

Curriculum vitae

Name : Dr Rajesh Kumar

Designation : Professor, Department of Mechanical Engineering, University
Institute of Engineering and Technology, Panjab University,
Chandigarh,



Educational Qualification

- **Ph.D.** (Faculty of Engineering & Technology- Mechanical) from **PEC University of Technology** (Panjab University), 2012
- **M.E.** (Computer Integrated Manufacturing) from **Punjab Engineering College**, Chandigarh, 2004
- Qualified Graduate Aptitude Test in Engineering (**GATE**) in **Mechanical Engineering**, 2002
- **B.E.** (Hons), **Punjab Engineering College**, Chandigarh, 1999

Previous Position: 2020-2023: Associate Professor, Mechanical Engineering, UIET, Panjab University.
2008-2020: Assistant Professor, Mechanical Engineering, UIET, Panjab University.
2006-2008: Assistant Professor, Mechanical Engineering, GJUS&T, Hisar.
2003-2006: Research Fellow, CSIR

Research/ Consultancy Projects :

- **Currently working on Research project titled** “Design of Cost Effective Indigenous Vision Machine for Small and Medium Scale Industries” sponsored by Technology Development Programme of **Department of Science and Technology** with Research funding of **Rs. 29, 18,408. (Principal Investigator)**
- **Successfully completed** one research project titled “Design and Development of Leaf Collector and Composting machine” under **Department of Science and Technology & Renewable Energy**, Chandigarh. **(Principal Investigator)**
The **Leaf Collector Machine**, developed as part of the project, has been **donated to** the National Service Scheme (NSS), Panjab University thus contributing towards a clean and green campus.
- **Got Research funding from PU Alumni Association** for the project titled “Design of a Portable Unit for Neck Muscle Strength Assessment” **(Principal Investigator)**
- **Successfully completed** one research project titled “Organic Composter Machine” with research grant from **Unnat Bharat Abhiyan 2.0, IIT Delhi. (Co-Principal Investigator)**
The **Organic Composter Machine**, developed through the project, has been **donated to** the Municipal Corporation, Chandigarh, and is currently operational at the Solid Waste Treatment Plant Site in Industrial Area, Phase 2, Chandigarh.
- **Got FIST (Level -1) Research funding of Rs 1,23,000/- as Co-Principal Investigator from DST India.**
One **five axis Milling Machine** has been procured in Mechanical Engineering Department .
- Successfully completed one research projects title “A sensor array to Characterize the Mechanical Properties of Lower Limb Prosthetic Components in Vivo” as **Co-Investigator** under **Nottingham Trent University (NTU) and Panjab University (PU) Research Grant.**
- **Accomplished four Consultancy projects:**
 - a. Retrofitting for automation of a shaft straightening Machine
 - b. Revolutionizing Colonic Histopathology using Artificial Intelligence
 - c. Replacement of DC drive control system by AC drive control system
 - d. Design and development of tinkerable projects for school students.

PhDs: Ph.D. Scholar Guided : 09, Ph.D. Scholar Guiding : 02, Junior Research Scholar: 01

Publications :

- Publications in SCI/SCIE indexed journals : 30
- Books Edited : 3
- Publications in Book Chapters : 26

Patents : Granted: 04, Published : 02

- Application No. 386190-001 titled "Vision system with camera", **(Indian Patent Granted)**
- Application No. 385495-001 titled "A Portable Unit for Muscle Strength Assessment", **(Indian Patent Granted)**
- Application No. 405479 titled "New Design and Rapid Prototyping of Ankle Foot Orthosis by SLS Technology", **(Indian Patent Granted)**
- Application No. 499010 titled "A System for Fabricating Copper-Tungsten-Carbon Nanotubes Composite Material Electrode for EDM Process", **(Indian Patent Granted)**
- Application No. 202211062857 titled "A Prosthetic Limb Testing Machine", **(Indian Patent Published)**
- Application No. 395515-001 titled "Leaf Collector Machine", **(Indian Patent Published)**

Accomplishments :

- Awarded Research Award by University Institute of Engineering and Technology, Panjab University, Chandigarh in academic year 2018-2019.
- **Primary Evaluator for Toyathon 2021** - Organised & Sponsored by AICTE, Ministry of Education's Innovation Cell, Government of India
- **Co-Chair** in international conference (IC-MAME 2021), 8th -9th October 2021, UIET, PU. **(Publication Partner – IOP Material Science and Engineering)**
- **Co-coordinator in International Conference** (ICAMSE 2020), 28-30th May, 2020, PU. **(Publication Partner – Materials Today-Elsevier)**
- Coordinator of **UHV-II : 8 days AICTE Faculty development program (FDP)** from 12.07.2023 – 19.07.2023

Academic/Administrative Responsibilities :

- NBA Accreditation committee incharge of Mechanical Department. (2022-23)
- Member of PU committee for preparation regarding **NAAC visit** (2023).
- Member to the Faculty of Engineering and Technology (2020-till now)
- Convener of accommodation cum transportation committee for G20 event at Panjab University (Mar 4th, 2023)
- Faculty Incharge for Alumni Association of UIET, PU (2013-2018)
- **Convener of PG Admissions** in Mechanical Deptt ,UIET, PU (2014 -2022)
- **Organized workshops and delivered talk** at GCET, Jammu(2018, 2019)

Invited lectures/ paper presentations (Selective)

- Prosthetic and Orthotic Devices, **(Invited Lecture)**, AICTE Sponsored FDP-2022.
- Chemical Engg. – Emerging Dimensions and Challenges Ahead, **(Session Chair)**, Int. Conf. CHEMCON 2014
- BioMEMS & Nano Robotics, **(Invited Talk)** Int. Conf. (VMN-2012), Amity University.
- Optical trapping of microspheres attached with Bionanomotors, Int. Conf. (ETMN – 2013), BITS GOA.
- Effect of small forces on microsphere under optical trap, Int. Conf.(NFEST- 2019) NIT, Kurukshetra.
- Better healthcare with point of care diagnostic, Int. Conf.(SMST 2020) IIT GOA.
- PEEK based hybrid nano composites for orthopaedic implants, Int. Conf. (ICAM-2023), GOA University.

Future Prospects

- International Collaboration, Education and Outreach Initiatives , More Research Grants, International Conference etc.

PERSONAL DETAILS

DoB: 14/09/76.

Nationality: **Indian.**

ORCID ID: 0000-0003-4824-61

Webpage: <https://uiet.puchd.ac.in/resumes/drrajesh.pdf>

Google Scholar: <https://scholar.google.com/citations?user=PWbicCsAAAAJ&hl=en>