

Mr. Vijay Kumar

Assistant Professor, Department of Mechanical Engineering
Rajkiya Engineering College, Azamgarh, UP



Professional Experience:

- **Assistant Professor** (Mechanical Engineering Department), Rajkiya Engineering College Azamgarh, U.P, December 2017 – till date.
- **Assistant Professor** (Mechanical Engineering Department), Dehradun Institute of Technology, Uttarakhand, July 2014 to December 2016.

Educational Qualifications:

- **Ph.D.** pursuing (Mechanical Engineering), N.I.T. Patna.
- **M.Tech.** (2014) Machine Design Engineering, IIT Roorkee. (Dissertation Topic: Biodynamic Response on Human Hand-Arm Model Under Vibration).
- **B.Tech.** Honours (2012), Mechanical Engineering, Ajay Kumar Garg Engineering College Ghaziabad, Uttar Pradesh Technical University.
- **12th** (2007) UP Board, Mahatma Gandhi Inter College, Gorakhpur, UP.
- **10th** (2005) UP Board, Mahatma Gandhi Inter College, Gorakhpur, UP.

Research Area:

- Machine Design
- Vibration (Human and hand-arm Vibration*)

Books Published:

1. A Text Book of INDIAN TRADITIONS, CULTURAL AND SOCIETY, Mr. Vijay Kumar , Mr. Sambhrant Srivastava, Dr. Pramod Kumar Srivastava , Vayu Education of India, 11 October 2022,ISBN: 9789394962569, 9394962565
2. A Text Book of DESIGN THINKING, Mr. Sambhrant Srivastava , Mr. Vijay Kumar , Dr. Pramod Kumar Srivastava . Vayu Education of India, 11 October 2022,ISBN: 978-9394962576.

Articles Published in SCI/SCIE/SCOPUS/UGC indexed Journals

1. S. Srivastava, V. Kumar, P. Yadav, B. Singh, S. K. Singh, and S. K. Sarangi, "Retightening of Internal Hexagonal and Conical Dental Abutment Connections: A FEA Analysis.," *J. Osseointegration*, 2024.
2. Brihaspati Singh, Pankaj Yadav, Sambhrant Srivastava, Savendra Pratap Singh, Saurabh Kumar Singh, Vijay Kumar, Amit Bhaskar, "Performance Improvement and Optimisation Using Response Surface Methodology (Central Composite Design) of Solar Photovoltaic Module with Reflector and Automatic Water Cooling," *Process Integr. Optim. Sustain.*, vol. 7, no. 1, pp. 343–357, 2023
3. V. Kakulapati, G. S. Gill, R. Chandramma, S. Srivastava, M. Sharma, and V. Kumar, "Importance of Artificial Intelligence in Neural Network: Speech Signal Segmentation Using K-Means Clustering with Kernelized Deep Belief Networks," *Int. J. Intell. Syst. Appl. Eng.*, vol. 11, no. 3s, pp. 144–149, 2023.
4. S. P. Singh, B. Singh, V. Kumar, S. Srivastava, P. Yadav, S. Kumar, and A. Bhaskar, "MODAL AND HARMONIC RESPONSE FINITE ELEMENT ANALYSIS OF CAR BUMPER," vol. 6, no. 1, pp. 483–488, 2019.
5. S. P. Singh, B. Singh, V. Kumar, P. Yadav, and S. Srivastava, "FREE VIBRATION AND HARMONIC RESPONSE ANALYSIS OF HEMP FIBRE COMPOSITE USING FINITE ELEMENT," vol. 6, no. 2, pp. 598–603, 2019.
6. S. P. Singh, V. Kumar, P. Yadav, S. Srivastava, B. Singh, K. Singh, and A. Bhaskar, "FEM Modal Analysis of Jute and Hemp Natural Fibre Reinforced Composite," vol. 8, no. 12, pp. 262–271, 2018.

Articles Published in International/National Journals

1. P. Yadav, B. Singh, S. Kumar, S. Srivastava, V. Kumar, and V. Narayan, "Energy, Exergy, Economic and Enviroeconomic Analysis of an Eco-Friendly Solar Still Made of Locally Available Materials," vol. 7, no. 4, pp. 452–461, 2022.
2. V. Kumar and S. Srivastava, "Vibration-induced biodynamic response of a human hand arm model," vol. 7, no. 5, pp. 13–23, 2022.

Book Chapter's

1. A. Bhaskar, P. Yadav, S.P. Singh, V. Kumar, S. Srivastava, S.K. Singh, B. Singh, and A. Dutt, "Artificial Intelligence in Healthcare Management," in *Reinventing Technological Innovations with Artificial Intelligence*, pp. 26-47, 2024.

