# Dr. Shuhaib Mushtaq

Assistant Professor,
School of Technology
Mechanical Engineering Department
Islamic University of Science & Technology,
Awantipora, Jammu and Kashmir, India-192122
Email: shuhaibmushtaq@gmail.com; shuhaibmushtaq@iust.ac.in
Contact: +91-6005804403(M)
Google Scholar:https://scholar.google.com/citations?user=FU3pNeYAAAAJ&hl=en
Scopus Author ID:
https://www.scopus.com/authid/detail.uri?authorId=57201135722
ORCID: https://orcid.org/0000-0003-4618-7037
Researchgate: https://www.researchgate.net/profile/Shuhaib-Mushtaq

Dr. Shuhaib Mushtaq is currently working as Assistant Professor at the School of Technology, Mechanical Engineering Department, Islamic University of Science & Technology. He has obtained Bachelor of Technology in Mechanical Engineering from Kashmir University and Master of Engineering in Mechanical System Design from National Institute ofTechnology Srinagar. He has carried his Ph.D. in the area of tribology at NIT Srinagar. He is actively involved in teaching and research for the past 3 years in thefield of design, materials and tribology. His research interests include lightweight materials, New Product Design and Development of Metal Matrix Composites, Development of Green Lubricants and Self-Lubricating Materials, Mechanical Testing of Composites, Friction and Wear of Materials, Surface Engineering.

He has published around 20 research papers in SCI and Scopus indexed journals. He has attended numerous conferences and workshops both in India and abroad like Malaysia. He is member of reviewer boards of various international journals apart from chairing technical sessions in various international and national conferences. Dr. Shuhaib is actively involved in organizing various conferences and workshops. He has also coordinated various student events. Moreover, he has supervised around 02 Masters and 06 Bachelor level projects.

# EDUCATION

National Institute of Technology Srinagar
*Doctor of* Philosophy, Mechanical Engineering -2018

National Institute of Technology, Srinagar
*Master of Technology*, Mechanical System Design -2011
GPA: 8.6/10

Kashmir University
*Bachelor of Engineering*, Mechanical Engineering -2007
GPA: 7.6/10

# Research and Teaching Experience

1. **Organization:** National Institute of Technology Srinagar India
   **Position:** Research Assistant (Tribology Lab NITS)
   **Duration:** 22/08/ 2018 to 31/12/ 2019
2. **Organization:** Islamic University of Science & Technology (J&K) India
   **Position:** Assistant Professor (Contractual)
   **Duration:** 20/02/ 2020 to 12/11/2020
3. **Organization:** Islamic University of Science & Technology (J&K) India
   **Position:** Assistant Professor (L10 with AGP 6000)
   **Duration:** 13/11/ 2020 to Present

# Details of the Courses Taught

**B.Tech.**

1. Machine Drawing & Solid Modelling
2. Machine Design
3. Theory of Machines & Mechanisms
4. Measurement & Instrumentation
5. Power Plant Engineering
6. Vibrations Lab
7. Material Science Lab

**M.Tech.**

1. Fundamentals of Tribology
2. Maintenance & Reliability
3. Tribology Lab

## Research Interests

- ✓ Development of New Light weight, Corrosion resistant and Sustainable Metal Matrix Composites
- ✓ Development of Green Lubricants and Self-Lubricating Materials
- ✓ Mechanical Testing of Composites
- ✓ Friction and Wear of Materials
- ✓ Surface Engineering

## Journal Publications (SCI/SCIE)

1. **Shuhaib. M and M.Nadeem '**Impact of section thickness on cooling curve morphology, structure and morphology of SG Iron**"** *Sādhanā* **46,** 17 (2021). https://doi.org/10.1007/s12046-020-01541-9
2. **Shuhaib. M** and Wani. M.F. 'A study on friction and wear characteristics of Fe-Cu-Sn alloy with $MoS_2$ as a solid lubricant under dry conditions'. *Sadhana Springer Indian Academy of Science* https://doi.org/10.1007/s12046-019-1208-8.
3. **Shuhaib. M** and Wani. M.F. 'Tribological characterization of Fe-Cu-Sn alloy with graphite as solid lubricant'. *Industrial lubrication and Tribology*, https://doi.org/10.1108/ILT-11-2017-0337.
4. **Shuhaib. M** and Wani. M.F. 'High-Temperature Friction and Wear Studies of Fe-Cu-Sn Alloy Containing Graphite as Solid Lubricant under Dry Sliding Conditions'. *Material Research Express*, https://doi.org/10.1088/2053-1591/aaa9a5.
5. **Shuhaib. M** and Wani. M.F. (2017). 'Self-lubricating tribological characterization of lead free Fe-Cu based plain bearing material'. *Jurnal Tribologi* 12, pp.18-37.
6. **Shuhaib. M**, Wani. M.F., Shahid. S. and Junaid. M. 'Tribological and Mechanical properties of PM Fe-Cu-Sn alloy containing graphite as a solid lubricant'. World review of science, technology and sustainable development, *Inderscience publishers*. doi 10.1504/WRSTSD.2018.10014265
7. **Shuhaib. M** and Wani. M.F. (2017) 'The study of micro hardness of powder metallurgy fabricated Fe-Cu alloy using Vickers indenter'. *Advanced Material Proceedings*, doi.10.5185/amp.2017/411.
8. K.A Najar, N.A Sheikh, **Shuhaib Mushtaq**, M.Mursaleen, M.A.Shah. (2019) 'Engineered Synthetic Diamond Film as a Protective Layer for Tribological and Machining Applications: A Review' J Bio Tribo Corros (2019) 5: 59. https://doi.org/10.1007/s40735-019-0252-6

