

Research Interest

Grinding of harder materials, Sustainable manufacturing, Sustainable cooling techniques, Advanced manufacturing process, Computer-aided design and manufacturing, additive manufacturing, Industry 4.0, Product Lifecycle Management, MCDM

Courses Taught

Metrology and Quality Management, Computer Integrated Manufacturing, Advanced Metal Cutting and Process Engineering, Product Lifecycle Management, CAD/CAM/CIM, Manufacturing Engineering, Machine Tool Design, Total Quality Management, Machine Design, Engineering Drawing, Computer Aided Design and Computer Aided Manufacturing, Computer Aided Design laboratory, Machine Drawing, Operation Research, International Business

Educational Qualification

- **Ph.D. (Mechanical Engineering)** (2022)
Indian Institute of Technology (IIT-Delhi), New Delhi, Delhi, India
- **M. Tech. Mechanical (CAD/CAM)** (2010)
Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIE&T), Nanded, Maharashtra, India
- **B.E. (Production Engineering)** (2007)
Shri Guru Gobind Singhji Institute of Engineering and Technology (SGGSIE&T), Nanded, Maharashtra, India
- **Diploma (Mechanical Engineering)** (2004)
Government Polytechnic, Nanded, Maharashtra, India

Experience

Academic

- Working as an **Assistant Professor**, Department of Production Engineering, **Veermata Jijabai Technological Institute (VJTI)**, Mumbai, India, since December 2010.
- Worked as **Head, Production Engineering Department**, Veermata Jijabai Technological Institute (VJTI), Mumbai, India, from 11.09.2023 to 30.01.2024.
- **PhD Research Scholar, Indian Institute of Technology (IIT) Delhi**, India, from 19.07.2016 to 03.06.2022.
- **Worked as Lecturer Mechanical Engineering**, Mahatma Gandhi Mission's (MGM's) College of Engineering, Nanded, Maharashtra, India from 30.07.2010 to 24.12.2010.
- **Worked as Lecturer Mechanical Engineering (Visiting)** at Government Polytechnic Nanded, Maharashtra, India, from July 2009 to July 2010.

Industry

- Worked as an **Engineer at Alfa Laval India Ltd. Pune** from 24.08.2007 to 23.08.2008.

Administrative

Department Level

- **Coordinator, Examination Section**, from July 2012 to September 2013, and September 2020 to September 2023.
- **Coordinator**, Time Table from January 2014 to June 2016 and September 2020 to May 2021.
- **Faculty Coordinator, IEOM Student International Chapter** for VJTI Mumbai for AY 2022-23.
- **Member**, Department Purchase Committee from September 2023.
- **In-charge, CAD Laboratory** from July 2012 to July 2016 and from December 2019 to till date.
- **In-charge**, Metrology Laboratory from September 2023 to Jan 2025.
- **Member, Department Academic Committee (DAC)** for UG and PG in Production Engg. from September 2020 to till date.
- **Member**, B. Tech. Production Engineering and M.Tech. Production Engineering **NBA** Team from December 2010 to July 2016.
- **Coordinator**, TEQIP-2 from July 2014 to July 2016.
- **Member, Departmental Board of Studies (BoS)** from December 2010 to till date

Institute Level

- **Convener, First Year and DSY B. Tech. Admission Process** 2023-24.
- **Member**, VJTI Institute Infrastructure Development and Maintenance Committee **IIDM** from July 2023 to till date.
- **Member, VJTI Internal Quality Assurance Cell (IQAC)** from 16th Jan 2021 to till date.
- **Member, VJTI NBA Committee** for the AY 2023-24.
- **Member, VJTI NEP Committee** for the AY 2023-24.
- **Member**, First Year and DSY B. Tech. Admission Process for AY 2011-12, 2012-13, 2014-15.
- **Convener, M.Tech. Admission Process** for the AY 2021-22, and AY 2022-23.
- **Member**, M. Tech. Admission Process for the AY 2020-21.
- **Member**, ARIIA ranking VJTI Committee for AY 2020-21, and AY 2021-22.
- **Member**, VJTI AISHE activities committee for AY 2020-21, and AY 2021-22.
- **Deputy Superintendent**, VJTI Exam Center, UPSC Civil Services Examination August 2014.
- **Marshal**, Convocation for AY 2023-24 held in 2025, AY 2021-22 held in 2023 and AY 2020-21 held in 2022.

