

# Curriculum Vitae

Name: **Dr. Muhammad Sohail**

Designation: Associate Professor,

Department of Materials Engineering,

NED University of Engineering and Technology, Karachi, Pakistan

Email: [msohailhanif@neduet.edu.pk](mailto:msohailhanif@neduet.edu.pk),

## Education

**Aug. 2010~June 2015:** Division of Mechanical Engineering, KAIST, South Korea.

*Ph. D (Mechanical)*, Advanced Laser, Plasma and Hybrid Application Lab., Advisor Prof. Suck Joo, Na

**Jan. 2007-Aug. 2009:** Department of Materials Engineering, NEDUET, Pakistan. *Master of Engineering (ME)*

**Dec. 2001-Feb. 2006:** Department of Industrial and Manufacturing Engineering, NEDUET, Pakistan. *Bachelor of Engineering*

## Career

**August 2020- Present:** Associate Professor Department of Materials Engineering, NEDUET, Pakistan

**May 2010 – August 2020 :** Assistant Professor Department of Materials Engineering, NEDUET, Pakistan

**Jun. 2008 - May 2010:** Lecturer Department of Materials Engineering, NEDUET, Pakistan

**Mar. 2007 – Jun. 2008 :** Research Assistant to Dr. Fakhir Hasanai, CMD NEDUET.

Worked on HEC project “Numerical study of Finned tube annulus in longitudinal flow”

## Awards and Honors

- Received Fully Funded Ph. D. Scholarship from Korea Advanced Institute of Science and Technology (KAIST) , South Korea
- Member Organizing Committee of 1st Advanced Materials and Process Engineering (AMPE) Conference 2015
- Member Organizing Committee of 2nd AMPE Conference 2017
- Co-Editor of Proceedings of 2nd AMPE Conference 2017
- Member Organizing committee of 3rd AMPE Conference 2019
- Member National Curriculum Review Committee on Materials and Metallurgical Engineering (NCRC) 2017
- Member Board of Studies of Materials and Metallurgical Engineering, NEDUET
- Member Board of Faculties of Faculty of Chemical and Process Engineering
- M. Engineering Coordinator for ME in Materials Engineering
- Member of Outcome Based Education (OBE) accreditation committee for Accreditation of Bachelor of Engineering in Materials Engineering
- Best Research paper Award (2017) from NED Alumni Association of Southern California (NEDAASC).
- Funded 1.0 Million as Co-PI through NED Seed Fund on the project of “Hydrogen Evolution Reaction on Metallic Surfaces”
- Funded 100,000 Rs. for the final year project through NEDAASC

## Academic Activities.

### Journal Papers

1. **Sohail M**, Han S-W, Na S-J, Gumenyuk A, Rethmeier M (2014) Characteristics of weld pool behavior in laser welding with various power inputs. *Welding in the World* 58 (3):269-277. doi:10.1007/s40194-014-0112-4
2. **Sohail M**, Han S-W, Na S-J, Gumenyuk A, Rethmeier M (2015) Numerical investigation of energy input characteristics for high-power fiber laser welding at different positions. *The International Journal of Advanced Manufacturing Technology*. doi:10.1007/s00170-015-7066-6
3. **Muhammad Sohail**, Miikka, K., Suck-Joo, N., Sang-Woo, H., Veli, K., 2017. Effect of leading and trailing torch configuration on mixing and fluid behavior of laser-gas metal arc hybrid welding. *Journal of Laser Applications* 29, 042009.: DOI; 10.2351/1.5008304
4. **Muhammad Sohail**, Sang Woo H., Suck-Joo, Na, Andrey G. ,Rethmeier M., 2018. A study on the role of recondensation flux in high power laser welding by Computational Fluid Dynamics Simulations, *Journal of Laser Applications* 30 (1):012013. DOI; 10.2351/1.4994246
5. Muhammad Yasir Khan, Ali Dad Chandio, **Muhammad Sohail**, Muhammad Arsalan, Muhammad Wasim Akhtar, Syed Zeeshan Abbas, Zeeshan Akhtar, “Low Temperature Synthesis of Anatase TiO<sub>2</sub> Nanoparticles and its Application in Nanocrystalline Thin Films”, Page 86-90, *Key Engineering Materials*
6. Muhammad Yasir Khan, Ali Dad Chandio, **Muhammad Sohail**, Syed Zeeshan Abbas, Rao Shakeel Ahmed, Shahid Bhutto, Syed Junaid Mehmood , “Removal of Heavy Metals (Lead, Cadmium and Iron) from Low-Grade Nanoscale Zinc Oxide Using Ammonium Carbonate Solution as a Leaching Agent”, Page 132-136, VOL 778, *Key Engineering Materials*
7. **Muhammad Sohail**, A. D. Chandio, Fayyaz Hussain, Maryam Sheikh, “High-Temperature Effectiveness of Ginger Extract as Green Inhibitor for Corrosion in Mild Steel”, Vol 11, No 1 (2018), *NUST Journal of Engineering Sciences*
8. Muhammad Ali Siddiqui , Fayaz Hussain , **M Sohail Hanif** , Ahmad Azmin Mohamad , Muhammad Tufail, “Effect of Calcination and Sintering Temperatures on Physical Properties of Barium Titanate Ceramic”, Vol. 6, Issuer 4, December( 2018), page 42-47, *International Journal of Electroactive Materials*
9. Danial Ahmad, **Muhammad Sohail**, Fayaz Hussain, Humair Siddiqui, and Muhammad Yasir “ Effect of pH and Conductivity of Electrolyte on the Synthesis of Cuprous Oxide Nano Cubes and Platelets Using Both Electrodes of Copper”, Vol. 38, No. 2, 415-420 April 2019 , *Mehran Univeristy of Engineering and Technology Research Journal*
10. Shahid Hussain Abro, **Muhammad Sohail**, Fayaz Hussain, “On the Effect of  $\gamma$ -phase transformation kinetics upon microstructure response of Cold Heading Quality Steel, (**Accepted Manuscript**) , *NUST Journal of Engineering Sciences*
11. Sarah Faheem, **Muhammad Sohail**, Fayaz Hussain, Muhammad Maaz, Bilal Abbas, “Synthesis and Characterization of Chitosan and Graphene Oxide to form a Nano-Composite Hydrogel for the removal of heavy metal ions”, (**Accepted Manuscript**), *Journal of Water Chemistry and Technology*, Springer
12. **Sohail Muhammad**, Humair Ahmed Siddiqui , Ishaque Abro, Adil Usmani and Amjad Malik, “Bacillus Subtilis as Self-Healing Agent in Cement Mortar: Combined and the Separate Effect of Bacteria and Calcium Lactate on Self-Healing Behavior in Cement Mortar, (**Accepted**