2. V. Kumar, S. Srivastava, S. K. Singh, S. K. Sarangi, and A. Maurya, “Methods and Application of 3D Printing in Implantable Medical Devices,” in Sustainable Computing: Transforming Industry 4.0 to Society 5.0, S. Awasthi, G. Sanyal, C. M. Travieso-Gonzalez, P. Kumar Srivastava, D. K. Singh, and R. Kant, Eds. Cham: Springer International Publishing, 2023, pp. 207–227. doi: 10.1007/978-3-031-13577-4_12.

Articles Presented in International/National Conference.

1. “Comparison of Fins in IC engine using CFD Analysis”, Vijay Kumar, 2nd International conference on Smart Sustainable materials and technologies ,organized by CARE college of engineering, Trichy, Tamil Nadu, India 30-31st August 2023.
2. “Emerging Trends in Manufacturing Automation Engineering”, in National Conference on Amity School of Engineering and Technology, Amity University, MP (NSMAE-2016).

Patent

1. V. Kumar, et al., "Composite Grass Straw Wrapping Sheet," Application No. 202311072025 A, Patent Publication Date: Nov. 24, 2023.
2. V. Kumar, et al., "MODIFIED VEHICLE SMOKE CLEANER," Application No. 202311071781 A, Patent Publication Date: Nov. 24, 2023.

MOOCs Courses

1. Social innovation in Industry 4.0 NPTEL 12 week, July to October 2023.
2. Metal Additive Manufacturing NPTEL 12 week , July to October 2023.
3. Product Design and Manufacturing NPTEL 12 week, Jan to April 2023.
4. Design Practice NPTEL 8 week, Feb to April 2023.
5. Completed AICTE Teachers training/FDP 8 module course July 2022.

Invited /Expert Lectures

1. Expert Lecture on Induction Programme for B.tech First year students at Rajkiya Engineering College Azamgarh, 2022 & 2023.
2. Speaker at five day faculty development programme (online), “Recent Trends In Mechanical Engineering”, 20-24 July 2021.

Faculty Training and Advisor

1. One-month Professional Training Gorakhpur from 31st may 2022 to 28th June 2022 in AUTOCAD at NIELIT Gorakhpur.

2. One-week Training in RKBK Maruti Suzuki Workshop, Gorakhpur, 2019.
3. One week Training in N.E. Railway Mechanical Workshop, Gorakhpur, 2018.
4. Faculty Advisor event “Formula Student India, SAE”.

FDP/Seminar/Workshop

1. One week workshop on Internet of things from 21-25th November 2023 in Mechanical Engineering Department at Rajkiya Engineering College Azamgarh (**Organized**).
2. One-Week Online Faculty Development Program (FDP) on “Development of Academic Leadership in Higher Education Under NEP-2020” organized by Department of Applied Sciences & Humanities, Rajkiya Engineering College Mainpuri U.P. from October 30 to November 03, 2023
3. Four weeks online technology based “Entrepreneurship Development Programme”, sponsored by NEB, DST and organized by IIC cell of G.L Bajaj from 10th July to 04th August 2023.
4. One-week FDP program on “Innovations in Mechanical Engineering and Technology” from 2th Jan -06 Jan 2023, organized by Mechanical Engineering Department and Industry Institute Cell at Rajkiya Engineering College Azamgarh (**Organized as Coordinator**).
5. CATIA V5 Design training from 19th -24th December 2022, organized by ALTEN technologies and Rajkiya Engineering College Azamgarh.
6. Attended One week FDP program on “Design for excellence: A step towards innovation” from 26-30Sept 2021, organized by Design innovation Centre of NIT Uttarakhand and IIT Roorkee.
7. Attended four-week Induction/Orientation programme for “Faculty in University/ College/ Institute of Higher Education” organized by Ramanujan College, University of Delhi under the aegis of Ministry of Education on 15th March to 14th April, 2021.
8. Attended One week faculty development programme on “Emerging Trends in Thermal, Design Manufacturing (ETDM-2020)” organized by MMMUT, Gorakhpur on 26th Oct to 30th Oct, 2020.
9. Attended One week faculty development programme on “Technological Evolution and Implementation of Modern Tools in Automotive Engineering” organized by UPES, Dehradun on 26th June to 30th June, 2020.
10. Attended One week faculty development programme on “Outcome Based Education: A Step Towards Excellence” organized by GCE, Karad (AICTE-Delhi) on 11th May to 15th May, 2020.
11. Attended AICTE approved two week Course on “ Digital Transformation in Teaching Learning Process” through Swayam Portal on 16th March to 30th March, 2020.
12. **Organized** One week Workshop on “Emerging Technology in Mechanical Engineering” as **Coordinator** at Department of Mechanical Engineering, Rajkiya Engineering College, Azamgarh in collaboration with SPIU, on 22nd Sep to 26th Sep, 2020.