9. S.S. Saleem, M.J.Mir, M.F.Wani and **Shuhaib. M** (2018)**.** Experimental investigation and modelling of PMEDM process with aluminium powder suspended dielectric on AISI-H11. *Discovery Engineering* Vol.6, ISSN 2320-6675.

*10.* **Shuhaib. M.** & Sheikh, N. A. (2013). Experimental evaluation of the effect of thread angle on the fatigue life of bolts. *IOSR J Mech Civil Eng*, *7*(1), 12-19.

*11.* **Shuhaib. M.** & Khan, R. A. (June - 2014). A study of Wear and frictional behavior of metals and polymers in Total Hip Arthroplasty: A Review. *International Journal of Engineering Research and Technology*, 3(6).

## Journal Publications (Conference Proceedings)

1. G.Khajuria, M.F.Wani. **Shuhaib.M**, R.Sehgal. Optimization of the effect of indentation load and dwell time on micro-hardness using fuzzy logic predictive model. IOP Conf. Series: Journal of Physics: Conf. Series **1240** (2019) 012085, IOP Publishing, doi:10.1088/1742-6596/1240/1/012085

2. Bisma.P, M.F.Wani, **Shuhaib.M** and et.al, Tribological characterization of Iron based ceramic reinforced self-lubricating material. IOP Conf. Series: Journal of Physics: Conf. Series **1240** (2019) 012108, IOP Publishing, doi:10.1088/1742-6596/1240/1/012108

3. S.Kumar, M.F.Wani, R.Sehgal, **Shuhaib.M**. Friction and Wear of Si3N4/TiC Ceramic composite under Nano lubrication. IOP Conf. Series: Journal of Physics: Conf. Series **1240** (2019) 012134,IOP Publishing, doi:10.1088/1742-6596/1240/1/012134

4. Md. Firdous, M.F.Wani, **Shuhaib.M** and et.al. Tribological characterization of Cu-Ni Metal matrix composites using MoS2 nano-lubricant. IOP Conf. Series: Journal of Physics: Conf. Series **1240** (2019) 012135, IOP Publishing,doi:10.1088/1742-6596/1240/1/012135

5. **Shuhaib. M,** M.F.Wani, S.S.Saleem, Sumera B, Jebran K, Junaid M. and Jagtar, S. Tribological Characteristics of Fe-Cu-Sn Alloy with Molybdenum Di Sulfide as a Solid Lubricant under Dry Conditions. http://ssrn.com/abstract=3321083 Elsevier 2019.

6. Sumera B, M.F.Wani, S.S.Saleem, **Shuhaib. M,** Jebran K, Junaid M. and Jagtar, S. Nanosctatch property of self -lubricating Ti/$MoS_2$ Nano coating at Nano scratch level. http://ssrn.com/abstract=3321096 Elsevier 2019.

7. Jebran K, Sumera B, M. F. Wani, S.S.Saleem, **Shuhaib. M**, Junaid M. and Jagtar, S. Tribological performance of PTFE in aqueous environments and dry sliding. http://ssrn.com/abstract=3321151 Elsevier 2019.

8. Jagtar, S. M. F. Wani, S.S.Saleem, **Shuhaib. M**, Junaid M and Jebran K. Nano mechanical property of Max phase material $Ti_2AlC$. http://ssrn.com/abstract=3321143 Elsevier 2019.

