

Name of the Faculty: Prof. Dr. Nitin Parashram Gulhane

Date of Birth: 30th June 1971

Post: Professor in charge for Training and Placement, VJTI, Former Head of Mechanical Engineering Department and Former Head of Mathematics Department



Date of Joining VJTI: 28th July, 2011 and Date of Joining Govt. of Maharashtra Services via. MPSC: 16th Aug., 2001

Contact Details

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Office: Mech. Engg. Dept. (Second floor) VJTI Campus, Mahajani Marg, Matunga, Mumbai-400019

Research Interests:

- Micro fluidics, Convective Heat Transfer,
- Computational Fluid Dynamics
- MEMS Design and Micro Channel Cooling
- Optimization in Thermal Devices and Energy Conservation and Management

Qualifications

- B.E. (Mech. Engg., 1992),
- M.E. (Thermal Engg. 1998)
- Ph. D. (Microfluidics. 2010), Dept. of Aerospace Engg., IIT Bombay, Best PhD Thesis IITB Award

Work Experience :

- Teaching: 26 Yrs, Industry : 2 Yrs and Research : 3 Yrs (Total Exp.: 31 Yrs)

Teaching Experience: 26 Years

- Eligible for Professor under CAS, Department of Mechanical Engineering, VJTI, from Aug. 2014.
- Associate Professor, Department of Mechanical Engineering, VJTI, from 2011.
- Selection Gr. Lecturer, Department of Mechanical Engineering, Government Polytechnic, Pune/Thane 2001-2011.
- Lecturer, Department of Mechanical Engineering, Distance Learning Program Division, BITS Pilani, 2000-2001.
- Sr. Lecturer, Department of Mechanical Engineering, Anuradha Engineering college, Chikhali 1995-2000.

- Adhoc basis Lecturer, Department of Mechanical Engineering, Prof. Ram Meghe college of Engineering and Management, Badnera 1994-1995.

Industry Experience: 2 Years

- Nitin Castings Ltd. Eastern Express Highway, Wagle Estate Thane, Fabrication and Quality Control Dept., Since 1992 to 1994

Research Experience: 3 Year

IIT Bombay, Post held: Research Fellow Since 2010 to 2013 (full time & part time associate researcher)

Academic Activities:

Courses Taught:

ME 0622	Energy Conversion and Energy Management
ME 0623	Advance Thermodynamics and Combustion
ME 0612/ME 859:	Advance Heat Transfer
ME 1613:	Computational Fluid Dynamics
ME 1623	Experimental Methods in Thermal Engineering
ME0422	Fluid Mechanics

International Conference Organised:

1. Organized International Conference on “Advances in Thermal systems, Materials and Design Engineering (ATSMDE-2017)”, sponsored by AICTE, during 21st – 22nd December, 2017 at Veermata Jijabai Technological Institute, Mumbai.

National Conference /Symposium Organised:

1. Organised National Symposium on “Applications of Mathematics in Science and Engineering”, by Department of Mathematics and Mechanical Engineering, during 29th and 30th March 2019 at VJTI, Mumbai Sponsored by TEQIP III.

Schools/Workshops Organised:

1. Organised DTE-MSBTE Sponsored Two Week winter school on, Development of Generic Skill among Engg. Students during 11-21 Dec., 2004.
2. Coordinated ISTE IIT-B National Mission on Education through ICT MHRD Govt. of India Sponsored Ekalavya Two Week Training programme on, Heat Transfer during Nov. 29 - Dec.11, 2011.
3. Coordinated a technical talk under Wednes lecture series:
 - (i) Dr. Prof. H R Srirangarajan, Prof Dept. of Mech. Engg. IIT Bombay on, Wonderful Land of Non-Linear Dynamics. and Chaos on 15.02.12
 - (ii) by Mr. Satyanarayana Villuri Deputy Chief Manager, R & D Nashik division Mahindra and Mahindra Nashik on, Recent Advancement in Engine Design on 22.02.12,

(iii) by Mr. S. M. Vaidya, Vice President Godrej Precision Systems, on Engineering Challenges in manufacturing on 29.12.12

4. Coordinated ISTE IIT-B National Mission on Education through ICT MHRD Govt. of India Sponsored Eklawyya Two Week Training programme on, Engg. Thermodynamics during 11-21 Dec, 2012.
5. Organised Pressure Vessel Design course for L&T-VJTI dated August. 31st 2013.
6. Coordinated 08 faculty Development Programme in VJTI under different schemes
 - i) TEQIP-II on, CFD in Engg. Domain using Computing Software during 8-12 July, 2013,
 - ii) QIP-AICTE on CFD and its application to Industrial problems during 11-15, Nov., 2013
 - iii) TEQIP-II on Advance FEM and its application in Heat Transfer and Fluid Mechanics during 11-12 March, 2014,
 - iv) QIP-AICTE course under QIP on, Renewable Energy Source for Sustainable Development: Need, Technologies and Policies during 29th December 2014 to 2nd January 2015
 - v) QIP-AICTE course under QIP on, Renewable Energy Source for Sustainable Development: Need, Technologies and Policies during 14th December 2015 to 18th January 2015
 - vi) AICTE course under QIP on, 'Fluid Flow Behavior using Computational Methods' 15th to 19th Dec. 2015
 - vii) AICTE course under QIP on, 'Fluid Flow Behaviour using Computational Methods, 28th Dec., 2015 –1st Jan, 2016.
 - viii) One day workshop on FEAST technology in joint venture with ISRO, funded under TEQIP-II, 8th November 2016.

Projects on-going/completed: 1.10 crore Fund received from different funding agency: AICTE under RPS, BARC, NPCIL, DST, MHRD, BARTI, MAHAJYOTI and TEQIP.

