



# Dr. Kaleem Ahmad Najar

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[https://www.researchgate.net/profile/Kaleem\\_Najar](https://www.researchgate.net/profile/Kaleem_Najar)

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## Objective

"To join as a Faculty Member in a reputed Technical Institution, where I can utilise my knowledge of advanced teaching methods such as team learning and e-learning." and research skills. "Develop and promote creativity and high-order thinking skills that increase the performance of the students. Also to join as Post-doctoral Researcher in a reputed research lab., where I can contribute in Advanced Research in Mechanical Engineering Discipline with a focus on Surface Engineering, Tribology and Smart Manufacturing, etc., while enhancing Experimental and Analytical Skills and supporting the development of Innovative Engineering solutions".

## Experience

- IOT Zakura, University of Kashmir** 09/06/2021 - Continue  
Assistant Professor  
Teaching and Research Assistant
- IUST Awantipura, Pulwama** 24/02/2020 - 31/12/2020  
Assistant Professor  
Teaching and Research Assistant
- National Institute of Technology Srinagar, India** 05/03/2018 - 31/12/2019  
Assistant Professor  
Teaching and Research Assistant
- Govt Polytechnic College Budgam, India** July-2012 - July-2013  
Lecturer  
Teaching
- Comfort Polymers Pvt. Ltd. Rangreth, Budgam, India** June-2007 - July-2008  
Maintenance Engineer  
Maintaining and Operating Machines

## Education

- National Institute of Technology Srinagar, India** 2018  
Doctorate in Surface Engineering & Industrial Tribology  
80
- National Institute of Technology Srinagar, India** 2011  
M-Tech in Mechanical System Design  
61.33
- University of Kashmir, India** 2007  
B.E. in Mechanical Engineering  
57

## Skills

- Surface Characterization Techniques: SEM, XRD and Raman Spectroscopy, etc.
- CNC Turning/Milling Part Programming
- Publications in reputed International Journals
- Additive Manufacturing
- Deposition of CVD-Diamond Coatings using HFCVD Method
- Origon Pro Software
- AutoCAD Software

- Reviewer in reputed international journals
- Bal-on-Disc/Pin-on-Disc type Nano/Micro-Tribometer: Friction & Wear Measurement
- Nano-Indenter: Hardness Measurement
- Arc/Gas/Spot Welding Machines
- Optical Microscope: Study of Microstructure
- Preparation of Samples: To Study the Surface Characterization
- Expert in Surface Pre-treatment Process and Analysis of Coating-Substrate Adhesion Strength
- Working as Reviewer in many reputed International Journals (<https://orcid.org/0000-0003-3459-652X> )

## Projects

- **B-Tech Project**  
B-tech Project entitled, 'Case Study on Ethiopian Airline Crash Boeing 737-260' Batch 2016, Mechanical Engineering Department, IUST Awantipura, Jammu and Kashmir (2020)
- **B-Tech Project**  
B-tech Project entitled, 'Smart Dustbin' Batch 2016, Mechanical Engineering Department, IUST Awantipura, Jammu and Kashmir (2020)
- **B-Tech Project**  
B-tech Project entitled, 'Design and Fabrication of Electric Vehicle' Batch 2018, Mechanical Engineering Department, IOT Zakura, University of Kashmir (2022)
- **B-Tech Project**  
B-tech Project entitled, 'A Study on the Tribological Properties of Al-SiC based Ceramic using Pin-on-Disc Tribometer' Batch 2019, Mechanical Engineering Department, IOT Zakura, University of Kashmir (2023)

## Achievements & Awards

- Outstanding Reviewer Award from the International Journal of 'Materials Research Express' (IOP Publishing) in 2018
- Best Oral Presentation Award in '5th International Conference on Nanotechnology for Better Living' (NBL-2019), ISBN: 978-81-939516-0-6, Applied Science Innovations Pvt. Ltd., Pune, Maharashtra, India, Page-114
- Outstanding Reviewer Award from the Journal of Materials Engineering and Performance (JMEP) in 2025

