



## Dr. Vikas M. Phalle

**Associate Professor**, Mechanical Engineering Department  
Former Head, Mechanical Engineering Department, QIP Coordinator  
Veermata Jijabai Technological Institute, Matunga, Mumbai-400 019  
Email: [vmphalle@me.vjti.ac.in](mailto:vmphalle@me.vjti.ac.in), [www.vjti.ac.in](http://www.vjti.ac.in)  
(m) 09819818084 (o) 022-24198225

### 1. Educational Qualifications :

- |                                |             |      |                                |
|--------------------------------|-------------|------|--------------------------------|
| • Ph.D.                        | Mechanical  | 2011 | I.I.T. Roorkee                 |
| • M.E. (I <sup>st</sup> Class) | Mech. Engg. | 2004 | VJTI Mumbai University, Mumbai |
| • B.E.(I <sup>st</sup> Class)  | Mech. Engg. | 1993 | Shivaji University, Kolhapur   |

### 2. Employment Details :

August 2012 to till date	QIP (Minor) Center Coordinator	V.J.T.I. Mumbai
20 <sup>th</sup> June 2014 to 30 <sup>th</sup> August 2018	Prof. In-charge Training and Placement	V.J.T.I. Mumbai
1 <sup>st</sup> Aug. 2014 to 31 <sup>st</sup> January 2018	Prof. In-charge Training and Placement	V.J.T.I. Mumbai
1 <sup>st</sup> Aug. 2012 to 31 <sup>st</sup> July 2014	Head, Mech. Engg. Dept.	V.J.T.I. Mumbai
5 <sup>th</sup> July 2009 to till date	Associate Professor	V.J.T.I. Mumbai
1 <sup>st</sup> Jan 2006 to 4 <sup>th</sup> July 2009	Assistant Professor	V.J.T.I. Mumbai
31 <sup>st</sup> March 2000 to 2005	Lecturer	V.J.T.I. Mumbai
2 <sup>nd</sup> August 1994 to 30 <sup>th</sup> March 2000	Lecturer	B.V.C.O.E. Navi Mumbai

3. **Area of Research :** Machine Design, Tribology, Bearing and Vibration, Design of Experiments, Crane design, etc.

4. **Visiting Professor** – Mechanical Engineering Department, Texas A& M University (TAMU) College station, Texas, Host faculty Dr. J N Reddy Professor in Mechanical Department.

5. **Teaching / Research Experience:** **26 years**

### 6. Research Publications:

(i) International Refereed Journals	-	36*
(ii) Book Chapters	-	02
(iii) National Refereed Journals	-	02*
(iv) Proceedings of International conferences	-	87
(v) Proceedings of National conferences	-	16

**Total number of publications** = **143**

#### \*Papers Published in the Following Journals:

- |  |  |
|--|--|
| • ASME Jr. of Tribology (ASME)                   | • Tribology in Industry  |
| • Tribology International (Elsevier)             | • Journal of IMechE, Part J: Journal of Engineering Tribology  |
| • Industrial Lubrication and Tribology (Emerald) | • Indian Journal of Tribology                                  |
| • Friction (Springer)                            | • Energy and Buildings (Elsevier)                              |
| • Iranian Rehabilitation Journal                 | • International Journal of Engineering, science and technology |

<b>Citation indices</b>	All	Since 2015
Citations	325	265
h-index	9	9

## 7. Research Guidance :

	<u>Awarded</u>	<u>In Progress</u>
Ph. D.	06	06
M.Tech.	61	05
B.Tech. Project	34	02

## 8. Administrative Experience:

Sr No	Post	Period	Duration in Years
i)	Faculty In-charge for NIRF	24 <sup>th</sup> October 2018 to till date	1+
ii)	Coordinator of Scheme for promotion of academic and research collaboration (SPARC) DST Delhi	November 2018 to till date	1+
iii)	Coordinator National Doctoral Fellowship (NDF) AICTE New Delhi	23 February 2018 to till date	1+
iv)	Professor In-charge Training and placement office (TPO)	Aug. 2014 to January 2018, 20 <sup>th</sup> June 2018 to 30 <sup>th</sup> August 2018	3 Yrs 8 Months
v)	Head, Mechanical Engineering Dept. VJTI Mumbai	Aug. 2012 to July 2014	2
vi)	Margdarshan scheme Coordinator AICTE approved	June 2017 to till date	2+
vii)	TEQIP-II Procurement Coordinator and CoE Procurement coordinator	22 Aug. 2012 to July 2017	5
viii)	QIP Center Co-ordinator	Aug. 2012 to till date	7+
ix)	Ph. D. Admission In-charge VJTI, Mumbai	2012- 2013, 2018-2019	2
x)	Chairman, Scrap removal committee VJTI Mumbai	Aug. 2012 to July 2014	2
xi)	TEQIP-II Department Coordinator	2012- 2013	1
xii)	Staff Advisor-M. Tech. (Machine Design)	2012 - 2013	1
xiii)	M.Tech Admission committee member VJTI, Mumbai	2005 – 2007	3

## 9. Books Published/ Patents

- Book compiled titled “TRIBOINDIA2018- Technical Book of Abstracts” Publisher Mechanical Engineering Department VJTI Mumbai. This is official technical book of abstract book of TRIBOINDIA2018-An International Conference on Tribology organized by Veermata Jijabai Technological Institute under the agies of Tribology Society of India ISBN Number 978-93-5346-812-5, pp-1-175, 2019.
- Book compiled titled “VJTI Ph. D. RESEARCH COLLIOQUIUM Technical Book of Abstracts” Publisher VJTI Mumbai. This book contains articles of VJTI Ph D students research work which will be presented in VJTI research Ph D Colloquium on 2019, 11<sup>th</sup> and 12<sup>th</sup> April 2019 at VJTI Mumbai 2019. ISBN Number 978-93-5361-213-9, pp-1-488, 2019.
- Patent

Invention Title	DATA ACQUISITION ALGORITHM FOR FRICTION COEFFICIENT IN VEHICLE DRUM BRAKE.
Publication Number	18/2017
Publication Date	05/05/2017
Publication Type	INA

Application Number	4194/MUM/2015
Application Filing Date	04/11/2015
Field Of Invention	MECHANICAL ENGINEERING
Classification (IPC)	F16D66/00

#### 10. Fund Generation MODROB/QIP/Consultancy/Testing: (31)

Sr No.	Particulars	Amount In Lacs	Remark
i)	Trailer Design, RTO Mumbai- Year 2018-19	0.64	completed
ii)	BRNS Mumbai Sanction of President of India Grants for "TRIBOINDIA-2018" during 13-15 Dec 2018	0.50	Completed
iii)	DRDO has approved an amount of Rs 100,000/- (Rupees One Lakh only) under Grants-In-Aid for "TRIBOINDIA-2018" during 13-15 Dec 2018	1.00	In progress
iv)	SERB-DST Financial assistance under "Assistance to Professional Bodies & Seminar / Symposia Scheme" Rs 1,00,000/- as partial grant-in-aid to the recommended application.	1.00	In progress
v)	Travel Grant for presenting paper at Dallas from DST, New Delhi 1.39445 Lacs and 0.85 from VJTI Matunga Mumbai	2.24	Completed
vi)	Fund for QIP Center from AICTE New Delhi Year 2018-19	15.00	Completed
vii)	Fund for QIP Center from AICTE New Delhi Year 2017-18	117.95	Completed
viii)	Trailer Design, RTO Mumbai- Amount – Rs. 0.50 lakhs Year 2017-18	0.50	Completed
ix)	Share and Mentor (Margdarshan scheme) of AICTE New Delhi Grant 2017-18 for the period of three years	11.00	In Progress
x)	Institute grant to visit Texas A & M University College Station, Texas	1.00	Completed
xi)	Trailer Design, RTO Mumbai Year 2016-17	0.40	Completed
xii)	Global Initiative on Academic Network (GIAN) MHRD Scheme <ul style="list-style-type: none"> <li>• Industrial Tribology</li> <li>• Robotics for Human Movement Training</li> </ul>	15.87	Completed
xiii)	Trailer Design, RTO Mumbai-Year 2015-16	0.20	Completed
xiv)	R & D Grant for “Antifriction bearing” research work under TEQIP-II	1.5	Completed
xv)	R & D Grant for “Investment casting” research work under TEQIP-II	4.5	Completed
xvi)	RPS Grant from AICTE New Delhi for “Experimental and CFD performance analysis of hydrodynamic cylindrical /conical journal bearing”22.69 Lacs	22.69	Completed
xvii)	Travel Grant for presenting paper at Dallas from DST, New Delhi 1.35 Lacs and 0.75 from VJTI Matunga Mumbai	2.10	Completed
xviii)	Trailer Design, RTO Mumbai- Year 2014	0.10	Completed
xix)	Approval of stability calculation for PIT cleaning cum QC unit on EICHER 10.80 Chassis, M/s IPWT Corporation Govandi (w), Mumbai. 2014	0.33	Completed
xx)	Fund for QIP Center from AICTE New Delhi 46.50 Lacs Year 2014-15	46.50	Completed
xxi)	Fund for QIP Center from AICTE New Delhi 52.50 Lacs Year 2013-14	52.50	Completed
xxii)	FDP courses 0.60 lakhs Year 2013-14,	0.60	Completed
xxiii)	Through MOU with M/s. Star Coolers & Condensers Ltd. (Jalgaon) 3.0 Lacs year 2013-14	3.0	Completed
xxiv)	MODROB for Machine Dynamics and Vibration lab 17.50 Lacs year 2013-14.	17.50	Completed
xxv)	MODROB for Measurement Lab from 11.00 Lacs year 2013-14	11.00	Completed
xxvi)	Travel Grant for presenting paper at Detroit from AICTE, New Delhi USA 05/03/2014. and 0.75 from VJTI Matunga Mumbai	1.95 (1.20+0.75)	Completed
xxvii)	Travel Grant for visiting South Africa universities and University of Mauritius 3.75 lacs TEQIP-II	3.75	Completed