13. **Sohail Muhammad**, Humair Ahmed Siddiqui , Ishaque Abro, Adil Usmani and Amjad Malik ,  
“Bacillus Subtilis as Self-Healing Agent in Cement Mortar: The Effect of Curing time and amount of Calcium Lactate on strength”, (**Accepted Manuscript**), Mehran Univeristy of Engineering and Technology Research Journal
14. Fayaz Hussain, **Muhammad Sohail** , Moiz Ullah Baig , Saad Arif , M. Daniyal Ahmed,  
“Fabrication of Ultrathin Graphene Oxide Membrane for water purification using Inkjet printing”, (**Accepted Manuscript**), Journal of Space Technology

### **Conference Papers**

1. **M.Sohail**, S.M.F. Hasani, “Numerical analysis of heat transfer and fluid flow in circumferential finned tube annulus in longitudinal laminar flow” , Fourth International Conference on Mathematical Models and Methods in fluid Mechanics July 7 – 9, 2008, Islamabad, Pakistan
2. **M. Sohail**, S.M.F. Hasani, “Conjugate conduction-convection analysis of finned tube annulus in longitudinal laminar flow“, Proceedings of the 4th BSME-ASME International Conference on Thermal Engineering 27-29 December, 2008, Dhaka, Bangladesh
3. M.Shakaib, S. M.F. Hasani, **M.Sohail**, “Parallel processing efficiency of computational fluid dynamics (CFD) simulations “, NAFEMS World Congress 2009, June 16 -19 , 2009 Crete, Greece
4. **M.Sohail**, A.Ali, “Grain size determination of medium carbon steel by ultrasonic velocity measurement”, 11th International Symposium on Advanced Materials (ISAM-2009), 08 –12 August, 2009, Islamabad, Pakistan
5. S.W.Han, **M.Sohail**, S.-J.Na, A.Gumenyuk, M.Rethmeier, “Characteristics of weld pool behavior in laser welding with various power inputs”, 65th Annual Assembly of the Institute of Welding, Denver, United States of America, 2012, July
6. W.I. Cho, **M. Sohail**, S.J. Na, “Modeling of Keyhole Formation in Laser and Laser Arc Hybrid Welding Based on CFD Simulations”, 31<sup>st</sup> ICALEO, September 22-27, 2012-Anaheim, California, USA
7. **Sohail Muhammad**, Na Suck-Joo, Gumenyuk Andrey, Rethmeier,,” Role of vapor re-condensation on bead shape in high power laser welding”, LAMP 2015, May 26-29, 2015, Kitakyushu, Fukuoka, Japan
8. **Sohail Muhammad**, Na Suck-Joo, Karhu Miikka, Kujanpaa Veli, “Numerical study on effect of laser position and joint gap on full penetration Laser-GMAW-P hybrid welding” , LAMP 2015, May 26-29, 2015, Kitakyushu, Fukuoka, Japan
9. Na Suck-Joo, **Sohail Muhammad**, Han Sang-Woo, Karhu Miikka, Kujanpaa Veli, Flow and Element Mixing Characteristics in Laser-GMA Hybrid Welding, The 15th Nordic Laser Materials Processing Conference, August 25th - 27th 2015, Lappeenranta, Finland