Sr No	Title	Sponsoring Agency & Officer Concerned	Period	Agency and Funds	Achievements
1	Acoustic Analysis of Axial Fan of HVAC by using CFD and Experimental Methods	Indraneel Samanta, Abhay Kumar Sahu- Research & Development Center, Blue Star Ltd. Thane, India Email- indraneelsamanta@bluestarindia.com abhaykumarsahu@bluestarindia.com	July 2011 To June 2012	Logistic support and funded by Blue Star work @ Blue Star R&D	Under MoU between VJTI & Blue Star, M. Tech student is deputed in Blue Star carry out project work. A research paper submitted to International Journal.

				division Thane.	
2	Heat flow analysis in high current carrying bus bar	Mr. Kapil Bavikar ED MV 2 R&D Verna Industrial Estate Siemens Ltd., Goa kapilbavikar@siemensgoa.com	July 2011 To June 2012	Logistic support & funded by R&D division Siemens Goa work carried out in VJTI-BARC lab	Paper in Int. Journal of Mechanical and Production Engineering (IJMPE) ISSN 23154489, vol. 1 Issue 1, 2012. Entitled Prediction of Temperature Rise in Busbars of switchgear using CFD as tool.
3	Comprehensive variations of compressible fluid properties in low subsonic laminar micro-flow	Prof S.P. Mahulikar, Dept. of Aerospace Engg. IIT Bombay in Association with A. von Humboldt Foundation, Germany	2011 - 2012 and 2012 - 2013	Research fund Dept. of Aerospace Engg. IIT B grant INI/1104249	Research published International Journal of Heat Transfer
4	Development of expt. Facility & mathematical modeling of heat and mass transfer inside the Venturi – Scrubber	Dr. Debabrata Datta, Addl. Chief (CA & HM), Directorate of RS &A, Nuclear Power Corporation of India Ltd., Anushakti Nagar, Mumbai – 94 Tel(O): 25995090, (M): 9969032459 Email: ddatta@npcil.co.in	July 2012 to June 2013	Logistic support by NPCIL and funded by BARC	A project investigates a dissolve process of nuclear contaminants during high pressure rise due to power failure. Funded by Nuclear Panel of Atomic Energy panel

5	Failure analysis in pressure vessel design	1. Mr. Ravishankar Sr. DGM Design Competency Centre Heat Transfer business unit, L&T Powai Mumbai. s.ravishankar@larsentoubro.com 2.Mr.Karambelkar, Astt.General Manager Design & System FPEX-Business Unit, L&T Powai Mumbai, amit.karambelkar@larsentoubro.com	July 2012 To June 2013	Logistic support and funded by L&T work @ L&T	Under MoU between VJTI and L&T, M.Tech students are deputed in L&T campus to carry out project work as a part of M. Tech thesis
6	Investigation of Nusselt number in Microflows with density variation	Department of Aerospace Engineering, IIT Bombay	2012 - 2013	Research fund Dept. of Aerospace Engg. IIT B grant	Research published in Reviewed Journal
7	Economic design for Photovoltaic and Thermal Solar Collectors System	In collaboration with ICT	2013 - 2015	PhD Research in ICT Mumbai	One International Conference Paper and One Journal paper accepted
8	Experimental investigation of convective heat transfer coefficient for condensation of steam in helical coiled tube	In VJTI	2013 - 2016	PhD Research in VJTI Funded by TEQIP-II	Paper Presented in one International conference

9	Heat Transfer Augmentation using Pin Fin arrays exposed to pulsating impingement of air with heat sink module surrounded by varying magnetic field.	In VJTI	2014 - 2016	PhD Research in VJTI Funded by TEQIP-II	4 Research Paper Published in International reviewed Journal & Two International Conference at Poland and Seoul, South Korea)
10	Venture scrubber experimentation to understand pressure drop characteristics	In VJTI	2014 - 2015	PG Research Funded by Mech. Engg. Dept.	One Int. Conf. Paper presented and One Journal paper submitted
11	Performance investigation of triangular receiver using PV cell	In VJTI	2014 - 2015	PG Research Funded by Mech. Engg. Dept.	Two Int. Conference Paper presented
12	Performance investigation of Photovoltaic Thermal System using CPC with fins	AICTE –under RPS scheme	2014 - 2015	22.8 lakhs	One Journal paper and One Conf. @ IIT B presented. 4 Publication in International Reviewed Journal of Solar Energy
13	Socio economic PVT Thermal	Project scholarship under MHRD BARTI Pune	2015 - 2016	11.34 lakhs	Eight research paper publication in

	System using CPC			PG Research Funded by Social Welfare Dept. BARTI Pune.	International Reviewed Journals
14	Investigation of petrol engine efficiency by ionizing the injected fuel	In VJTI	2015 - 2016	Ph. D Research funded by TEQIP - II	
15	Improving COP of Heat Pump	In collaboration with Emerson Climate Technologies India Pvt. Ltd Pune and VJTI	2017 - 2018	7.2 Lakhs M. Tech Project	Emerson India Pvt. Ltd donated this pump to VJTI Boys hostel in June 2018
16	An Experimental Investigation of Cooling Tower	Project Scholarship under Chhatrapati Shahu Maharaj Research, Training and Human Development Institute (SARTHI), Pune	2018 - 2023	Research Funded by SARTHI	One Int. Conf. Paper presented and One Journal paper submitted
17	An experimental and Numerical Investigation of Heat Transfer Augmentation under pulse jet impingement	Project Scholarship under Mahatma Jyotiba Phule Research and Training Institute (MAHAJYOTI), Nagpur	2021 - 2024	Ph. D. Research Funded by Mahajyoti	One Journal paper submitted
18	Research Collaboration with Cracow University Technology	1) Analysis of the Effect of Packing Materials (Fills) and Flow Rate on the Range and Efficiency of a Forced Draft Evaporative Cooling Tower	2023	3 Lakhs	Published Two Journal papers

		2) A comparative study between the conventional and advanced biomass pretreatment methods applied on the Napier Grass used as a biomass		1 Lakh		
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Awards and Honors:

- Best Ph. D Thesis IIT Bombay award and excellency in research Rs. 20,000/-MHRD Govt. of India award @ IIT Bombay on 7th Aug. 2010
- Felicitated as Best Teacher by State bank of India (SBI in Touch, Mumbai Zone @ Kurla Branch) on 6th Sept, 2014.
- Felicitated by IGBC @ Gandhinagar, Gujrat for IGBC –VJTI student Chapter in Nov. 2015.
- Felicitated by ASHRAE, Navi Mumbai at Datta Meghe COE on Mar 15th, 2015.
- Best Teacher award by Maharashtra Teachers Parishad on 10th Feb., 2018 in Dahisar, Mumbai
- Visiting Professor in April 2018 at Cracow University of Technology, Cracow, Poland
- Evaluator for National Board of Accreditation, (NBA) New Delhi
- PhD and M. Tech thesis evaluator for Pune, Mumbai and Nagpur University
- AICTE expert in EVC, Research Proposal, FDP & MoDRoB Proposals.
- Committee Members for IITB students preplacements interviews
- Experts in STTP and FDP session under AICTE Margdarshan Scheme
- Subject Expert for FDP session under AICTE ATAL Scheme
- Appreciation by Government Polytechnic, Mumbai for guidance on, “NBA Accreditation Process and Evaluation”. Letter dated 26 April 2023.
- Appreciation by Maharashtra State Skills University, letter No. 7 Jul 2023
MSSU/Panel/Appreciation/2023-2024/473.
- Certificate for Appreciation by Schlinder MNC for prompt industrial services on 11 October 2023.

