amreli Steels Limited

- Gained hands-on technical experience in steel bar manufacturing, developing an understanding of the complete production processes and plant operations
- Enhanced personal effectiveness and professional skills within a corporate environment
- Prepared and submitted brief reports summarizing observations and key learnings

Research Interests

- Industry 4.0/5.0
- Smart Manufacturing
- Human Factors Engineering
- Occupational Health and Safety
- Advanced Production Technologies
- Sustainable and Green Manufacturing

Research Publications

- **Muhammad Danish Saleem**, Muhammad Wasif and Anis Fatima, Engineering management: Impact of Industry 4.0 on sustainability. In Structural Engineering, Robotics and Mechatronics, Sustainable Power Supply (pp. 175). Trans Tech Publications. <https://doi.org/10.4028/b-aXCb1W>
- **Muhammad, D. S.**, Muhammad, W., & Anis, F. (2025). Impact of Industry 4.0 on Sustainability. Applied Mechanics and Materials, 929, 175–184. <https://doi.org/10.4028/p-eq3fhv>
- **Muhammad Danish Saleem** and Muhammad Wasif (2025), “Leveraging Machine Learning to enhance Supply Chain Agility and Strategic Operational Excellence”, International Conference on Digital Manufacturing, Pahang, Malaysia.
- Muhammad Mubashir Aftab, Anusha Ahmed, **Muhammad Danish Saleem** and Muhammad Wasif (2025), “Non-Contact Surface Roughness Measurement: Prototype Development and Testing”, International Conference on Digital Manufacturing, Pahang, Malaysia.
- **Muhammad Danish Saleem**, Muhammad Wasif and Anis Fatima (2025), “Impact of Industry 4.0 on Sustainability”, 14th International Mechanical Engineering Conference, Karachi, Pakistan.
- **Muhammad Danish Saleem**, Muhammad Mubashir Khan and Anis Fatima (2024), “IoT in Industry 4.0: Challenges and Opportunities”, 13th International Mechanical Engineering Conference, Karachi, Pakistan. (**Best Paper Award**)
- Anis Fatima, **Muhammad Danish Saleem** and Muhammad Wasif (2024), “On Optimization of Process Parameters of Inconel-718 Machining for Green Production”, AIP Conference Proceedings, Vol. 3125, Issue No. 1 doi: <https://doi.org/10.1063/5.0214431>
- Syed Rehan Ashraf, **Muhammad Danish Saleem**, Khalid Ijaz and Sadaf Sajjad (2024), “Sales forecasting using Sequential Long short-term memory (LSTM) Model”, IBA SBS 3rd International Conference, Karachi, Pakistan.
- Anis Fatima, **Muhammad Danish Saleem** and Asim Zaheer (2023), “On implementation of health and safety measures in re-beaming department of denim manufacturing – a case study”, Journal of Quality and System Engineering, Vol. 2, Issue No. 1-2, Page1-10.
- Anis Fatima, **Muhammad Danish Saleem** and Muhammad Wasif (2023), “On Optimization of Process Parameters of Inconel-718 Machining for Green Production”, 3rd International Conference on Key Enabling technologies, Istanbul, Turkey.

- **Muhammad Danish Saleem** and Nasiruddin Shaikh (2021), “Cycle time reduction of assembly line using value stream mapping”, Proceedings of the 10th International Mechanical Engineering Conference (IMEC), Karachi, Pakistan.

Research and Industrial Projects

Research Supervisors of the following research and industrial projects:

- Digital Twin Using Lathe Machine [**UNESCO Best FYP 2025**]
- Optimizing Supply Chain Efficiency using machine learning techniques [**UNESCO Best FYP 2025**]
- Enhancing Operational Performance and Productivity through Industry 4.0 enabled smart Manufacturing Technologies
- Design and prototyping of a 3D Surface profiling device using optical imaging [**UNESCO Best FYP 2025**]
- Design and development of Smart Factory Utilities dashboard that monitor consumption and predict outliers [**UNESCO Best FYP 2025**]
- Implementation of predictive quality analytics enhancing product quality in AGP limited
- Cost Optimization and Process Integration in FMCG
- An IoT based intelligent automated production line for smart manufacturing (won the **Best Poster Award** in the *13th International Mechanical Engineering Conference Poster Competition 2024*) [**UNESCO Best FYP 2024**]
- Smart Health and Safety Compliance System
- Optimizing Supply Chain Efficiency using Machine Learning techniques
- Digital Twin Using Lathe Machine.
- Enhancing Operational Performance and Productivity through Industry 4.0 enabled smart Manufacturing Technologies
- Design and Development of Smart Factory Utilities dashboard that monitor consumption and predict outliers
- Design and prototyping of a 3D Surface Profiling device using Optical Imaging
- Implementation of Predictive Quality Analytics enhancing product quality at AGP Limited
- Cost Optimization and Process Integration in FMCG
- Cost Reduction and Waste Minimization by using Lean Manufacturing

