

BIO-DATA

Name : **Dr. Madhukar S. Tandale**

Date of Birth : 29th February 1964

Address for

Correspondence : Professor, University Department of Mechanical Engineering
Dr. Babasaheb Ambedkar Technological University,
Lonere. 402 103.
Tq. Mangaon, Dist. Raigad, Pin 402 103



Email id : mstandale@dbatu.ac.in,

Academic Qualifications:

Institute / University	Degree	Year	Field of Specialization
College of Engineering, Pune 411 005 (CoEP)	B.E. (Mech)	1987	Mechanical Engineering
IIT Bombay, Mumbai	M.Tech.	1993	Thermal & Fluids Engineering
IIT Bombay, Mumbai	Ph.D.	2005	Heat Transfer / Heat Exchangers /Waste Heat Recovery

Work Experience:

Teaching: 30 Years,

Industrial Experience: 01 Year,

Research Experience: 03 years.

Institute / University	Designation	Period
Dr. Babasaheb Ambedkar Technological University, Lonere	Professor	Since 12/12/2011 till date
Dr. Babasaheb Ambedkar Technological University, Lonere	Associate Professor (Sixth Pay)	01/01/2006 to 11/12/2011
Dr. Babasaheb Ambedkar Technological University, Lonere	Assistant Professor (Fifth Pay)	19/08/1995 to 31/12/2005
Vishwakarma Institute of Technology, Pune	Lecturer	03/03/1993 to 14/08/1995
Pravara Rural Engineering College, Loni	Lecturer	14/02/1989 to 22/07/1991
Bajaj Auto Ltd	Trainee Engineer/ Asst Engineer	Aug 1987 to Oct 1988

INDUSTRIAL / RESEARCH EXPERIENCE

1987-1988 Bajaj Auto Ltd, Aurangabad, as a Trainee Engineer and Assistant Engineer

2001-2004 Heat Pump Lab, IIT Bombay, as a Research Scholar

Research Interests:

Heat Transfer Enhancement,
Alternative Fuels for Internal Combustion Engines,
Renewable Energy,
Waste Heat Recovery from Refrigerator/Air-conditioner.

Subject Taught/Teaching:

Thermodynamics
Applied Thermodynamics I, II, III
Heat Transfer
Internal Combustion Engines
Refrigeration & Air-conditioning
Fluid Mechanics
Power Plant Engineering
Fluid Machinery
ICE&FM
Instrumentation and Control
Strength of Materials
Renewable Energy Sources
Advanced Thermodynamics (M.Tech.)
Advanced Heat Transfer (M.Tech.)
CI Engines (M.Tech.)
SI Engines (M.Tech.)
Utilization of Solar Energy (M.Tech.)
Steam & Gas Turbines (B.Tech & M.Tech.)
Design of Heat Exchangers (M.Tech.)

POSITIONS HELD

- Worked as **Head of the Department**, Dr. Babasaheb Ambedkar Technological University, Lonere, 1995-1999.
- Worked as **Head of the Department**, Dr. Babasaheb Ambedkar Technological University, Lonere, 6th Feb 2006- 23rd April 2010
- Member, Executive Council, Dr. Babasaheb Ambedkar Technological University, Lonere (1st July 2010 to 30th June 2013)
- Member, Academic Council, Dr. Babasaheb Ambedkar Technological University, Lonere (1st July 2010 to 30th June 2013)
- In-charge Registrar, Dr. Babasaheb Ambedkar Technological University, Lonere from December 2009-October 2010.
- Member, Academic Council, Dr. Babasaheb Ambedkar Technological University, Lonere (2005-2010)

- Member, Executive Council, Dr. Babasaheb Ambedkar Technological University, Lonere (2004-2006)
- Member, Executive Council, Dr. Babasaheb Ambedkar Technological University, Lonere (2017 onwards)
- Member, Academic Council, Dr. Babasaheb Ambedkar Technological University, Lonere (2000-2001)
- Member, Academic Council, Dr. Babasaheb Ambedkar Technological University, Lonere (1995-1999)
- Member Secretary, Board of Studies for Mechanical Engineering, Dr. Babasaheb Ambedkar Technological University, Lonere (1995-1999).
- Coordinator, Post Graduate Education & Research Cell, (June 2005- August 2014).
- Vice-President, Students Gymkhana, Dr. Babasaheb Ambedkar Technological University, Lonere (1998-2001).
- Faculty Advisor for M.Tech. TFE program till date (since last more than 5 years).
- Dean, Skill Development
- Director, IQAC for about one year till 23 March 2023
- Worked on several committees of this University as a member; purchase committee, selection committees, BoS etc.

Visit to Foreign Universities:

Royal Institute of Technology, Stockholm, and Malardalen University, Vasteras, Sweden in June 2007

Imperial College, London in June 2016

McGill University, Montreal, Canada in June 2018

Purdue University, West Lafayette, USA in May 2023

ORGANIZING EXPERIENCE

Sr.	Activity/Event	Place	For Whom	Period
1.	Organized 'Youth Parliament, for the university students. I had trained ten students for participation in the competition held at regional level. Our students had shown excellent performance and received certificates of appreciation from the Ministry of Parliamentary Affairs.	University Campus, Lonere	B.Tech students	--