xxviii)	Rashtriya Industries 1.86 lakhs June 2012,	1.86	Completed
xxix)	Training course, IOCL, Mumbai, Amount – Rs. 12.00 lakhs. Year 2004-2007	12.00	Completed
xxx)	Trailer Design, RTO Mumbai- Amount – Rs. 6.00 lakhs. Year 2002-2007	6.00	Completed
xxxi)	Project Design analysis for 300 litre storage drums, Client- M/s Time Packaging Ltd., Mumbai,	0.50	Completed
xxxii)	Project Quick connect Dry break Couplings Client-M/s OPW Fluid Transfer Division, Mumbai, 2008	0.50	Completed

### 11. Global Initiative on Academic Network (GIAN) MHRD Scheme: (02)

Sr No	Course Name	No of participants	Name of Foreign Expert	Grant	Date	Status
1	Industrial Tribology	54	Michel Fillon, France	8000\$	4 <sup>th</sup> -8 <sup>th</sup> July 2016	Completed
2	Robotics for Human Movement Training	46	Prof. Sunil Kumar Agarwal MechEnggDept University of Colombia NY USA	8000\$	8 <sup>th</sup> -12 <sup>th</sup> August 2016	Completed

### 12. Contribution of in 'Enhancing academic excellence in the institution' under TEQIP-III/II:

Sr No	Activity	Funding agency
1	Established Machine Dynamics Research lab (Tribology Centre)	TEQIP-II
2	Finishing school for UG Mech Engineering	TEQIP-II
3	International Conference TRIBOINDIA 2018	TEQIP-III
4	International conference on Advances in Material, Design & Manufacturing Engineering held in VJTI during 21-22 Dec., 2017	TEQIP-II

### 13. Short Term Courses/workshop Organized :(27)

- (i) Two days National workshop on "Research Projects, Funding and Opportunities in Engineering and Sciences" at Government Engineering College Ajmer, Rajasthan, for more than 90 participants during on 29<sup>th</sup>& 30<sup>th</sup> May 2019.
- (ii) Two days NBA workshop on "Outcome Based Education and Accreditation" for Rajiv Gandhi Pradyogiki Vishwavidyalaya Bhopal, at Mahakal Institute of Technology, Ujjain (M.P) MP, for more than 100 participants during 29<sup>th</sup> to 30<sup>th</sup> April, 2019 under TEQIP-III.
- (iii) One Day Pre-conference workshop on "Industrial Tribology" under TRIBOINDIA 2018 and AICTE Margdarshan Scheme held on December 12<sup>th</sup> 2018 at V.J.T.I. Matunga, Mumbai.
- (iv) Three days NBA workshop on "Outcome Based Education and Accreditation and how to upload SAR" for Ajmer College of Engineering, Ajmer, Rajasthan on 22 – 24 May 2018.
- (v) Two days NBA workshop on "Outcome Based Education and Accreditation" for SGSIT, Indore, at SGSIT Indore MP, for more than 100 participants during on 9<sup>th</sup>& 10<sup>th</sup> March 2018.
- (vi) Two days NBA workshop on "Outcome Based Education and Accreditation" for Rajiv Gandhi Pradyogiki Vishwavidyalaya (RGPV), at SGSIT Indore, MP, for more than 150 participants during 12-13 April 2018.
- (vii) Faculty development programme on "Industrial Tribology" held from Monday, November 07 – 11, 2018 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai through AICTE SPONSERED, QIP funding.

- (viii)** One Day orientation workshop on “NBA" under Margdarshan Scheme for mentee institutes” held on July 28<sup>th</sup> , 2017 at V.J.T.I. Matunga, Mumbai.
- (ix)** One Day orientation workshop on “VSSC ISRO’s FEAST<sup>STM</sup> FEA TECHNOLOGY” Jointly organized by ISRO and Mechanical Engineering Department and held on November 14<sup>th</sup>, 2016 at V.J.T.I. Matunga, Mumbai.
- (x)** One Day orientation workshop on “Outcome Based Education and Accreditation for Programme Evaluators (PEVs)” held on Saturday, May 14, 2016 at V.J.T.I. Matunga, Mumbai TEQIPSPONSERED.
- (xi)** One Day Faculty development programme on “Skill India” held on Monday, December 07 – 11, 2015 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai through AICTE SPONSERED, TEQIP funding, 25<sup>th</sup> February, 2016 at VJTI, Matunga, Mumbai-19.
- (xii)** One Day Workshop on “Entrepreneurship Development Programme” jointly organized by Maharashtra Chamber of Commerce, Industry & Agriculture and VJTI on 12<sup>th</sup> January, 2016.
- (xiii)** One Day Faculty development programme on “Digital Transformation” held on Monday, December 07 – 11, 2015 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai through AICTE SPONSERED, TEQIP funding, 2<sup>nd</sup> February, 2016 at VJTI, Matunga, Mumbai-19.
- (xiv)** One Day Faculty development programme on “Internet of Things” held on Monday, December 07<sup>th</sup> – 11<sup>th</sup>, 2015 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai through AICTE SPONSERED, TEQIP funding, 8<sup>th</sup> January, 2016 at VJTI, Matunga, Mumbai-19.
- (xv)** Faculty development programme on “Industrial Tribology” held from Monday, December 07 – 11, 2015 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai through AICTE SPONSERED, QIP funding.
- (xvi)** Faculty development programme on “Industrial Tribology” held from, December 22 –26, 2015 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai through AICTE SPONSERED, QIP funding.
- (xvii)** Four days training program organized on “TEQIP MIS” at VJTI Mumbai by NPIU/SPFU Maharashtra state during 10<sup>th</sup>–13<sup>th</sup> March 2014.
- (xviii)** Organized one week International Workshop under TEQIP-II on “25 Years of Passivity Based Control: New Vistas”, jointly by Center of Excellence in Complex & nonlinear Dynamics Systems,VJTI and Highly-complex and networked control system (HYCON) during 19<sup>th</sup> to 23<sup>th</sup> May 2014.
- (xix)** One day Workshop On “Entrepreneurship Development Program” on Tuesday,10<sup>th</sup> February 2015 at VJTI Mumbai for Final Year M Tech students.
- (xx)** Faculty development programme on “Fault Diagnosis of Rotating Machines and Finite Element Analysis” held from Monday, January 05 – 09, 2015 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai through AICTE SPONSERED, QIP funding.
- (xxi)** Convener for “A National Level Doctoral Consortium for Research Scholars in Industrial Engg./Production Engg./ Mechanical Engg./ Automobile/Metallurgy/ Operations Management/HRD”, at VJTI on 11<sup>th</sup> January 2013.
- (xxii)** Faculty development programme “Advances in Fault Diagnosis of Rotating Machines and Fluid Film Bearing” held from Monday, June 10 – 14, 2013 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai through TEQIP\_II funding.
- (xxiii)** Faculty development programme “Mechatronics” held on Monday, June 10 – 14, 2013 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai through TEQIP\_II funding.
- (xxiv)** One Week Faculty Development Program under TEQIP-II on “Rapid Product Development & Manufacturing” held during November 26-30, 2013 in collaboration with IIT Bombay and Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai.
- (xxv)** "E-Foundry: Casting Design and Simulation" on October 26, 2013 (Saturday) in association with Indian Institute of Technology Bombay (IITB), Mumbai and National Knowledge Network (NKN) mission of Govt. of India, New Delhi.
- (xxvi)** Faculty development programme on “Advances in Machine Design” held on June 10 – 14, 2013 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai funded by AICTE-QIP,.
- (xxvii)** Faculty development programme on “Finite Element Analysis” held on March 11 – 12, 2014 at the Mechanical Engineering Department, V.J.T.I. Matunga, Mumbai funded by TEQIP-II.

