

# ENGR. MUHAMMAD SAMIUDDIN

## ASSISTANT PROFESSOR

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### ACADEMIC QUALIFICATIONS

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|---------------------|--|
| <b>2011 to 2013</b> | Master of Engineering ( <b>M.Engg.</b> ) in <b>Materials</b> from NED University of Engineering & Technology, Pakistan<br><b>Thesis Title:</b> “Synthesis & Characterisation of Super Absorbent Polymer (SAP)”   |
| <b>2007 to 2010</b> | Bachelors of Engineering ( <b>B.E</b> ) in <b>Materials</b> from NED University of Engineering & Technology, Pakistan<br><b>Thesis Title:</b> “Phase analysis of Tool Steels through Quantitative Metallography” |

### PROFESSIONAL EXPERIENCE & INDUSTRIAL TRAININGS

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| <b>2018 to date</b> | <b>Assistant Professor</b> , (Metallurgical Engineering Department), NED University of Engineering & Technology, Karachi.  |
| <b>2011 to 2017</b> | <b>Lecturer</b> , (Metallurgical Engineering Department), NED University of Engineering & Technology, Karachi.<br><b>Career summary:</b> <ul style="list-style-type: none"><li>• Engage in teaching different engineering courses (i.e. Mineral processing, welding metallurgy, mechanics, design and Characterisation of materials etc.)</li><li>• Actively involved in commercial testings and industrial projects (troubleshooting).</li><li>• Proficient in developing new lessons and activities to expand learning opportunities.</li><li>• Extensive participation on committees and extra-curricular activities.</li><li>• Employed differentiated teaching methods, incorporating, audio and visual activities to address all learning styles.</li><li>• Identification and organizing field trips to enhance curriculum.</li><li>• Served as Final Year Class Advisor, Faculty Advisor and Project Coordinator.</li><li>• In-charge of Microscopy, Metallography and Mineral Processing Laboratory.</li><li>• Actively involved in undergraduate curriculum revision for materials and metallurgy.</li></ul> |
| <b>2010</b>         | Working experience with Pak Suzuki Company Ltd as management trainee <ul style="list-style-type: none"><li>• Quality control Department</li><li>• Welding section</li><li>• Vehicle Assembly unit</li></ul>  |
| <b>2009</b>         | Intern at Pakistan Cables Ltd <ul style="list-style-type: none"><li>• Cathode Plant for copper melting</li><li>• PVC compounding for cable insulation</li><li>• Aluminum Extrusion and anodizing department</li></ul>  |
| <b>2009</b>         | Intern at Pakistan International Airline (PIA, Engineering division) <ul style="list-style-type: none"><li>• Engine Overhaul Shop</li><li>• Ultrasonic Inspection Lab</li><li>• Composite Testing Lab</li></ul>  |

## TECHNICAL SKILLS & COMPETENCIES

- Expertise on **MODSIM (Mineral Processing Software)** and **Solid-Cast** simulation Software.
- Destructive testing (tensile, impact, hardness).
- Skilled in Metallography, Optical and Stereo Microscopy.
- Hands on experience with spectrophotometer and wet chemical analysis.
- Proficiency in Scanning Electron Microscopy, XRD and DSC-TGA.

## RESEARCH PUBLICATIONS & CONFERENCES

	<i>“Study of tensile strength on heat treatable Aluminum Alloy 6061 using TIG welding joints” (in Process).</i>
<i>Sep, 2017</i>	<i>“Experimental Investigation of Induction Hardening Process Parameters on Microstructural and Micro Hardness changes in DIN 1.2743 Steel” (manuscript submitted in Journal of Kovove materialy - Metallic Materials).</i>
<i>Oct, 2017</i>	<i>“Experimental investigation and optimization of process parameters for through induction hardening using factorial design of experiments”(Accepted in Journal of Engineering Research).</i>
<i>May, 2016</i>	<i>“Effect of heat treatment on Impact Resistance of AU5GT and AS7GT Aluminum Alloys” (Accepted in Journal of Mechanical Science and Technology).</i>
<i>2015</i>	<i>“Modeling of bainitic phase transformation in Fe-Mn-Si-C alloy” (accepted for Proceedings of Advanced Materials and Process Engineering, AMPE).</i>
<i>2015</i>	<i>“Design and Fabrication of Laboratory Scale Cupola Furnace” (accepted for Proceedings of Advanced Materials and Process Engineering, AMPE).</i>
<i>2015</i>	<i>“To Develop a Laboratory Scale Vacuum Furnace for the Production of Magnesium Particles” (accepted for Proceedings of Advanced Materials and Process Engineering, AMPE).</i>
<i>May 2015</i>	<i>“Effect of heat treatment on the corrosion rate of AISI 1045 steel, when subjected to various environments”. (accepted for proceedings of 5<sup>th</sup> International Mechanical engineering congress,)</i>

## SCHOLARSHIPS, AWARDS & HONORS

<i>2015</i>	Received “ <b>Excellency in Teaching Award 2015 &amp; 2016</b> ” by the Alumni Association of Southern California, USA.
<i>2014</i>	<b>Secured 9<sup>th</sup> position worldwide in 7<sup>th</sup> Virtual Steel Making Challenge</b> by producing Steel grade for yellow goods Application in EAF, <b>at a total cost of \$295.58.</b>
<i>2009</i>	NED University Assistance Scholarship.

## RESEARCH INTEREST

- Modeling and Simulation of Materials
- Mineral Processing and Extractive metallurgy
- Welding and joining of Materials
- Materials development and Characterisation.

## TRAINING & CERTIFICATIONS

- Certified Training on **Mechanical Testing Machines** by Wance Technology, China
- Attended a session on Adoption of **Outcome Based Education System** in an engineering institute by Malaysian professor.
- Certificate on **Technical Computation with MATLAB**
- Certificate on **Technical writing with LATEX**
- Certificate on **Technology for Teaching and Learning**
- Certificate on **Stress and Time Management**
- **HEC** indigenous Workshop on “ **Project Management**” , 2015

## OTHER OFFICIAL ASSIGNMENTS/PROJECTS

- Involved in Research activity of the Beneficiation of Taconite based iron ore in collaboration of **Pakistan Petroleum Ltd** and **Bolan Mining Enterprises**.
- Developed a laboratory setup of **Mineral Processing** at Department of Metallurgical Engineering.
- Established **Wet Chemistry Lab** at Department of Metallurgical Engineering.
- Conduct a workshop for the industries (**International Industries Ltd.** and **International Steels Ltd.**) to provide technical assistance in Metallography and Microscopic Techniques.
- Conduct a workshop on “Design, Selection & Corrosion of Engg. Materials” for Extended Internship Programme (EIP) jointly organized by **Pakistan Petroleum Limited (PPL)** and **NED University of Engineering & Technology**, June 2015 to August 2015(Audience 30+ including Mechanical, Chemical and Petroleum Graduates).
- Actively involved during PEC re-accreditation process from 2013 to date.

## PROFESSIONAL MEMBERSHIPS:

- Life time member of Pakistan Engineering Council (METAL/2631)
- Member of American Society of Mechanical Engineers (ASME)
- Member of Ana mileage club, Japan