

Dr. ISHFAQ AMIN MAEKAI

105 Sarmad lane, Firdous Colony, Dr. Ali Jan Road Eidgah, Srinagar-190002, India

Contact: +91-7006804649, +91-9086892509

Email: aminishfaq19@gmail.com | ishfaqamin@nitsri.ac.in



*Seeking a challenging and rewarding opportunity with an organization of repute which recognizes and utilizes my true potential in the field of **Academics, Research and Development.***

Areas of Expertise

EROSIVE WEAR: Design and development of indigenously built test rig for quantification of wear in hydro turbines such as Francis and Pelton type, Studies on mechanisms of erosive wear, developing remedial measures for mitigation of erosive wear.

Well versed in numerical methods applied for numerical simulation of physical processes and evaluation of mathematical models of the process. Good understanding of the finite element method for solving algebraic, differential and integral equations related to complex physical processes.

Tribology: Good understanding of the three areas of tribology i.e. friction, wear and lubrication. Good understanding of types and mechanisms of wear, factors affecting friction and wear. Experiments were carried out to study the tribological properties of cold forged Al-2014 alloy using a slurry erosive wear test rig to study slurry erosive wear behavior under varying parameter such as slurry concentration, rotational speed, grain size and test duration. Well-equipped with a pin-on-disc machine under varying parameters such as load, time and sliding velocity. Well trained in using air jet erosive wear test rig used to analyze air jet erosive wear behavior under varying parameters such as angle of impingement, standoff distance and erodent particle size. Good understanding of SEM analysis, EDAX analysis and 3D confocal microscopy.

Educational Credentials

Ph.D. Mechanical, 2021

National Institute of Technology, Srinagar

Area of research:

Sediment Based Tribological Studies on Some Hydro Runner Materials Used in Jammu & Kashmir State (GPA 7.80)

M.Tech (Manufacturing Science and Engineering), 2014

Visvesvaraya Technological University, Belgaum;
81.37%

B.E (Mechanical), 2011

Kashmir University; 71.90%

Higher Secondary, 2007

Tyndale Biscoe School, Srinagar; 73.50%

Scholarships

Aug' 2017
to
April 2021

Ph.D. Scholarship Assistantship

Ministry of Human Resource and Development, Government of India

Oct' 2012
to
Mar' 2014

M.Tech Scholarship Assistantship

Ministry of Minority Affairs, Merit cum Means Scholarship, Government of India

Oct' 2007
to
Jan' 2011

B.E Scholarship Assistantship

Ministry of Minority Affairs, Merit cum Means Scholarship, Government of India

Professional Experience

- Currently working as Lecturer (Academic Arrangement) at IOT Zakura, Jammu and Kashmir from March 2024.
 - Worked as Lecturer (Academic Arrangement) at IOT Zakura, Jammu and Kashmir from April 2023 to December 2023.
 - Worked as Assistant Professor (Academic Arrangement) at SKAUST-K Srinagar, Jammu and Kashmir from November 2021 to March 2023.
 - Worked as Assistant Professor (Academic Arrangement) at GCET Safapora, Jammu and Kashmir from April 2021 to October 2021.
 - Research Scholar in Mechanical Engineering Department at National Institute of Technology Srinagar from August 2015 to June 2021.
 - Worked as Assistant Professor (Academic Arrangement) at IUST Pulwama, Jammu and Kashmir from March 2015 to September 2015.
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Achievements

- Won Best Outgoing Student Award 2014 from Department of Mechanical Engineering, PES Institute of Technology.
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Publications