#### 14. International Visits : (7)

- (i) 2013- 68<sup>th</sup> STLE Annual Meeting, Detroit, Michigan (USA) May 05-09, 2013. (Travel Grant from AICTE, New Delhi USA )
- (ii) University of South Africa\*November 12-26, 2013 (TEQIP-II)
  - University of KWAZULU-NATAL- College of Agriculture, Engineering and Science University in Durban, South Africa
  - Cape Peninsula, University of Technology South Africa
  - CSIRs Nonwoven & Composite Port Elizabeth, South Africa
- (iii) University of Mauritius Faculty of Engineering November 12-26, 2013.
- (iv) 2015- 70<sup>th</sup> STLE Annual Meeting, Dallas, Texas (USA) May 17-21, 2015. (Travel Grant from DST, New Delhi USA 1.35 Lacs and 0.75 from VJTI Matunga Mumbai)
- (v) Texas A& M University (TAMU) College station, Texas, as a Visiting Professor in Mechanical Engineering Department, Host faculty Dr. J N Reddy Professor in Mechanical Department. (Institute funds 1.00 lacs)
- (vi) IMECE-2018- David L. Lawrence Convention Center, Pittsburgh, PA, CONFERENCE Nov 9–15, 2018 (Travel Grant from DST, New Delhi USA 1.35 Lacs and 0.80638 from VJTI Matunga Mumbai)
- (vii) ICoNSoM 2019, International Conference on Nonlinear Solid Mechanics, 16-19 June 2019, Roma, Italy

#### 15. Honored/Appreciations:

- **Best Paper Awards**

- Goyal Jaya, S. S. Mantha, and **V. M. Phalle**. (2019). “Analysis of passive retrofitting measures for reduced electricity demand.” International Conference on Nascent Technologies in Engineering (ICNTE), January 2019, **IEEE**. ( Best Paper Award, Young Researcher Award )
- Goyal Jaya, S. S. Mantha, and **V. M. Phalle**. (2019). “Envelop insulation for energy efficient smart buildings in India”. International Conference on Delivering Future Infrastructure for Developing Countries (INFRACON), July 2019. ( Best Paper Award )

#### 16. Memberships of Professional Bodies:

- i. ASME Member, New York USA, (Membership no 000102515829)
- ii. Executive council member of Tribology Society of India (TSI) Dec 2018
- iii. Board Member of IRD Mechanalysis Ltd. Andheri (E) Mumbai since July 2016
- iv. Life member of Indian Society for Technical Education (ISTE LM-22516)
- v. Life member of Tribology Society of India (TSI LM-3792)
- vi. Senior Member of “Indian Institute of Industrial Engineering”, Navi Mumbai (SMIIE 10036)
- vii. Treasurer of Tribology Society of India (TSI) Mumbai-Pune Chapter 2013-2014

#### 17. National Board of Accreditation:

- Mechanical Department UG course accredited for 2 Years 2014-2016, and worked as Head, Mechanical Engineering Department
- Member of Expert Team National Board of Accreditation (NBA) visited to many Tier-I, Tier-II and Diploma Institutions in India.
- Conducted more than 30 workshops on NBA in Maharashtra, Madhya Pradesh, Rajasthan and Bihar.

#### 18. Finishing school for academically weak students: (01)

- Finishing school for academically weak students of Mechanical Engineering UG and PG students organized on 25<sup>th</sup> -29<sup>th</sup> May 2013.

## 19. Training and Placement:

- To strengthen relationships with academia and influence the development of future talent, Deloitte launch of the third season of the Deans Summit on April 13-14, 2017 at DU: The Leadership Center in India, Hyderabad. "Building World Class Institutions" Dr V M Topkar, Nominations to Deloitte University Relations - Deans Summit 2017.
- Faculty Development Programme Organized on 4<sup>th</sup>&5<sup>th</sup>August 2016at Infosys Pune for Faculty of Computer, Electronics &MCA Department. (Prof. Sharwne, Dr Bhole G P, Prof A A Pandit and Prof Rahul Ingale, Prof Vikrant Chaudhary attendees )
- Attended TPO Meet of Directi (Media.Net) at Andheri on 26<sup>th</sup> July 2015 and 15<sup>th</sup> July 2016
- Attended TPO meet of Accenture company at Goa on 3<sup>rd</sup>-4<sup>th</sup> July 2015
- Faculty Development Programme Organized on 6<sup>th</sup> to 17<sup>th</sup> July 2015 at L& T Infotech for Faculty of Computer Department. (Prof. Sharwne and Prof Varshapriya attended )
- MoU with Tech Mahindra Pune for Year 2015-2018  
Objectives:
  1. Faculty Interaction
  2. Joint Training & M Tech Projects
  3. Research Projects
  4. Industrial visits for Student
  5. Placement for students
- MoU with ShindlerIndiaSchindler India Pvt Ltd 2015-2018  
Objectives:
  1. Faculty Interaction
  2. Research Projects
  3. Industrial visits for Student
  4. Placement for students
  5. Scholarship to VJTI Students
- The Siemens Student Program, SSP for the VJTI student in Industry after second year of B Tech. at SIMENS started in May 2015 and for the year 2015-16, 2016-17, 2017-18
  1. Summer internship 19<sup>th</sup> May to 18<sup>th</sup> July 2015
  2. Winter internship
  3. Donation of Software and CNC machine (worth 2 Cr)
- VJTI TPO and INFOSYS jointly organized one day workshop on "INDUSTRY INSTITUTE INTERACTION" on Saturday 18<sup>th</sup> July 2015
  1. Placement Session + Practice Workshop
  2. Alumni Session- Interaction
  3. Technology Brainstorming- Case Study
  4. Employer of Choice Session
  5. Q&A Session
- VJTI TPO and Accenture jointly organized one day workshop on "INDUSTRY INSTITUTE INTERACTION" on Saturday 8<sup>th</sup> Aug 2015
  1. Placement Session + Practice Workshop
  2. Employer of Choice Session
  3. Q&A Session

## 20. TEQIP\_II / TEQIP-III

### TEQIP-II Procurement Coordinator:

- TEQIP-II Procurement Coordinator 22 Aug. 2012 to 31<sup>st</sup> July 2017
- TEQIP- II COE Procurement coordinator
- Procurement of 5.67Cr successfully completed including Civil work, Learning resources, procurement of Equipment's from August 2012 to December 2014.
- Procurement of 2.35 Cr successfully completed including Civil work, Learning resources, procurement of Equipment's from January 2013 to December 2016.

### TEQIP-III

- NBA workshops conducted for Ajmer College of Engineering Rajasthan and for Gaya College of Engineering Bodh Gaya Bihar
- Students of Ajmer college guided for Internship at VJTI Mumbai 6<sup>th</sup> June to 6 July 2019

- Sessions conducted on Skill and personality development for students at Ajmer College of Engineering Rajasthan and for Gaya College of Engineering Bodh Gaya Bihar

## 21. QIP center Coordinator:

- One Faculty development programs organized at VJTI in the Year 2018-19
- Thirteen Faculty development programs organized at VJTI in the Year 2017-18
- Ten Faculty development programs organized at VJTI in the Year 2016-17
- Seven Faculty development programs organized at VJTI in the Year 2015-16
- Seven Faculty development programs organized at VJTI in the Year 2014-15
- Two students provisionally admitted for Ph D through QIP center
- Five Faculty development programs organized at VJTI in the Year 2013-14
- Introduction of QIP Center at VJTI in the year 2012

## 22. National Doctoral Fellowship (NDF) – AICTE Delhi

Sr No	Ph D Admission	Admission registration year	Number of students admitted
1.	Year 2018-19	Year 2018-19	7
2.	Year 2019-20	Year 2019-20	7

## 23. SHARE AND MENTOR INSTITUTIONS (MARGDARSHAN)

### 2017 to 2020

- i) AICTE Grant 11.00 Lakhs
- ii) MoUs Signed with 16 academic institutes under Share and Mentor Institutions ‘Margdarshan’ AICTE approved scheme
- iii) One day Workshop on NBA under “Share and Mentor” (Margdarshan) Scheme for 16 mentee institute
- iv) One day pre-conference workshop on ‘TRIBOLOGY’ on 12 December 2018
- v) Three day workshop on ‘ANSYS’ at Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai
- vi) Expert Talk on Research funding opportunities and Innovations for Faculty at G H raisoni college of engineering Pune 2/3/2019
- vii) 3 one week Faculty development program conducted at Jondhle college of engineering Asangaon Thane
- viii) Organized joint International Conference TRIBOINDIA-2018 on 13-15 December 2018 with maintee institutes
- ix) NBA guidance to maintee institutes
- x) Expert Talk on ‘Research funding opportunities and how to write proposals’ for Faculty at Bharati Vidyapeeth’s college of engineering, Belapur, Navi Mumbai 30/3/2019
- xi) NBA guidance and MOCK accreditation to Fr. C. Rodrigues Institute of Technology, Vashi, Navi Mumbai and finally college got accredited
- xii) NBA guidance and MOCK accreditation to D J Sangvi college of engineering, Mumbai and finally college got accredited
- xiii) NBA guidance and MOCK accreditation to Rajiv Gandhi college of engineering Andheri, Mumbai and finally college got accredited
- xiv) Expert Talk on ‘Research funding opportunities’ for Faculty at G H Raisoni college of engineering Wagholi, Pune 30/3/2019
- xv) Expert support to Government college of engineering Karad for Writing proposal to AICTE New Delhi.
- xvi) NBA, NAAC guidance and MOCK accreditation to Jondhle college of engineering Asangaon Thane, Mumbai and finally college got NAAC accredited with B+ Grade
- xvii) NBA, NAAC guidance and MOCK accreditation to B R Harne college of engineering Vangani, Thane, Mumbai and finally college got NAAC accredited with B+ Grade.
- xviii) NBA guidance to Bharati Vidyapeeths college of engineering, Belapur, Navi Mumbai, Mumbai and finally college got accredited

