Name:

Dr. Pravin G. Kulkarni

Designation:

Associate Professor, Dean IQAC

Contact Details:

Email id: pgk_mech@pvgcoet.ac.in

Phone Number with extension: 9890265462

Educational Qualifications:

- PhD (Mechanical), SP Pune University, Pune, August' 2015.
- M.E. (Mechanical-Design Engg.), Shivaji University, Kolhapur, October' 2001.
- B.E. (Mechanical), Dr. BAMU, Aurangabad, June' 1998.
- Any other

Experience:

- Industrial: 1 Year
- Teaching: 24 Years
- Research: 5 Years

Research Interests:

- Condition Monitoring
- Vibration Analysis
- Machine Learning
- Signal Processing

Research Projects:

- **BCUD** research project on "Investigations on Signal Processing Techniques For Vibration Monitoring of Rolling Element Bearings" (2013)
- **Research** project on"Development Of An Intelligent System For Auto Classification Of Rotating Machinery Faults"

Field of Consultancy (Aspiring):

- Vibration based Condition Monitoring, Machine Learning

Consultancy offered:

- Assisting PG and Ph D scholars in Signal analysis and Signal Processing

Number of Publications:

International Journal:20

International Conference: 1

Number of PhD students Guided: 3

Professional Society Memberships:

- ISTE (LM 33829)

Number of FDPs / STTPs attended:17

Number of Conferences / Seminars attended:1

Number of Online Certification Courses done:23

Details of Research papers published:

- **P. G. Kulkarni**, Investigation of performance and emissions of lower blends of algae biodiesel on variable compression ratio diesel engine, International Journal of Advanced Technology and Engineering Exploration, ISSN (Print): 2394-5443 ISSN (Online): 2394-7454
- **P. G. Kulkarni,** Vibration Analysis of Gear Drive Using Machine Learning, Industrial Engineering Journal, Volume : 52, Issue 6, No. 4, June : 2023
- **Ami Barot, Pravin Kulkarni**, Application of Wavelet Multi-resolution Analysis For Gear Fault Diagnosis, Industrial Engineering Journal, Volume : 52, Issue 8, No. 3, August : 2023, ISSN: 0970-2555
- Development of ML model for rotating machinery, IOSR Journal of Mechanical and Civil Engineering, Volume 21, Issue 2, ISSN: 2278-1684
- **Ami Barot, Pravin Kulkarni**, Dynamic analysis of effect of progressive crack and variation in center distance on vibration of spur gears, Materials Today: Proceedings, Materials Today: Proceedings, Volume 77, 2023, Pages 603-613

- **P. G. Kulkarni,** Performance Testing of Polyhouse Bagasse Dryer, International Research Journal of Engineering and Technology, Volume: 10 Issue: 05, May 2023
- **P. G. Kulkarni,** Gear Defect Detection Using Machine Learning, International Journal of Novel Research Development, Volume 8 Issue 5, May-2023

- **P. G. Kulkarni,** Vibration Analysis and Experimental Testing of Existing 3-Wheeler Automotive Silencer Using Modal and FFT Analyzer, International Research Journal of Modernization in Engineering Technology and Science, Volume:05/Issue:05/May-2023, IRJMETS, e-ISSN: 2582-5208

- **P. G. Kulkarni et al.,** DESIGN & ANALYSIS OF HEAVY-DUTY OVERHEAD CONVEYOR SYSTEM, International Research Journal of Engineering and Technology, Volume: 09 (2022), e-ISSN: 2395-0056
- **Ami Barot, Pravin Kulkarni,**Technological Evolution In The Fault Diagnosis Of Rotating Machinery: A Review, *IOSR Journal of Mechanical and Civil Engineering (IOSR-JMCE),*Volume 18, Issue 2, (2021)
- **Pravin Kulkarni, Ami Barot**, A Wavelet Based Multi-resolution Technique for Analysis of Vibration Signals, *International Journal of Science Technology & Engineering (IJSTE),* Vol. 7, Issue 4, (2020)
- **Prathamesh Surnis, Dr. Pravin Kulkarni**, Material Selection for Spur Gear Design Using Ashby Chart, *International Research Journal of Engineering and Technology (IRJET),* Vol.7 Issue 9, (2020)
- **P. G. Kulkarni, N. G. Jaiswal, Ami R. Barot,** Analysis of Vibration Signals of Rolling Element Bearings with Localized Defects, *International Journal Of Modern Engineering Research (IJMER)*, Vol. 10, Issue 7,(2020)
- **P. G. Kulkarni, A. R. Barot,** Attainment of Course Outcomes and Program Outcomes: A Case Study in an Engineering Course, *International Journal of Science Technology & Engineering* ***(IJSTE),*** Vol. 5, Issue 8, (2019) 40-45
- **P. G. Kulkarni, A. R. Barot,** Methodology For Course Outcomes Attainment Analysis For An Engineering Course, *International Journal of Scientific & Technology Research* ***(IJSTR),*** Vol. 8, Issue 3, (2019) 16-19
- **P. G. Kulkarni, A. D. Sahasrabudhe,** Investigations on Mother Wavelet Selection For Health Assessment of Lathe Bearings, *International Journal of*