2.	Member of organizing committee for the workshop on 'Alternative Refrigerants and Cycles' at IIT Bombay during. This workshop was coordinated by Prof Milind V Rane	IIT Bombay	Faculty and Research Scholars	23-25 August, 2002
3.	Organized a one day programme on 'Patent Awareness' for the faculty members of University on. Prof. Vishal Kartaria, IPR Chair, University of Pune delivered series of lectures on the topic.	University Campus, Lonere	Faculty Members	10 Dec 2004
4.	Co-coordinated a 2 day National Refresher Course on 'Environment Management' held in the University under TEQIP jointly with Petrochemical Engineering Department in collaboration with ICT, Matunga, Mumbai	Dr. Babasaheb Ambedkar Technological University, Lonere	National Refresher Course	27-28 Jan 2006
5.	Coordinated One Week Short Term Training Program, jointly with Dr. Neeraj Agrawal, on 'Advances & Practices in Heating, Ventilation, Air-conditioning & Refrigeration' in the Department of Mechanical Engineering	Dr. Babasaheb Ambedkar Technological University, Lonere	STTP	January 8-12, 2013
6.	Organized an Industrial Visit of Third Year B.Tech and I year M.Tech Students to Kisan Veer Satara Co-operative Sugar Mill, Bhuinj and Wind Mill site of Suzlon Energy Pvt Ltd at Chalkewadi, Dist. Satara during. Number of participants 90	Sugar Mill and Wind Mill near Satara	Industrial Visit	19-20 March 2016
7.	Organized an Industrial Visit of TY B.Tech and I year M.Tech Students to Dahanu Thermal Power Station, Dahanu. Participants 75 Students	Dahanu	Industrial Visit	22 October 2016
8.	Organized an Industrial Visit of TY B.Tech and I year M.Tech Students to Food Processing Industries at Kudal MIDC and Sawantwadi MIDC, Sindhudurg Participants 90 Students	Sindhudurg	Industrial Visit	17-19 Sept 2017

Invited Lectures Delivered

Sr.	Topic of Expert Lecture	Place	Date	Remark
1.	‘Opportunities of Waste Heat Recovery in Refrigerators and Air Conditioners’ in STTP on ‘Advances in Refrigeration and Cryogenic Air Separation’	College of Engineering, Pune (COEP)	21 st November 2008.	STTP
2	Expert lecture given on “Education in Human Value: Essence and Challenges” at 3-day training program for Lab Assistants/Lab Technicians	Dr. Babasaheb Ambedkar Technological University, Lonere	16-18 February 2009	Training Program
3	‘Opportunities of Waste Heat Recovery in Refrigerators and Air Conditioners’ in the Seminar under MESH 2009	Fr. C Rodrigues Institute of Technology, Vashi	21 st February 2009	Seminar
4	‘Research opportunities through student’s projects: case studies’	Amruthvahini College of Engineering Sangamner	11 th Dec 2009	Review of Research
5	‘Opportunities of Waste Heat Recovery in Refrigerators and Air Conditioners’ in the 5 th National Level Workshop on ‘Recent Trends in Heat Exchangers’	Walchand College of Engineering, Sangli	January 29-30 2010	National Workshop
6	‘Opportunities of Waste Heat Recovery in Refrigerators and Air Conditioners’ in the Workshop on ‘Refrigeration and Air Conditioning’	Rajendra Mane College of Engineering and Technology, Devrukh during	August 21, 2010	Workshop on RAC
7	Expert lecture given on ‘Opportunities of Waste Heat Recovery in Refrigerators and Air Conditioners’ in the National Workshop on ‘Advances in Refrigeration and Air Conditioning’	D Y Patil College of Engineering, Akurdi, Pune.	29-30, July 2011	National Workshop on RAC
8	‘Opportunities of Waste Heat Recovery in Refrigerators and Air Conditioners’ in the STTP on ‘Advances & Practices in Heating, Ventilation, Air-conditioning & Refrigeration’	MED, Dr. Babasaheb Ambedkar Technological University, Lonere	January 8-12, 2013	STTP

Publications:

A. Patents:

Sr.	Details of Patent	Status/Patent No.	File Number	Valid with effect from
1	Rane, Milind V and Tandale, Madhukar S Title: Tube-Tube Heat Exchangers	Granted & Commercialized. Patent grant No. 205362	Indian Patent No. 1082/MUM/2002	3-12-2002
1*	Rane Milind V and Tandale Madhukar S, Title: Tube-Tube Heat Exchangers	PCT Granted. Publication No. WO/2004/051168, 17-06-2004	International Application No.: PCT/IN 03 / 00377, 3-12-2003	3-12-2002*
2	Ankolekar Vinay V. and Madhukar S Tandale, Vortex Connector Apparatus	Filed	Indian Patent Application No. 1741/MUM/2010	8-06-2010**

**PCT application was filed for the patent in serial number #1 for getting priority.*

***Validity will be confirmed after the grant of patent.*

COMMERICALIZATION OF TECHNOLOGY BASED ON PhD RESEARCH

Based on Tube-Tube Heat Exchanger technology developed, following companies were then identified / launched for marketing heat exchangers for various applications and continued for several years (non-exclusive basis).