13. **Organized** Two Days faculty development programme on “Innovations Optimization Techniques in Mechanical Engineering” as **Convenor** at Department of Mechanical Engineering, Rajkiya Engineering College, Azamgarh in collaboration with Department of Mechanical Engineering, Government College of Engineering, Karad, Pune on 20th April to 21st April, 2020.
14. **Organized** five days Hand-on Training on “ANSYS and MATLAB” as **Convenor** at Department of Mechanical Engineering, Rajkiya Engineering College, Azamgarh in collaboration with Department of Mechanical Engineering, Government College of Engineering, Karad, Pune on 17th Feb to 21st Feb, 2020.
15. Attended One day Workshop on Problem based and project-based learning, on 18th Feb 2020, organized by State project implementation unit-UP and Rajkiya Engineering College Azamgarh.
16. Attended One day Workshop on Gender sensitization and women empowerment, on 18th Feb 2020, organized by State project implementation unit-UP and Rajkiya Engineering College Azamgarh.
17. **Organized** One Week faculty development programme on “Recent Advancement in Mechanical Engineering” as **Convenor** at Department of Mechanical Engineering, Rajkiya Engineering College, Azamgarh in collaboration with Department of Mechanical Engineering, Government College of Engineering, Karad, Pune on 19th August to 23rd August, 2019.
18. **Organized** two-day seminar on “Value Based Education” as **Convenor** at Department of Mechanical Engineering, Rajkiya Engineering College, Azamgarh on 25th July to 26th July, 2019.
19. Attended and organized one week workshop on “Emerging Trends in IoT and Discrete Process Modelling, Simulation and Optimization” organized by Department of Mechanical Engineering, Rajkiya Engineering College, Azamgarh on 30th March- 03rd April, 2019.
20. **Organized** one week workshop on “Corporate Expectation and Academia” as **Convenor** at Department of Mechanical Engineering, Rajkiya Engineering College, Azamgarh on 15th- 19th September, 2018.
21. **Organized** one week workshop on “Start-Up Summit” **Convenor** at Department of Mechanical Engineering, Rajkiya Engineering College, Azamgarh on 4th- 8th September, 2018.
22. **Organized** three days’ workshop on “Entrepreneurship Awareness Camp” **Convenor** at Department of Mechanical Engineering, Rajkiya Engineering College, Azamgarh on 19th- 21th April, 2018.
23. Attended two days’ workshop on “Outcome Based Education” organized by Rajkiya Engineering College, Azamgarh on 16th- 17th March, 2018.
24. Attended One week Workshop on “Active Learning, Autonomy, Academic Governance and R & D” organized by IIT Roorkee, June 18th – 22nd, 2018
25. Three Days “Gyan Technical Program” under Yantriki club, at Rajkiya Engineering College Azamgarh held on 05-07th October, 2018(Organized).

Awards/Appreciation

- **Certificate of Appreciation by Director of Rajkiya Engineering College Azamgarh in *Innovation learning and technology in Pedagogy* at 5th September 2019.**
- **Certificate of Appreciation** for contribution and dedication in the academics, 2019
- **Potential Reviewer in** - Journal Mechanics of Solids
- IGI Global

Subjects Taught:

- Theory of Machines
- Machine design
- Fluid Mechanics
- Kinematics of Machines
- Constitution of India, Law and Engineering

Responsibilities:

- Dean Collaboration, (July 2021-Till date)
- Member Central Moderation committee (July 2021-Till date)
- Head of Department, Department of Mechanical Engineering, (Dec 2017- Dec 2020)
- Member, BOS, GEC Karad (Jan 2018- Sep 2020)
- Member, Academic Committee, (Jan 2018-Dec 2020)
- In-Charge, Horticulture, (May 2018- June 2021)
- Member, Central Library Committee, (May 2019-Dec 2021)
- Dean Student Welfare, (August 2018-Dec 2018)

Other Responsibilities:

- Departmental Project Coordinator
- Project External Member, IT Final Year.
- Member, Departmental Core committee.
- Member, Departmental Moderation committee.
- Class Coordinator.