CURRICULUM VITAE (CV)

Objective: **Passionate to work together on common goals on a relatively continuous basis to accomplish the objectives, managerial and research, by effective integration of available resources.**

Dr. Muhammad Muzamil

Date of birth: 23 march 1988

▪Citizenship: Pakistan

Contact

E-mail: muzamil@neduet.edu.pk
muzamil_vir@hotmail.com
Tel / Whatsapp: +92-3323153206

Education (From Top to Bottom)

2016 - 2020	**PhD (Mechanical Engineering) from the School of Mechanical Engineering, Northwestern Polytechnical University, Xi'an, PR China. (Completed in July 2020)**
2011 - 2013	**MS in Mechanical Engineering (Design) with Thesis, NEDUET, Karachi, Pakistan.**
2007 - 2010	**Bachelor of Materials Engineering, NEDUET, Karachi, Pakistan.**

Experiences (From Recent to Previous)

Teaching at NED University of Engineering & Technology in the Faculty of *Mechanical Engineering Department.*

Lecturer (December 2012 - April 2016)

Assistant Professor (May 2016- Till Today)

Teaching the particular subjects are listed below in Under-Graduation:

- **Engineering Mechanics**
- **Engineering Drawing**
- **Manufacturing Processes /Production Engineering I and II**
- **Operations Management**
- **Finite Element Analysis**
- **Materials and Metallurgy**

Teaching in Post-Graduation

- **Project Management**
- **Organizational System**
- **Quality and Reliability Engineering**

Teaching PhD Subjects

- **Materials Characterization**
- **Tribology and Wear**
- **Additive Manufacturing**
- **Non-Traditional Machining**

Worked in ALSONS Industries (PVT.) LTD, from April *2011* to December *2012*, in the Quality Control & Assurance Department as an Assistant Manager for Manufacturing & Process Auditing.

- **Responsible for making QSP (Quality system Procedure) and Inspection Procedures**
- **Leading Final and In-process Quality Control section**
- **Lead Process Auditor of Manufacturing processes**

Research Profile (Journal Paper Publications)

Publications on Additive Manufacturing SLM and WAAM

[1]. "Indentation Behavior Assessment of As-Built, Solution, and Artificial Aged Heat-Treated Selective Laser Melting Specimens of AlSi10Mg." Crystals (2024**) (Impact Factor: 2.4).**

[2]. "Mechanical Behavior of Selective Laser Melting (SLM) Parts with Varying Thicknesses in a Saline Environment under Different Exposure Times." Materials (2024) **(Impact Factor: 3.1).**

[3]. "Post-Wear Surface Morphology Assessment of Selective Laser Melting (SLM) AlSi10Mg Specimens after Heat Exposure to Different Gas Flames." Coatings (2024) **(Impact Factor: 2.9).**

[4]. "Wear Behavior Assessment of New Wire-Arc Additively Manufactured Surfaces on AA6061 and AA5086 Alloys through Multi-Walled Carbon Nanotubes and Ni Particles Inducement." Coatings (2024) **(Impact Factor: 2.9).**

[5]. Comparative mechanical behavior of thin-walled additively-manufactured parts of AlSi10Mg by SLM against as-built, post solution and aging treatment (JOM: the journal of the Minerals, Metals & Materials Society (TMS) (2023) **(Impact Factor: 2.5).**

[6]. "Investigation for macro mechanical behavior explicitly for thin-walled parts of AlSi10Mg alloy using selective laser melting technique." Journal of Manufacturing Processes (2021) **(Impact Factor: 6.1)**

[7]. "A state-of-the-art review on energy consumption and quality characteristics in metal additive manufacturing processes." Journal of the Brazilian Society of Mechanical Sciences and Engineering (2020) **(Impact Factor: 2.0).**

[8]. "Heat treatment influences densification and porosity of AlSi10Mg alloy thin-walled parts manufactured by selective laser melting technique." Journal of the Brazilian Society of Mechanical Sciences and Engineering (2019) **(Impact Factor: 2.0).**

[9]. "Developing of manufacturing cycle architecture for fused deposition modeling technique." International Journal of Lightweight Materials and Manufacture (2019) (Emerging Sources Citation Index)