- M/s Aqua Engineering, Mumbai
- M/s Rhizo Technologies, Mumbai
- M/s Aditty Enterprise, Mumbai

EXPERIENCE ON CONSULTANCY PROJECTS UNDERTAKEN BY MY RESEARCH GUIDE AT IIT BOMBAY

Following projects were undertaken by my Supervisor Prof. M V Rane in Heat Pump Laboratory, IIT Bombay, Mumbai during my PhD research at IIT. I was involved in design, fabrication and testing of these heat exchangers since these applications were based tube-tube heat exchanger technology.

a. Development of a Tube-Tube Heat Exchanger (prototype) for superheat recovery water heating (SHRWH) application in a 60 TR R22 based chiller

Vented double walled tube-tube heat exchanger was designed for recovery of superheat from a 60TR R22 based chiller. This heat exchanger was fabricated in Heat Pump Laboratory of IIT Bombay, Mumbai and commissioned in one of the hotels in Mumbai.

b. Development of a Tube-Tube Heat Exchanger (prototype) for superheat recovery water heating (SHRWH) application in a 2x135 TR NH₃ based chiller

Vented double walled tube-tube heat exchanger was designed for recovery of superheat from a 2x135 TR NH₃ based chiller. This prototype heat exchanger was fabricated in Heat Pump Laboratory, IIT Bombay, Mumbai and commissioned at Worli Dairy, Mumbai.

B) International Journal Papers:

S r.	Title of paper	Authors	Publisher/Details	Date of Acceptance/ Publication
1	Water-to-water heat transfer in tube-tube heat exchanger: experimental and analytical study	Milind V Rane & Madhukar S. Tandale	International Journal of <i>Applied Thermal Engineering</i> ELSEVIER 25 (2005) 2715-2729.	5-01-2005/ January 2005 doi:10.1016/j.applthermaleng.2005.01.007
2	Experimental Investigations on heat transfer and frictional characteristics of a turbulator roughened solar air heater duct	Santosh B Bopche & Madhukar S Tandale	<i>International Journal of Heat Mass Transfer</i> , IJHMT 52 (2009) 2834-2848	9-09-2008/ 13-02-2009 doi:10.1016/j.jheatmasstransfer.2008.09.039
3	Heat Loss Characterization from Solar Concentrator Receiver – A Review” paper published in	Milind S Patil, M. S. Tandale , Ajay G Chandak,	International Journal of Engineering Science and Technology, Vol. 2(12), 2010, 7531-7539,	December 2010.
4	Blends of Jatropha and Karanja Bio-diesels for diesel engine applications	Ganesh Shirsath , M. S. Tandale , S. V. Khandal , G Suresh , N. R. Banapurmath , V. S. Yaliwal & P. G. Tiwari	<i>International Journal of Sustainable Engineering</i> , Taylor & Francis , Vol. 5, No. 3, 252–264	11-12-2011/ January 2012 http://dx.doi.org/10.1080/19397038.2011.652220
5	Effect of injection timing, injector opening pressure and nozzle geometry on the performance of a compression ignition engine operated on non-edible oil methyl esters from different sources	S.P. Wategave, M.S. Sawant, M.S. Tandale , G. Suresh, V.S. Yaliwal, N.R. Banapurmath & P.G. Tewari	<i>International Journal of Sustainable Engineering</i> ’ Taylor & Francis , Vol 7, No. 1, 71-81, January 2013.	Paper published 9-01-2013 Vol 7, No. 1, 71-81, January 2013. http://dx.doi.org/10.1080/19397038.2013.777134
6	Multi-objective performance optimization of CI engine operated on Mangifera Indica Biodiesel by applying Taguchi grey relational analysis' paper Published	Sangram D. Jadhav and Madhukar S Tandale	International Journal 'Waste and Biomass Valorization' Springer	Paper published 20-02-2016/ 10-03-2016 doi:10.1007/s12649-016-9504-6
7	Part load and full load multi-objective performance optimization of single-cylinder diesel engine operating on Mangifera Indica Biodiesel as a Biofuel Published	Sangram D. Jadhav and Madhukar S Tandale	International Journal 'Biofuels', Taylor and Francis	Published in 2018 Volume 9, No.1, 29-44 http://dx.doi.org/10.1090/17597269.2016.1249740

8	Optimization of transesterification process using homogeneous & nano-heterogeneous catalysts for biodiesel production from Mangifera Indica oil Published	Sangram D. Jadhav and Madhukar S Tandale	International Journal 'Environmental Progress and Sustainable Energy' Wiley Online	Paper Published Volume 37, Issue 1 15, January 2018 Pages 533–545 doi.10.1002/ep
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C) Papers Presented/Published in Proceedings of International Congress /Conferences:

Sr.	Title of paper	Authors	Conference/Place	Period
1	Benefits of superheat recovery on chillers-case study for a hotel installation	Rane, M V and Tandale, M S	<i>21st IIR International Congress of Refrigeration</i> , and included in the Conference Proceedings, Washington, DC,	August, 17-22, 2003.
2.	Tube-Tube Heat Exchanger for Heat Recovery from Engine Cooling Circuit: Water Heating and Space Heating Applications. Paper presented.	Rane, M V, Tandale, M S and Vidyapati Tiwari	<i>International Conference on Sustainable Habitat for Cold Climates</i> , and included in the Conference Proceedings, Leh, Srinagar, INDIA,	September, 16-18, 2004
3.	Performance Evaluation of Low-cost Domestic Parabolic Solar Cooker, Paper presented	Khandekar T N and Tandale M S,	' <i>Third International Green Energy Conference</i> ' Vasteras, Sweden,	17-21 st June 2007.
4.	Performance Evaluation of Low-cost Domestic Parabolic Solar Cooker, paper published in the proceedings	Khandekar T N and Tandale M S,	<i>Third International Conference on Thermal Engineering: Theory and Applications</i> ', Amman, Jordon,	21-23 rd May 2007.
5.	'Design of heat exchanger for waste heat recovery from producer gas', paper accepted and included in conference proceedings.	Joshi Sandeep and Madhukar Tandale	International Conference on Heat and Mass Transfer (HMT 08) and included in the conference proceedings, at Acapulco, New Mexico	January 25-27, 2008
6.	Study on Heat Transfer Enhancement in Solar Air Heater' paper presented.	Bopache Santosh and Tandale M S	International Conference on Advances in Energy Research' and included in the conference	12-14 December 2007

