



Mr. Vijay D. Kolate

Ph.D. Mechanical (Appearing), M.E. Mechanical (Design Engineering),
B.E. (Mechanical Engineering)

P.G. Coordinator & Assistant Professor

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Experience: 08 years, 06 Months.

EDUCATION:

- | | |
|---|---|
| 1. Master of Engineering (Mechanical Design Engineering) | (2012 – 2014) |
| University: Savitribai Phule Pune University, Pune, India | CGPA: 7.90 (1 st Class with Distinction) |
| 2. Bachelor of Engineering (Mechanical Engineering) | (2007 – 2011) |
| University: Pune University, Pune, India | Percentage: 76.60% (1 st Class with Distinction) |
| 3. HSC (12th Standard) | (2005 – 2007) |
| Maharashtra State Board for Secondary & Higher Secondary | Percentage: 73.50% (1 st Class) |
| 4. SSC (10th Standard) | (2005) |
| Maharashtra State Board for Secondary & Higher Secondary | Percentage: 79.86% (1 st Class with Distinction) |

RESEARCH INTEREST:

Shock and Vibration , Finite Element Method, Mechanical Design Analysis, Composite Material, Mechatronics, Compliant Mechanism.

RESEARCH PUBLICATIONS AND CITATIONS:

International Journal	: 10	International Conferences	: 00	National Conferences	: 00
Google Scholar citations	: 01	Google Scholar h-index	: 01	Google Scholar i10-index	: 00

RESEARCH PROJECTS:

- ME Project Title:** Fatigue Finite Element Analysis of Air Receiver for Pressure & Acceleration Loading.
Summary: The objective of analysis to check fatigue life & stress levels of Air Receiver for cyclic pressure and impact loading. To achieve accuracy within satisfactory level, convergence study is conducted for 3.5MPa pressure case. Model is analyzed with given data cases. (1) Data case 1 – Cyclic Pressure Service of 1.5 MPa to 3.5 MPa. (2) Data case 2 - Cyclic Pressure Service of 0 to 3.5 MPa. (3) Data case 3 – Vertical acceleration of +/- 3g. Development of vibration measurement system using Arduino and MEMS accelerometers:
- Design of XY Flexure Mechanism**
Designed a model of XY Flexure Mechanism which is used for micro-fabrication process useful for creating components having sizes in microns. Various types of mechanisms were designed and analyzed for static and dynamic characterization as well as system identification.
- Blood Warmer**
This device controls exact temperature of injecting blood into patient's body by innovative combination of mechanical stirrer mechanism and electronics control system. Device initially senses temperature of patients body and based on this operator can choose temperature of blood to be injected. Device gets the signal from both patient and operator and generates desired control signal to heater to heat the blood via heat exchanger in uniform and controlled manner.

INTERNATIONAL JOURNAL:

- ❖ "Design and Development of Buffer by Analyzing Collision Force to Resist Jerk Impact on Crane Operator in EOT Crane with Cabin ", Journal of Emerging Technologies and Innovative Research (JETIR), ISSN 2349-5162, ISSN UGC Approved (Journal No. 63975) Impact Factor: 5.87, <https://www.jetir.org>, Volume 6 Issue 6, June 2019, 279 – 284.
- ❖ "Fault Diagnosis of Spur Gear Box for Structural Health Monitoring ", Journal of Emerging Technologies and Innovative Research (JETIR), ISSN 2349-5162, ISSN UGC Approved (Journal No. 63975) Impact Factor: 5.87, <https://www.jetir.org>, Volume 6 Issue 6, September- 2019, 35-41.
- ❖ "Design and Development of Buffer by Analyzing Collision Force to Resist Jerk Impact on Crane Operator in EOT Crane with Cabin ", Journal of The Gujrat Research Society (JGRS), ISSN 0374-8588, UGC-CARE List Group (Group D), Impact Factor: 4.3, <http://www.gujaratresearchsociety.in>, Volume 21 Issue 2, September- 2019, 238 – 249.
- ❖ " Fault Diagnosis of Spur Gear Box for Structural Health Monitoring ", Journal of The Gujrat Research Society (JGRS), ISSN 0374-8588, UGC-CARE List Group (Group D), Impact Factor: 4.3, <http://www.gujaratresearchsociety.in>, Volume 21 Issue 2, September- 2019, 238 – 249.
- ❖ "Static Structural Analysis and Optimization of Pneumatic Compressor Connecting Rod", International Journal of Science and Research (IJSR), ISSN 2319-7064, Impact Factor: 6.391, <https://www.ijsr.net>, Volume 6 Issue 6, June 2017, 566 – 569.
- ❖ "Design and Development of Anti-Roll Back Mechanism", International Journal of Science and Research (IJSR), ISSN 2319-7064, Impact Factor: 6.391, <https://www.ijsr.net>, Volume 6 Issue 6, June 2017, 747 – 750.
- ❖ " Development of Transportation Structure of Industrial Trolley", International Journal of Science and Research (IJSR), ISSN 2319-7064, Impact Factor: 6.391, <https://www.ijsr.net>, Volume 6 Issue 6, June 2017, 1208 – 1211.
- ❖ "Fatigue Finite Element Analysis of Air Receiver for Pressure Loading.", International Journal of Emerging Technology and Advanced Engineering, Website: www.ijetae.com (ISSN 2250-2459, ISO 9001:2008 Certified Journal, Volume 5, Issue 1, January 2015).

