

RESUME

Profile

Name Dr. SUMMERA BANDAY
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Qualification

Ph.D Tribology (Nano-coatings)/ NIT Srinagar
M.Tech Mechanical System Design/ NIT Srinagar, **87.32%**
B.E (Mechanical) University of Kashmir, **72.98%**

Experience

Assistant Professor Mechanical Engineering Department- Islamic University of Science & Technology; J & K, India (From Sept. 2013- Nov. 2013)
Lecturer University of Kashmir; North Campus; Delina; J & K, India (From 1st July 2019 - 8th March 2020)
Lecturer Institute of Technology, University of Kashmir; Zakura Campus; J & K, India (From 9th March 2020 - till date)

Publications

1. **Summera Banday**, Bilal Ahmad Reshi, and M. F. Wani. "Adhesion strength and tribological property of self-lubricating Si/MoS₂ nanocoating by pulsed laser deposition method." *Ceramics International* (2021), 47(24), pp.35260-35267.

2. **Summera Banday** and M.F. Wani. "Nanoscratch Resistance and Nanotribological Performance of Ti/MoS₂ Coating on Al-Si alloy deposited by Pulse Laser Deposition Technique". ASME, Journal of tribology, 2019 Feb 1;141(2):022003.
3. **Summera Banday** and M.F. Wani."Nanomechanical and nanotribological characterization of multilayer self-lubricating Ti/MoS₂/Si/MoS₂ nanocoating on aluminium-silicon substrate." Surface and Interface Analysis 51, no. 6 (2019): 649-660.
4. **Summera Banday**, M.F. Wani . Nanomechanical and nanotribological properties of self-lubricating Ti/MoS₂ nanocoating at nanoscale level. International Journal of Surface Science and Engineering, 2020, 14(2), 89-104.
5. **Summera Banday**, M.F. Wani, Mohammad Junaid Mir, Bisma parveez. Adhesion Property of Self-lubricating Si/MoS₂ Nanocoating at Nano-scale Level. In IOP Conference Series: Materials Science and Engineering 2019 Oct 1 (Vol. 561, No. 1, p. 012082). IOP Publishing.
6. **Summera Banday**, & M. Marouf Wani. "Computational parametric investigations on a single cylinder spark ignition engine using ethanol-gasoline blends for power generation". International Journal of Mechanical Engineering and Robotics Research, 4(2), 105, 2015.
7. **Summera Banday**, and M. Marouf Wani. "Effect of Compression Ratio on a Single Cylinder Spark Ignition Engine Using Ethanol-Gasoline Blends for power Generation". Elixir 2016.
8. Shabir Ahmad Lone, **Summera Banday**. "A Study on Single V-Butt Weld Joint with Constructional Modification in Weld Edge" IJTIMES, 5(03), 882.
9. Jagtar Singh, M. F. Wani, **Summera Banday**, Chandra Shekhar, Gurtej Singh. "Nano scratch and Nanoindentation: An Approach to Understand the Tribological Behaviour of

- Max Phase Material Ti₂AlC. In IOP Conference Series: Materials Science and Engineering 2019 Oct 1 (Vol. 561, No. 1, p. 012111). IOP Publishing.
10. Md Firdos Ali, M.F.Wani, **Summera Bandy**, Bisma Parveez, M. Junaid Mir, S. Mushtaq. “Tribological Characterization of Cu-Ni Metal Matrix Composites Using MoS₂ Nano-lubricant. In Journal of Physics: Conference Series 2019 Jul 1 (Vol. 1240, No. 1, p. 012135). IOP Publishing.
11. M. Junaid Mir, M.F Wani, **Summera Bandy**, Bisma Parveez. “Influence of cutting fluid conditions on tool wear and surface roughness in hard turning AISI-D2 Steel using mixed ceramic tools. In Journal of Physics: Conference Series 2019 Jul 1 (Vol. 1240, No. 1, p. 012109). IOP Publishing.
12. Bisma Parveez, M.F.Wani, Md.Firdos Ali, **Summera Bandy**, M.Junaid Mir, S.Mushtaq. “Tribological Characterization of Iron Based Ceramic Reinforced Self-lubricating Material. In Journal of Physics: Conference Series 2019 Jul 1 (Vol. 1240, No. 1, p. 012108). IOP Publishing.

