List of Publications

In Journals

1. **R.K. Patel**, B. Bhattacharya, S. Basu, "A finite element based investigation on obtaining high material damping over a large frequency range in viscoelastic composites, " *Journal of Sound and Vibration* (**Elsevier, SCI, 3.655 Impact Factor**), 2007, Vol. 303, 3, 753-766. (DOI: 10.1016/j.jsv.2007.02.010) (ISSN: 0022-460X)
2. **R.K. Patel**, B. Bhattacharya, S. Basu, "Effect of interphase properties on the damping response of polymer nanocomposites," *Mechanics Research Communications* (**Elsevier, SCI, 2.254 Impact factor**), 2008, Vol. 35, 1-2, 115-125. (DOI: org/10.1016/j.mechrescom.2007.08.005) (ISSN: 0093-6413)
3. Alok Soni, **R.K. Patel,** "Two Dimensional Finite Element Modeling of Single Pulse Laser Drilling", *International Journal of Engineering Science and Innovative Technology*, 2013, Vol. 2, 3, 389-396.
4. Ankur Saxena, **R. K. Patel,** "Vibration Control of Cantilever Beam using Eddy Current Damper", *International Journal of Engineering Science and Innovative Technology*, 2013, Vol. 2, 3, 432-439.
5. S. K. Mishra, D. K. Shukla, **R. K. Patel,** " Flexural Properties of Functionally Graded Epoxy-Alumina Polymer Nanocomposite," *Materials Today: Proceedings 5* ***(Elsevier)***, at NIT Trichy IMME17, March 10-12, 2017. (DOI: org/10.1016/j.matpr.2017.11.538)
6. S. K. Mishra, D. K. Shukla, **R. K. Patel,** "Effect of particle morphology on flexural properties of functionally graded epoxy-alumina polymer nanocomposite", *Material Research Express* (**IOPscience, SCIE, 1.620 Impact Factor**), 2019, Vol. 6. (DOI: org/10.1088/2053-1591/ab70e2) (ISSN: 2053-1591)
7. Gyanesh Sharan, **R. K. Patel**, " Optimization of cutting parameters of turning for hardness of AISI 4140 alloy steel," *Materials Today: Proceedings 18* ***(Elsevier)***, part 7, *9th International Conference of Materials Processing and Characterization, ICMPC-2019,* NITTTR Chandigarh, 3582–3589. (DOI: DOI: org/10.1016/j.matpr.2019.07.289)
8. P. K. Rai, V. Yadava, **R. K. Patel,** "Design optimization of cubic Bezier horn for ultrasonic machining," *Sadhana* (**Springer, SCIE, 0.940 Impact Factor**), 2020, Vol. 45, 85. (DOI: org/10.1007/s12046-020-1321-8) (ISSN: 0973-7677)
9. P. K. Rai, V. Yadava, **R. K. Patel,** " Design of Bezier profile horns by using optimization for high amplification," *Journal of the Brazilian Society of Mechanical Sciences and Engineering* (**Springer, SCIE, 1.698 Impact Factor**), 2020, Vol. 42, 309. (DOI: org/10.1007/s40430-020-02379-2) (ISSN: 1806-3691)
10. P. K. Rai, V. Yadava, **R. K. Patel,** "Computer-Aided Design of Bezier Horns Using Finite Element Analysis for Rotary Ultrasonic Machine," *Journal of Advanced Manufacturing Systems* (**World Scientific, Scopus, 1.34 Impact Score**), 2020, Vol. 19, 3, 517-541. (DOI: org/10.1142/S0219686720500250) (ISSN: 1793-6896)
11. S. K. Mishra, D. K. Shukla, **R. K. Patel,** "Fracture toughness of functionally graded nanocomposite in quasi‐static loading," *Polymer Bulletin* (**Springer, SCI, 1.936 Impact Factor**), 2021. (DOI: org/10.1007/s00289-021-03594-0)(ISSN: 1436-2449)
12. P. K. Rai, **R. K. Patel**, "Modal Analysis of Horns Used in Rotary Ultrasonic Machining," *NanoWorld Journal* (Scopus) 2023 Vol. 9 (1) S144-S147, https://doi.org/10.17756/nwj.2023-s1-029
13. Sandeep Kumar Gautam, **Rabindra Kumar Patel**, "Prediction of Dynamic Mechanical Properties of Viscoelastic Composites," *NanoWorld Journal* (Scopus) 2023, Vol. 9 (1) S642-S645, https://doi.org/10.17756/nwj.2023-s1-124
14. Shambhu Kumar, Akhilendra Singh, Mayank Tiwari, **Rabindra Kumar Patel**, "Estimation of Flexural Modulus of Layer Graded Polymer Nanocomposite using Finite Element and Micromechanics Approach, " Materials Today Proceedings,