			proceedings, at IIT Bombay, Mumbai.	
7.	Energy Efficient Three-in-One System for Air conditioning, Water Heating and Water Cooling' paper accepted for inclusion in proceeding.	Madhukar S Tandale and Pramod G Patole	International Conference on Energy Engineering and Eco-balance (ICEEE 2009), MITR, Pune and included in the conference proceedings.	16-18 February 2009
8.	'Energy Efficient Household Refrigerator-cum-Water Heater' paper presented in Conference	Madhukar S Tandale , Siddharth Waghmare and Swapnil Deshmukh,	International Conference on Energy Engineering (ICEE 2009), PEC Pondicherry,	7-9 January 2009.
9.	Recent Trends in Solar Desalination. Paper presented	Madhukar S Tandale and Ramanathan V	International Conference on Energy Engineering (ICEE 2009), PEC Pondicherry,	7-9 January 2009.
10.	A Comprehensive Study of Biodiesel as an Alternative Fuel for CI Engine' Paper presented.	Sachin B. Bansode, Abhishek S. Chavan, Madhukar S.Tandale	International conference on ALTERNATIVE FUELS FOR I.C. ENGINES (Published in Proceedings: ISBN: 978-81-924029-8-7) held MNIT, Jaipur, INDIA	6-8 February 2013.
11.	A Comprehensive Study of Biodiesel as an Alternative Fuel for CI Engine' presented and published in proceedings.	Sachin B. Bansode, Abhishek S. Chavan, Madhukar S.Tandale	International Conference on BIOENERGY, ENVIRONMENT & SUSTAINABLE TECHNOLOGIES (Published in Proceedings: ISBN: 978-81-926424-0-6) held at Arunai Engineering College, Tiruvannamalai, Tamilnadu, INDIA during	27-30 Jan 2013.
12.	Performance of three-in-one system for air conditioning, water heating & water cooling applications, Paper presented.	P.G Patole, M.S Tandale	International Conference on Advances in Mechanical Engineering at CoE Pune.	29-31 May 2013
13.	"Effect of Cooled Exhaust Gas Re-circulation (EGR) on Performance-Emission Characteristics of CI	S.P.Wategave, M.S. Tandale , M.S. Sawant, N.R.Banapurmath,	International Conference on Advances in Mechanical Engineering' at CoE Pune.	29-31 May 2013.

	Engine with Cotton Oil Methyl Ester Blends” Paper presented.			
14.	A review of Soar Cooking using Latent Heat Storage” paper presented in Proceedings Applied Mechanics and Materials, Vol 592-594 (2014). Paper presented.	Bhagwat Gore, Madhukar Tandale	“International Mechanical Engineering Congress 2014” organised by NIT Tiruchirapalli, TN.	13-15 June 2014.
15.	A review of Performance & Emission Studies on CI Engine using Cotton Seed Oil Biodiesel” paper presented.	Sagar Sarode, Madhukar Tandale	“International Mechanical Engineering Congress 2014” organised by NIT Tiruchirapalli, TN during	13-15 June 2014.
16.	Material Characterization of Envelope Fabrics for Lighter-Than-Air Systems” presented and published in Proceedings.	Bhushan S. Sonawane, Marvin A.F. Fernandes, Varun Pant, Madhukar S. Tandale , Rajkumar S. Pant	International Colloquium on Materials, Manufacturing & Metrology 2014” Department of Mechanical Engineering, IIT Madras, Chennai during	8-9 August 2014.
17.	Performance of CI Engine using Simarouba Biodiesel with Varying Compression Ratio, Injection Opening Pressure & Nozzle-Hole Geometry, paper published in the proceedings.	Bharat Aher & Madhukar Tandale ,	International Symposium on Aspects of Mechanical Engineering & Technology for Industry" NERIST, Itanagar, AP.	6-8 December 2014
18.	"Effect of Variable Compression Ratio on CI Engine Performance Using Cotton Seed Oil Biodiesel and Its Blends", paper published in the proceedings.	Sagar Sarode & Madhukar Tandale ,	International Symposium on Aspects of Mechanical Engineering & Technology for Industry" NERIST, Itanagar, AP during	6-8 December 2014.