## 24. International conference organized (3)



- TRIBOINDIA-2018 An International conference on Tribology, Theme: Tribology for Reliability and Life, 13<sup>th</sup> – 15<sup>th</sup> December 2018 Mechanical department VJTI Mumbai, in association with DST, DRDO, BRNS and Tribology Society of India (TSI).
- Organizing Secretary for International Conference on Advances in Material, Design & Manufacturing Engineering held in VJTI during 21-22 Dec., 2017
- ICONSOM 2019 Mini Symposia 16-24 June 2019 at Rome Italy jointly collaboration with McGill University Canada

**25. International Collaboration**

- ICoNSoM 2019 Mini Symposia 16-24 June 2019 at Rome Italy jointly Organized with McGill University Canada, TRE university Rome, Italy.
- Worked as a session chair in international conference ICoNSoM-2019 Italy Rome.

**26. Keynote Speaker at International/National Conferences: (05)**

- Key Note speaker at “4th National Conference on Research & Developments in Mechanical Engineering (NCRDME-2019)” organized by Mechanical Engineering Department of G. H. Raisoni College of Engineering & Management Pune Sponsored by BCUD, Savitribai Phule Pune University, Pune under QIP on 1-2 March 2019.
- Key Note speaker at first International conference TRIBOINDIA-2018 on 13<sup>th</sup> - 15<sup>th</sup> December **2018**, Veermata Jijabai Technological Institute, Mumbai
- Key Note speaker at 4<sup>th</sup> International conference on "Global Technology Initiatives" (ICGTI-2015) on 29<sup>th</sup>& 30<sup>th</sup> March **2015**, Rizvi College of Engineering, Mumbai
- Key Note speaker at 4<sup>th</sup> National conference on "Innovations in Mechanical Engineering" (NCIME-**2016**) held on 17<sup>th</sup>& 18<sup>th</sup> February **2016**, Sinhgad Institute of Technology, Lonavala, Maharashtra
- Key Note speaker at International Conference TRIBOINDIA-2018 on TRIBOLOGY: for life and sustainability. (TRIBOINDIA-2019)" held on 13<sup>th</sup>-15<sup>th</sup> December **2019**, Sponsored by DST-SERB, DRDO, BRNS, TEQIP-III, at VJTI Mumbai.

**27. Interaction with VJTI Alumni**

- Interaction with Alumni of VJTI at Detroit Michigan USA 6<sup>th</sup> to 9<sup>th</sup> May 2013 and interact with Mr Fulchand Jain passed out 1959 and Mrs. Sarika Kapil passed out 2004.
- Visit of Invited to Mr. SekharBasu, Director BARC Mumbai, and Alumni to visit and interact with students and faculty of Mechanical Engineering Department 18<sup>th</sup> March 2013.
- Interaction with Alumni at Dallas Texas USA Mr. Balsara Poras Tehmuras pass out in 1981 Working as Professor at University of Texas at Dallas USA and interaction with Mr. Shah Jasvantrai Chunilal Pass out year 1959.
- Interaction with Alumni of VJTI at CMU Pittsburg USA 16<sup>th</sup> November 2018 and interact with Pass out of B Tech Batch 2016.

**28. Expert Lectures delivered -22 in International/ National workshops and Conferences.**

**29. Glimpse of Major Development in Mechanical Engineering Department & TPO**

i)	Renovation of TPO office HR room, Interview & Group discussion rooms	2015-16
ii)	Developed Dynamics of Machine and Vibration Laboratory in the Department. (Through MODROB and TEQIP-II Funding agencies) Grants	2013-2014
iii)	Developed GUI Lab developed through Institute funds	2013-2014
iv)	PG Research lab developed under TEQIP-II grant	2013-2014

### 30. INDUSTRY ACADEMIC COLLABORATION

- xix) **Invited to Mr. Sanjay Kirloskar Chairman and MD of Kirloskar Brothers Ltd. Pune to interact with students and faculty of Mechanical Engineering Department on 12<sup>th</sup> March 2014.**
- xx) **MoUs Signed with (08)**
  - a) HSBC
  - b) Schindler India Pvt Ltd 2015-2018
  - c) Tech Mahindra 2015-2018
  - d) Geometric Ltd 2014-2015
  - e) M/s. Star Coolers & Condensers Ltd. 2013-14
  - f) M/s. Cummins India Ltd. Pune 2013-14 and 2014-17
  - g) University of Mauritius
- xxi) Expert Lecture organized on “Tribological Testing and the Modeling of Real Systems” VJTI, Mechanical Engineering Dept., Mumbai and Tribology Society of India, Mumbai–Pune Chapter, of Mr George PLint, Managing Director, Phoenix Tribologies Ltd., UK, on 30 January 2014.
- xxii) Visit of Technische Hochschule Ingolstadt, Center of Applied Research (ZAF) , Esplanade 10 GERMANY- 85049 Ingolstadt (*Robert Lugner, Deputy President of Institute for Vehicle Safety Systems, Head of Occupant Safety, [Robert.lugner@thi.de](mailto:Robert.lugner@thi.de)*) on 26 Dec 2013.

31. Member of Editorial Board of ‘Materials Science: An Indian Journal’, Trade Science journals, ISSN (PRINT): 0974-7486

### 32. Reviewer for International Journals/conferences. (13)

- i) Journal of Tribology Transaction (Taylor & Francis group)
- ii) Lubrication Science (Wiley)
- iii) Tribology International (Elsevier)
- iv) Journal of Engineering Tribology (IMEchE Part J, SAGE)
- v) Journal of vibration and Control
- vi) Journal of Engineering Science and Technology, School of Engineering, Taylor’s University
- vii) Journal of Mechanical Engineering Research
- viii) Journal of Scientific Research and Reports
- ix) International Journal of Physical Sciences (IJPS)
- x) Sciencedomain international
- xi) Journal of Engineering Science and Technology (JESTEC) Malaysia.
- xii) Journal of Nonlinear Studies USA.
- xiii) Springer Journals Meccanica

### 33. Reviewer for International/National Books: (03)

- (i) ‘Kinematics, Dynamics, and Design of Machinery’ by Kenneth J. Waldron (Stanford University, USA) Gary L. Kinzel (The Ohio State University, USA) and Sunil K. Agrawal (University of Delaware, USA), Wiley Publication, John Wiley & Sons Limited is a private limited company registered in England with registered number 00641132, Oct 2013.
- (ii) Tata McGraw Hill Education, “Design of Machine Elements” by V B Bhandari on 15 January 2015.
- (iii) Cambridge University Press India, book review of “Machine Design Volume 1” and “Machine Design Volume 2” July 2015

### 34. Research and Development activity:

#### *A) Member of Center of Excellence (TEQIP-II)*

#### **Center of Excellence - Complex & Non-linear Dynamical Systems (CoE-CNDS)**

**Theme:**

The proposed CoE is aimed at developing a rigorous and unified framework for both theoretical and applied research in the area of complex and nonlinear dynamical systems by interconnecting scattered groups to create critical mass and complementarity.

Following are the key objectives:

- i. To foster in both ways fundamental studies and applications by collaborative research.
- ii. To develop a basis for a unified framework harnessing complex and nonlinear systems.
- iii. To motivate and integrate multi-disciplinary approaches to complex problems.
- iv. To contribute in nation's growth- technologically & socially by synthesising the obtained results and methodologies into unified strategies, criteria and procedures for design of new devices and processes.
- v. Facilitate the interchange of scientific results and ideas between various institutes, industries and research organizations within and outside India.
- vi. Promote use of open-source software in fundamental research areas.