Grants Received:

1. **AICTE–MODROB Grant of Rs. 7.2 Lacs** for Heat Transfer Equipment’s, 2013
Letter No: F.No.12/AICTE/RIFD/MOD/(Policy-2)-127/2012-13 Dated: 06/02/2013.
2. **TEQIP-II R&D Grant Rs. 3.42 Lacs** for “Experimental Study for Analysing electrical thermal performance characteristics in photovoltaic/thermal system”, 2014-15. No. VJTI/TEQIP-II/R&D 24/11/2014.

3. **TEQIP-II R&D Grant Rs. 2.01 Lacs** for “Experimental investigation of condensation heat transfer in helical coil”, 2014-15. No. VJTI/TEQIP-II/R&D 24/11/2014.
4. **TEQIP-II R&D Grant Rs. 1.98 Lacs** for “Experimental investigation of self-priming venturi scrubber”, 2014-15. No. VJTI/TEQIP-II/R&D 24/11/2014.
5. **AICTE-RPS Grant of Rs. 17.82 Lacs** for “Experimental Investigation and Performance Analysis of a Single Pass Solar Photovoltaic Thermal (PVT) System using Compound Parabolic Collector (CPC)”, 2015-17.
Letter No: AICTE (RPS) No. 8-208/RIFD/RPS/Policy-1/2014-15 Dated: 05/03/2015.
6. **BARTI Pune Grant of Rs. 17.5 Lacs** as stipend for PhD Scholar supervised during 2015-18.
Letter No: Out. No./BARTI/Research section/BANRF-2015-16/2567 Dated: 01/10/2015
7. **PMKVY Grant of Rs. 7 Lacs** for Department Equipment’s purchase, 2016
Letter No: F. No.:2-6/D-NSQF/PMKVY-NSC/2016 Dated: 16/11/2016.
8. **Coordinator for AICTE-Adjunct Faculty Grant of Rs. 12 Lacs**, 2016-17.
Letter No: 1. F.N. 60-2(20)/RIFD/AICTE-ADF/2016-17
2. F.N. 60-2(22)/RIFD/AICTE-ADF/2016-17
3. VJTI Letter No/Estt/Mech/AICTE-Adj F/2336 Dated 29/06/2017.
9. **AICTE-TGS Grant of Rs. 1.5 Lacs** for attending “ 10th International Conference on Computational Heat, Mass and Momentum Transfer (ICCHMT-2017)” at Seoul, Korea.
Letter No: 10-29/RIFD/TG/Policy-1/2016-17 Dated: March 2017.
10. **AICTE-MODROB Grant of Rs. 8.70 Lacs** for Energy laboratory, 2017
Letter No: 9-63/RIFD/MODROB/Policy-1/2016-17 dated: 8 Sep. 2017.
11. **AICTE GOC Grant of Rs. 2.0 Lacs** for organizing **International Conference** in Dec 2017.
File No: 67-38/RIFD/GOC/Pol-1/2016-17 Dated: 05/06/2017.
12. **AICTE-TGS Grant of Rs. 1.0 Lacs** for attending “ 12th International Conference on Computational Heat, Mass and Momentum Transfer (ICCHMT-2019)” at Rome Italy, 03-06 Sept. 2019.
Letter No: 10-10/RIFD/TG/Policy–1/2019-20 Dated: 01/08/2019.
13. **AICTE-RPS UNDER NDF Grant of Rs. 20.00 Lacs** for, March 2019.
File No: 8-27/RIFD/RPS-NDF/Policy-1/2018-19 Dated: 13/03/2019
14. **TEQIP-III R&D Grant of Rs 1.00 Lacs** for organizing **National Symposium** on “Applications of Mathematics in Science and Engineering”, Mar 2019.
Approval Dated 28 Feb 2019.

15. **TEQIP III Grant of Rs. 5.78 Laacs** for “Micro Device Panel Control and Experimental Cooling system performance setup”, 24th April 2019. Letter No: TEQIP-III/MH/VJTI/29/434 Dated: 24/04/2019.

Industrial Projects Completed:

- Acoustic Analysis of Axial Fan of HVAC by using CFD and Experimental Methods in collaboration with Blue Star Ltd. Thane during 2011-12.
- Prediction of Temperature Rise in Busbars of switchgear using CFD in collaboration with Siemens LTD. Thane during 2011-12.
- Experimental Study of Iodine Removal Efficiency in Self-Priming Venturi Scrubber in collaboration with NPCIL Mumbai during 2012-13.
- Pressure variation in Shell and Tube Heat Exchanger after Tube Rupture in collaboration with L&T Powai, Mumbai during 2012-13.
- CFD analysis of hot air recirculation in cooling system off-road vehicle in collaboration with John Deere, Pune during 2012-13
- Flow Simulation & analysis of thermal plasma torch pyrolyser in collaboration with BARC, Mumbai during 2014-15.
- Improving COP of Heat pump, in collaboration with Emerson Climate Technologies (India) Pvt. Ltd, Pune during 2017-18.
The setup is donated by company and installed at Boys hostel, VJTI.
- Dynamics of Hot Streaks and Its Effects on Flow Distribution in Transformer Winding, in joint venture between VJTI and Crompton Greaves, Kanjur Marg, Mumbai during 2018-19.