19.	A Review on Passive Techniques of Heat Transfer Enhancement", paper presented & published in the proceedings.	Ninad Patil & Madhukar Tandale,	International Conferences in Industrial, Mechanical & Production Engineering: Advancements & Current Trends" Mechanical Engineering Department, MANIT Bhopal.	27-29 November 2014
20.	Biodiesel (Mangifera Oil Methyl Ester) derived from triglycerides of Mangifera Kernel seed & leaves oil by using heterogeneous catalyst, paper published in the proceedings.	Sangram D Jadhav & Madhukar S Tandale,	Proceedings of SAE 2015 World Congress & Exhibition' scheduled in Detroit, Michigan, USA.	April 21-23, 2015
21.	Optimization of Extraction Process Using N-Hexane Solvent for Mangifera Indica Oil Production from Mangifera Indica Curcas, paper accepted for poster presentation.	Sangram D Jadhav & Madhukar S Tandale,	' <i>SAE 2016 World Congress and Exhibition'</i> scheduled in Detroit, Michigan, USA.	April 12-14, 2016
22.	Multi-objective Performance and emission characteristics for CI Engine operated on Mangifera Oil Methyl Ester using equal weightage multiobjective optimization by Taguchi grey relational analysis (TGRA)' paper accepted for publication in proceedings.	Sangram D Jadhav & Madhukar S Tandale,	SAE 2016 World Congress & Exhibition' scheduled during in Detroit, Michigan, USA.	April 12-14, 2016
23.	Biodiesel (Mangifera Oil Methyl Ester) Derived from Triglycerides of Mangifera Kernel Seed and Leaves Oil	Sangram D Jadhav and Madhukar S Tandale	SAE Technical Paper 2015-01-1682,2015, doi:10.4271-01-1682	14-04-2015

	by using Heterogeneous Catalysts Published in SAE proceedings.			
24.	Heat Transfer Augmentation of Helixchanger Using CFD, paper accepted and presented (Oral)	Nikhil Raje, Madhukar Tandale & Manjunath C	<i>Sixth International Congress on Computational Mechanics and Simulation (ICCMS2016)</i> ' at IIT Bombay, India, organized by Department of Civil Engineering, IIT Bombay and Department of Structural Engineering, VJTI Mumbai	27 June – 1 July 2016.
25.	Optimization of performance & emission characteristics of CI engine operated on Mahua Biodiesel using Taguchi and Multi-regression Analysis, Paper presented (oral).	Madhukar S Tandale & Sangram D Jadhav	International Conference in Mechanical Engineering (ICME-2016) under 'World Congress on Engineering (WCE2016)' to be held at Imperial College, London, UK organized by IAENG.	30 June to 1 July 2016
26.	Experimental Study on CI Engine Performance for Optimum Blending Ratio of Blended Kusum Biodiesel	Anil Poshetti and M S Tandale	International Conference on Advances in Energy Research (ICAER 2017) IIT Bombay, Mumbai	12-14 Dec 2017
27.	Optimization of Biodiesel Production from Waste Cooking Oil Using Homogeneous and Heterogeneous Catalysts through Transesterification Process	Kiran Shende, Sachin Sonage, Pratik Dange, Madhukar Tandale	2 nd International Conference on Advanced Technologies for Societal Applications SVERI's College of Engineering, Pandharpur-413304, Dist. Solapur, Maharashtra.	14-15 December 2018
28.	Optimization of Extraction of Kusum Seed Oil through Soxhlet Extraction Process Using N-Hexane Solvent	Snehal Warake, Dnyaneshwari Barde, Khushboo Chaudhari, Utkarsha Jawale ,	2 nd International Conference on Advanced Technologies for Societal Applications SVERI's College of Engineering, Pandharpur-	14-15 December 2018

		Sachin Sonage, Madhukar Tandale	413304, Dist. Solapur, Maharashtra.	
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Sessions Chaired in Intl/National Conferences:

1. Chaired a session in '**World Congress on Engineering (WCE2016)**' held at Imperial College London, UK during 29-30 June and 1st July 2016.
2. Chaired a session on 'Sustainable Resource Management' in ***International Conference on Advances in Mechanical Engineering*** (ICAME) at College of Engineering, Pune during 29-31 May 2013.
3. Chaired a session on 'Automotive Alternative Fuels' in '***National Conference on Energy and Sustainable Development***' held at College of Engineering, Pune during 28-29 February 2012.

PhD Thesis Guided:

Sangram Jadhav (RS20120116) has completed his PhD on 05-08-2017. His research topic was 'Investigation on Suitability of Alternative Fuel obtained from Regional Feed stock for CI Engine'

List of M.Tech. projects guided:

Sr.	Name/Roll No. of Students	Title of MTP	Year of Completion or Status
1.	Bhirud Niteen L (MT 2004601)	Field Evaluation of Fixed Focus Concentrators for Industrial Oven	2007
2.	Bopche Santosh B (MT2005603)	Experimental Investigations on Heat Transfer Enhancement in Solar Air Heater by Using Artificial Roughness	2007
3.	Ramanathan V (MT2006606)	Development of Low-cost, Efficient Solar Still	2008
4.	Patole Pramod (MT2005605)	Performance Evaluation of Three-in-One Air Conditioning System	2008
5.	Waghmare Siddharth (MT2004611)	Design, Fabrication and Testing Performance of Water Heater-cum-Refrigerator	2008
6.	Sutar Kailasnath B (MT2005614)	Experimental Investigations on Heat Transfer Enhancement in Solar Air Heater by Using pin-fins	2008
7.	Barai Chandrashekhar (MT20056020)	CFD Analysis of Gas Engine Air Handling System of V-type Diesel Engine	2008
8.	Joshi Sandip (MT	Design, Fabrication and Testing of Pancake (Spiral Shell & Coil type) Type Heat Exchanger for Waste Heat Recovery from Producer Gas	2008