**B) RPS :** completed

**Technical Field of proposal: Machine Design-Fluid Film Journal bearing**

**Title of proposal: Experimental and Analytical/CFD Performance Analysis of Hydrodynamic cylindrical and conical Journal Bearing**

**Objective - Project Significance / Relevance with ongoing academic activities**

In Journal bearing system wear and shaft misalignment are the common defects observed in real conditions. Both defects influence their dynamic behaviors, stability and life time and their detection is a very important task. An experimental setup will be developed in order to find the relationship among the friction force, the misalignment angles, and wear depth. In quest of this a significant attention has been paid by the researchers and bearing designers in this regard. It has also been observed no comprehensive study is available in the area of Hydrodynamic cylindrical and conical journal bearing system. Keeping in view the gaps as indicated in the literature review. The work proposed to be carried out to accomplish the following objectives:

- To carry out the performance analysis of circular journal bearings
- To study the combined influence of wear and journal misalignment on the performance characteristics of a fluid film journal bearing system.
- To evaluate the comparative performance of circular journal bearing vis a vis the conical journal bearing system.
- To study the influence of wear on the performance characteristics of conical fluid film journal bearing system.

### **35. List of Ph.D. Research Students**

No.	Name	Topic	Status
1.	H.P. Khairnar	Friction Modeling of Automotive Brakes	Completed 2016
2.	Prashant G. Khakse	Performance Analysis of non recess Conical Hybrid Journal Bearing	Completed 2016
3.	Ajay Kumar Gangrade	Performance Analysis of Conical Hydrodynamic Journal Bearing	Completed 2019
4.	Sangita N. Bansode	Distortion Analysis of Investment Casting	Completed 2019
5.	Dinesh Kamble	Performance of conical hydrostatic bearing with nano fluids	Ongoing
6.	Sangram S. Patil	Condition Monitoring	Completed 2019
7.	Kiran H. Ghadyalji	Pressure Vessel	Ongoing
8.	S R Pawar	Influence of Restrictors on The Performance of Hole Entry Worn Hybrid Conical Journal Bearing.	Completed 2019
9.	Vishwadeep	Gear Dynamics and Machine Learning	Ongoing
10.	P D Kulkarni	Journal Bearing	Ongoing
11.	Pallavi Khaire	Conditioning Monitoring & IOT	Ongoing
12.	Avinash	Conical Bearing and AI	Ongoing

## PAPERS PUBLISHED

### A. List of Publications in International peer Reviewed Journals:

1. Sangita Bansode, **V.M.Phalle**, S.S.Mantha. Productivity enhancement in investment casting foundry using automation technique in shelling operation. *Industrial engineering Journal* – Accepted.
2. Sangita Bansode, **V.M.Phalle**, S.S.Mantha. Influence of Slurry Composition on Mould Properties and Shrinkage of Investment Casting. *Transactions of the Indian Institute of Metals*. Under review
3. Sangita Bansode, **V.M.Phalle**, S.S.Mantha. Optimization of process parameters to improve dimensional accuracy of investment casting using Taguchi approach. *Journal of Advance Mechanical Engineering* – Vol. 11(4), 2019, pp 1–12
4. Sangita Bansode, **V.M.Phalle**, Shankar S.Mantha. Taguchi Approach for Optimization of Parameters that Reduce Dimensional Variation in Investment Casting. *Archives of Foundry Engineering*. - ISSN (1897-3310) Volume 19 Issue 1/2019 pp. 5 – 12.
5. Sanjay R. Pawar, **Vikas M. Phalle**, “Performance Analysis of Hole Entry Worn Hybrid Conical Journal Bearing Compensated with Orifice Restrictor. *Tribology International* - Under Review.
6. Sanjay R. Pawar, **Vikas M. Phalle** ,(2019) “Extended Version of Influence of wear on the cross coupled stiffness and damping coefficients of hybrid conical journal bearing,” *Journal of The Institute of Engineers (India)* , Series C, (Springer)- Under Review.
7. Sanjay R. Pawar, **Vikas M. Phalle**, (2019) “Influence of wear on the performance of capillary compensated hole entry hybrid conical journal bearing”, *Journal of Industrial Lubrication and Tribology*,71(2), pp333-340.
8. S R Pawar, **Vikas M. Phalle**, “Effect of wear on the performance of hole entry hybrid conical journal bearing employing constant flow valve compensation”, accepted in in the *Journal of IMechE, Part J: Journal of Engineering Tribology*.
9. Patil, Sangram S., and **Vikas M. Phalle**. “Fault Detection Of Anti-Friction Bearing Using Ensemble Machine Learning Methods”, *IJE TRANSACTIONS B: Applications* Vol. 31, No. 11 pp.1972-1981, 2018.
10. Sandeep S. Udmale, Sangram S. Patil, **Vikas M. Phalle** and Sanjay Kumar Singh, “A bearing vibration data analysis based on spectral kurtosis and ConvNet” *Soft Computing*, Springer.
11. Ameya M. Mahadeshwar, Sangram S. Patil, Vishwadeep C. Handikherkar, **Vikas M. Phalle** “Influence of Operating Parameters on Unbalance in Rotating Machinery Using Response Surface Method” *S&V: Sound and Vibration*, Vol.52, Issue 5 , pp.12-21 , 2018
12. Sumit Desai, S.S. Mantha, **V.M. Phalle**, “Design of a Novel Reconfigurable Wheelchair Product Incorporated with Sit-to-stand and Sit-to-sleep Capabilities using TRIZ and AHP”, *International Journal of Sustainable Design*, 2018. (Scopus Indexed Journal, ISSN 1823- 5514)
13. Sumit Desai, S.S. Mantha, **V.M. Phalle**. (2018). Design of a reconfigurable wheelchair with stand-sit-sleep capabilities for enhanced independence of long-term wheelchair users. *Technology and Disability*, 30(3), 135-151. (Scopus Indexed Journal, ISSN 1055-4181) DOI: 10.3233/TAD-180210

14. Singh, Jaya, S. S. Mantha, and **Vikas M. Phalle**. (2018) "Analysis of technical and economic electricity saving potential in the urban Indian households." *Sustainable Cities and Society* (Elsevier), Accepted
15. Ajay Kumar Gangrade, **Vikas M. Phalle** and S. S. Mantha (2018), "Performance analysis of a conical hydrodynamic journal bearing", *Iranian Journal of Science and Technology, Transactions of Mech. Engineering*, ISSN: 2228-6187 (Print); ISSN: 2364-1835 (Online). (Publisher: Springer International Publishing, indexed in Science Citation Index Expanded, SCOPUS, and Google Scholar).
16. Ajay Kumar Gangrade, **Vikas M. Phalle** and S. S. Mantha (2018), "Parametric investigations of short length hydro-dynamically lubricated conical journal bearing", *Jurnal Tribologi*, Publisher, Malaysian Tribology Society (MYTRIBOS).
17. Singh, Jaya, Shankar S. Mantha, and **Vikas M. Phalle**, "Characterizing domestic electricity consumption in the Indian urban household sector", *Energy and Buildings*, 170, pp. 74-82, 2018. DOI:- <https://doi.org/10.1016/j.enbuild.2018.04.002>
18. Sumit Desai, S.S. Mantha, **V. M. Phalle**, "Comprehensive Needs Assessment Study and Deployment of QFD Targeted at New Wheelchair Design", *Iranian Rehabilitation Journal*, 15(4):377-388, 2017. DOI: - 10.29252/nrip.irj.15.4.377
19. H.P.Khairnar, **V. M. Phalle**, S.S.Mantha."Friction coefficient depending on active friction radius with BPV and BTV in automobile disc braking system".*International Journal of Engineering, science and technology*. Vol. 9(3), pp. 41-50, 2017.
20. P.G. Khakse, **V.M. Phalle** and S.S. Mantha, "Orifice Compensated Performance Characteristics of Hybrid Hole-entry Conical Journal Bearing,"in the *Journal ofIMEche, Part J: Journal of Engineering Tribology* 2016.
21. P.G. Khakse, **V.M. Phalle** and S.S. Mantha, "Comparative Performance of a Non-recess Hole-entry Hybrid/Hydrostatic Conical Journal Bearing Compensated with Capillary and Orifice Restrictor," in the *Journal of Tribology in Industry*,2016.
22. P. G. Khakse, **V. M. Phalle** and S. S. Mantha, "Static Performance Characteristics of Hole-entry Hybrid Conical Journal Bearing," *Published in International Journal of Global Technology Initiatives*, vol.5(1), pp.D48-D54,2016.
23. Gangrade A. K., and **Phalle Vikas M.**, "Effect of clearance and aspect ratio on the performance of water lubricated hydrodynamic journal bearing," *International Conference on Global Technology Initiatives*, 5(1), D59-D64, 2016.
24. H.P.Khairnar, **V.M.Phalle**, and S.S.Mantha. "Comparative frictional analysis of automobile drum and disc brakes".*Tribology in Industry* (Vol.38, No. 1)11-23. 2016.
25. P. G. Khakse, **V. M. Phalle** and S. S. Mantha, "Performance Analysis of a Non-recessed Hybrid Conical Journal Bearing Compensated with Capillary Restrictors," *Published inASME Journal of Tribology*, vol.138(1), pp.011703-011709,2016.[DOI: 10.1115/1.4030808]
26. Khairnar H. P., **Phalle Vikas M.** and S. S. Mantha, "Estimation of automotive brake drum-shoe interface friction coefficient under varying conditions of longitudinal forces using Simulink",*Friction*, September, Vol. 3(3),pp. 214–227, .
27. S. M.Pawar, S. G.Jadhav, and **V.M. Phalle**, "CFD Analysis of Two Lobe Hydrodynamic Journal Bearing", *International Journal of Engineering Development and Research* 2 (3 (Sept 2014)) ISSN: 2321-9939 (Impact Factor = 1.79)
28. Vinayak D. Latake, and **V.M.Phalle**, "A survey paper on a factors affecting on selection of mechanical gripper", *International Journal Of Engineering Development And Research ( IJEDR)*, pp.-47-51 2014, ISSN: 2321-9939
29. Satish C. Sharma, **Vikas M. Phalle**, and S.C. Jain, "Performance of a noncircular 2-lobe multirecess hydrostatic journal bearing with wear", *Industrial Lubrication and Tribology*, Vol. 64, Issue 3, pp. 171 – 181, 2012.