Outside Institute

- **District Liaison Officer (DLO)**, Mumbai District, Maharashtra Health and Technical Common Entrance Test (MHT-CET) **2021**.
- **Investigation Incharge**, Oxygen Verification at Hindu Sabha Hospital, Ghatkopar (W), Mumbai during **COVID-19**.
- **AICTE Observer, JEE main (Session-1)** 2023 on 24th Jan. 2023.
- **Scrutiny officer, Regional DTE office**, Bandra during 01.10.2013 to 09.10.2013.
- **Scrutiny officer, AICTE WRO, Mumbai** during 11.09.2013 to 12.09.2013.
- **AICTE Observer, CMAT-2013** on Feb. 21st, 22nd, and 25th, 2013.

Memberships

- **The American Society of Mechanical Engineers (ASME)**, *Membership* (No: 102114023)
- **Indian Society for Technical Education (ISTE)**, *Life member* (LM-117888)
- **Indian Institute of Industrial Engineering (IIIE)**, *Life membership* (LAM-9625)
- **The Institution of Engineers (India) (IEI)**, *Life Member*(M-166117-5)
- **Industrial Engineering & Operations Management Society International (IEOM)**, *Member*(No: 1442003)
- Indian Institute of Delhi **IIT Delhi** Alumni Association Member

Achievements

- **Recipient of a Merit Certificate for First Rank in Production Engineering** at Swami Ramanand Teerth Marathwada University (SRTMU) Nanded during AY 2006-2007.

Thesis Supervised

- Ph.D. 00 completed 03 in progress
- M. Tech. 31 completed 03 in progress
- B. Tech. 85 completed 10 in progress

Academic Supervision

Ph.D. Supervision

- **2025 – Till Date – Supply Chain Management** (*Ph.D. – Nilesh Gaware*)
- **2023 – Till Date – Sustainable Manufacturing** (*Ph.D. – Shivram Poojari*)
- **2023 – Till Date – Dissimilar Metal Welding** (*Ph.D. – Shafik Sayyed*)

M.Tech. Thesis Supervision

- **2024–25: Risk Identification in a Healthcare Program Using a Hybrid Model of Project Management and Monte Carlo Simulation** (M.Tech – Shubham Mane)
- **2024–25: Study on Supplier Relationship Management in a Manufacturing Firm: A Case Study of My Windows** (M.Tech – Vaibhav N. Mundhe)
- **2024–25: Integrated Project Prioritization and Resource Allocation Using Streamlit Dashboard: A Hybrid Decision-Support Framework** (M.Tech – Yash Kaluram Ohal)
- **2023–24: Integrated Framework for Contractor Selection Using Fuzzy TOPSIS and Gradient Boosting Machine in the Construction Industry** (M.Tech – Premkumar Nagesh Kanekar)
- **2023–24: Supply Chain Control Tower for Real-Time Inventory Visibility and Optimization** (M.Tech – Vipul Anil Dighe)
- **2023–24: Automated Project Tracking Information System** (M.Tech – Quadri Ibad Ali)
- **2023–24: Developing a Productive Supplier Relationship in a Competitive Market and Supplier Selection Using AHP (Analytical Hierarchy Process)** (M.Tech – Momin Mohammed Aamir Mohammed Aarif)
- **2021 – 2023 – Environmental Friendly Pothole Repair Method using MCDM Techniques** (*M.Tech – Ankita A. Singh*)
- **2021 – 2023 – Inventory Control and Material Management using Advanced Data Visualization Software for Product Industry** (*M.Tech – Shantanu M. Patil*)
- **2021 – 2023 – Demand Forecasting Technique for lead time reduction in Supply Chain Management** (*M.Tech – Aman A. Kalambe*)
- **2021 – 2023 – Analysis and Applications of S-Curve in Project Management** (*M.Tech – Dharmesh C. Borker*)

