

# Dr. Pramod A. Wankhade

Dept. of Mechanical Engineering, VJTI, Mumbai - 400019

pawankhade@me.vjti.ac.in

(+91) 9930882220

## EDUCATION

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**Ph.D. in Mechanical Engineering**  
Specialization: Advanced Heat Transfer

Jadavpur University, Kolkata, India  
November 2023

**M.E. in Mechanical Engineering**  
Specialization: Automobile Engineering

VJTI Mumbai, India  
June 2005

**B.E. in Mechanical Engineering**  
June 1996

Amravati University, Maharashtra, India

## EMPLOYMENT

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**Assistant Professor**

Till Date

Veermata Jijabai Technological Institute, Matunga, Mumbai

**Lecturer (Sr. Scale)**

16.11.2004

Veermata Jijabai Technological Institute, Matunga, Mumbai

**Lecturer**

11.04.2000 – 15.11.2004

Veermata Jijabai Technological Institute, Matunga, Mumbai

**Lecturer**

16.11.1998 – 08.04.2000

B. N. College of Engineering, Pusad, Amravati University

## AREAS OF ACADEMIC INTEREST

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- Hybrid & Electric Vehicles Technology
- Automotive Composites
- Advanced IC Engines and Combustion Analysis
- Vehicle Dynamics
- Vehicle Performance
- Advanced Heat & Mass Transfer
- Thermal Engineering
- Heat Exchangers-Fin Heat Transfer
- Energy Engineering

## COURSES TAUGHT

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- Engineering Graphics
- Machine Drawing
- Power Plant Engineering
- I.C. Engines
- Energy Engineering
- Advance Heat Transfer
- Thermal Engineering
- Thermodynamics
- Automobile Engineering
- Vehicle Dynamics
- Vehicle Performance
- Vehicle Chassis & Body Engineering
- Automotive Transmission System

## PUBLICATIONS

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### Patents Published

1. Dr. Balaram Kundu & **Pramod A. Wankhade**, (2016). *Subsonic Flow Always Found in a Portion of the Divergent Part of a Convergent-Divergent Nozzle Under an Actual Application*. Patent Application No. 1337/KOL/2015. Publication date:01/01/2016.

### Journal Papers

1. Kundu, B., & **Wankhade, P. A.** (2018). Analytical temperature distribution on a turbine blade subject to combined convection and radiation environment. *Journal of Thermal Engineering*, 2(1), 524–528. doi:10.18186/jte.16067
2. **Wankhade, P. A.**, Kundu, B., & Das, R. (2018). Establishment of non-Fourier heat conduction model for an accurate transient thermal response in wet fins. *International Journal of Heat and Mass Transfer*, 126, 911–923. doi:10.1016/j.ijheatmasstransfer.2018.05.089
3. Chavan, N., Solanke, S., Sute, P., & **Wankhade, P. A.** (2022). Design and analysis of planetary gearbox for all-terrain vehicle. *International Journal for Research in Applied Science and Engineering Technology*, 10(12), 100.
4. Kumbhar, S. K., & **Wankhade, P. A.** (2014). A survey paper on effect of nozzle hole geometry on DI diesel engine emission. *IJSRD - International Journal for Scientific Research & Development*, 2(2), ISSN 2321-0613.
5. Bhagat, V. K., **Wankhade, P. A.**, & Ghosh, P. P. (2012). Development and Structural Analysis of Translation Carriage for Reach Truck. *International Journal of Applied Research in Mechanical Engineering*, 2(2), Article 8.
6. Yadav, M. S., & **Wankhade, P. A.** (2009). Improvement in the operating characteristics of internal combustion engine using variation in compression ratio. *International Journal of Recent Trends in Engineering*, 1(5), May 2009.