https://doi.org/10.1016/j.matpr.2023.08.338

In conferences

1. **R.K. Patel**, B. Bhattacharya and S. Basu, "Numerical study of damping behavior of polymer matrix particulate composites," *International congress on computational mechanics and simulation ICCMS-04*, at IIT Kanpur, Dec. 9-12, 2004.
2. **R.K. Patel**, B. Bhattacharya and S. Basu, "A finite element based investigation on obtaining high material damping over a large frequency range in viscoelastic nanocomposites," *International conference on computational mechanics and simulations ICCMS-06*, at IIT Guwahati, Dec. 8-10, 2006.
3. Naresh Kumar, Mukul Shukla, **R.K.Patel,** " Finite Element Modeling of Erosive Wear in Abrasive Jet Machining," *International Conference on Theoretical, Applied, Computational and Experimental Mechanics*, at IIT Kharagpur, Dec. 27-29, 2010.
4. S. K. Singh, **R. K. Patel, "**Effect of Prony Series Parameters on Fracture Behaviour of Mixed-Mode of Viscoelastic Materials," *National Conference on Advances in Manufacturing Technology,* NITTTR Chandigarh, May, 2013.
5. Ashish Mishra, Kaushal Kishor, **R K Patel**, M. S. Alam, "Heat Transfer Enhancement in Shell & Tube Heat Exchanger with Al_2O_3–Water Based Nanofluids: A Numerical Investigation," *22nd National and 11th International ISHMT-ASME Heat and Mass Transfer Conference*, at IIT Kharagpur, Dec. 28-31, 2013.
6. S. K. Mishra, D. K. Shukla, **R. K. Patel**, "Fracture toughness of functionally graded epoxy-alumina polymer nanocomposites," *Proceedings of third Indian Conference on Applied Mechanics* (INCAM 2017), at MNNIT Allahabad, July 5-7, 2017.
7. Varun Chhabra, **R. K. Patel,** "Effect of Discontinuities on the Fracture Behavior of Viscoelastic Materials", International Conference on Innovative Technologies in Mechanical Engineering, KIET Ghaziabad, Aug 24-25, 2012.
8. Ankur Saxena, **Rabindra Kumar Patel**, "Concept and damping force calculation for eddy current dampers", National Conference on Challenges & Opportunities for Technological Innovation in India, AIMT Lucknow, Feb. 16, 2013.
9. Gaurav Pant, **R. K. Patel,** "Effect of interphase property variation on the properties of polymer nanocomposites", National conference on recent trends in engineering and sciences, PIES Indore, April 20-21, 2012.
10. Varun Chhabra, **R.K. Patel,** "Effect of prony series parameters on fracture behavior of viscoelastic materials", National conference on recent trends in engineering and sciences, PIES Indore, April 20-21, 2012.
11. Udit Goel, **R.K. Patel,** "Effect of inclusion on elastic properties of polymer nanocomposites", National conference on recent trends in engineering and sciences, PIES Indore, April 20-21, 2012.