- **2020 – 2022** – Human Resource Cost **Optimization Model** for Multiple Projects using **Genetic Algorithm** (*M.Tech – Mitali Mahesh Dhuri*)
- **2020 – 2022** – Optimization of Risk in New Healthcare Product Development using **Delphi Technique** (*M.Tech – Aniket Hanumnth Shelke*)
- **2020 – 2022** – 8D Problem-Solving Approach for Resolving Quality Issues (*M.Tech – Sourabh Dilip Dudhe*)
- **2020 – 2022** – Distracted Driver Detection: A Comparative Study using **CNN** (*M.Tech – Sujay Hanmant Jagadale*)
- **2020 – 2022** – Drinking Water Treatment: Proposed Modifications and Its Cost Implications - case study of an urban water treatment plant in Maharashtra Region (*M.Tech – Syed Noorul Wajahat*)
- **2019 – 2021** – Analysis on 3PRL and its Source Selection using **MCDM Technique** (*M.Tech – Shashank Mishra*)
- **2019 – 2021** – **Multi-objective Optimization** in Wire EDM (*M.Tech – Sahil Sanjay Thobade*)
- **2019 – 2021** – Application of **Project Management** Processes in Automation Projects of Oil and Gas Sector (*M.Tech – Mrumayee Manoj Acharya*)
- **2019 – 2021** – Improvement of Quality and Production of an Automobile Catalytic Converter (*M.Tech – More Rushikesh Pradeep*)
- **2019 – 2021** – Application of **Project Management** Practices for Supply Chain Development (*M.Tech – Gopal Choudhari*)
- **2019 – 2021** – Business Development of CAPRIHAN INDIA LIMITED by E-Commerce (*M.Tech – Aves Ahmed Khan Hafizullah Khan*)
- **2019 – 2021** – Numerical Simulation and Analysis of **Single Grit Grinding** (*M.Tech – Jaiswal Swapnil Shivilal*)
- **2014 – 2016** – **Optimization of Process Parameters** in **Electrochemical Machining** of Aluminium Alloy 7075 using the **Gray Taguchi Method** (*M.Tech – Atul Jagannath Unare*)
- **2014 – 2016** – Implementation of FIFO Warehousing Technique in Lube Oil and Grease Manufacturing Industries (*M.Tech – Jitendra Sajjan Patil*)
- **2014 – 2016** – Productivity Improvement in a Lube Oil Manufacturing Plant (*M.Tech – Sagar Shankar Barkade*)
- **2014 – 2016** – Experimental Analysis in **Powder Mixed Electrical Discharge Machining** (*M.Tech – Vipul Vijay Mahindrakar*)
- **2014 – 2016** – Optimization of Process Quality in an Automobile Industry (*M.Tech – Rahul Raut*)
- **2013 – 2015** – Analysis of **Cold Forming** Dish End in Pressure Vessels (*M.Tech – Mahesh C. Agiware*)
- **2013 – 2015** – Design Analysis of Mud Gun/Clay Gun in the Blast Furnace of Bhilai Steel Plant (*M.Tech – Kamble Chetan Sunil*)
- **2012 – 2014** – Parametric Considerations for **Hot Forming** Dish End (*M.Tech – Rajavardhan s. Repe*)
- **2011 – 2013** – Application of the **Taguchi Method** for **Optimization of the Grinding Process** (*M.Tech – Pradeep Govindrao Patil*)

Research & Development Project

- **Title:** Centre of Excellence in “**Digital Twin for Sustainable Manufacturing**”

Sponsored by: VJTI Centre of Excellence Funding Scheme

Amount: 4.90 Lakhs (Rupees Four Lakhs Ninety Thousand Only)

