Dr. Nadeem Ahmed Sheikh

House no. 295, Allama
Iqbal Avenue, Phase V
Gulraiz Rawalpindi.
Email id:ndahmed@gmail.com
Phone: 00923238544332
Date of Birth: 1981-Aug-15

Research interests

Multiphase flows, particle laden flows, Granular flows, Computational Fluid Dynamics. Finite element analysis, non-linear contact mechanics, Discrete element modelling. Energy systems. Optimization. Experimentation and testing.

Editorial and Honorary positions

Member National Curriculum Review Committee (HEC)
Reviewer of Mechanical Engineering program under Outcome Based Education (PEC)

Current position

Professor **May 2018- to date**
International Islamic University, Islamabad, Pakistan

Previous positions

Associate Professor **Mar 2012- to May 2018**
Department of Mechanical engineering, Capital University of Science and Technology, Islamabad

Assistant Professor, **Mar 2011- March 2012**
University of engineering and technology, Taxila, Pakistan

PhD Student (Loughborough University UK) **July 2007- Mar 2011**

Funded by Loughborough University on the implementation and validation of hydrodynamic order models for dissipative particulate flows.
Thesis: Study of constitutive relationships for granular flow in three dimensional vibro-fluidized beds

Assistant Professor **July 2006-June 2007**
Department of mechatronics engineering Air University, Islamabad, Pakistan.

Advantech Engineering Solutions (PMO) **Oct 2003-June 2006**
Assistant Manager: Design

Assistant Manager **May 2003-Sep 2003**
OBiz, Pakistan

FECTO cements, Islamabad, Pakistan. **April 2002-May 2002**
Internee

Education

Post Doctoral Fellow **March 2014- Jan 2015**
King Abdulla University of Science and Technology (KAUST), Thuwal, KSA

Wolfson School Loughborough University, UK. **July 2007-Jan 2011**
PhD in mechanical engineering
Thesis: Study of constitutive relationships for granular flow in three dimensional vibro-fluidized beds
University of engineering and technology Taxila, Pakistan **Sep 2004- Apr2006**
Specialization Area: Thermo-fluids and CFD
CGPA: **3.66/4.0**

National University of Sciences and Tech, Rawalpindi, Pakistan. Dec 1999-May 2003
Bachelor in Engineering
CGPA: **3.921/4.00**
Merit: Second position

Achievements/Awards

- Awarded KAUST postdoctoral fellowship.
- Awarded school scholarship for completion of PhD at Loughborough University covering tuition, research and living allowance.
- Awarded with President's Gold medal for best undergraduate project.
- Awarded Silver medal for securing second position at NUST in BE mechanical engineering.
- Granted university scholarship for complete undergraduate study at NUST.

Research grants awarded

Title: Laser processing of dissimilar materials
Funding organization: University of Malaya
Duration: Sep 2017-Sep 2018
Responsibility: Co-PI

Title: Flow of generalized Newtonian flow in porous media
Funding organization: KAUST, KSA/ ARAMCO KSA
Duration: Mar 2014- Mar 2015
Responsibility: Postdoctoral position with Dr.Oleg Iliev.

Title: Optical techniques for novel platelet substitutes
Funding organization: iNET/ haemostatix
Duration: Oct 2010-Mar 2011
Responsibility: Co-researcher under supervision of Dr. R.D. Wildman.

Title: Higher order effects in granular flows
Funding organization: EPSRC
Duration: Mar 2009-Aug 2009
Responsibility: Co-researcher under supervision of Dr. R.D. Wildman and Dr. V. Kumaran (IIT Banglore)

Title: Evaluation of constitutive relationships for simple granular flows
Funding organization: Wolfson School Loughborough University
Duration: July 2007-June 2010

Responsibility: Principal researcher and PhD candidate under supervision of Dr. R.D. Wildman. and Dr. Prof. J. M. Huntley

ASSOCIATIONS MEMBERSHIP

Member of Pakistan Engineering Council (PEC) Lifetime Membership

PUBLICATIONS/CONFERENCE CONTRIBUTIONS

Complete list is included in separate document ***(combined Impact Factor: > 70)***