Industrial Consultancy Work Completed:

- “Vetting of structural design of fire screen used in installation and commissioning of underground storage tank at Utter Pradesh” for HPCL via GAS Projects India Pvt. Ltd. 09 Oct 2018.
- Design Approval Report for, “Pinion Gear Mechanism for Tipcart of Portable Compactor” For M/s Antony Motors Pvt. Ltd. Mhape Mumbai. MECH/TEST-34/Des.Chk.Report/10/34/2023/ Date 12/10/2023, Consultancy cost 59000/-.
- Vetting Report on “Drawing for installation of piped natural Gas (PNG) based Cremation Furnace”. BMC Letter no. Ch. Eng./M&E/1996 Date 04/07/2023 & VJTI-MECH/Test-33/Vetting Report/2023/dated 10/10/2023, Consultancy cost 70,800/-

Training Attended

- At IIT Kharagpur on welding technology,
- At Mahindra & Mahindra on recent developments in engine design.
- At IIT Bombay Solar Thermal Simulation Software
- One-week training during 12th-16th September, 2011 at IIT Bombay on topic Heat Transfer.
- One-week training during 14th-18th November, 2011 at VJTI on topic Advances in the Manufacturing & Micromachining Techniques under AICTE FDP.
- Two-week training during 29th Nov.-10th Dec., 2011 at IIT Bombay on topic Heat Transfer.
- One-week training during 12th-16th March, 2012 at VJTI on topic Industrial Engineering Tools & Techniques AICTE QIP.
- Two-week training during 12th-22nd June, 2012 at IIT Bombay on topic Computational Fluid Dynamics, under ISTE IITB National Mission on Education through ICT, MHRD, Govt. of India, Sponsored Ekalavya, STTP conducted by IIT Bombay.
- One-week training during 25th June - 4th July, 2012 at IIT Bombay on topic Introduction to Research Methodologies.
- One-week training during 20th-24th November, 2012 at Indian IIT Bombay on topic Coordinators on Engineering Thermodynamics.
- One-week training during 11th-21th December, 2012 at IIT Bombay on topic Engineering Thermodynamics.
- Two-week training during 18th-22nd February, 2013 at VJTI on topic Recent Trends in Finite Element Method & Introduction to Boundary Element & Mesh- Free Method under TEQIP II.
- One-week training during 10th-14th June, 2013 at VJTI on topic Advances in Fault Diagnosis of Rotating Machines & Fluid Film Bearing under TEQIP II.
- One-week training during 8th-12th July, 2013 at VJTI on topic CFD in Engineering Domain Using Computing Software's under TEQIP II.
- One week, 22nd-26th August, 2013 at VJTI on topic Project Management Tools & Techniques (PMTT) under AICTE.
- One-week training during 11th-15th November, 2013 at VJTI on topic CFD Application & Engineering Analysis using Computing Software's under TEQIP II.
- Attended Training Cum Research collaboration in Academic visit to Technical University of Hamburg- Harburg Germany (TUHH Germany) and Delft university of Technology (TU Delft) Netherland during Dec. 3rd Dec. 11th, 2013 and 11th -15th, 2013, letter dated 17th Oct., 2013 at TUHH & TU Delft (Under TEQIP-II).

- One-week training during 15th-19th December, 2014 at VJTI on topic Pedagogy Skills Development under TEQIP II.
- Attended Continuing Education Centre for Distance Engineering Education programme on, Teaching Applied Mathematics to Post Graduate Students in Engineering during 13-15th May, 2015 at IIT Bombay.
- One-week AICTE Sponsored under QIP training program on Renewable Energy Source for sustainable development: Need, Technologies & Policies, during 14th to 18th Dec 2015 at Veermata Jijabai Technological Institute (VJTI).
- One-week AICTE Sponsored under QIP training program on Fluid Flow Behaviors using Computational Methods during 28th Dec 2015 to 1st Jan 2016 at Veermata Jijabai Technological Institute (VJTI).
- AICTE QIP Course Fluid Flow and computational method during 13th -18th Feb, 2017.
- One Week FDP, MHRD sponsored under PMMMNMST, organised by Faculty Development Center, VJTI on “Advanced Data Analysis and Decision Making” during 30th Dec 2019 to 03rd Jan 2020.
- One Week FDP, MHRD Sponsored under TEQIP-III KITE, organised by IIT Bombay on “Internet of Things” during 24th Feb to 29th Feb 2020.

International Visits:

- Technical University of Harburg, **Hamburg, Germany**, Delft University of Technology, **Netherlands** and Pilatus Aircraft Ltd. **Switzerland** for research collaboration under TEQIP II during 3-18 Dec. 2014
- Cracow University of Technology, **Poland**, IX International Conference in Computational Heat and Mass Transfer. 22nd – 28th May 2016. Presented a research article.
- **Seoul, Korea** XI International Conference on Computational Heat and Mass and Momentum Transfer, 28th May – 1st June 2017. Article presented and accepted in journal. Letter No: 10-29/RIFD/TG/Policy-1/2016-17 Dated: March 2017.
- Cracow University of Technology, **Poland**, Worked as Visiting Professor during April 2018.
- **Rome, Italy**, XII International Conference on Computational Heat, Mass and Momentum Transfer (ICCHMT-2019), 03rd Sept. – 06th Sept. 2019. Article presented and accepted in journal. Sponsored by AICTE under Travel Grant Scheme via Letter No: 10-10/RIFD/TG/Policy – 1/2019-20 Dated: 01/08/2019.
- **Visiting Professor** at TOR VERGATA University on 05th and 06th Sept 2019.

- Invited as Visiting Professor at Cracow University of Technology, **Poland**, during April-May 2020 (Not Attended due to COVID 19 restrictions).
- Invited as Visting Professor at Cracow University of Technology, **Poland**, during 28th March– 15th April 2024.

Collaboration with IIT Bombay: based on following published journal paper:

Mahulikar S.P., Gulhane N.P., Pradhan S.D., Hrishikesh K., & Prabhu S.V. 2012 (Jul-Sep), Pressure drop characteristics in continuum-based laminar compressible micro-convective flow, *Nanoscale & Microscale Thermophysical Engineering*, 16(3) 181-197.

Graduate project thesis co-guidance for IIT BHU student

- Mr. Ajay Hirulkar (Reg. in 2010 in IIT BHU for M Tech Integrated course) Guide: Prof. Dr. O. N. Singh, Banaras Hindu University & Dr. N P Gulhane VJTI, work on project entitled “Influence of Electromagnetic effect on variation of Fluid properties”.