9.	Ankolekar Vinay (MT2005601)	Investigation of Performance of Various Vortex Tube Refrigerators with Few Modifications	2010
10.	Khandekar T N (MT2004605)	Performance Testing of Parabolic Solar Cooker with Mirror type Reflector and its Comparison with Aluminium Reflector	2010
11.	Kajale Jayant N (MT2007605)	Experimental Investigations on 'Heat Transfer Enhancement in Solar Air Heater by Using Expanded Metal Mesh	2010
12.	Milind Patil (MT 2009612)	Heat loss characterization of receiver of solar scheffler type solar system' jointly co-guided by MS Tandale & Dr. Neeraj Agrawal.	2011
13.	Ganesh Shirsath (MT 2009606)	Engine performance and exhaust emission analysis of Multicylinder CI engine using Biodiesel	2011
14.	Ajit Mane (MT2009615)	Study the effect of operating parameters on the performance of heat-pipe based indirect evaporative system	2012
15.	Avinash Jadhav (MT2009605)	Heat transfer and friction characteristics of rectangular duct with enhanced surface geometry	2012
16.	Deepak Patil (MT2009602)	Exhaust Heat Waste Heat Recovery from CI Engine	2012
17.	Wategave Sumeet (MT	Testing of Engine Performance on various blends of Bio-diesel with EGR	2012
18.	Mahesh Sawant (MT2010606)	Testing of Engine Performance on various blends of Bio-diesel	2012
19.	Mirza Mustaeenulla Baig (MT2010604)	Study of Heat Transfer Enhancement in a Circular Tube using Diamond Shape Strip Inserts	2012
20.	Abhishek Chavan (MT2011604)	Performance & Emission Studies on CI Engine Using Mahua Bio-diesel and Its Blends	2013
21.	Nilesh Arjun Patil (MT2011609)	Study on Effects of PCM on Performance of ETC type Domestic Solar Water Heater	2013
22.	Sachin Bansode (MT 201160).	Study of Performance and Emission on CI Engine using Neem Oil Bio-diesel	2013
23.	Shaikh M Shahezaad (MT 2012615)	Numerical Analysis of Centrifugal Pump on ANSYS CFX & ANSYS FLUENT	August 2014
24.	Sagar Sarode (MT2012613)	Performance Studies on CI Engine Using Cotton Seed Oil as Biodiesel & its Blends	August 2014
25.	Mayur Jadhav (MT2012607)	Numerical Analysis of Transonic Axial Compressor using Rotor 37" by Completed in.	August 2014
26.	Gore Bhagwat (MT2012606)	Study of Parabolic Solar Cooker with PCM for Energy Storage & Improving its Performance with Utility	August 2014

27.	Chaudhari Vasudev (MT2012603)	Effect of Intercooler on Performance of Turbocharged Multicylinder Engine & Performance of Single Cylinder Diesel Engine with Mahua Oil Biodiesel	August 2014
28.	Aher Bharat (MT2012601)	Performance Studies on CI Engine Using Simarouba Biodiesel & its Blends	August 2014
29.	Ninad Patil (MT2012610)	Experimental investigations on heat transfer enhancement in a circular tube using conical shape strip inserts	December 2014
30.	Manohar Sachin (MT2013613)	Design, fabrication & testing performance of small Scheffler collector system for cooking application	August 2015
31.	Kasabe Asmita Ananda (MT2013610)	Numerical analysis of crystallization fouling in PHE using ANSYS	August 2015
32.	Jadwar Jagdish S (MT2013609)	Design, fabrication & testing of Aerostat for various applications in University campus' by Completed at IIT Bombay	August 2015
33.	Bichkar Onkar Vijay (MT2013604),	Analysis of heat transfer from Tethered Aerostat' Completed at IIT Bombay	August 2015
34.	Bane Sagar Bhimrao (MT2013602)	Experimental study on three expansion devices in small capacity air-conditioning system	August 2015
35.	Aitawadekar Priyant S (MT2013601)	Optimization of shape of the tethered aerostat & fins' Completed in IIT Bombay	August 2015
36.	Barahate Sagar Jeevan (MT2014601)	Analysis of Flow through Micro-channels using CFD	Incomplete
37.	Kamble Pratap Nivrutti (MT2014607)	Multi-Objective Optimization of Diesel Engine Performance by Using Various Optimization Techniques	August 2016
38.	Shaikh Javed Sikandar (MT2014611)	Energetic-exergetic modeling and performance evaluation of solar water heating system	August 2016
39.	Raje Nikhil Shivaji (MT2014618)	CFD analysis of helically baffled shaft and tube heat exchanger using structured multi-block mesh	August 2016
40.	Shimpi Dnyaneshwar K (MT2014618)	Development of	August 2016
41.	Kamble Sonal Manohar (MT2011605)	Development of low-cost efficient solar still.	August 2016
42.	Ansari Shoyeb (MT20156010)	Design & Cost Evaluation of Boiler Blowdown Heat Recovery System for 10 MW Thermal Power Plant	August 2017
43.	Khot Kiran (MT2015609)	Experimental study on heat transfer in a liquid flat plate collector with different tube-fin materials.	August 2017
44.	Moon Vaibhav (MT2015613)	Study of performance and emission characteristics of single-cylinder VCR engine using biodiesel obtained from soap-nuts.	August 2017