1. Mirza Abdullah Rehan, Muzaffar Ali, **Nadeem Ahmed Sheikh**, M. Shahid Khalil, Ghulam Qadar Chaudhary, Tanzeel ur Rashid, M. Shehryar, Experimental performance analysis of low concentration ratio solar parabolic trough collectors with nanofluids in winter conditions, In Renewable Energy, Volume 118, 2018, Pages 742-751, ISSN 0960-1481, https://doi.org/10.1016/j.renene.2017.11.062. ***(Impact factor 4.35)***
2. M.M. Khan, N.A. Sheikh, W. Lughmani, A. Khalid, Experimental characterization of gasoline sprays under highly evaporating conditions, Heat and Mass Transfer (Accepted for publication), ***(Impact factor 1.233)***
3. Muzaffar Ali, Muhammad Hasan Iqbal, **Nadeem Ahmed Sheikh**, et al., "Performance Investigation of Air Velocity Effects on PV Modules under Controlled Conditions," International Journal of Photoenergy, vol. 2017, Article ID 3829671, 10 pages, 2017. doi:10.1155/2017/3829671 ***(Impact factor 1.27)***
4. Muhammad Kashif Shahzad, Muzaffar Ali, **Nadeem Ahmed Sheikh**, Ghulam Qadar Chaudhary, M. Shahid Khalil, Tanzeel Ur Rashid, Experimental evaluation of a solid desiccant system integrated with cross flow Maisotsenko cycle evaporative cooler, Applied Thermal Engineering, Volume 128, Pages 1476-1487, 2018 ***(Impact factor 3.8)***
5. K Rana, S Manzoor, **NA Sheikh**, M Ali, HM Ali, Gust response of a rotating circular cylinder in the vortex suppression regime, International Journal of Heat and Mass Transfer, Volume 115, Page 763, 2017 ***(Impact factor 3.4)***
6. Khan MM, Hélie J, Gorokhovski M, **Sheikh NA**. Experimental and Numerical study of Flash Boiling in Gasoline Direct Injection Sprays. Applied Thermal Engineering. 2017 May 22. ***(Impact factor 3.8)***
7. Khan MM, Hélie J, Gorokhovski M, **Sheikh NA**. Air Entrainment in High Pressure Multihole Gasoline Direct Injection Sprays. Journal of Applied Fluid Mechanics. 2017 Aug 1;10(4). ***(Impact factor 0.888)***
8. Muzaffar Ali, Sher Asim Khan, **Nadeem Ahmed Sheikh**, Syed Ihtsham-ul-haq Gilani, Muhammad Shehryar, Hafiz Muhammad Ali, Tanzeel Ur Rashid, Performance analysis of a low capacity solar tower water heating system in climate of Pakistan, Energy and Buildings, Volume 143, 15 May 2017, Pages 84-99, ISSN 0378-7788, http://dx.doi.org/10.1016/j.enbuild.2017.02.031. ***(Impact factor 2.98)***
9. Khan, M.M. & **Sheikh, N.A.** J Mech Sci Technol (2017) 31: 2015. https://doi.org/10.1007/s12206-017-0351-6 ***(Impact factor 1.28)***
10. Muhammad Mahabat Khan, **Nadeem Ahmed Sheikh**, Identification and characterization of coherent structures in gasoline injector nozzle flow using proper orthogonal decomposition, Journal of mechanical science and technology, Volume 30, Issue 8, Pages 3673-3680. ***(Impact factor 0.72)***
11. **Nadeem A. Sheikh**, Shehryar Manzoor, Muhammad Mahabat Khan and Muzaffar Ali, Hydrodynamic description of a vibrofluidized granular bed driven at high frequency, Eur. Phys. J. Appl. Phys., 75 3 (2016) 31101 ***(Impact factor***

0.774)