Ph. D Supervised:

- Mr. Kaustubh Chavhan, on Experimental investigation & performance analysis of a single pass Solar Photovoltaic thermal (PVT) system using Compound parabolic collector, awarded PhD in April 2017.
- Mr. Umair Siddiqui (Heat transfer augmentation using pin fin arrays exposed to pulsating impingement of air with heat sink module surrounded by varying magnetic field, Reg. Aug. 2014, Full time stipendiary candidate under TEQIP II funded scheme). Awarded PhD in May. 2018
- Mr. Rashid Ali, Part time candidate (Experimentation on enhancement in heat transfer coefficient using helical coil low Re, single phase regime thermal device Reg. Aug. 2012). Awarded PhD in Feb 2019.
- Mr. Sainath Waghmare (Graphical ray tracing and experimental analysis of compound parabolic collector with low acceptance angle, reg. in Aug 2016) in association with BARTI Pune. Awarded PhD in May 2019.
- Mrs. Ramola Sinha (reg. in Aug 2015) (Experimental and Numerical Investigation on Double Cavity Three Stage Cascade Solar Receiver to Reduce Internal Heat Loss) Ph.D. Awarded.
- Mr. S. B. Kadam, (Part Time candidate Reg. Aug. 2012) (Venturi scrubber for iodine removal) Ph.D. Awarded.
- Mr. Dinesh Dond (reg. in Aug 2016) (Performance investigation of Single Cylinder diesel engine) PhD Awarded.

Ongoing PhD students at VJTI

- Mr. Kushal Wasankar (Reg. in 2018, Thesis submitted) working on Solar Cavity Receiver heat loss analysis for high temperature range.
- Mr. Swapnil Shinde (Reg.in 2018, Thesis submitted) working on Cooling tower performance improvement.
- Mr. Nitin Kubde (Reg. in 2016, Thesis submitted) Working on An Experimental Research study to find the Techno-Economic Feasibility of a compressed Biogas plant with the Napier Grass feeder in Indian Context.
- Mr. Avinash Rathod (Reg in 2021, Course work Completed) working on Heat Transfer augmentation of flat plate by air jet impingement.
- Mr. Motiwala Nawaz Irshad Abida (Reg.in 2021, Course work completed) working on Ground handling system for Aerostat.

Project Guidance: PhD students at VJTI = 12 (07 PhD awarded, 3 Ph. D. Submitted Thesis).

Project Guidance: M. Tech students in VJTI

Completed: 69, ongoing (2023-24): 01

Project Guidance: B. Tech students in VJTI

Completed: 60, ongoing (2023-24): 04

List Of Publications, Review article/Book Chapters and patents filed:**Patent Filed:**

1. Patent submitted and pending with Indian Govt. on, 'Non-Dimensional Parameter representing heat transfer augmentation using pulse jet' Application Number: 2016 21 004403, CBR Number: 2283 and Form Number: E-2/359/2016/Mumbai, E-3/603/2016/Mumbai, E-5/349/2016/Mumbai, Docket Number 3200 date of submission 8th Feb., 2016.
2. Non-Dimensional Parameter Representing the Range for the Occurrence of Non – Uniformity in Nusselt Distribution Profile, Reference CBR No. 5831.

Books Published/Review articles/Book chapters: -

1. N. P. Gulhane, & Mahulikar, S.P., **2011**, *Laminar Micro-Convection of Gas and Liquid*, ISBN 978-3-8433-9189-4, LAP Lambert Academic Publishing GmbH & Co. KG, Saarbrücken, F.R. Germany, 144 pgs.
2. **Istanbul, Turkey** for 7th International Conference on Computational Heat and Mass transfer.

Article published on “Pressure drop in laminar micro-convective flow due to variable properties of Compressible fluid”, (Mahulikar, S.P., Gulhane, N.P., Pradhan, S.D., & Prabhu, S.V.), Jul. 2011.

3. Popular News Articles/Letters: Micro-convective Heat Flow published in TU Hamburg-Harburg – Besuchaus Indien: Für die Forschung nach Harburg, Germany, Europe dated 5th Jan. **2012**.
4. Amarnath D. Landge, Gulhane, N.P., & Manishkumar G. Gadle., **2016**, *Application of Venturi Scrubber in Nuclear Engineering*, ISBN 978-3-330-32974-4, LAP Lambert Academic Publishing GmbH & Co. KG, Saarbrücken, F.R. Germany, 93 pgs. (with M Tech student).
5. Kaustubh V Chavhan, N.P. Gulhane, Amarnath D. Landge, Applications of Compound Parabolic Collectors in Solar PV-Thermal System- Performance of PVT System, LAP Lambert Academic Publishing, ISBN-13: 978-3-330-34785-4, Date:10/07/**2017**.
6. Umair Siddique Mohammed & Gulhane N. P. **2017**, *Heat Transfer Augmentation with steady air jet impingement*, ISBN 978-613-9-87973-1, LAP Lambert Academic Publishing GmbH & Co. KG, Saarbrücken, F.R. Germany, 173 pgs. (with PhD student).
7. Tata McGraw Hill Education / Review work on Heat and Mass Transfer Chapter 1 and chapter 15, 2014 email dated Dec., 16th 2014.
8. Course Material for Tata McGraw Hill Education / Review work on Thermodynamics Chapter 1, Chapter 2 and chapter 3, 2015 email dated April, 30th 2015.

Papers in Refereed Journals

2009

1. Gulhane, N P , Mahulikar, S P, “Variations in gas properties in laminar micro-convection with entrance effect”, International Journal of Heat & Mass Transfer, Vol. 52, Nos. 7-8, pp. 1980-1990, Mar 2009.

2010

2. Gulhane, N. P., Mahulikar, S P, Numerical study of compressible convective heat transfer with variations in all fluid properties, International Journal of Thermal Sciences, Vol. 49, No. 5, pp. 786-796, May 2010.

2011

3. N. P. Gulhane, “Micro-Convective Heat Transfer with Entrance Effect and Graetz Problem”, Technical Note in Nanoscale and Microscale Thermophysical Engineering, Jan-Mar 2011.
4. Gulhane, N P, Mahulikar, S P, Numerical study of micro convective water-flow characteristics with variations in properties, Int. Journal of Nanoscale & Microscale Thermophysical Engineering, Vol. 15, No. 1, pp. 28-47, Dec. 2011.