## Publications

- **SCI/Scopus Indexed/International/National Journals**
  1. Kaleem Ahmad Najar, N. A. Sheikh, M. A. Shah and Mohammad Mursaleen Butt. Enhancing the Wear Resistance of WC-Co Cutting Inserts using Synthetic Diamond Coatings. *Industrial Lubrication and Tribology*, Emerald, 70 (2018) 1224–1233.
  2. Kaleem Ahmad Najar and Mohammad Mursaleen Butt, Development of a Dual Layered Diamond Coated-WC-Co Cutting Tool for Enhancing Tool Life in the Dry Machining of Mildsteel Alloy. *Proc IMechE Part B: J Engineering Manufacture*, Sage Publications, 233(5) (2019) 1515–1528.
  3. Kaleem. Ahmad Najar, N. A. Sheikh and M. A. Shah. Enhancement in Tribological and Mechanical Properties of Cemented Tungsten Carbide Substrates using CVD-diamond Coatings. *Tribology in Industry*, 39 (2017) 20-30.
  4. Kaleem Ahmad Najar, Nazir Ahmad Sheikh, Sajad Din and Mohammad Ashraf Shah. Effect of CVD-diamond coatings on the tribological performance of cemented tungsten carbide substrates. *Jurnal Tribologi*, Malaysian Tribology Society, 9 (2016) 1-17.
  5. Kaleem Ahmad Najar, Nazir Ahmad Sheikh and M. A. Shah. A comparative investigation of mechanical and tribological properties of multilayered CVD-diamond coatings: effect of boron doping. *Advanced Materials Letters*, 8 (2017) 932-938.
  6. Kaleem Ahmad Najar, N. A. Sheikh, M. Mursaleen Butt and M. A. Shah. Engineered Synthetic Diamond Coating as a Protective Layer for Tribological and Machining Applications: A Review. *Journal of Bio- and Tribo-Corrosion*, Springer, 59 (2019) 1-16.
  7. Sajad Hussain Din, M. A. Shah, N. A. Sheikh, K. A. Najar, K. Ramasubramanian, S. Balaji and M. S. Ramachandra Rao. Influence of boron doping mechanical and tribological properties in multilayer CVD diamond coating system. *Bulletin of Material Science*, Springer, 39 (2016) 17531761.
  8. S Mushtaq and K. A. Najar . A study on friction and wear characteristics of Fe-Sn-Cu alloy with MoS<sub>2</sub> as solid

lubricant under dry conditions. Indian Academy of Sciences, Sādhanā, 240 (2019) 1-7.

9. Mohammad Mursaleen Butt, Kaleem Ahmad Najar and Towseef Hussain Dar. Experimental Evaluation of Multilayered CVD- and PVD-coated Carbide Turning Inserts in Severe Machining of AISI-4340 Steel Alloy. *Jurnal Tribologi, Malaysian Tribology Society*, 29 (2021) 117-143.

10. Kaleem Ahmad Najar, Sheikh Nazir, M.A. Shah and Zahid Mushtaq. A dual-layer approach for enhancing the tribological and machining performance of carbide tools in dry turning of mildsteel alloy. *Int. J. Machining and Machinability of Materials, Inderscience*, Vol. 24, Nos. 1/2 (2022).

11. Shezan Malik, Asrar Rafiq Bhat, R. K. Mishra, Kaleem A. Najar and Yogesh Singh. Fabrication and tribological characterization of Jute-fibre reinforced epoxy composites with pistachio-vera nut shell powder as filler material. *Jurnal Tribologi, Malaysian Tribology Society*, 46, 168-181, (2025).

12. Kaleem Ahmad Najar, N. A. Sheikh, M. Mursaleen Butt and M. A. Shah. Mathematical Analysis carried out on the Study of Compatibility, De-lamination and Load-bearing Capacity of Synthetic Diamond Coatings Deposited on Tungsten Carbide Composites. *Journal of Nanotechnology and Materials Science, OMMEGA Publishers*, 6 (2019) 10-16.

13. Kaleem Ahmad Najar, M. A. Shah and N. A. Sheikh. Integrity of CVD-Diamond Coatings on Cemented Tungsten Carbide Substrate: Mathematical Analysis carried out for Calculating the Force of De-lamination and Load Bearing Capacity of Coating-substrate System. *Elixir, Nanotechnology*, 90 (2016) 37463-37467.

14. Aqib Hussain Mir, S. Qadri, Yunis Ahmad Dar and Kaleem Ahmad Najar. Study of Fluid Flow Characteristics for the Flow of Air over a Heated Diamond Shaped Tube. *International Research Journal of Engineering and Technology (IRJET)*, 6 (2019) 3792- 3794.

15. Aqib Hussain Mir, S. Qadri, Yunis Ahmad Dar and Kaleem Ahmad Najar. Study of Heat Transfer Characteristics for the Flow of Air over a Heated Diamond Shaped Tube. *International Research Journal of Engineering and Technology (IRJET)*, 6 (2019) 1- 3.

16. Aqib Hussain Mir, S. Qadri, Yunis Ahmad Dar, Kaleem Ahmad Najar. Investigation of Fluid Flow Characteristics for the Forced Convection of Air over Heated Elliptical Shaped Tube. *International Research Journal of Engineering and Technology (IRJET)*, 6 (2019) 91- 93.

List of Publications in Conference Proceedings:

1. Kaleem Ahmad Najar, M. A. Shah and N. A. Sheikh. Development of CVD Diamond-coated WC-Co Tools for Enhancing Tool Life in the Machining of Hard Metallic Alloys or Ceramics. *Proc. of the Intl. Conf. on Nanotechnology for Better Living, 2016*. DOI: 10.3850/978-981-097519-7nbl16-rps-72.

2. Kaleem Ahmad Najar and M. Mursaleen Butt. Influence on temperature variation, tool wear and tool life with respect cutting speed on diamond-coated WC-Co inserts in the machining of Al15% SiC alloy. *5th International Conference on Nanotechnology for Better Living (NBL-2019)*, ISBN: 978-81-939516-0-6, Applied Science Innovations Pvt. Ltd., Pune, Maharashtra, India, Page-114 (\*Best Oral Presentation).