## Book Chapters

1. **Shuhaib Mushtaq**, M.F Wani, Nadeem Bhat, Carsten Gatoch "Self-Lubicating Iron Based Self-lubricating Metal Matrix Composites" Tribology & Sustainability

https://www.taylorfrancis.com/books/edit/10.1201/9781003092162/triboloy sustainability

## International/ National Conferences

1. **Shuhaib Mushtaq,** Nadeem Baht. ' On Wear behavior of Different grades of Spheriodal Graphite Iron'' 2nd Virtual International Tribology Symposium (ITRS2021)
2. **Shuhaib. M** and Wani. M.F. " Friction and Wear characteristics of Fe based self-lubricating composite containing $MoS_2$ as solid lubricant', in **International conference on Tribology "TriboIndia 2018", 13-15 Dec. 2018 at VJTI Mumbai, India.**
3. **Shuhaib. M** and Wani. M.F. ' Effects of Graphite content and temperature on microstructure, mechanical and tribological properties of iron based powder metallurgy materials', in **International conference on Mechanical Engineering and Allied Sciences (ICMEAS-2018), 14-15 September, 2018, at SMVDU Katra J&K**.
4. **Shuhaib. M** and Wani. M.F. 'Tribological and Mechanical properties of PM Fe-Cu-Sn alloy containing graphite as a solid lubricant', in **5th International Conference and Exhibition on Energy and Advanced Materials (ICE-SEAM 2017), 16-19 October, 2017, at Melaka, Malaysia.**
5. **Shuhaib. M** and Wani. M.F. 'The study of microhardness of powder metallurgy fabricated Fe-Cu alloy using Vickers indenter', in **International Conference on Materials Science & Technology (ICMTech 2016), Delhi, India, 01 - 04 March, 2016, at the Conference Centre, University of Delhi, India.**
6. **Shuhaib. M** and Wani. M.F. 'Tribological study of self-lubricating materials for plain bearings' **11th JK Science Congress**, University of Kashmir

## Faculty Development Programs and Workshops Attended

1. 1 day NME-ICT Awareness workshop organized by NIT Srinagar sponsored by MHRD ON June 19, 2013
2. One Week TEQIP III sponsored faculty development programme on "Outcome based Education" by Mechanical Engineering Department NIT Srinagar from 18th to 22nd May 2019.
3. One Week International Indo-Tunisian Symposium on "*Tribology for Sustainability*" organized by National Institute of technology, Srinagar in collaboration with University De Sfax, Tunisia during 17th to 21st June,2019
4. 5 days virtual international short term course on Tribology & Sustainability from 24th- 28th August 2020 organized by SRM Institute of Engineering & Technology Chennai India.
5. 6-Day AICTE Sponsored Short Term Training Programme (STTP) Series on RECENT ADVANCES IN TRIBOLOGY AND SURFACE ENGINEERING: Series 2 of 4 - Tribology of Machine Components and Applied Tribology, September 14-19, 2020.
6. 6-Day AICTE Sponsored Short Term Training Programme (STTP) Series on RECENT ADVANCES IN TRIBOLOGY AND SURFACE ENGINEERING: Series 4 of 4 - Surface Characterization and Treatments in Tribology, November 23-28, 2020
7. One Week AICTE-ISTE Sponsored Induction/ Refresher Program (Online) ''Advances in Materials Processing and characterization'' Jan 05-11, 2022. Organized by Department of Mechanical Engineering, DAV Institute of Engineering & Technology Jalandhar Punjab.

## Awards and Grants

1. Received best paper award in 2nd Virtual International Tribology Symposium (ITRS 2021) organised by SRM Chennai, NIT Karnataka, Surathkal, and SMVDU Katra, India from 8th to 10 December 2021.
2. Received 1st best paper award in EAH-2019, An International Conference on contemporary issues in engineering and applied sciences, organized by department of MME NIT Srinagar 22-23 June.2019.
3. Received 1st best paper award in TRIBOINDIA-2018, An International Conference on Tribology held in Mumbai 13-15 Dec.2018 (Co-authored)
4. Received Best Session chair Award in International Conference at SMVDU Katra J&K

## Member of Committees

1. Organizing member of **2nd Indo Tunsia symposium held in Tribology laboratory** NIT Srinagar 17-21 June 2019
2. Member of NBA committee in Mechanical Engineering Department of NIT Srinagar
3. Reviewed and Reviewer of many Journals like **Material Research Express**, **Journal of Material Research** and **Silicon (Springer)**.
4. Team member for organizing ***Research Scholars Conclave*** at NIT Srinagar.
5. Active member of ***International Association of Advanced Materials (IAAM) Sweden***.
6. Life-time Member of ***Institution of Engineers India***.
7. Member in compiling NIRF Data for Mechanical Engineering Department at NIT Srinagar.

## Research Guidance

**B.Tech. Projects Supervision-------- [04 Awarded]**

## Events Organized

### Conferences

1. Organizing member of **2nd Indo Tunsia symposium held in Tribology laboratory** NIT Srinagar 17-21 June 2019
2. Organizing member of TriboIndia 2023 'Sustainability Development Through Tribology' organized by Tribology society of India and NIT Srinagar 05-07 Oct. 2023.

Dr. Shuhaib Mushtaq
24/12/2023