### National/International Conference Papers

1. Session Chair and Coordinator for the Second International Conference on Advances in Thermal System, Materials and Design Engineering (ATSMDE) held at VJTI, Mumbai during 27th–28th December 2024.
2. Kundu, B., & **Wankhade, P. A.** (2016). Thermal Analysis of Porous Fins under Simultaneous Convection and Radiation Heat Transfer. *Proceedings of the International Conference NCEAT, Jadavpur University, Kolkata, 23–24 September 2016*.
3. Kundu, B., & **Wankhade, P. A.** (2019). Transient Heat Transfer Analysis of an Annular Wet Fin for Dehumidification of Air. *5th International Conference on Advances in Mechanical Engineering, Istanbul, 17–19 December 2019*.
4. **Wankhade, P. A.** (2013). Optimization of Suspension System and an Introduction to Genetic (Evolutionary) Algorithm. *International Conference on Emerging Trends in Technology and Its Application, Yadavrao Tasgaonkar Institute of Engineering and Technology, Karjat, Maharashtra, 6–7 March 2013*.
5. **Wankhade, P. A.** (2010). Disk Brake Squawk Analysis. *International Conference on Emerging Trends in Engineering (ICETE 2010), Dr. J. J. Magdum College of Engineering, Jaysingpur, Maharashtra, 20–21 February 2010*.

## **International Visits**

1. Attended a two-week training program on Hybrid and Electric Vehicles (2008), Cranfield University, UK.
2. Participated as Faculty In-charge with student team during SAE International Aero-modelling Competition held at Texas, USA (2011).
3. Participated as Faculty In-charge with student team during SAE International Aero-modelling Competition held at California, USA (2012).
4. Presented a research paper in International Conference on Advances in Mechanical Engineering, Istanbul, Turkey. 17th -19th December 2019.

## **Workshops/Training Attended**

1. Participated in a Five Day FDP on "Integrating Electric Vehicle Design, Simulation and Control into Engineering Education" jointly organized by AICTE, Mathworks and COEP Tech. Univ., Pune during 26th – 30th August 2024 at COEP, Pune.
2. Participated in One week FDP on "Digital Transformation in Design and Manufacturing Using Autodesk Fusion" jointly organized by AICTE , AUTODESK and VJTI during 5th -9th - August 2024 at VJTI, Mumbai.
3. Completed the AICTE – ISTE approved one-week FDP on "Electric Mobility as a Future" organized by Dr. D. Y. Patil Institute of Engineering, Management and Research Akurdi, Pune in association with SAE India Western Section, during 25th – 29th October 2021.
4. Represented VJTI team participated in the BAJA SAEINDIA 2014 competition held at NATRAX Facility of NATRIP, Pithampur, Indore during 21st – 23rd February 2014.
5. Participated in Two-week ISTE Workshop on "Introduction to Research Methodologies" conducted by IIT- Bombay from 25th June – 4th July 2012 under the National Mission on Education through ICT (MHRD) at Bharati Vidyapeeth CoE, Navi Mumbai, Maharashtra.
6. Participated in Two - week ISTE Workshop on "Engineering Thermodynamics" conducted by IIT- Bombay from 11th – 21st December 2012 under the National Mission on Education through ICT (MHRD) at VJTI, Mumbai, Maharashtra.
7. Completed the TEQIP II Sponsored one-week FDP on "Advances in fault Diagnosis of Rotating Machines and Fluid Film Bearing" organized by Mechanical Engg. Dept., VJTI, Mumbai during 10th – 14th June 2013.
8. Completed the TEQIP II Sponsored one-week FDP on "CFD in Engineering Domain Using Computing Softwares" organized by Mechanical Engg. Dept., VJTI, Mumbai during 8th – 12th July 2013.
9. Participated in the TEQIP Sponsored one-week FDP on "Project Management Tools and Techniques (PMTT)" organized by VJTI and Project management institute during 22nd – 26th August 2013.
10. Participated in the TEQIP II Sponsored one-week FDP on "Rapid Product Development & Manufacturing" organized by Mechanical Engg. Dept., VJTI, Mumbai during 26th – 30th November 2013.
11. Participated in Two - week ISTE Workshop on "Heat Transfer" conducted by IIT- Bombay from 29th November – 10th December 2011 under the National Mission on Education through ICT (MHRD) at VJTI, Mumbai, Maharashtra.