30. Satish C. Sharma, **Vikas M. Phalle**, and S. C. Jain, "Combined Influence of Wear and Misalignment of Journal on the Performance Analysis of 3-Lobe Three-Pocket Hybrid Journal Bearing Compensated with Capillary Restrictor," ASME Journal of Tribology, Vol. 134 / 011703-11, **2012**.
31. Satish C. Sharma, **Vikas M. Phalle**, and S. C. Jain, "Performance of a Noncircular 2-Lobe Multirecess Hydrostatic Journal Bearing with Wear", Industrial Lubrication and Tribology, Vol. 64 Issue: 3, pp. 171 – 181, **2012**.
32. Satish C. Sharma, **Vikas M. Phalle**, and S. C. Jain, "Influence of Wear on the Performance of a Multirecess Conical Hybrid Journal Bearing Compensated with Orifice Restrictor," Tribology International, Vol. 44, pp. 1754-1764, **2011**.
33. Satish C. Sharma, **Vikas M. Phalle**, and S. C. Jain, "Performance Analysis of a Multirecess Capillary Compensated Conical Hydrostatic Journal Bearing System," Tribology International. Vol. 44 (5), pp. 617-626, **2011**.
34. **Vikas M. Phalle**, Satish C. Sharma and S.C. Jain, "Influence of Wear on the Performance of a 2-lobe Multirecess Hybrid Journal Bearing System Compensated with Membrane Restrictor", Tribology International, Vol. 44(4), pp. 380-395, **2011**.

#### B. List of Publications in National Peer Reviewed Journals:(01)

35. **Phalle Vikas M.**, Gangrade A. K., and S. S. Mantha, "Performance Analysis of Conical Fluid Film Hydrodynamic Journal Bearing for various aspect ratio", Indian Journal of Tribology, July 2016.
36. Sanjay R. Pawar, Vishwadeep C. Handikherkar, **Vikas M. Phalle**, "CFD Analysis of Worn out Hole Entry Hybrid Conical Journal Bearing". Tribo-India, International Conference, 13-15 December, 2018 presented at VJTI, Mumbai. And submitted to the IJT for publication

#### C. List of Papers Presented in Proceedings of International Conferences:

37. Dinesh Kamble, and **Vikas M. Phalle**, (2019), "Performance Analysis of Conical Hydrodynamic Bearing Under Different Eccentricity Ratio", International Conference on Non-Linear Solid Mechanics (ICoNSoM-2019), Rome, Italy, 16-19 June, 2019.
38. Vishwadeep Handikherkar and **Vikas M. Phalle**, (2019), "Vibration Analysis Based Spalling Defect Severity Assessment of Spur Gearbox Using a Dynamic Model", International Conference on Non-Linear Solid Mechanics (ICoNSoM-2019), Rome, Italy, 16-19 June, 2019.
39. Sangram Patil, **Vikas M. Phalle**, and Faruk Kazi (2019), "Fault Detection of Rolling Element Bearing with Stationary Wavelet Transform and Random Forest", International Conference on Non-Linear Solid Mechanics (ICoNSoM-2019), Rome, Italy, 16-19 June, 2019.
40. **Phalle V.M.** and Pawar S.R., "Dynamic Performance Analysis of Hole Entry Worn Hybrid Conical Journal Bearing Under Variation of Speed," ICoNSoM 2019, Roma, Italy, 16<sup>th</sup> to 19<sup>th</sup>. June, 2019.
41. Pawar S.R., **Phalle V.M.**, "Comparative Performance Analysis for Various Compensating Elements of Hole Entry Worn Hybrid Conical Journal Bearing with Variation of Speed," ICoNSoM 2019, Roma, Italy, 16<sup>th</sup> to 19<sup>th</sup>. June, 2019.
42. Sanjay R. Pawar, Prashant G. Khaske **Vikas M. Phalle**, "Performance analysis of non-recessed hole-entry hybrid/hydrostatic conical journal bearing using CFD", International conference on Materials, Manufacturing and Design Engg. iCMMD-2016, BATU Lonere. 20-21 December, 2016.
43. Singh, Jaya, S. S. Mantha, and **V. M. Phalle**. (2019). "Analysis of passive retrofitting measures for reduced electricity demand." International Conference on Nascent Technologies in Engineering (ICNTE), 2019, IEEE. (Accepted for publication)

44. Singh, Jaya, S. S. Mantha, and **V. M. Phalle**. (2019). "Envelop insulation for energy efficient smart buildings in India". International Conference on Delivering Future Infrastructure for Developing Countries. (Accepted for publication)
45. Ajay Kumar Gangrade, **Vikas M. Phalle**, "Influence of eccentricity ratio on stability performance of conical hydrodynamic journal bearing", 2nd International Conference on New Frontiers in Engineering, Science & Technology (NFEST 2019), National Institute of Technology, Kurukshetra (NITK), 18<sup>th</sup> to 22<sup>nd</sup> Feb 2019.
46. Nandu Durge, Small Capacity Plant for Post-harvest process of Mango – Worth to Indian Farmer , Techno-Societal 2018
47. **Vikas M. Phalle**, Sanjay R. Pawar, "Effect of Wear on The Static Performance Characteristics of Non-Recessed Hole Entry Hydrostatic Conical Journal Bearing", STLE 2018, Minneapolis, USA. 20-24 May,2018.
48. Nandu Durge, S S Mantha, **Vikas M Phalle** "Design and development of small capacity mango process plant", 3rd International Conference on Intelligent Manufacturing and Automation Engineering, held in Tokyo, Japan on September 27-30, 2019.ICIMA2018
49. Patil, Sangram and Khairnar, Tushar and Kalhapure, Vaibhav A. and **Phalle, Vikas M.**, Vibration Based Fault Detection of Deep Groove Ball Bearing Using Data Mining Algorithm (December 21, 2017). International Conference on Advances in Thermal Systems, Materials and Design Engineering (ATSMDE2017). <http://dx.doi.org/10.2139/ssrn.3101405>.
50. Sangram S. Patil, **Vikas. M. Phalle**,(2016),"Fault Diagnosis of Anti-Friction Bearing Using Daubechies Wavelet", Proceedings of 6th International Congress On Computational Mechanics And Simulation (ICCMS2016), IIT Bombay, Mumbai, India,pp.1458-1461
51. **Vikas M. Phalle**, Sanjay R. Pawar, Sangram S. Patil, "Effect of Speed on the Performance Characteristics of Non- Recessed Worn Hybrid Conical Journal Bearing for Different Semi Cone Angles," Proceedings of the ASME 2018 International Mechanical Engineering Congress and Exposition, IMECE2018, Pittsburgh, PA, USA. 9-15 November, 2018.
52. Sumit Desai, Shankar Mantha, **Vikas M. Phalle**, Sangram Patil, Vishwadeep Handikherkar, "Design and prototype development of a reconfigurable wheelchair with stand-sit-sleep configurations," Proceedings of the ASME 2018 International Mechanical Engineering Congress and Exposition, IMECE2018, Pittsburgh, PA, USA. 9-15 November, 2018.
53. Sangram Patil, Aum Patil, Vishwadeep Handikherkar, Sumit Desai, **Vikas M. Phalle**, Faruk S Kazi, "Remaining useful life (RIL) prediction of rolling element bearing using random forest and gradient boosting technique," Proceedings of the ASME 2018 International Mechanical Engineering Congress and Exposition, IMECE2018, Pittsburgh, PA, USA. 9-15 November, 2018
54. Pramodkumar R. Mishra, Vishwadeep C. Handikherkar, Sanjay Pawar, **Vikas M. Phalle**, "CFD Analysis of Worn out Hole Entry Hybrid Conical Journal Bearing", TRIBOINDIA-2018-International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
55. Ganesh G. Bhoje, Sanjay R. Pawar, S.P. Gajare, **Vikas M.Phalle**, "Performance Analysis of Four Recess Hybrid Conical Bearing using CFD", TRIBOINDIA-2018- International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
56. Sanjay R. Pawar, **Vikas M.Phalle**, "Effect of journal speed on the static performance characteristics of orifice compensated hole entry, worn hybrid conical journal bearing", TRIBOINDIA-2018-International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.