Conferences

1. **Summera Bandy**, M. F. Wani, M. Junaid Mir, Jagtar Singh, Shuhaib Mushtaq, M. Jebran Khan and S. Shahid Saleem. “Nanoscratch Property of Self-lubricating Ti/MoS₂ Nanocoating at Nano-scale Level” SSRN, <http://ssrn.com/abstract=3321096>., In Proceedings of TRIBOINDIA-2018 An International Conference on Tribology 2018 Dec 13.
2. M. Junaid Mir, M.F Wani, **Summera Bandy**, Shuhaib Mushtaq, Jebran Khan, Jagtar Singh, S.S.Shahid. “Comparative assessment of coated CBN and multilayer coated carbide tools on tool wear in hard turning AISID2 steel” SSRN 3323677, (2018), In Proceedings of TRIBOINDIA-2018 An International Conference on Tribology 2018 Dec 13.

3. Singh, Jagtar, M. F. Wani, **Summera Banday**, M. Junaid Mir, Jebran Khan, Shuhaib Mushtaq, S. S. Saleem, and Gurtej Singh. "Nanomechanical Property of Max Phase Material Ti_2AlC ." SSRN 3321143 (2018), In Proceedings of TRIBOINDIA-2018 An International Conference on Tribology 2018 Dec 13.
4. Khan, Jebran, M. F. Wani, Rajat Gupta, S. Shahid Saleem, Shuhaib Mushtaq, M. Junaid Mir, Jagtar Singh, and **Summera Banday**. "Tribological performance of polytetrafluoroethylene (PTFE) in aqueous environments and dry sliding." SSRN 3321151 (2018), In Proceedings of TRIBOINDIA-2018 An International Conference on Tribology 2018 Dec 13.
5. M. Junaid Mir, M. F. Wani, **Summera Banday**, S. Mushtaq, J. Khan, J. Singh, SS Saleem. "Comparative assessment of coated CBN and multilayer coated carbide tools on tool wear in hard turning AISID2 steel". In Proceedings of TRIBOINDIA-2018 An International Conference on Tribology 2018 Dec 13.

Publications (Books and Book Chapters)

1. **Summera Banday**, M. Junaid Mir, M.F.Wani. "Solid-lubricating Coatings: An Effective Lubricating Coating for Tribological Application" Book Chapter, CRC Press, Taylor and Francis Group, 2021, pp. 85-102.
2. Farooq Ahmad Najar, Junaid H. Masoodi, **Summera Banday**, Nadeem Akbar Najar, "Nanomaterials for Sustainable Tribology" Book Chapter, CRC Press Taylor and Francis Group, 2023, pp. 1
3. **Summera Banday**. "Tribological Characterization of Self-lubrication composites" LAMBERT Academic publications. ISBN No.: 978-613-9-46097-7.
4. **Summera Banday**. "Micro Hardness Evaluation of Non-Oxide Ceramic-Ceramic Composites" LAMBERT Academic publications. ISBN No.: 978-3-659-96791-7.

5. **Summera Banday.** “Experimental Investigation of Solar Thermal Flat Plate Collector” LAMBERT Academic publications. ISBN No.: 978-613-9-46319-0.

Awards

1. Best Paper Award (Technical Paper- Academic Research); “Tribology for Reliability & Life” Tribo India 2018.
2. INSC Young Researcher Award, 2021

Projects

1. Laser Surface Texturing of Aluminium Alloy for Bearing Application [**B.Tech**]
2. Tribological Performance of Coconut Oil with MoS₂ under Boundary Lubrication Regime [**B.Tech**]
3. Failure Modeling of Household Materials [**B.Tech**]

Reference 1

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Reference 3

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Reference 4

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