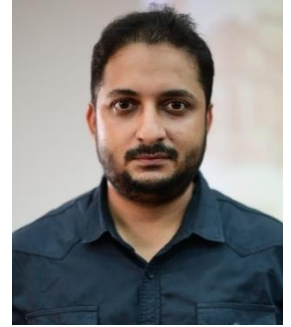


## CURRICULUM VITAE (CV)

**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

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## 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:

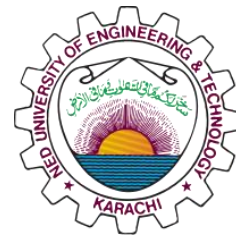
- Engineering Mechanics
- Engineering Drawing
- Manufacturing Processes /Production Engineering I and II
- Operations Management
- Finite Element Analysis
- Materials and Metallurgy

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<sub>2</sub>) 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<sub>2</sub> 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<sub>2</sub> 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), 11<sup>th</sup> 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
<b>Nabeel Ahmed Siddiqui</b>	Framework Development for Assessment and Optimization in Wire Arc Directed Energy Deposition Additive Manufacturing of Magnesium Alloys
<b>Muhammad Asif Ali</b>	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
<b>Arsalan Ahmed</b>	2021-2022	Thermal analysis of welding heat source on metallic materials
<b>Naveed Ahmed</b>	2022	Experimental study of the new surface development (Additive) for repairman works through MWCNTs inducements and wear assessments
<b>Kamal Kumar</b>	2022	Analysis of machining on additively fabricated specimens through welding
<b>Mahad Ali Khan</b>	2022-2023	Post-treatment wear behavior assessment of SLM (selective laser melting) specimens
<b>Abubakr Shahnawaz</b>	2022-2023	Indentation behavior assessment of SLM (selective laser melting) specimens of AlSi10Mg
<b>Muhammad Salman</b>	2023-2024	Thin Layer Development on Additively Manufactured Aluminum Specimen
<b>Muhammad Moin Irfan</b>	2023-2024	Analysis of Porosity and Relative Density in Additive Manufactured Specimens by Directed Energy Deposition
<b>Rasab Yousuf</b>	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.