Advanced Manufacturing Technology ***(Springer)****,* Vol. 90, Issue 9-12, (2017) 3317-3331

- **P. G. Kulkarni, A. D. Sahasrabudhe,** A Theoretical Model For Studying Vibrations of Ball Bearing With Localized Defects on Outer Race Using Cubic Hermite Spline, *International* ***(IEEE)*** *Conference on Industrial Instrumentation & Control (ICIC),* College of Engineering Pune, India, (2015) 121-126
- **P. G. Kulkarni, A. D. Sahasrabudhe,** A Dynamic Model of Ball Bearing For Simulating Localized Defects on Outer Race Using Cubic Hermite Spline, *Journal of Mechanical Science and Technology* ***(Springer)****,* 28(9) (2014) 3433-3442
- **P. G. Kulkarni, A. D. Sahasrabudhe,** Application of Wavelet Transform For Fault Diagnosis of Rolling Element Bearings, *International Journal of Scientific & Technology Research* ***(IJSTR)****,* Vol. 2, Issue 4, (2013) 138-148

Details of FDPs / STTPs attended in last 5 years:

- Applications of Artificial Intelligence and Machine Learning in Mechanical Engineering STTP 8 Aug to 12 Aug 2022
- Syllabus implementation workshop of subject “Data Analytics Laboratory” Workshop 30 July to 2 Aug 2022
- WorkshopDOM Syllabus Implementation 27 to 30 July 2022 Workshop27 to 30 July 2022
- EMERGING TRENDS IN TEACHING & RESEARCH (ETTR) Faculty Development Program7th Feb to 12th Feb 2022
- Research Opportunities in Vibration Engineering Faculty Development Program24th Jan to 29th Jan 2022
- Machinery Condition Monitoring Faculty Development Program 10th Jan to 14 Jan 2022
- Diagnostic Maintenance of Mechanical Systems Faculty Development Program8th Nov to 12th Nov 2021
- ATAL FDP on “Applications of Artificial Intelligence in Mechanical Engineering” 2nd Aug to 6th Aug 2021
- ATAL FDP on “Recent Advancement in Artificial Intelligence” 2nd Aug to 6th Aug 2021

- Awareness of recent noise control techniques and noise pollution laws 18th to 22nd Jan 2021
- Robotics 11th to 15th Jan 2021
- Artificial Intelligence 4th to 8th Jan 2021
- FDP organized by VIIT, Pune on “Research and application perspective of Artificial Intelligence” 21st to 25th Dec 2020
- Short Term Training Program organized by Sandip Foundation’s Sandip Institute of Engineering and Management Nashik on “Renewable Energy and Utilization” 26th to 30th May 2020
- FDP organized by AISSMS COLLEGE OF ENGINEERING, PUNE on “Promoting Quality Culture in Technical Institutions” 25th to 29th May 2020
- FDP Organized under Spoken Tutorial Project by PVG's COET, Pune on “Python 3.4.3” 25th to 30th May 2020
- FDP BY NPTEL (SWAYAM) on “Gear And Gear Unit Design : Theory And Practice” Jan-Apr 2020

Major Portfolios Handled: (college level and department level)

- IQAC
- MESA
- NBA
- NAAC

Role in University Bodies….

- Member LIC Committee, SPPU
- Subject Expert, interview committee, SPPU