12. Usman Ikhtiar, S. Manzoor, **N.A. Sheikh**, Muzaffar Ali, Free stream flow and forced convection heat transfer around a rotating circular cylinder subjected to a single gust impulse, International Journal of Heat and Mass Transfer, Volume 99, August 2016, Pages 851-861, ISSN 0017-9310 ***(Impact factor 2.857)***
13. Adnan Mehmood, Masood Shah, **Nadeem Ahmed Sheikh**, Junaid Ahmad Qayyum, Shahab Khushnood, Grain refinement of ASTM A356 aluminum alloy using sloping plate process through gravity die casting, Alexanderia engineering journal, 2016 ***(Impact factor TBA)***
14. Omar Khalid, Muzaffar Ali, **Nadeem Ahmed Sheikh**, Hafiz M. Ali, M. Shehryar, Experimental analysis of an improved Maisotsenko cycle design under low velocity conditions, Applied Thermal Engineering, Volume 95, 25 February 2016, Pages 288-295, ISSN 1359-4311. ***(Impact factor 2.624)***
15. H.E. fayed, **N.A. Sheikh**, O. Iliev, On Laminar Flow of Non-Newtonian Fluids in Porous Media, transport in porous media, (Accepted) ***(Impact factor 1.431)***
16. KF Tamrin, S.S Zakariya, **NA Sheikh,** Multi-criteria optimization in CO2 laser ablation of multimode polymer waveguides, Optics and lasers in engineering, (Accepted) ***(Impact Factor 2.237)***
17. Muzaffar Ali, Vladimir Vukovic, **Nadeem Ahmed Sheikh**, Hafiz M. Ali, Mukhtar Hussain Sahir, Performance investigation of solid desiccant evaporative cooling system configurations in different climatic zones, Energy Conversion and Management (Accepted). ***(Impact Factor 3.59)***
18. **Nadeem Ahmed Sheikh**, Shehryar Manzoor and Muzaffar Ali, Variation of heat flux at lower frequencies of vibration in a vibrated granular bed, Advances in Condensed Matter Physics (Accepted) ***(Impact Factor 1.013)***
19. Muzaffar Ali, Vladimir Vukovic, **Nadeem Ahmed Sheikh**, Hafiz M. Ali, Mukhtar Hussain Sahir, Enhancement and integration of desiccant evaporative cooling system model calibrated and validated under transient operating conditions, Applied Thermal Engineering, Available online 27 October 2014, ISSN 1359-4311. ***(Impact Factor 2.624)***
20. KF Tamrin, Y Nukman, **NA Sheikh**, Laser spot welding of thermoplastic and ceramic: An experimental investigation, Materials and Manufacturing Processes, (Accepted) ***(Impact Factor 1.486)***
21. **N.A. Sheikh** et al., Free Stream Flow and Forced Convection Heat Transfer across Rotating Circular Cylinder in Steady Regime: Effects of Rotation, Prandtl Number and Thermal Boundary Condition, Journal of Mechanical Science and Technology, (Accepted) ***(Impact Factor 0.703)***
22. **Nadeem A. Sheikh**, Shehryar Manzoor, Shahab Khushnood, A modified non-linear model for the high mass ratio square cylinder, Journal of Mechanical Science and Technology, 28 (12) (2014) ***(Impact Factor 0.703)***
23. Huntley JM, Tarvaz T, Mantle MD, Sederman AJ, Gladden LF, **Sheikh NA**, Wildman RD. 2014 Nuclear magnetic resonance measurements of velocity distributions in an ultrasonically vibrated granular bed. Phil. Trans. R. Soc. A 20130185. http://dx.doi.org/10.1098/rsta.2013.0185 ***(Impact Factor 2.89)***
24. **N.A. Sheikh** et al., Heat Transfer Suppression in Flow around a Rotating Circular Cylinder at High Prandtl Number. AJSE, http://dx.doi.org/10.1007/s13369-014-1337-7. ***(Impact Factor 0.385)***
25. K.F. Tamrin, Y. Nukman, **N.A. Sheikh**, M.Z. Harizam, Determination of optimum parameters using grey relational analysis for multi-performance characteristics in CO2 laser joining of dissimilar materials, Optics and Lasers in

Engineering, Volume 57, June 2014, Pages 40-47, ISSN 0143-8166. ***(Impact Factor 1.916)***