Publications on Joining Manufacturing Processes (Welding)

[10]. "Mechanism of pore evolution in electron beam welding joints of Mo-14Re alloy." Journal of Materials Research and Technology (2024) **(Impact Factor: 6.2).**

[11]. "Crack generation and propagation mechanism of Mo14Re alloy laser welding." International Journal of Refractory Metals and Hard Materials (2024) **(Impact Factor: 4.2).**

[12]. Nanoparticle induced control (MWCNTs-TiO_2) on grain size and tensile strength response and multi response optimization on TIG welded joints (Transaction Canadian Society of Mechanical Engineering (2022) **(Impact Factor: 1.45).**

[13]. "Macro-Mechanical behavior of unique surface welded joints (AA5083) utilizing tungsten inert gas welding against single-stage homogenization annealing"." Revista de Metalurgia (2020) **(Impact Factor: 0.8).**

[14]. "Multicomponent enabled MWCNTs-TiO_2 nano-activating flux for controlling the geometrical behavior of modified TIG welding joint process." Diamond and Related Materials (2019) **(Impact Factor: 4.3).**

[15]. "Modified TIG welding joint process: An approach to improve microstructure and fracto-mechanical behavior by MWCNTs inducement in Al-Mg-Si alloy." Materials (2019) **(Impact Factor: 3.1).**

[16]. "Modified utilization of semi-sectioned tubes as filler coated with MWCNTs–TiO_2 in TIG arc welding to recover fusion lost mechanical properties of the weldment." Journal of the Brazilian Society of Mechanical Sciences and Engineering (2019) **(Impact Factor: 2.0).**

[17]. The response of heat-treatable filler on non-heat-treatable aluminum alloy substrate against age hardening cycle for intelligent development of surface welded joints using TIG welding process." Journal of the Brazilian Society of Mechanical Sciences and Engineering (2019) **(Impact Factor: 2.0).**

Publications on Design, Manufacturing Processes, and Materials Engineering

[18]. "Correlation Analysis of Established Creep Failure Models through Computational Modelling for SS-304 Material." Metals (2023) **(Impact Factor: 2.9).**

[19]. "Investigation on the wall thickness variation of an eccentric tube in the rotary draw bending process." Engineering Computations (2023) **(Impact Factor: 1.67).**

[20]. "Finite Element Analysis of Composite Pressure Vessel Using Reduced Models." Tecciencia (2022) (Emerging Sources Citation Index)

[21]. Parametric Optimization of Diffusion Welding Process in Joining of CoCrNi Medium-Entropy Alloys (MEA) and SUS 304 Stainless Steel Using Full Factorial Design. JOM: the journal of the Minerals, Metals & Materials Society (TMS), (2022) **(Impact Factor: 2.5).**

[22]. Mechanical and Microstructural Characterization of the Bond Interface Formed in Diffusion Welding of CoCrNi Medium Entropy Alloy (MEA) and AISI 304 Stainless Steel Under Various Processing Parameters. Metals and Materials International (2022) **(Impact Factor: 3.451).**

[23]. Effect of composition and microstructure on the rusting of MS Rebars and ultimately their impact on mechanical behavior joints. Transaction Canadian Society of Mechanical Engineering (2022) **(Impact Factor: 1.450).**

[24]. "A Study of Induction Hardening Parameters for the DIN 42CrMo4 Alloy through Its Microhardness, Corrosion Resistance, and Microstructure Examination." Physics of Metals and Metallography (2021) **(Impact Factor: 0.97).**

[25]. "Diffusion welding of CoCrNi medium entropy alloy (MEA) and SUS 304 stainless steel at different bonding temperatures." Welding in the World (2021) **(Impact Factor: 2.103).**

[26]. "Comparative investigation of corrosion rate on A-36 steel with different coatings include ZnO and TiO." Revista de Metalurgia (2021) **(Impact Factor: 0.8).**

[27]. "A new strategy for acquiring the forming parameters of a complex spatial tube product in free bending technology." Journal of Materials Processing Technology (2020) **(Impact Factor: 6.3)**.