Duration: Commenced in December 2024

Project Members: **Dr. Pirsab R. Attar (PI)**, Dr. Vishwadeep Handikherkar (Co-PI), Dr. Sachin Mastud (Co-PI), Dr. Sandeep Udmale (Co-PI), Dr. Sameer Sayyad (Co-PI), and Dr. Dadarao Raut (Co-PI)

Universities Visited

- Visited the **USA** from October 18th–28th, 2019, to present a paper at the **STLE Tribology Frontiers Conference**, Chicago, and visited the **University of Michigan-Dearborn** campus for research collaboration.

Publication

Journals

- 1 **Pirsab R. Attar**, Vipul, Dighe, Arif Varsi, Balkrishna Narkhede, and Sameer Sayyad, “**Supply Chain Control Tower for Real-Time Inventory Visibility of Perishable Items**,” *Int. J. Business Excellence*, 2025, (Accepted for Publication).
- 2 Shivram R. Poojari, **Pirsab R. Attar**, and Arif Varsi, “**Optimization of CO2 Laser Machining Parameters for PMMA Using RSM and Desirability Analysis**,” *International Journal on Interactive Design and Manufacturing (IJIDeM)*, 2025. [[URL](#)]
- 3 Ankita Singh, **Pirsab R. Attar**, Khaled Sayed and Sameer Sayyad, “Performance Evaluation of Pot-hole Repair Techniques using **Multi-Criteria Decision-Making Method**: A Case Study in Mumbai,” *Knowledge-Based Engineering and Sciences*, 2023, vol. 4(1), pp. 85–105. [[URL](#)]
- 4 M. Zubairuddin, M. Vasudevan, P. V. Elumalai, M. Akram, **Pirsab R. Attar**, and Elavarasan Krishnasamy, “Numerical and experimental analysis of temperature and residual stress of **GTA and LASER welding** for grade 91 steel,” *International Journal on Interactive Design and Manufacturing (IJIDeM)*, 2024, [[URL](#)]
- 5 Sameer U. Sayyad, Priteshraj V. Patil, and **Pirsab R. Attar**, “Cost Comparison Of A Sewage Treatment Plant Unit By Conventional Method And **BIM Approach**,” *AEJ*, 2024, vol. 14, no. 4, pp. 79–86. [[URL](#)]
- 6 Wajid Ali Hashmi, Abdul Rehman, G.S. Lathkar, **Pirsab R. Attar**, and M. Zubairuddin, “Investigating the Combined Effect of **FDM 3D Printing** Parameters on Tensile Behaviour of ABS Plastic Using **Taguchi Method**,” *Journal of Polymer and Composites*, 2024, vol. 12 (5), pp. 161–169.
- 7 **Pirsab R. Attar**, Rajeshkumar Madarkar, S. Ghosh, and P. V. Rao, “Investigation of **water-based hybrid nanofluid** on tribological performance in **minimum quantity lubrication grinding** of **Nimonic-90 superalloy**,” *Journal of Materials Engineering and Performance*, 2024, vol. 34, pp. 13736–13750. [[URL](#)]
- 8 Rajeshkumar Madarkar, Sahaj Agarwal, **Pirsab R. Attar**, S. Ghosh and P. V. Rao, “Application of ultrasonic vibration assisted **MQL** in **grinding of Ti-6Al-4V**,” *Materials and Manufacturing Processes*, 2017, [[URL](#)]