- ❖ “Fatigue Finite Element Analysis of Air Receiver for Acceleration Loading.”, International Journal of Emerging Technology and Advanced Engineering, Website: www.ijetae.com (ISSN 2250-2459, ISO 9001:2008 Certified Journal, Volume 5, Issue 1, January 2015).
- ❖ “Robotic Dredger”, International Journal of Engineering, Education and Technology (ARDIJEET), www.ardigitech.in (ISSN 2320-883X, Volume 3, Issue 2, 01/04/2015).

NPTEL ONLINE COURSES:

1. Teaching Learning and Evaluation Technique (4 Weeks)
2. Introduction to Research (8 Weeks)

MEMBERSHIP OF PROFESSIONAL BODIES:

1. Associate Member of Institute of Engineers, India, AMIE (AM1842024)
2. Chartered Engineers of Institute of Engineers, India, CEIEI

HONORS AND AWARDS:

1. Secured first Rank in F.E. to B.E. (at S.N.D. College of Engineering and Research center, Nasik)
2. Secured first Rank in M.E. (S.N.D. College of Engineering and Research center, Nasik)
3. Secured first Rank in SSC (Dr. Shankarrao Kolate Vidhyalaya & Junior College, Pisarve)
4. Secured Third Rank in HSC (Pune Jilha Shikshan Mandal, Waghire College, Saswad)

SUBJECT TAUGHT:

Advanced Stress Analysis	Dynamics of Machinery	Operation Research	Mechanical System Design
Advanced Mechanical Vibrations	Theory of Machines	Basic Mechanical Engg.	Design of Machine Element

SEMINARS/WORKSHOPS/STTPS ATTENDED/ORGANIZED:

- ❖ One Week Faculty Development Program on "Data Science" on **19 - 24 August 2019**, at TAE, Pune organized by PMMMMNMTT, Shivaji University, Kolhapur
- ❖ One Week Faculty Development Program on "Cyber Security" on **10 - 16 June 2019**, at TAE, Pune organized by PMMMMNMTT, Shivaji University, Kolhapur
- ❖ Participated in one day workshop on "Subjected detailing of Refrigeration and Air Conditioning (TE Mechanical 2015 Course conducted on 7th November 2016, Organized by BOS- Mechanical Engineering, SPPU Pune.
- ❖ Participated in one day workshop on "Syllabus Implementation of Operation Research (BE Mechanical 2012 Course conducted on 1st August 2015, Organized by BOS- Mechanical Engineering, SPPU Pune.
- ❖ Attended Two Days Workshop on FFT Analyser: A Tool for Measurement and Analysis of Vibration Parameter held on 30th and 31st January 2015 at Pravara Rural Engineering College, Loni.
- ❖ Participated as Resource Person/ Coordinator /Counsellor in two days' workshop for faculty Development for Diploma in Value and Spiritual Education at YCMOU, Nashik on 27th to 29th January 2013.
- ❖ Attended Two Day Workshop on 'Condition monitoring of machines by using FFT Analyser held at SRES College of Engineering, Kopargaon.
- ❖ Attended Two Days State Level Seminar on 'Artificial Neural Network' Conducted by Department of Mechanical Engineering & ETC held at SND College of Engineering and RC, Yeola, 8th March – 9th March, 2013.
- ❖ Secured 3rd rank in Sensor based Autonomous Robotics organized by Roboversity on 19th and 20th Feb. 2013 at SND COE & RC, Yeola.
- ❖ Attended Two days' Workshop on 'Latex' held at Matoshri College of Engineering and Research Centre, Nasik, 28th – 29th Dec, 2012.
- ❖ Participated in state level Project Competition entitled "Design of Pedestrian Bridge" in "Vidyut Zep -2010" organized at SND COE & RC, Yeola, dated 12th March, 2010.