45.	Poshetti Anil (MT2015615)	Optimization of Biodiesel Production Processes and Performance Analysis CI Engine Using Kusum Biodiesel	August 2017
46.	Sadgir Shankar (MT2015616)	Experimental Investigations on Heat Transfer Enhancement in a Circular Tube using Wave Shaped Strip Inserts	August 2017
47.	Shivsharan Sandesh (MT2015617)	Study of Friction Factor and Heat Transfer Characteristics of Tube-in-Tube Heat Exchanger with Straight Cut Delta Winglet Inserts	August 2017
48.	Mohite Prashant (MT2015612)	Operational and experimental study of biomass Gasifier with multiple fuels at Tata Power Bhira	August 2017
49.	Patil Sagar (MT2015614)	Performance evaluation of vortex-tube with effect of cone angle	August 2017
50.	Malekar Jayraj (MT2015611)	Design and simulation of tube-fin heat exchanger for different applications.	August 2017
51	Bamane Atul (MT2016601)	Study of performance parameters and emission characteristics of CI engine using Cashew nut shell liquid methyl ester (CNSLME)	August 2018
52	Bari Vandan B (MT2016602)	Study on performance of CI engine using Kusum Biodiesel (KOME)	August 2018
53	Chaudhari Hitendra (MT2016604)	An experimental study on prototype of Solar Chimney Power Plant	August 2018
54	Dawange Vivek (MT2016606)	Enhancement of steam economy of sweet water evaporation plant at Hindustan Unilever Ltd	MST+HNW August 2018
55	Jagdale Vishal S (MT2016607)	Achieving low temperature combustion in Diesel engines using EGR techniques in HCCI (IIT Indore)	August 2018
56	Sumedhkumar Wakode (MT2015618)	Heat Transfer Enhancement in tube with combination of coil wire and rectangular perforated twisted tape inserts	August 2018
57	Rohit Gawade 10303320171291410009	Experimental Investigations on Heat Transfer Enhancement in Solar Air Heater by Using Semi-Circular Conical Roughness Geometry	August 2019
58	Pratik Dange 10303320171291410002	Optimization of Biodiesel Production Process & Performance Parameters of CI Engine using Waste Lubricating Oil (WLO) and Case Study on Energy Audit of Gas Engine	August 2019
59	Sachin Sonage 10303320171291410010	Optimization of Biodiesel Production Process from Waste Cooking Oil, Engine performance and Emission test on CRDI engine and Performance Evaluation of gas engine at MNGL Pune	August 2019

60	Neha Bhole 10303320171291410006	ROBUSTNESS OF MASS BASED SOOT LOAD ESTIMATION (MBSLE) ACCURACY OVER VARIATION IN CRITICAL INPUT PARAMETER Guided jointly with Kranthi S. Chithapragada	August 2019
61	Sagar Upadhye (10303320181291410001)	Modifications of Split Air Conditioner for Obtaining Three Simultaneous Utilities Jointly with Dr. RP Kate	August 2020
62	Salgar Hanamant (10303320181291410009)	Theoretical Study of Water Cooler for Performance Improvement Jointly with Dr. RP Kate	August 2020
63	Pawar Hrushikesh (1930332914001)	Design & Development of Biogas and Waste Processing Plant for Municipal Solid Waste	August 2021

Industrial Interaction:

A) Participation in Industrial Training Programs

- Attended **two weeks** training in Thermax Ltd, Pune on 'Vapour Absorption Systems' in their Chiller plant
- Participated in **one week** course on Steam Engineering at 'Forbes Marshall, Pune'.
- Attended about **two weeks** training programme in Kirloskar Cummins Ltd, Pune.

Besides, visited various companies like Tata Motors, Wartsila Diesel, Thermax Ltd etc. several times during follow-up programme of the in-plant training of the students of sandwich course.

B) **Industrial Consultancy Project:**

Completed the consultancy project for Maharashtra Natural Gas Limited (MNGL), Pune on Energy Audit of their CNG fueling station at Chikhali, Pune.

The consultancy Amount Rs.60,000/-

The period of consultancy 2018-19

SHORT TERM COURSES / FDPs / SEMINARS / CONFERENCES / WORKSHOPS ATTENDED:

Sr.	Title	Place	Conf/Seminar/ Workshop	Period
1.	Participated in XXVII Annual Convention of ISTE and National Seminar on 'Global Interconnectivity for Technical Education in India.	MACT Bhopal	National Seminar	December 19-21, 1997
2	Participated in the National Seminar on 'Physical Education and Sports'	University of Kerala	National Seminar	25-27 June 1998

3	Participated in the 'Orientation Course on Youth Parliament'	Ministry of parliamentary affairs, GoI, New Delhi	Orientation Course	5-7 November, 1998
4	Attended seminars on 'Technology Day, Environment Day & Management Day'	Automotive Trade Fair Pune (AUTO 98) during.	Seminar	3-5 December 1998
5.	Participated in a seminar on 'Synergogy' organized and conducted by GRID	DBATU, Lonere	Seminar	15-19 April 1999.
6.	Participated in 'Steam Engineering Program' on the topic 'Theory and practices in steam generation, distribution, Utilization and steam related energy conservation'	Forbes Marshall Centre for Steam Engineering, Pune	Training Program	February 15-19 1999
7.	Participated in 'Indian Science Congress' held in Pune University.	Pune	Indian Science Congress	3-7 January 2000
8.	Participated in 18 th International Cryogenic Engineering Conference (ICEC-18)	IIT Bombay	International Conference	22-26 February, 2000
9.	Participated 27 th National Renewable Energy Convention 2002	IIT Bombay	National Conference	30 th November to 2 nd December, 2000
10.	Participated in Workshop on 'Alternative Refrigerants and Cycles' organized jointly by IIT Bombay & NCL Pune sponsored by Swiss Agency for Development and Cooperation under HIDECOR project	IIT Bombay	National Workshop	23-25 August, 2002
11.	Participated in International Conference on Sustainable Habitat for Cold Climates,	Leh, Srinagar, INDIA during	International Conference	16-18 September, 2004.
12.	Participated in one week CEP on 'Advanced Heat Transfer' conducted by Dr. Bhalchandra Puranik, IIT Bombay	College of Engineering, Pune.	CEP	27 May-1 June 2006
13.	Participated in Workshop under TEQIP on 'Promoting	VIT Pune	Workshop under TEQIP	April 21, 2006.