26. M. Khan, **N. A. Sheikh**, K. Alam, H. I. Syed, A. Khan and L. Ali, 'Balling phenomena in Selective Laser Melting (SLM) of pure Gold (Au)', Lasers in Engineering, volume 28, Page 319-336, 2014. ***(Impact Factor 0.469)***
27. **Nadeem Ahmed Sheikh**, Shehryar Manzoor and Usman Ghani, 'Evaluating energy flux in vibro-fluidized granular bed', Advances in Mechanical Engineering (In press) ***(Impact Factor 1.062)***
28. Syed H I Jaffery, Mushtaq Khan, **Nadeem A Sheikh**, and Paul Mativenga, Wear mechanism analysis in milling of Ti-6Al-4V alloy, Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, doi:10.1177/0954405413481210 ***(Impact Factor 0.77)***
29. S. Manzoor, J. Khawar, and **N. A. Sheikh**, "Vortex-Induced Vibrations of a Square Cylinder with Damped Free-End Conditions," Advances in Mechanical Engineering, vol. 2013, Article ID 204974, 12 pages, 2013. doi:10.1155/2013/204974 ***(Impact Factor 1.062)***
30. Iqbal M.J, **Sheikh N.A**., Ali H.M., Khushnood S., Arif M. Comparison of empirical correlations for the estimation of conjugate heat transfer in a thrust chamber. Life Sci J 2012;9(4):708-716 ***(Impact Factor 0.165)***
31. **N.A. Sheikh** (2012). Density-driven convection roll in annular vibrated granular bed. The European Physical Journal Applied Physics, 59, 11101. ***(Impact Factor 0.77)***
32. **Nadeem Ahmed Sheikh**, "Comparison of Constitutive Relationships for Dilute Granular Flow in a Vibrofluidized Cell," Advances in Condensed Matter Physics, vol. 2012, Article ID 906598, 8 pages, 2012. ***(Impact Factor 1.175)***
33. H. Viswanathan, **N. A. Sheikh**, R. D. Wildman and J. M. Huntley (2011). Convection in three-dimensional vibrofluidized granular beds. Journal of Fluid Mechanics, 682, pp 185-212 doi:10.1017/jfm.2011.209. ***(Impact Factor 2.45)***

Non Indexed Journal articles

34. Rahmatullah, Bahbibi, Khairul Fikri Tamrin, and **Nadeem Ahmed Sheikh**. "NUMERICAL ANALYSIS OF SWIRL INTENSITY IN TURBULENT SWIRLING PIPE FLOWS." Jurnal Teknologi 78.5-10 (2016).
35. Usman Ghani, **Nadeem A. Sheikh**, "Energy Consumption in Relation with Buffer Design during the Pre-Build Stages of Manufacturing System", International Journal of Manufacturing Technology and Management, Inderscience Publishers. (Accepted for publication)
36. **Sheikh Nadeem**, Shehryar Manzoor. "Numerical simulation of phase map shift of vibrating cylinder at low Reynolds number" CFD Letters, Volume 5 Number 3.
37. **N.A. Sheikh** et.al., "FSI of Flow Induced Vibration: A study of Laminar and Turbulent flows", JSME , vol. 2, 2008.

International Conference

38. K F Tamrin, **N A Sheikh**, B Rahmatullah, Numerical Analysis of Swirl Intensity in Turbulent Swirling Pipe Flows, International Conference on Engineering Technology, and Social Science 2015 (ICETVESS2015), Perak, Malaysia; 12/2015
39. **N. A. Sheikh**, M. Khan, K. Alam, H. I. Syed, A. Khan and L. Ali, 'Balling phenomena in Selective Laser Melting (SLM) of pure Gold (Au)', 37th MATADOR Conference July 2012 Manchester UK.
40. Tayyaba Bano, **Nadeem Ahmed Sheikh**, S. Manzoor, Shahab Khushnood 'Numerical Simulation of Flow past a Square Cylinder', 9th IBCAST 2012

Islamabad, Pakistan.

41. **N.A. Sheikh** et.al., "Nuclear Magnetic Resonance studies of an ultrasonically vibrated granular bed", presented at peer reviewed session 'Dense granular flows' at Isaac Newton Institute for Mathematical Sciences, 2009-01-30.
42. **N.A. Sheikh**, "FSI of Flow Induced Vibration: A study of Laminar and Turbulent flows", ICONE-15-2007, Japan.
43. **N.A. Sheikh**, Shahab. K et.al., "Damping in heat exchanger tube bundles: A review", ICONE-15-2007, Japan.
44. **Nadeem Ahmed Sheikh** et.al., "CFD Analysis of Vortex Shedding In A Circular Cylinder: Flow Induced Vibration Design", ICON 14- 2006, USA.

References

1. **Dr. Shehryar Manzoor**
   Dept of Mechanical Engineering, UET
   Taxila.
   Email: m.shehryar@uettaxila.edu.pk
2. **Dr. Muzaffar Ali**
   Department of Energy Engineering, UET
   Taxila
   Email: muzaffar.ali@uettaxila.edu.pk
3. **Dr. K. Fikri Tamrin**
   Department of Mechanical and
   Manufacturing Engineering, Faculty of
   Engineering, Universiti Malaysia Sarawak
   (UNIMAS), Samarahan, Sarawak, Malaysia
   Email: k.f.tamrin@outlook.com