3. N. A. Sheikh, M. Mursaleen Butt and Kaleem Ahmad Najar. Mathematical analysis carried out on the study of compatibility, delamination and load bearing capacity of synthetic diamond coatings deposited on tungsten carbide composites. *5th International Conference on Nanotechnology for Better Living (NBL-2019)*, ISBN: 978-81-939516-0-6, Applied Science Innovations Pvt. Ltd., Pune, Maharashtra, India, Page-93 (\*Best Poster Presentation).

4. Aqib Hussain Mir, Kaleem Ahmad Najar and S. Qadri. Structural analysis of three different truss bridges subjected to standard IRC class-A loading using FEM tool. *5th International Conference on Nanotechnology for Better Living (NBL-2019)*, ISBN: 978-81-939516-0-6, Applied Science Innovations Pvt. Ltd., Pune, Maharashtra, India, Page-512.

Books And Chapters Published:

1. Kaleem Ahmad Najar, Mohammad Mursaleen Butt and M. A. Shah. A Book, entitled, 'Tribological and Mechanical Properties of Synthetic Diamond Coatings'. *LAMBERT Academic Publishing*, ISBN: 978-3-659-96594-4 (2019).

2. Kaleem Ahmad Najar, Shah Aarif Ul Islam and N. A. Sheikh. A Book Chapter, entitled, 'Surface Engineering of Tungsten Carbide Tool Material by Nano and Microcrystalline Diamond Coatings' in the Book published as 'Surface Engineering of Modern Materials', *Springer's Book Series*, Editor: Prof. Kapil Gupta, ISBN: 978-3-030-43231-7 (2020).

3. S. Rouf, S. Altaf, S. Malik, K. A. Najar and M. A. Shah. A Book Chapter, entitled, 'Comparative Analysis carried out on Modern Indentation Techniques for the Measurement of Mechanical Properties: A Review' in the Book published as 'Post Transition Metals', ISBN: 978-1-83968261-2 (2020).

4. Zahid Mushtaq, M. Hanief and Kaleem Ahmad Najar. A Book Chapter, entitled, 'Non-Edible Biodegradable Plant Oils' in the Book published as 'Industrial Tribology', Taylor & Francis group, Boca Raton, ISBN: 9781003243205 (2022).

## Languages

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- English Urdu Kashmiri

## Personal Details

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- Date of Birth : 17/01/1983
- Marital Status : Married
- Nationality : Indian
- Religion : Islam
- Gender : Male
- Place : Srinagar

## Professional References

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- **Professor Sheikh Nazir - National Institute of Technology Srinagar**  
Professor in Mechanical Engineering Department  
nazir@nitsri.net  
7006629047
- **Professor M. A. Shah - National Institute of Technology Srinagar**  
Professor in Physics Department  
shah@nitsri.ac.in  
7889426961
- **Dr. Farooq Ahmad Najar - IOT Zakura, University of Kashmir**  
Assistant Professor in Mechanical Engineering Department  
farooqnajar@uok.edu.in  
+91-9149534709

## Additional Information

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Research Expertise:  
Surface Engineering & Material's Characterization; Industrial Tribology & Design, and Smart Machining

## Research Interests

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- <https://www.scopus.com/authid/detail.uri?authorId=57192414352> (ResearcherID: E-3448-2019)
  1. Surface Engineering & Material's Characterization
  2. Thin Film Deposition Techniques (Chemical Vapour Deposition Method)
  3. Single-layer & Multilayer CVD Diamond Coatings, (Nano/Microcrystalline)
  4. Industrial Tribology (Friction and Wear)
  5. Smart Machining (CNC and Additive Manufacturing)
  6. Cutting Tool Design and Tool Wear

## Teaching Interests

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- **BTech and MTech Courses Taught**
  - i. Fundamentals of Tribology (M-Tech)
  - ii. Wear Analysis & Control (M-Tech/Ph.D.)
  - iii. Material's Engineering (B-Tech)
  - iv. Computer Applications in Maintenance (M-Tech/Ph.D.)

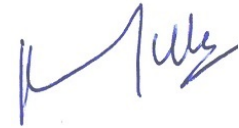
- v. Advanced Manufacturing Processes (B-Tech)
- vi. Automation in Manufacturing (B-Tech)
- vii. Basic Engineering Thermodynamics (B-Tech)
- viii. Power Plant Engineering (B-Tech)
- ix. Fluid Mechanics (B-Tech)
- x. Design of Machine Elements (B-Tech)
- xi. Value Engineering (B-Tech)
- xii. Workshop Technology-II (B-Tech)
- xiii. Engineering Graphics (B-Tech)
- xiv. CAD

## Research Internships

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- **Internships during Ph.D**

1. Worked in collaboration with Indian Institute of Technology Madras (2014, 2015 & 2016).
2. Worked in collaboration with Indian Institute of Technology Kanpur (2016).
3. Worked in collaboration with National Aerospace Laboratories Bangalore (NAL), India (2015).



DR. KALEEM AHMAD NAJAR