12. Completed the AICTE Sponsored one-week FDP on “Advances in the Manufacturing and Micromachining Techniques” organized by Production Engg.. Dept., VJTI Mumbai during 14th – 18th November 2011.
13. Completed the one-week Training Programme on “Steam Engineering and Energy Conservation” organized by Forbes Marshall Steam Engineering Centre, Pune during 27th – 31st July 2009.
14. Attended a one-week training program on “An Introduction to Hybrid Electric Vehicle and System Integration” during 10th -12th November 2008, held at Cranfield University, UK.
15. Completed the one-week (Seven Saturdays) FDP on “Build People to Build Institute” organized Life Skill Education Academy and VJTI Mumbai, during 1st September – 3rd November 2008.
16. Completed the one-week NITTR, Bhopal Certified FDP on “Student Counselling and Evaluation” organized by VJTI, Mumbai during 16th – 18th April 2007.
17. Attended a ISTE - QIP course on “E – Commerce and Industrial finance” A four-week course winter school programme for Engineering college and Polytechnic teachers organized by at VJTI, Mumbai, during 14th November – 12th December 2003.

## PROJECTS/THESES SUPERVISED

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### Ph.D. :(02 - Ongoing)

1. Ms.Asiya Khan (Admitted in 2024; Registration-249021004), “Natural Fiber Composites in Automotive Applications” ( Application of Natural Fibre Composites in Automotive Engineering)
2. Mr.Dattaprakash G. Vernekar (Admitted in 2025; Registration-259020003)

### M. Tech. :(Completed More that 75, Few Listed Below), on going -05

1. Nirav J. Patel (Reg. No.242100011), Fabrication and Mechanical Characterization of Catla Fish Scale and Scale-Powder Reinforced Polymer Composites.(2025)
2. Aman D. Chavan (Reg. No.242100002), Design, Simulation, and Experimental Validation of Dynamic Behavior of Sandwich Composite Panels Under Transportation-Induced Loading Conditions.(2025)
3. Qasim Vaid (Reg. No.242100010), Development of Gasoline 2W vehicle for M100 Fuel Meeting BS-VI Emission Norms.(2025)
4. Ms.Shivani K. Patil (Reg. No.242101007), Cycle Time Improvement in TATA Harrier EV Process.(2025)
5. Atharv S. Salunkhe (Reg. No.242100008), Two Stage Turbocharging for Hydrogen Powered Internal Combustion Engines.(2025)
6. Tanmay S. Shinde (Reg. No.232110006), Automated Continuous Oil Polishing System.(2024)
7. Saurabh Bhandari (Reg. No.222100002),Developing a Methodology for Damage Simulation in Metals using GISSMO : A Generalized Incremental Stress State Approach.(2023)
8. Akhil Liladhar Firake (Reg. No.212100002),Modelling and Range Extension of Strong HEV Powertrain.(2022)
9. Mangesh Mahendra Lokare (Reg. No.202180020),Numerical Simulation of Latent Heat Storage Unit.(2021)

10. Bhushan D Garde (Reg. No.202180014), Performance analysis of an Annular fin under the effect of dehumidification with transient heat transfer.(2021)