	IPR Awareness in Technical Education'			
14.	Attended MDP on 'Management Capacity & Vision Development'	WELINGKAR Institute of Management Matunga, Mumbai	MDP	19-21 January 2006.
15.	Participated a three day programme on 'Leadership Skills for Excellence' at MDI Gurgaon.	Management Development Institute, Gurgaon	Three day Program	4-9 September 2006.
16.	Attended International Conference on Advances in Energy Research (ICAER 2007)	IIT Bombay, Mumbai	International Conference	December 12-14, 2007.
17.	Participated in Management Development Programme on 'Management Capacity & Vision Development'	--	MDP	19-21 st December 2006.
18.	Participated in '3 rd International Green Energy Conference '	Malardalen University, Vasteras, Sweden	International Conference	17-21 June 2007
19.	Participated in One day seminar on 'CO2 as Refrigerant' conducted by Dr H Quack, Technical University, Dresden, Germany on 'CO2 as Refrigerant' conducted by Dr H Quack, Technical University, Dresden, Germany	VJTI, Mumbai	One day seminar	1 st September 2007
20.	Participated in CEP course on 'Teaching Engineering Effectively'	IIT Bombay	CEP	27 Sept-October 1, 2007.
21.	Participated in National Colloquium on 'Emerging Paradigm of Service to Society'	ICT Mumbai	National Colloquium	2-3 November 2007.
22.	Participated in International Conference on Energy Engineering (ICEE 2009) organized by PEC	Pondicherry Engineering College, Puducherry	International Conference	7-9 January 2009
23.	Participated in 2-day training program on 'Effective Role Execution for Institutional Development'	VIT, Pune	Two-day Training Program	10 th February 2009
24.	Participated in one week STC under QIP on 'Recent Advances on Utilization of	Center for Energy Studies, IIT Delhi	STC under QIP	6-11 December 2010

	Alternative Fuels for Transportation'			
25.	Participated in Workshop on 'Industry-Institute Interaction'	College of Engineering Pune	Workshop	August 11, 2012
26.	Participated in ' TEQIP Innovative Meet 2013 '	ICT Mumbai	TEQIP Meet	Sept 25-26, 2013.
27.	Participated in CEP course on ' <i>Institution Building through Appreciative Mindset</i> '	IIT Bombay	CEP	August 29, September 2-4, 16, 2013
28.	Participated in CEP course on ' <i>Inter-disciplinary Aspects of Modeling of Manufacturing Processes</i> '	IIT Bombay	CEP	October 2-6, 2013
29.	Participated in the 5 day Proficiency Improvement Program (PIP) on ' <i>Engine Testing and Certification</i> ' jointly organized by ARAI Pune and AVL India	ARAI Pune	PIP	19-23 August 2013.
30.	Participated in EPICS (Engineering Project in Community Services) Workshop on 'Integrating Design and Service-Learning into the Curriculum' organized by IEEE and Purdue University, USA	Hyderabad.	Workshop	29-31 October 2013
31.	Participated in Quality Enhancement in Engineering Education (QEEE) training workshop	IIT Madras, Chennai	QEEE Workshop	13-14 December 2013
32.	Attended one week STTP on "Advanced Engineering Optimization through Intelligent Techniques"	SVNIT Surat	STTP	22-26 September 2014
33.	Participated in " 102th Indian Science Congress "	Mumbai University	Indian Science Congress	3-7 January 2015
34.	Attended one week CEP on "Engineering & Design Optimization"	IIT Bombay, Mumbai	CEP	December 2015
35.	Participated in Workshop on 'Quality Initiatives in Technical & Higher Educational Institutes (In compliance with NBA & NAAVC Accreditation)'	Engineering Staff College of India (ESCI) Hyderabad	Workshop	23-25 February 2016.

36.	Participated in “Effective Implementation of Outcome Based Education”.	TCE, Madurai - 625015	AICTE-QIP-STC	25-02-2019 to 10-03-2019.
37.	Development Dialogue 2020	Deshpande Foundation, Hubli	DD2020	29-31 Jan 2020
38.	Stepping towards problem solving and problem based learning for academic excellence	KIT Kolhapur	FDP	9-13 June 2020
39.	E-Contents Development	VIT Mumbai	FDP	25 June 2020
40.	Steam Engineering	PCCOE, Pune	Webinar	15-18 June 2020
41.	Incorporation of UHV in Technical Education	NCCIP-AICTE	Online Workshop	10-14 April 2020
42.	Ethics and Values in Higher Education	MSFDA at IofC Panchgani	FDP	31 Oct to 4 Nov 2022
43.	One-day Conference on NAAC	Mumbai University	Conference	11 Nov 2022

OTHER INTERESTS & ACTIVITIES:

- Attended several “Vipassana” Meditation courses since 1989.
 - Completed yog-pravesh and yog-parichay courses
 - Cycling and Trekking
 - Visited Hemalkasa (Bhamragad), Somnath (Near Tadoba), Anandwan (Warora), SEARCH (Gadchiroli), Deshpande Foundation (Hubli) as a interest in social activities.
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