- Ishfaq Amin Maekai, G.A. Harmain, Zehab-ud-Din, J.H. Masoodi, “Resistance to slurry erosion by WC-10Co-4Cr and Cr₃C₂ – 25(Ni₂₀Cr) coatings deposited by HVOF stainless steel F6NM”, **International Journal of Refractory Metals and Hard Materials**, Volume 105, 2022, 105830, ISSN 0263-4368, <https://doi.org/10.1016/j.ijrmhm.2022.105830>.
- Ishfaq Amin Maekai, G.A. Harmain, “Effect of sediment concentration and particle size on erosion behavior of forged stainless steel “, **Materials Today: Proceedings**, Volume 26, Part 2, 2020, Pages 1412-1417, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2020.02.293>.
- Ishfaq Amin Maekai and G.A. Harmain , “An assessment of erosive wear of hydro-turbine steel using statistical modelling and optimization” Published Online: April 12, 2021 **International Journal of Surface Science and Engineering** , 2021 pp 1-17 <https://doi.org/10.1504/IJSURFSE.2021.114337>
- Ishfaq Amin Maekai, G.A. Harmain, “Influence of Operating Parameters on Slurry Erosion of Stainless Steel F6NM” **Tribology in Industry** Vol. 42, No. 2 (2020) 236-254, [DOI: 10.24874/ti.780.10.19.02](https://doi.org/10.24874/ti.780.10.19.02)
- Ishfaq Amin Maekai, G.A. Harmain, “Experimental and numerical investigation on the influence of rotational speed and particle size on wear of hydro turbine steel”, **Materials Today: Proceedings**, Volume 26, Part 2, 2020, Pages 419-422, ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2019.12.073>.
- Shah, M. A. ud din, & Maekai, I. A. “Statistical modelling and optimization of clad characteristics in SAW welding of SS-304”, **Welding International**, 37(5), 237–253. <https://doi.org/10.1080/09507116.2023.2202342>

Conference Papers

- Maekai Ishfaq Amin, Lone Aazim Shafi, R Chinnakurli Suryanarayana Ramesh, Qari Faisal Ahmad, “Slurry Erosive Wear Behaviour Studies of Cold Forged Aluminium 2014 Alloy”, **STLE Annual Meeting & Exhibition** May 17-21, 2015, Omni Hotel, Dallas, Texas, USA.
 - Lone Aazim Shafi, R Chinnakurli Suryanarayana Ramesh, Qari Faisal Ahmad, Maekai Ishfaq Amin, “Tribological Studies on Cold Forged Aluminium 2014 Alloy”, **STLE Annual Meeting & Exhibition** May 17-21, 2015, Omni Hotel, Dallas, Texas, USA.
 - Lone Aazim Shafi, R Chinnakurli Suryanarayana Ramesh, Qari Faisal Ahmad, Maekai Ishfaq Amin, “Development in Cold Forging”, **National Conference on Advances in Mechanical Engineering**, AMC Engineering College, Bangalore.
 - Qari Faisal Ahmad, Lone Aazim Shafi, R Chinnakurli Suryanarayana Ramesh, Maekai Ishfaq Amin, “A Study on Air jet wear behaviour of Cold Forged Aluminium 2014 Alloy”, **STLE Annual Meeting & Exhibition** May 17-21, 2015, Omni Hotel, Dallas, Texas, USA.
 - A CFD Approach for Assessment of Sediment Erosion on Dulhasti Power Station Runner Authors Mohammad Zehab ud din Parray G A Harmain, Ishfaq Amin, Junaid Masoodi Publication **13th J&K Science Congress**
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Computer Skills

- **Languages:** RDBMS (SQL), C, C++, Html, Java.
 - **Web Designing:** HTML, CSS, .NET.
 - **Software** like MATLAB, ANSYS, AutoCAD, SolidWorks, Pro E, Design Expert, Microsoft Office.
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Key Projects/Seminars/Workshops

Major Projects:

- Tribological Studies on Cold Forged Aluminum 2014 Alloy.
- Fabrication and Design of Hybrid Escalator.

Minor Projects:

- Development of AMC for Automotive applications.
- Thermal Spray Coatings – General Electrical (GE) India & Bharat Heavy Electrical Limited (BHEL) Bangalore works.

Industrial Training:

- Basics of Gas Turbine Plant, its function & maintenance of each component.
- Central Heating System.
- Steam generation and supply and their allied system.
- Operation and control system of Hydro Power Plant to generate electricity.
- Working and maintenance at U.E.E.D(Urban Environmental Engineering Department)

Date of Birth: 28^h December 1988

References:

1. **Prof. G. A. Harmain** | gharmain@nitsri.ac.in
Dean Faculty Welfare, Former Dean Research and Consultancy, Former HoD
Professor, Mechanical Engineering Department, National Institute of Technology, Srinagar, India
2. **Dr. Azher Jameel** | jameelazher@gmail.com
Assistant Professor, Mechanical Engineering Department, National Institute of Technology, Srinagar, India
3. **Prof. M. F. Wani** | mfwani@nitsri.ac.in
Dean Research and Consultancy, Former HoD, Former Dean Academics
National Institute of Technology, Srinagar, India
4. **Prof. C S Ramesh** | csr_gce@yahoo.co.in
Professor & Dean, Research & Innovations, Presidency University, Bangalore, India