Workshops/Trainings/Seminars/Certifications

- Attended training on **Quality Management System: An in-depth Training**
- Attended **Faculty Development Training Programme** (*Technology Transformation Dissemination Sessions*) arranged by GetInnovative4impact & co-funded by the European Union in collaboration with UET Taxila and International Project Partners
- Attended CPD training on **Project Management (From Planning to Performance: The Project Managers Toolkit)**
- Attended International Summit on **Redefining Digital Manufacturing: Concept to Product**
- Attended training on **HEC Cascade program: An Internationalization approach in Higher Education Academia & Assessment and Evaluation in Higher Education**
- Attended training on **Research Development Programme**
- Attended **Reciprocate Training Sessions** at Universiti Malaysia Pahang Al-Sultan Abdullah
- Attended training on **Process of Examination and Assessment/ Duties of Invigilator and Examiner**
- Attended training on **Using Generative Artificial Intelligence (AI) tools in office work**

- Attended **Faculty Development Training Programme** (*Technology Transformation Dissemination Sessions*) arranged by GetInnovative4impact & co-funded by the European Union
- Attended training on **Technology Integration in Higher Education Teaching** arranged by HEC-NAHE at Dow University of Health and Sciences
- Attended **Fire Safety Masterclass Training** by FPAP
- Attended Expert Panel discussion on **AI in Engineering Industry and Education**
- Attended training on **Outcome Based Education (OBE)**
- Attended training on **Process of Examination and Assessment**
- Attended workshop on **Course Design**
- Attended training on **Effective Workplace Communication: Principles & Practices**
- Attended training on **Teaching Case Studies**
- Attended training on **Time Management**
- Attended training on **Psychomotor and Affective Domain Evaluation & Assessment, CEP and CEA (OEL & PBL)**
- Attended webinar on **Chat GPT & Professional Integrity**
- Attended webinar on **Digital Transformation**
- Attended webinar on **Artificial Intelligence: Implications for Technologies & Business Strategy**
- Attended training on **ChatGPT for Effective Learning**
- Attended seminar on **Capacity Building Workshops for Research**
- Attended webinar on **Introduction to Industry 4.0 Technologies**
- Attended webinar on **Engineering Application of Agile Methodology**
- Attended webinar on **Risk Assessment and Management**
- Attended webinar on **Digital Transformation and Impact of IoT on Education, Industry, Health Sector and Society**
- Attended workshop on **Accelerate your research using Elsevier's Scopus**
- Attended workshop on **SAP S/4 HANA Implementation Framework**
- Attended certificate Course on **ERP Fundamentals with SAP**
- Attended certificate Course on **Supply Chain Management**
- Attended session on **Career Orientation by CISCO**
- Attended session on **OBE Training**
- Attended workshop on **Stress & Time Management**
- Attended workshop on **Maximizing Potential**
- Attended workshop on **Stay Well Training**
- Attended certificate Course on **Computer Software & Programming**

Software and Information Technology

- CAD Software: **TinkerCAD, AutoCAD, SOLID EDGE, Pro-Engineer and CATIA.**
- Simulation Software: **CISCO Packet Tracer, ANSYS, working knowledge of ICEM CFD, CFX, Fluent, and Open FOAM.**
- Statistical Analysis: **MINITAB.**
- Programming Languages: **Python, Google Colab, Turbo C++, MATLAB, GW BASIC and MS DOS.**
- Application Software: **Microsoft Power BI, MS Azure, IMB Watson, MS Office, MS Project, POM and TORA.**
- Graphics: **Adobe Photoshop and FreeHand.**
- Cloud based Applications: **Zoom, Google Classroom, Google Meet and ChatGPT.**

Academic Research Projects

- **Biogas Digester:** Construction of a biogas digester using organic waste of Cow Dung.
- **Power Hacksaw:** A prototype hacksaw model based on reciprocating mechanism.
- **Taper Shaft:** Manufacturing project manufactured on a lathe machine.
- **Dark Sensor:** Electronic project for sensing darkness and glow mechanism.
- **Concrete Mix Ratio:** Achieving best concrete mix ratio with compression & tensile tests.
- **Slider Crank:** CAD Model of slider crank on Pro-Engineer.
- **AGV:** Research based Assignment on Automated guided vehicles.
- **International Quality Standards:** Research based assignment on internationally recognized quality standards.

Languages

- English
- Urdu

Memberships and Affiliations

- Pakistan Engineering Council (PEC)
- Industrial Engineering & Operations Management (IEOM) International Society