

Curriculum Vitae

Name: **Dr. Muhammad Sohail**
Designation: Professor,
Department of Materials Engineering,
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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

Jan 2022- present: Professor Department of Materials Engineering, NEDUET, Pakistan

Aug 2020- Jan 2022 : Associate Professor Department of Materials Engineering, NEDUET, Pakistan

May 2010 – Aug 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”

Dec.2006- Mar. 2007: Design Engineer in Ahmed Engineering Works

Major work include designing of Tools for Automotive Parts

June 2006-Nov. 2006: Assistant Engineer in Taha Engineering Limited.

Worked on Modeling and Interference analysis of Yamaha Engine’s Gear Transmission

Honors and Awards of Dr. Muhammad Sohail

- Received Fully Funded Ph. D. Scholarship from Korea Advanced Institute of Science and Technology (KAIST) , South Korea
- Received scholarship amounting to Rs. 5 Million from NED UET
- 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 (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

- Awarded Best Research Publication Award by NED Alumni Association of Southern California(NEDAASC) for 2018
- Final Year Design Project on ‘Development of Impact Resistance Sheet using Natural and Synthetic Fibers’ was selected for Funding by NEDAASC in 2019 (Amount 100,000/-Rs)
- Member Uniform Outcome Based Education committee of NED University

Research 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. ,Rethmeir 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 TiO₂ Nanoparticles and its Application in Nanocrystalline Thin Films”, Page 86-90, *Key Engineering Materials [Scopus Indexed: ISSN web 1662-9795]*
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 [Scopus Indexed: ISSN web 1662-9795]*
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 γ -phase transformation kinetics upon microstructure response of Cold Heading Quality Steel, *NUST Journal of Engineering Sciences*, Vol. 11, No.2, page 51-55, 2018
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”, *Journal of Water Chemistry and Technology*, 2021, Vol. 43, No. 1, pp. 22–28, Springer

12. **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
13. **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, **Mehran University Research Journal of Engineering and Technology**, [S.l.], v. 40, n. 2, p. 426 - 434, mar. 2021. ISSN 2413-7219.
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”, Journal of Space Technology, July 15, 2019, **ISSN 2077-3099 (Print); ISSN 2411-5029 (Online)**
15. Rizwan, Yousuf, **Muhammad Sohail**, Bashir, Alias, Hamdi, and Basirun, , Synthesis, Characterization, and In Vitro Biochemical Analysis of Hydroxyapatite–Bioglass Composite Scaffolds for Bone Tissue Repair, Journal of Materials, Vol. 72, No. 10, 2020 <https://doi.org/10.1007/s11837-020-04289-z> ,2020 The Minerals, Metals & Materials Society
16. Shahid Hussain Abro*, Fayaz Hussain, **Muhammad Sohail**, Danial Tariq, Kamran Jawed, and Rana Sanwal, Development and Synthesis of Composite Electrode (rGO/G/PANI) for Capacitor from Burnout Battery Powder, Proceedings of the Pakistan Academy of Sciences: A. Physical and Computational Sciences: 57 (1): 31-36 (2020) *ISSN: 2518-4245 (print), 2518-4253 (online)*
17. Shahid Hussain Abro, Hazim Moria, **Sohail Muhammad** and Hamza Suharwardi, Microstructure Integration Upon Heating Temperatures in Low Carbon Mn Steel, Submitted to Journal of Engineering and Applied Sciences, Volume 39, Issue 2, Page 164-169, December 2020
18. Muhammad Rizwan, Ali Dad Chandio, **Muhammad Sohail**, M. Nasir Bashir, Sumra Yousuf, Rodianah Alias, Hammad ur Rehman, M. Hamdi, Wan Jeffrey Basirun, “Bioglass-fiber reinforced Hydroxyapatite composites synthesized using spark plasma sintering for bone tissue engineering”, Revision Submitted, Journal of Processing and Application of Ceramics, Manuscript ID PAC-OJ-1250

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”, 31st 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