[28]. "A modified constitutive model with grain rotation for superplastic forming of Ti–6Al–4V alloy." Journal of Engineering Materials and Technology (2020) **(Impact Factor: 1.144).**

[29]. "Dynamic failure of un-strengthened aluminosilicate glass." Theoretical and Applied Fracture Mechanics (2019) **(Impact Factor: 5.3).**

[30]. "Optimum heat treatment of aluminum alloy used in manufacturing of automotive piston components." Materials and Manufacturing Processes (2018) **(Impact Factor: 4.8).**

[31]. "Experimental investigation and optimization of process parameters for through induction hardening using factorial design of experiments." Journal of Engineering Research (2017) **(Impact Factor: 1).**

[32]. "Effect of heat treatment on impact resistance of AU5GT and AS7G06 aluminum alloys." Journal of Mechanical Science and Technology (2016) **(Impact Factor: 1.6).**

[33]. "Numerical and experimental investigation of wind loadings on vertical axis wind turbine blade deflection." Journal of Mechanical Science and Technology (2016) **(Impact Factor: 1.6).**

Honors and Awards

- Won Best Post Presentation award in 2022 in IMEC (IEP Award for Best Poster), 11th International Mechanical Engineering Conference.
- Award Full Scholarship for PhD Studies (**Chinese Government Scholarship CSC** for the duration of 4 years, 2016-2020).
- Received **Best-Researcher Award** from NED University of Engineering & Technology for Publishing Research Articles in 2019, 2021, 2022.
- Received letter of commendation and award for research publications in 2016 and 2019 from **NEDAASC (NED Alumni Association of Southern California, USA).**
- Received Certificate of Appreciation from the Managing Director of ALSONS Industries PVT LTD for well-organizing and the Best Decorated Stall in IDEAS 2012.

Supervised/Supervising PhD, Post-Graduate and Undergraduate Projects

PhD Thesis Supervision

Student Name	Research Title
Nabeel Ahmed Siddiqui	Framework Development for Assessment and Optimization in Wire Arc Directed Energy Deposition Additive Manufacturing of Magnesium Alloys
Muhammad Asif Ali	Exploring the Performance Characteristics of Structures Developed through Multi-material Wire Arc Additive Manufacturing

Post-Graduate (Master's MS Thesis Supervision)

Student Name	Year	Research Topic
Arsalan Ahmed	2021-2022	Thermal analysis of welding heat source on metallic materials
Naveed Ahmed	2022	Experimental study of the new surface development (Additive) for repairman works through MWCNTs inducements and wear assessments
Kamal Kumar	2022	Analysis of machining on additively fabricated specimens through welding
Mahad Ali Khan	2022-2023	Post-treatment wear behavior assessment of SLM (selective laser melting) specimens
Abubakr Shahnawaz	2022-2023	Indentation behavior assessment of SLM (selective laser melting) specimens of AlSi10Mg
Muhammad Salman	2023-2024	Thin Layer Development on Additively Manufactured Aluminum Specimen
Muhammad Moin Irfan	2023-2024	Analysis of Porosity and Relative Density in Additive Manufactured Specimens by Directed Energy Deposition
Rasab Yousuf	2023-2024	3D printing of recycled PET filament through fused deposition modeling additive manufacturing

Under-Graduate

- **Wear testing analysis of new surfaces developed through wire arc additive manufacturing**
- **Post-treatment analysis of selective laser melting (SLM) specimens**
- **Post-treatment analysis of additively prepared structure**
- **Development of Entropy alloys through wire arc additive manufacturing**
- **Utilization of conventional welding sources for additive manufacturing**

Research Funding Applied and Awarded

- **Awarded with "Seed Funding" Independent Research Project (IRP) in 2021 of 1Million PKR.**
- **Submitted Research Proposal as a Collaborator in CPEC-CRG in 2021 on the Industrialization of Friction Stir Welding for Aluminum Alloys (Al60601-T6).**
- **Submitted research proposal to SRSP Framework development and mechanical behavior assessment of wire arc direct energy deposition (DED) additive manufacturing process 2023.**
- **Received/awarded 0.5 Million PKR funding for a PhD Student.**

Professional Training

❖ **Received training on Metal Printing from AIM (Associazione Italiana di Metallurgia), Summer School at Bertinoro, and University of Brescia, Italy from Get-innovative Erasmus Project, July 2024.**