2012

5. Jambhrunkar, G.D. & Gulhane, N.P., & Biradar, M. G, "CFD Analysis of Hydraulic Cylinder to Evaluate Performance of Cushioning in Cylinder", International Journal of Mechanical and Production Engineering (IJMPE), ISSN: 2315-4489, Vol. 1(1), 2012.
6. Gulhane, N. P., & Mahulikar, S.P., Numerical investigation on laminar micro-convective liquid flow with entrance effect and Graetz problem due to variation in thermal properties, Int. Journal of Heat Transfer Engineering, Vol. 33, No. 8, pp. 748-761, Jun., 2012.
7. Mahulikar, S.P., Gulhane, N.P., Pradhan, S.D., Hrisheekesh, K., Prabhu, S.V., "Pressure drop characteristics in continuum-based laminar compressible micro-convective flow", Nanoscale and Microscale Thermophysical Engineering, Vol. 16, No. 3, pp. 181-197, Sept. 2012.
8. Gulhane N.P. & G. Guru, "Prediction of Temperature Rise in Bus bars of switchgear using CFD", Int. Journal of Mechanical and Production Engineering (IJMPE) ISSN 23154489, vol. 1 Issue 1, 2012.

2013

9. N. P. Gulhane, Rajput, P., Study of Vortex Interactions between two aerodynamic lifting Surfaces, Int. Journal of Emerging technologies in Computational and applied Sciences, ISSN (Online): 2279-0055, IJETCAS 12 -350, Issue 3, Vol. 1 & 2, Dec. 2012 - Feb. 2013.
10. Umbarkar, A., N. P. Gulhane, Datta D., "CFD Simulation of Self Priming Venturi Scrubber, International Journal of Engineering Research and Development", Volume 7, Issue 8, PP. 50-54, 2013.
11. Dr. N. P. Gulhane, Priyanka Rajput, "Optimization of Aerodynamics of Canard Configuration", International Journal of Mechanical Engineering Technology, ISSN (Online): IJMET 12 -50, Issue 4, Vol. 2, April, 2013.
12. Shukla D.S., N. P. Gulhane, Datta, D., "Experimental Study of Iodine Removal Efficiency in Self-Priming Venturi Scrubber", IOSR Journal of Mechanical and Civil Engineering, Volume 7, Issue 3, PP. 01-05, 2013.
13. U. D. Swami, A. K. Tak, A. K. Das, Dr. N. P. Gulhane, "Flow Simulation & Thermal Analysis Of Pyrolysis Of Wood Particle In Vertical Column", International Journal of Engineering Research & Technology (IJERT), Vol. 2 Issue 6, June 2013.

2014

14. K. H. Salian, P. S. Sanku, S. P. Shah, U. A. Shaikh, Dr. N.P. Gulhane and S.B. Shedge," Elimination of Cracks Formed on Rivet Head", International Journal of Engineering & Technical Research (IJETR), Vol. 2 Issue 4, April 2014.

15. N. P. Gulhane, Chavan k., A Critical Technological Literature Review of - Photovoltaic / Thermal Solar Collectors System, International Journal of Current Engineering and Technology, ISSN: 2277- 4106, P-ISSN: 2347 – 5161, Issue-3, pp. 258-264, April 2014.
16. Ganesh Katke, N P Gulhan, M Venkatesh, “Pressure variation in low pressure side of shell and tube heat exchanger after tube rupture”, (Proceedings of the ASME 2014 Pressure Vessels & Piping Conference PVP 2014-28616, Anaheim, California, USA, July 20-24, 2014) American Society of Mechanical Engineers, Pressure Vessels and Piping Division (Publication) PVP 5,2014.
17. A Appa, NP Gulhane, “CFD analysis of fin tube heat exchanger using rectangular winlet vortex generator”, International Journal of Engineering Technologies in Computational and Applied Science, Vol 8(5), pp 450-457, 2014.

2015

18. Dr. N. P. Gulhane, A. D. Landge, D.S. Shukla, S.S. Kale, “Experimental study of Iodine removal efficiency in self-priming venturi scrubber”, Annals of Nuclear Energy, Vol. 78, pp. 152-159, April 2015, Elsevier.
19. Dr. N. P. Gulhane, Satish Patil, “Selection of TEMA Type and Thermal Design Optimization of Shell and Tube Heat Exchanger”, Journal of Material science and Mechanical engineering (JMSME), Print ISSN: 2339-9095; Online, ISSN: 2393-9109; Volume 2, pp. 18-23, April-June 2015.
20. Gulhane, N., Patil, S., Singh, K, “Acoustic Analysis of Condenser Fan of split Air-conditioner using Numerical and Experimental Method”, International journal of Air-conditioning and Refrigeration, Volume 23, Issue 2, 1-12, April 2015.
21. Dr. N. P. Gulhane, Harish Kadam, “Analysis of Pressure and Velocity at the throat of self-priming Venturi scrubber”, Journal of Material science and Mechanical engineering (JMSME), ISSN: 2339- 9095; Online, ISSN: 2393-9109, Volume 2, pp. 57-61, April-June 2015.
22. Dr. N. P. Gulhane, Vikrant Salunke, “Analysis and Prediction of thermal behavior of current path for circuit breaker using FEA model and DOE Approach”, Journal of Material science and Mechanical engineering (JMSME), ISSN: 2339- 9095, Online ISSN: 2393-9109, Volume 2, 76-79.
23. Dr. N. P. Gulhane, Sagar Pare, Modelling and Calibration of Charge Air Cooler in GT-Power, Cummins Functional Excellence Practice (FEP), work performed along with Thermal and Fluid Science (System Simulation) team at Cummins Research and Technology India (CRTi), Balewadi, Pune during Sept 2014 to Jun 2015.
24. Dr. N. P. Gulhane, Chaitali Shirke, “Effect of shroud gas injection on thermal and fluid behavior of RF plasma tube used for Nano synthesis of Alumina, Journal of Material science and Mechanical engineering (JMSME), ISSN: 2393- 9095, Online ISSN: 2393-9109, Volume 2,48-52, April-June 2015.

25. N. P. Gulhane, , K. Chavan, “Experimental And Fluid structure Interaction Study of Triangular Receiver with Square Fin Arrangement Using CPC”, Royal University Journal, Bhutan, Vol. 2, ISSN 2059-2353, ISBN 978-0-9932795-1-5, June 2015.