57. Ajay Kumar Gangrade, **Vikas M. Phalle**, S. S. Mantha, "Stability Analysis of Various Lengths Conical Hydrodynamic Bearing for Variable Load Conditions", TRIBOINDIA-2018- International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
58. Prasad D. Kulkarni., **V. M. Phalle**, "Influence of various parameters on performance of fluid film Journal Bearing operating in Turbulent flow Regime – Overview", TRIBOINDIA-2018- International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
59. Vishwadeep C Handikherkar, **Vikas M Phalle**, "Fault Diagnosis of Bevel Gear by Using Random Forest and Adaptive Boosting Technique", TRIBOINDIA-2018- International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
60. Abhishek Prakash Murkar, Ajay Kumar Gangrade, **Vikas M. Phalle**, "Effect of Erosion-Corrosion and Other Tribological Parameters in Failure Analysis of Heat Exchangers", TRIBOINDIA-2018- International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
61. Sangram Patil, Aum Patil, **Vikas Phalle**, "Life Prediction of Bearing by using Adaboost Regressor", TRIBOINDIA-2018- International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
62. Abhishek N Khairnar, Sumit J Patil, **V M Phalle**, P K Limaye, "Design of hydrostatic bearing using optimization of Self-compensating orifices for high stiffness in linear hydraulic actuator", TRIBOINDIA-2018- International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
63. M. R. Valse, **V. M. Phalle**, "A Review of Temperature Variation and its Effect in Hydrodynamic Journal Bearing", TRIBOINDIA-2018- International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
64. Dinesh H. Kamble, **Vikas M. Phalle**, S. S. Mantha, "Effect of Semi-cone angle on the performance of conical hydrodynamic air lubricated journal bearing", TRIBOINDIA-2018- International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
65. Aviraj P. Nirmale. Sangram S. Patil, Vishwadeep C Handikherkar, **Vikas M Phalle**, "Finite-element analysis and mechanical analysis of gripper finger", TRIBOINDIA-2018- International Conference on Tribology at VJTI, 13<sup>th</sup> -15<sup>th</sup> December, 2018.
66. Sumit Desai, S. S. Mantha, and **V. M. Phalle**, "Assistive Technology solution for disabled population of India", International IEEE Conference on Current Trends in Computer, Electrical, Electronics and Communication, ICCTCEEC, IEEE, 2017.
67. Sumit Desai, S. S. Mantha, and **V. M. Phalle**, "Design and prototype development of a reconfigurable wheelchair with stand-sit-sleep configurations", International Mechanical Engineering Congress and Exposition (IMECE 2018), ASME, 2018. **(Under Review)**.
68. Sumit Desai, S.S. Mantha, **V.M. Phalle** and Patil, S. (2018, September). Design, Modeling and Simulation of a Reconfigurable Wheelchair with Stand-sit-sleep Facilities. In IOP Conference Series: Materials Science and Engineering (Vol. 417, No. 1). IOP Publishing. (Indexed by Scopus, Thomson Reuters (WoS)) **(Presented at International conference on mechanics and mechatronics research ICMR-2018, Tokyo University of Science, Japan)**
69. N. K. Durge, S. S. Mantha, and **V. M. Phalle**, "Design and development of small capacity mango plant", International Conference on Intelligent Manufacturing and Automation, Springer proceedings, 2018. **(Accepted for publication)**.



70. Sangita Bansode, **Vikas M. Phalle** and S. S. Mantha,(2017), “Optimized Design of Feeding System for Complex Steel (CF8) Investment Casting to Improve Quality and Productivity”, Advanced in Thermal System, Materials and Design Engineering (ATSMDE-2017) - International Conference, Paper No.-**MM-054**, 21-22 December, 2017.
71. **Phalle Vikas M.**, Pawar S. R. and Khaske P. G. Influence of speed on the static performance characteristics of hole entry worn hybrid conical journal bearing, , 16<sup>th</sup> EDF Pprime Workshop France, 5-6 October,2017.
72. **Phalle Vikas M.**, and Pawar S. R., Influence of speed on the dynamic performance characteristics of hole entry hybrid worn conical journal bearing compensated with capillary restrictor, 9<sup>th</sup> international conference on industrial tribology ICIT-2017, 6-9 December,2017
73. Ajay Kumar Gangrade, **Vikas M. Phalle** and S. S. Mantha,(2017), “Effect of Aspect ratio and Semi Cone Angle on the Stability Behavior of a Conical Hydrodynamic Journal Bearing”, Advanced in Thermal System, Materials and Design Engineering (ATSMDE-2017) - International Conference, Paper No.-**DE-017**, 21-22 December, 2017.
74. Sangram S. Patil, TusharKhairnar, Vaibhav A. Kalhapure and **Vikas M. Phalle**,(2017), “Vibration based Fault Detection of Deep Groove Ball Bearing using data Mining Algorithm”, Advanced in Thermal System, Materials and Design Engineering (ATSMDE-2017) - International Conference, Paper No.-**DE-045**, 21-22 December, 2017.
75. Vishwadeep Handikherkar, Samadhan Dhangar, Sangram S. Patil and **Vikas M. Phalle**,(2017), “Stress Analysis of Parallel Misaligned Spur Gear Pair”, Advanced in Thermal System, Materials and Design Engineering (ATSMDE-2017) - International Conference, Paper No.-**DE-049**, 21-22 December, 2017.
76. Sanjay R. Pawar and **Vikas M. Phalle**, (2017), “Influence of Wear on the Dynamic Performance Characteristics of Non-recessed Hole Entry Hydrostatic Conical Journal Bearing”, Advanced in Thermal System, Materials and Design Engineering (ATSMDE-2017) - International Conference, Paper No.-**DE-050**, 21-22 December, 2017.
77. **Vikas M. Phalle**, and SangramPatil, “Fault Detection of Anti-friction Bearing using AdaBoost Decision Tree (Paper ID #310)” for 2017 International Conference on Computational Intelligence: Theories, Applications and Future Directions has been received. (Submitted)
78. Sumit Desai, S.S. Mantha, **V. M. Phalle**, “Advances in Smart Wheelchair Technology”, IEEE International Conference on Nascent Technologies, 27<sup>th</sup>-28<sup>th</sup> January 2017, Vashi. pp. 1-7. IEEE, **2017**. DOI: [10.1109/ICNTE.2017.7947914](https://doi.org/10.1109/ICNTE.2017.7947914).
79. Jaya Singh, S.S. Mantha, **V. M. Phalle**, “Future Prospects of Energy Efficient Smart Homes in India,” IEEE International Conference on Nascent Technologies, 27<sup>th</sup>-28<sup>th</sup> January 2017, Vashi, International Conference on. IEEE, pp. 1-6, **2017**. DOI: [10.1109/ICNTE.2017.7947931](https://doi.org/10.1109/ICNTE.2017.7947931)
80. Sanjay R. Pawar, Prashant Khakse, and **Vikas M. Phalle**, “Performance Analysis of Hydrostatic/Hybrid Conical Journal Bearing Using CFD”, In: proceedings of theInternational Conference on Materials, Manufacturing and Design Engineering, at **Dr. BabasahebAmbedkar Technological University, Maharashtra, 20<sup>th</sup> and 21<sup>st</sup> December, 2016**
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104. **Vikas M. Phalle** and Kashyap Y Anandpara, "Ideas and Innovation in green Technology", 2013 Amity Delhi, India
105. **Vikas M. Phalle** and Satish C. Sharma, "Influence of Wear Depth Parameter on the Performance of Four-Pocket Hybrid Conical Journal Bearing system", Proc. Of 8th International Conference on Industrial Tribology (ICIT-2012), 7 – 9 December 2012, Pune (India).
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117. Sumit Desai, S.S. Mantha, V.M. Phalle. (2018). Design of Wheelchair Considering Needs of Indian User. National Congress on Disability Studies, Vasant Kunj, New Delhi, 5-8 Oct, 2018. (Organized by Society of Disability Research Studies (SDRS) and GOI, presented at Indian Spinal Injuries Centre, New Delhi)
118. Sanjay R. Pawar, **Vikas M.Phalle**, "Influence of wear on the cross coupled stiffness and damping coefficients of hybrid conical journal bearing," Proceedings of the National Conference on Emerging Trends in Mechanical Engineering (NCETME-2019), VIT Pune, 7-8 Feb, 2019.
119. Sanjay R. Pawar, **Vikas M. Phalle**, "CFD Analysis of Worn Hydrostatic Journal Bearing", National Conference at Raisoni College Pune, 23<sup>rd</sup> Feb, 2018.
120. **V. M. Phalle**, S R Pawar, S. S. Mantha, "Development of customised experimental test-rig for hydrodynamic conical journal bearing" Research & Developments in Mechanical Engineering (NCRDME-2019)" G H Raisoni College of Engineering and Management, Wagholi Pune held on 1<sup>st</sup> & 2<sup>nd</sup> March 2019.
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122. Abhishek Prakash Murkar, Ajay Kumar Gangrade, **Vikas M. Phalle**, Microstructural and behavioural study of Intergranular Stress Corrosion Cracking in process equipments, Proceedings of the National Conference on Emerging Trends in Mechanical Engineering (NCETME-2019), VIT Pune, Feb. 7-8 2019
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127. **Vikas M. Phalle**, Satish C. Sharma and S.C. Jain, “Reduction of Friction of 2-Lobe Four Pocket Hybrid Journal Bearing by Offsetting Bearing Shells”, Proc. of National Tribology Conference – 2011, I.I.T.R., Roorkee, Uttarakhand, India, December 8-10, pp.125-130, 2011.
128. S. K. Kamble and **Vikas M. Phalle**, Seminar on Mechanical Vibration- Analysis and Diagnosis at Pravara Rural Engineering College, Loni, Maharashtra, 24-26 March 2007
129. **Vikas M. Phalle** and Sonar, “Tribo Design”, Proceedings of “National Conference on Sun Rising technologies” (NCSRT-05), Parshvanath College of Engineering, Thane, Mumbai (India), 18-19 November 2005.