**B.Tech. :(Completed More than 100, Few Listed Below), on going -02**

1. Pavan Barhate (Reg.No.201020080) Tanushri Naik (Reg.No.201021034) Pranjal Jadhav (Reg. No.201021067) Suvarna Talpe (Reg.No.201021014) Design and Construction of Forced Convection Solar Dryer for Food Preservation.(2024)
2. Shruti R Phalke (Reg.No.201021906) Pratiksha R Waghmare (Reg.No.201021907) Harshada C. Shigwan (Reg.No.201021908).Comprehensive Review and Design of High – Performance HVAC System with VRF ( Variable Refrigerant Flow) System. (2024)
3. Krish Shah (Reg.No.201020021) Jatin Baranwal (Reg.No.201020036) Arya Dhumane (Reg.No. 201021033). Development of FEA Model for Validation and Optimization of Bicycle Frame.(2024)
4. Prasad Nagare (Reg.No.191020041) Aditya Nagargoje (Reg.No.191020042) Bhagyesh Sonawane (Reg.No. 191020068). Design and Analysis of a Model for Green Energy Production through Speed Breakers on Highways.(2023)
5. Jayvirsing Chauhan (Reg.No.181020015) Pratik Sulake (Reg.No.1910 20902) Nivrutti Wandale (Reg.No.1910 20909). Performance Investigation for Improving Thermal Efficiency of Earth Tube Heat Exchanger.(2022)

**B.Tech. Honors in Automobile Engineering :(Completed Mini Projects 05),**

1. Aditya Ambalwar (Reg.No.211020036) Rahul Barbude (Reg.No. 211020070) Shravani Deshpande (Reg.No. 211021039).Design and Analysis of Cutting Brake System for an All-Terrain Vehicle (ATV).(2025)
2. Medha Sati (Reg.No. 211021035), Janhavi Deshpande (Reg.No. 211021042).Design, and Analysis of Power Transmission System of A Go Kart. (2025)
3. Kartik Kedare (Reg.No.211020013) Jateen Telange (Reg.No. 211020016) Sakshi Chorghe (Reg.No. 211021071).Power Train Design for an Electric All Terrain Vehicle.(2025)
4. Sahil Dhoble (Reg.No.211020033) Niel James (Reg.No.211020047) Ashwin Dias (Reg. No.211020066).Design and Analysis of a Functionally Graded Disk Brake Rotor.(2025)
5. Kunal Dodani (Reg.No. 211020062) Anurag Dhande(Reg.No.211020045) Varun Shetty (Reg.No. 211040063).Chassis Design and Performance Analysis of an SAE Baja All-Terrain Vehicle: Enhancing Off-Road Mobility and Durability.(2025)

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**ADMINISTRATIVE EXPERIENCE**

- Rector, Boys Hostel, VJTI (2011–2014)

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**ACADEMIC RESPONSIBILITIES**

1. Principal Investigator & In-charge – Centre of Excellence in Electric Vehicle Technology (2025)
2. Program Coordinator – EV Technology (w.e.f. July 2025) & M.Tech. Automobile Engineering (till 2024)
3. Initiated B.Tech. Honors Course in Automotive Engineering (2022) & Faculty In-charge, B.Tech. Honors in Automobile Engineering (2023–Present)
4. Faculty In-charge – Syllabus restructuring for M.Tech. Electric Vehicle Technology and B.Tech. Honors in Automotive Engineering
5. Founder Faculty Member & In-charge, SAE VJTI Student Activities Chapter (2008–Present)

6. Faculty In-charge, M.Tech. Automobile Engineering - Institute level Admissions (2010–2014)

## **PROFESSIONAL ACTIVITIES**

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- Member of Society of Automotive Engineers since 2008 – till Date

## **CONSULTANCY / TESTING**

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- Trailer design checking for Transport Department, Maharashtra
- Worked as Expert Committee Member with MSRTC for accident reduction & safety guidelines

## **RESEARCH / INSTITUTE GRANT RECEIVED**

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- Institute grant received for setting up Centre of Excellence in Electric Vehicle – 45 lacs
- CSR fund of 92 lacs received from SBI Capital for infrastructural development of Centre of Excellence in EV Technology, SAE Students' Racing Club, and AERO Students' Club areas