2016

26. Siddique Mohd Umair, N.P. Gulhane, “On Numerical Investigation of Heat Transfer Augmentation through Pin Fin Heat Sink by Laterally Impinging Air Jet, Energy”, Procedia Engineering (Elsevier Publication), Vol.157, PP: 89 -97, 2016.
27. Siddique Mohd Umair, N.P. Gulhane, “On Numerical Investigation of Non-Dimensional Constant Representing the Occurrence of Secondary Peaks in the Nusselt Distribution Curves”, International Journal of Engineering, Transaction A, Vol. 29 (10), PP: 1431-1440, Oct. 2016.
28. Sainath Waghmare, Nitin Gulhane, “Design and Ray Tracing of a compound parabolic collector”, Elsevier -Solar Energy, 137 (2016), pp. 165-172.
29. Gulhane N.P and Chawane Chetan, " Swirl flow characteristics in a can type combustion chamber of gas turbine", Proceedings of the Asian Congress on Gas Turbines, Indian Institute of Technology Bombay, Mumbai, India, 14th -16th November 2016.
30. Chavan Kaustubh, Gulhane Nitin, “Performance investigation of compound parabolic collector system with triangular receiver with and without internal fins”, International Journal of Energy and Statistics (IJES), World Scientific Publication (Journal online ISSN No. 2335-6812), Vol.: 04 (1) 1650004, 2016.

2017

31. Umair, S.M., Kolawale, A.R., Bhise, G.A., Gulhane, N.P., “On numerical heat transfer characteristic study of flat surface subjected to variation in geometric thickness”, International Journal of Computational Materials Science and Engineering, World Scientific publication, Vol. 6 (02), article: 1750010, 2017.
32. Siddique Mohd Umair, N.P. Gulhane, On Numerical investigation of non-uniformity in cooling characteristic for different materials of target surfaces being exposed to impingement of air jet, International Journal of Modeling, Simulation, and Scientific Computing, Vol. 8 (03), article: 1750024, 2017.
33. Chavan Kaustubh and Gulhane Nitin, “Performance analysis of compound parabolic collector with extended surfaces inside the triangular receiver”, International Journal of Renewable Energy Technology (IJRET), Inderscience Publication, ISSN online: 1757-398X, Vol. 8 (1), pp. 24-46, 2017.

34. Sainath Waghmare, Nitin Gulhane, "Flux concentration on tubular receiver of compound parabolic collector by surface areal irradiance method of ray tracing", Elsevier - Optik , Vol. 136, pp: 470-479, 2017.
35. Anil Kumbhar, Nitin Gulhane, Sachin Pandure."Theoretical Analysis of Hybrid Chiller", Energy Procedia, Vol. 109, pp 487-496, 2017.
36. Anil Kumbhar, Nitin Gulhane, Sachin Pandure. "Effect of various parameters on working condition of chiller", Energy Procedia, 109, pp. 479 – 486, 2017.
37. Divyesh Ubale, S. S. Umale, N. P. Gulhane, "Experimental Investigation of Condensation heat transfer in vertical Shell and Helical coil Heat Exchanger", Advanced Science, Engineering and Medicine, Vol : 10 (3-4) pp. 398-402, March 2018.
38. Sainath Waghmare, Chavan, K.V., Muntode, P.B., N. P. Gulhane, Experimentation of surface areal irradiance method for solar flux measurement in compound parabolic collector. Elsevier- Optik-International Journal for Light and Electron Optics, 147, pp. 373-384, 2017.
39. Sainath Waghmare, N. P. Gulhane, "Optical evaluation of compound parabolic collector with low acceptance angle", Elsevier- Optik, IJLEO, 149, pp. 359-371, 2017.
40. D K Dond, Dr N P Gulhane, "Experimental Investigations on Fuel Properties Under the Influence of Magnetic Field", International Journal of Engineering Research & Technology (IJERT) ISSN: 2278-0181 Published by, www.ijert.org ICRTME - 2016 Conference Proceedings, 2017.

2018

41. Siddique Mohd Umair, Ganesh Bhise, N.P. Gulhane, "On numerical investigation of local Nusselt distribution between flat surface and impinging air jet from straight circular nozzle and power law correlations generation", Journal of heat transfer, Asian Research Publication, Vol. 47, pp. 126-149, 2018.
42. Sainath Waghmare, Chavan, K.V., Muntode, P.B., N. P. Gulhane, "Evaluation and optimization of receiver height in compound parabolic collector with low acceptance angle, Taylor and Francis- Int. Journal of Ambient Energy, Vol. 40, No. 7, pp.675-686, 2018.
43. Ali, R., & Gulhane, N. P., "Experimental Analysis of Condensation in Helical Coil Tube", Pertanika Journal of Science & Technology, Vol. 26 (3), 2018.
44. Nitin Pandey, Ishant Jain, Sudhakar Reddy, Nitin P Gulhane, "Electro-thermal Analysis of Contact resistance", AIP Conference Proceedings, Vol 1966 (1), Page: 020017, 15/05/2018.
45. Sainath Waghmare, N. P. Gulhane, Optimization of receiver height in compound parabolic collector by optical analysis and experimental method, Elsevier- Optik IJLEO, 157, pp. 1331-1341, 2018.

46. Rashid Ali, N.P. Gulhane, "Experimental study on Condensation Heat Transfer in Vertical Helically Coil Tubes, International Journal of Process Systems Engineering (MS_IJPSE_207370) Vol. 4 (4), pp. 257-274, 2018.
47. Satpute Jitendra, Chavan Kaustubh, Gulhane Nitin, "Thermal Performance Investigation of Concentrated Solar Collector Using Novel Aluminium Absorber", in Materials Today: Proceeding in Science Direct, Volume 5, Issue 2, Part 1, 2018, Pages 4059-4065.