Conferences

- 1 Suresh Jadhav, Sharad Valvi, Haseen Shaikh, Jayram Gholave, Kiran Bhole, Balwant Bhasme and **Pirsab R. Attar**, “Design and Analysis of Thermal Magnetic Release for Moulded Case Circuit Breaker,” in *Proceeding of International Conference on **Industry 4.0** - Nascent Technologies and Sustainability for 'Make in India' Initiative, SPCE Mumbai, Maharashtra, India,*, December 22-23, 2022.
- 2 Sujay H Jagadale, and **Pirsab R. Attar**, “Distracted Driver Detection: A Comparative Study Using **CNN**,” in *Proceeding of the International Conference on Industrial Engineering and Operations Management, NIT Warangal, Telangana, India*, August 16-18, 2022.
- 3 Mitali Dhuri, and **Pirsab R. Attar**, “Human Resource cost **optimization Model** for multiple projects using **Genetic Algorithm**,” in *Proceeding of the second international conference on humanities and social sciences, management and education technology, India,*, November 03-05, 2022.
- 4 Gopal Choudhary, and **Pirsab R. Attar**, “Application of **Analytic Hierarchy Process** for **Supply Chain Design Project**,” in *Proceeding of the International Conference on Industrial Engineering and Operations Management, NIT Warangal, Telangana, India*, August 16-18, 2022.

- 5 **Pirsab R. Attar**, S. Ghosh, and P. Venkateswara Rao, “Effect of **nano-MQL** using **graphene nanoplatelets** as cutting fluid on lubrication during **grinding of Nimonic 90**,” in *Proceeding of the International Conference STLE Tribology Frontiers Conference, at Chicago, USA.*, October 20-23, 2019.
- 6 **Pirsab R. Attar**, Rajeshkumar Madarkar, S. Ghosh, and P. Venkateswara Rao, “Experimental Investigations on Grindability of Nickel Based Alloy **Nimonic-90**,” in *Proceeding of 10th International Conference on Precision, Meso, Micro and Nano Engineering (COPEN 10), at Indian Institute of Technology Madras, Chennai- 600 036- India.,*, December 07-09, 2017.

Professional Activities

Reviewer

- **Reviewer** for Journal of Manufacturing Processes **JMP**, International Journal on Interactive Design and Manufacturing **IJIDeM**, Mechanics of Advanced Composite Structures, Sigma Journal of Engineering and Natural Sciences, and Conference on Welding and Joining of Advanced Engineering Materials-2025.
- **Guest Editor** of Special issue on, **Environmental Sustainability: Challenges and Solutions** Springer in Feb 2025.[[URL](#)]
- Reviewer of **ATSMDE-2024** held on 27th - 28th December 2024 at VJTI Mumbai.
- Reviewed book chapter of book titled “Grinding of Single-crystal Nickel based Superalloys” from **Taylor and Francis Group, CRC Press**, in March 2024.
- Reviewer of **ICSE-2023** conference held on 16th - 17th March 2023 at VJTI Mumbai.
- Reviewer of **SPICON-2022** conference held on 22nd - 23rd December 2022 at SPCE Mumbai.

Invited Talks and Lectures Delivered

- 1 Delivered expert session on “*Advances in Grinding of Superalloys and The Industry 4.0 Scenario*”, in a three-day Faculty Development Workshop on “Recent Trends in Digital Manufacturing” organized under AICTE Training and Learning (ATAL) Academy and Vibrant Advocacy for Advancement and Nurturing of Indian Languages (VAANI 2025–26) from 9th to 11th September 2025 at Department of Mechanical Engineering, Pillai HOC COE, Rasayani, Mumbai.
- 2 Delivered expert lecture on “*Industry 4.0: The Digital Era*”, under the ISTE chapter in the Mechanical Engineering Department at Government Polytechnic Nanded on 19th July 2025.
- 3 Delivered expert session on “*Improvement in Grinding of Nimonic 90 using Sustainable Cooling Techniques*”, in a five-day online short-term course (e-STC) on “Advances in Manufacturing: Materials, Processes & Systems (AMMPS-25)” organised by the Department of Mechanical Engineering, **National Institute of Technology Kurukshetra** during March 06–10, 2025.
- 4 Delivered expert session on “*Advances in Grinding of Superalloys and The Industry 4.0 Scenario*”, in a five-day Faculty Development Workshop on “Robotics & Automation in advanced manufacturing and Industry 4.0” organized under AICTE Training and Learning (ATAL) from 6–11 January 2025 at Medi-Caps University, Indore.
- 5 Delivered expert session on “*Design of Experiment and use of Minitab*”, in a five-day online Faculty Training Program on “Engineering Research Methodology” organised by the Department of Mechanical Engineering, MH Saboo Siddik Polytechnic, Mumbai during 27th February 2023 to 03rd March 2023.