### **List of M Tech Project Students**

- [1]. Chandra Prakash Singh, “Design And Modification Of Mobile Cold Feeder Bin With Convertible Ramp”, Linnhoff India Pvt ltd, **Dr V M Phalle** and Mr Feroz khane, Deputy Manager Design, 2019
- [2]. Sagar Bapusaheb Dhongade, Design and development of industrial gearbox., Transprecision Gears Pvt Ltd, **Dr V M Phalle** and Akshay Bichu, 2019
- [3]. Dhuldev Shrikant Kokare, De-Aeration of Lube Oil Tank, General Electric, **Dr V M Phalle** and Kumar Vunoth GE Bangalore 2019
- [4]. Gururaj Mallikarjun Hanamane, Dynamic performance improvement of circuit breaker with bouncing mitigation, **Dr V M Phalle** and Mr. Jitendra Shukla, 2019
- [5]. Omprakash Harishchandra Nerurkar, Analysis of effects of operating parameters on gearbox, **Dr V M Phalle, 2019**
- [6]. Sumit Mahadevappa Karegaonkar, Vibration analysis of shunt reactor , Cropton Greaves Power and Industrial Solutions Ltd Mumbai, **Dr V M Phalle** and Mr. Sunil Gaikwad CG Mumbai 2019
- [7]. Abhishek Kale, Dynamic Behaviour Analysis of Vacuum Circuit Breaker, Seimens, **Dr V M Phalle** and Dhananjay Awate, 2018
- [8]. Pranav Pande, Optimization Of Turbo Machinery & Digitization of Lifting Tool, GE Oil & Gas, **Dr V M Phalle** and T Srinivasan. 2018
- [9]. Raviraj Surade, Optimization of Support Structure & Automation of Ventilation System of Gas Turbine, GE Oil & Gas, **Dr V M Phalle** and Prasanna Sitaram. 2018
- [10]. Nilesh Vishwakarma, Novel Technique For Impeller and Shaft Assembly In Centrifugal Compressor, GE Oil & Gas, **Dr V M Phalle** and Avinash Renuke, 2018
- [11]. Tushar Khairnar, Vibration monitoring system for critical machines using neural network and Data mining algorithms, **Dr V M Phalle, 2017**
- [12]. Mukesh Yadav, Effect of Centrifugal Force and Gyroscopic Couple on Deep Groove Ball Bearing, **Dr V M Phalle** , 2017
- [13]. Amol Damdore, CFD analysis of worn out hydrostatic circular journal bearing, **Dr V M Phalle** , 2017

- [14]. Samadhan Dhangar, Stress Analysis of parallel misaligned gear pair, **Dr V M Phalle, 2017**
- [15]. Ahmed Khalil, In House, '**Bevel gear box fault diagnosis using vibration signal**'. 2016.  
**Dr V M Phalle,**
- [16]. Anirudh Vilas kakade, In House, '**Vibration analysis of ball bearing with defect on its races**'.2016.  
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- [17]. Sajjan Raghunath Bhosale, In House, '**CFD analysis of conical journal bearing**'.2016.  
**Dr V M Phalle,**
- [18]. Shahuraj Mohan patil, , In House, '**Effect of misalignment of deep groove ball bearing**'.2016.  
**Dr V M Phalle,**
- [19]. Akshay Balchandre Mane, BARC, Dr V M Phalle, '**Hydrodynamic bearing test rig design & development of mathematical model**', 2016, **Dr V M Phalle**andP.KLimaye, BARC Mumbai
- [20]. Sagar Gavhane, BARC, Dr V M Phalle, '**Study & design of gearbox and drive system**', 2016.  
**Dr V M Phalle** and Saurabh BARC Mumbai,
- [21]. Moinalirizwan Thakur, BARC, Dr V M Phalle, '**Modelling and analysis of FCRM support structure**', 2016.  
**Dr V M Phalle**andP.K Mishra, BARC Mumbai
- [22]. Kaustubhkashinath veer, Cummins, Dr V M Phalle, '**Torsional vibration analysis in shaft system selection and drive line optimization for diesel engine testing**', 2016.  
**Dr V M Phalle** and Mr Santosh Dhuri, BARC, Mumbai.
- [23]. Ajinkya patil, IITB, Dr V M Phalle, '**Experimental biomechanics of squatting motion**', 2016.  
**Dr V M Phalle** and Prof Abhishek Gupta, IIT Bombay,
- [24]. Vasimsayyed, Sponsored, Dr V M Phalle, '**Effect of center distance & backlash variation on performance of gearbox**', 2016.  
**Dr V M Phalle** and Sunil Kumar,
- [25]. Mr. Rohan Ramesh Malkar, '**Geometric Software Technologies**', Year 2014-15,  
**Vikas M Phalle** and Mr. Sriram Sail
- [26]. Mr. Prasad Tanaji Gaikwad, '**Standardization of engine connections in test cell to reduce engine rig up time**', Cummins India limited, Year 2014-15  
**Vikas M Phalle** and Mr. Niraj Bharambe
- [27]. Mr. Ketan Mukunda Chaudhari, '**Cylinder head temperature gradient optimization**', Cummins India limited, Year 2014-15  
**Vikas M Phalle** and Mr. Shashikant Dubey
- [28]. Dhiraj Ashokrao Deshmukh, '**Optimization of four cylinder, 2.8L diesel engine with cooled EGR technology for meeting regulatory BSIV emission norms**', Cummins india limited, Year 2014-15  
**Vikas M Phalle** and Sandeep J Patil
- [29]. Mr. Swapnil Dinkar Pawar, "**Analysis of ball bearing**", Analysis of ball bearing, BARC Mumbai  
**Vikas M Phalle** and Mr. Limaye BARC
- [30]. Mr. Zeeshan Ahmad Rizwan, BARC, '**Evaluation of fire resistant hydraulic fluid to replace conventional mineral oil based hydraulic fluid**', Year 2014-15.  
**Vikas M Phalle** and Mr. N.L.Soni
- [31]. Ms.Pradnya Chandrakant Joshi, '**Design of Exhaust System for Diesel Engine**', Mahindra & Mahindra Ltd. Truck & Bus Div, Year 2014-15  
**Vikas M Phalle**andChintamaniMhaskar
- [32]. Mr. Vinayak Dinakar Latake, CAD/CAM & Automation, '**Conceptualization and design of seal replacement assembly for feeder coupling**', Year 2013-14

**Vikas M Phalle**

- [33]. Mr. Harshavardhini A. Jagdale, CAD/CAM & Automation, '**Design of low cost shaft balancer system for 4-cylinder in line engine**', Year 2013-14  
**Vikas M Phalle**
- [34]. Ghanashyam D. Apsunde, Machine Design, '**Conceptualization and design of Reciprocating and sliding wear and friction testing machine**', Year 2013-14  
**Vikas M Phalle**
- [35]. Mr. Amit B. Patil, Machine Design, '**FEA of vertical hydrogenerator rotor**', Year 2013-14  
**Vikas M Phalle**
- [36]. Mr. PratimaKokate, Machine Design, '**A tribological study of polymeric material under dry and static condition using pin-on-disc machine**', Year 2013-14  
**Vikas M Phalle**
- [37]. Mr. Vishwadeep Handikherkar, Machine Design, '**Design of linear hydrostatic bearing for servo hydraulic actuators**', Year 2013-14  
**Vikas M Phalle**
- [38]. Mr. Mahesh A. Borawake, Machine Design, "Analysis of hydrodynamic journal bearing using non-newtonian lubricants", Year 2013-14  
**Vikas M Phalle**
- [39]. Mr. Ramesh Bhandare, Machine Design, "Influence of misalignment on hydrodynamic journal bearing", Year 2013-14  
**Vikas M Phalle**