Organization of Faculty Development or Training Activities Programme

- 1 Coordinated a one-week ATAL FDP online on “*Nanotechnology Advances in Engineering Materials and Manufacturing*”, during July 8th–13th, 2019, at VJTI, Mumbai.
- 2 Coordinated a one-week QIP FDP on “*Advancement in Manufacturing Technology and Management*”, during Feb 22nd–27th, 2016, at VJTI, Mumbai.
- 3 Conducted a one-week “*Finishing School Workshop*” for academically weaker students under TEQIP-II, during June 27th–July 01st, 2016, at VJTI, Mumbai.

Short Term Courses Attended (FDP/STTP)

- 1 Attended one-week workshop on “**Green and Sustainable Solution for Polymers**” organized by ICT Mumbai during April 01–05, 2024.
- 2 Attended one-week online FDP on “**Effective Curriculum Implementation**” organized by ICT Mumbai jointly with NITTR Chandigarh from July 24–28, 2023.
- 3 Attended one-week FDP on “**Quality Assurance through NAAC Accreditation Process**” organized by VJTI Mumbai during Feb. 21–25, 2023.
- 4 Participated in the training programme on “**Composite Materials**” organized by ICAR-CIRCOT, Mumbai during Feb. 07–09, 2023.
- 5 Attended two-week Industrial Training in “**Additive Manufacturing and its Applications**” online from May 11–24, 2022, at NIELIT Calicut, India.
- 6 Short Term Course under TEQIP-III on “**Surface Texturing for Green Technologies**” at IIT Delhi during Mar. 25–29, 2019.
- 7 FDP on “**Product Lifecycle Management**” at SGGSIE&T Nanded under TEQIP-II during May 25–30, 2016.
- 8 STTP on “**Decision Making Models in Operations and SCM**” at IIT Delhi during Feb. 15–19, 2016.
- 9 MHRD–TEQIP–KITE Workshop on “**Teaching Applied Mathematics to Postgraduate Students in Engineering**” at IIT Bombay during May 13–15, 2015.
- 10 Short Term Course on “**Data Analysis for Research and Publication**” at IIT Roorkee during Dec. 20–21, 2014.
- 11 STTP on “**Advanced Data Analysis in Management**” at IIT Delhi during Oct. 21–25, 2013.
- 12 FDP under TEQIP-II on “**CFD in Engineering Domain using Computing Software**” at VJTI Mumbai during Jul. 8–12, 2013.
- 13 CEP Course on “**Rapid Prototyping and Manufacturing**” at IIT Bombay during Feb. 26–28, 2013.
- 14 STTP on “**Micro-Manufacturing**” at IIT Kanpur during Nov. 05–10, 2012.
- 15 STTP on “**Research Methodologies**” at VJTI Mumbai conducted by IIT Bombay during Jun. 25 – Jul. 04, 2012.
- 16 STTP on “**Industrial Engineering Tools & Techniques**” at VJTI Mumbai during Mar. 12–16, 2012.
- 17 STTP on “**Advances in Manufacturing and Micromachining Techniques**” at VJTI Mumbai during Nov. 14–18, 2011.
- 18 STTP on “**Computer Aided Design**” at IIT Madras during Sept. 12–16, 2011.
- 19 STTP on “**Heat Transfer**” at VJTI Mumbai conducted by IIT Bombay during Nov. 29 – Dec. 10, 2011.
- 20 Attended PG Level Part-Time Programme “**ME-676: Collaborative Engineering**” at IIT Bombay during Jan. 01 – Apr. 30, 2012.