2019

48. Waghmare, S.A. and Gulhane, N.P., "Design configurations and possibilities of reflector shape for solar compound parabolic collector by ray tracing simulation", Elsevier-Optik IJLEO, Vol. 176, pp. 315-323, Jan 2019.
49. Sainath Waghmare, Kaustubh Chavan, Nitin Gulhane, "Numerical simulation of tracking modes for compound parabolic collector with tubular receiver", IEEE Transactions on Industry Applications, Vol 55(2), pp. 1882-1889, March-April 2019.
50. Siddique Mohd Umair, N. P. Gulhane, Sher Afghan Khan, Jan Taler, Arthur Cebula, Pawel Oclon, Rajesh Patil, "Numerical investigation of semi-empirical relations representing the local Nusselt number magnitude of a pin fin heat sink", Journal of Heat Transfer, Wiley Publication, Vol. 48, pp. 1857-188, 2019.
51. Siddique Mohd Umair, N. P. Gulhane, A. Al. Robaian, Sher Afghan Khan, "On numerical investigation of semi-empirical relations representing local Nusselt number at lower Nozzle-target spacing's", International Journal of Engineering, Vol.: 32(1), pp 135-145, 2019.
52. Ramola Sinha, Nitin P. Gulhane, Jan Taler & Paweł Ocloń, "Heat loss analysis of three coil cylindrical solar cavity receiver of parabolic dish for process heat", Thermal Science Journal, Vol. 23, Suppl. 4, pp. S1-S10, 2019, Vinča Institute of Nuclear Sciences, Belgrade, Serbia.
53. Waghmare, S.A., Chavan, K.V., Gulhane, N.P., "Numerical simulation of tracking modes for compound parabolic collector with tubular receiver", IEEE Transaction on Industry Application, Vol. 55, Issue. 2, pp. 1882-1889, 2019.
54. Siddique Mohd Umair, N. P. Gulhane, "Numerical Investigation of mathematical non-dimensional constant and Empirical relation representing Non-uniformity in Nusselt Profile", Journal of Thermophysics and Heat Transfer, <https://doi.org/10.2514/1.T5828>, Dec 2019.

2020

55. Ramola Sinha, Nitin P. Gulhane, "Heat loss analysis of three coil solar cavity receiver of parabolic dish collector under wind condition", International Journal of Renewable Energy Technology, Inder science Publisher.
56. Ramola Sinha, Nitin P. Gulhane, Numerical study of Radiation Heat Loss from Cavity Receiver of Parabolic Dish Collector, Numerical Heat Transfer Part B: Fundamental, Taylor and Francis.
57. Dipak Dond, Nitin Gulhane, "Optimization of combustion parameter for modified CRDI small cylinder diesel engine by using response surface method" in the journal ", Sadhana: Indian Academy of Sciences" SCI journal
58. Dipak Dond, Nitin Gulhane, "Effect of Combustion Parameters on Performance, Combustion and Emission Characteristics of a Modified Small Single-Cylinder Diesel Engine" in the "International journal of Energy & Environmental Engineering", Springer publication
59. Dipak Dond, "Predict the effect of combustion parameter on the performance and combustion characteristics of small single cylinder diesel engine", Combustion modelling and Science journal, SCI journal.

2021

60. Ramola Sinha, Nitin P Gulhane, "Experimental Investigation and heat loss analysis of a three coil solar cavity receiver of parabolic dish collector under wind condition", International Journal of Renewable Energy Technology, Volume 12, Issue 1, April 2021.
61. Dipak Dond, Nitin P Gulhane, "Optimization of combustion parameter for modified CRDI small cylinder diesel engine by using response surface method", Journal of Mechanical Engineering and Sciences, JMES2010771, Dec 2021.
62. Dond, D. K., & Gulhane, N. P, "Effect of injection system parameters on overall performance of a small diesel engine", Journal of Heat Transfer, Wiley Publication.
63. Dond, D. K., & Gulhane, N. P, "Effect of a turbocharger and EGR on the performance and emission characteristics of a CRDI small diesel engine", Journal of Heat Transfer, Wiley Publication.
64. Dond, D. K., & Gulhane, N. P, "Optimization of Injection System Parameter for CRDI Small Cylinder Diesel Engine by using Response Surface Method", Journal of the Institution of Engineers (India): Series C
65. Dond, D. K., & Gulhane, N. P, "Effect of Injection System Parameters on Performance and Emission Characteristics of a Small Single Cylinder Diesel Engine", *International Journal of Automotive and Mechanical Engineering*

2022

66. Dond, D. K., & Gulhane, N. P, “Combined effect of split injection and EGR on performance and emission of small diesel engine”, Routledge Taylor and Francis group
67. Swapnil Shinde, Nitin Gulhane, “Experimental study on the performance of wet cooling towers using different packing materials”, Materials Today: Proceedings, Volume 72, Part 3,2023.
68. Nitin Kubde Dr. Nitin Gulhane, “An Analytical Study of the Variation in the Carbohydrates and Sugars Contents of the Napier Grass used as a Biomass Cultivated at Various Maturation Stages in the Indian Territory”, Change Management: An International Journal
69. Nitin Kubde Dr. Nitin Gulhane, “An Analytical study of the Variation in the Chemical Oxygen Demand and Total Nitrogen Contents of the Napier Grass Cultivated at Various Maturation Stages in the Indian Territory”, International Journal of Science, Mathematics and Technology Learning.

2023

70. M. Qadeer, Dr. N. P. Gulhane, “On the importance of fluidic manifold design and orientation on flow boiling instability in microchannel heat sinks”, International Journal of Heat and Mass Transfer, 209,124120,2023
71. Nitin Kubde, Dr. N. P. Gulhane, “A comparative study between the conventional and advanced biomass pretreatment methods applied on the Napier Grass used as a biomass”, Cleaner Energy and Technology,17,100694,2023.
72. SS Shinde, Dr. N.P. Gulhane, J Taler, P Oclon, “Analysis of the Effect of Packing Materials (Fills) and Flow Rate on the Range and Efficiency of a Forced Draft Evaporative Cooling Tower”, Energies,16 (14),5255,2023.
73. SSM Khalil, RSN Sahai, NP Gulhane, KA Pathan, AR Attar, SA Khan, “Experimental Investigation of Local Nusselt Profile Dissemination to Augment Heat Transfer under Air Jet Infringements for Industrial Applications”, Journal of Advanced Research in Fluid Mechanics and Thermal Sciences 112
74. AM Rathod, Dr. N.P. Gulhane, Umair Siddique, “Heat Transfer Augmentation for Impingement of Steady Air Jet Under Exponential Heat Flux Boundary Condition”

Papers in Refereed International and National Conferences (Selected)

2003

1. National Conference on Mathematics and Engineers Paper presented on “Pseudo Velocity Concept in IC engine detonation”, at Shri Sant Gajanan Maharaj College of Engineering, Shegaon, 2003.

2004

2. Paper presented in National Conference on “Renewable Energy: need of hour”, All India Institute of Engineers (Kolkata) Seminar held at College of Engineering, Badnera, 2004.

2012

3. Paper presented in Int. Conference on Manufacturing Trends in Mechanical & Production Engineering, entitled “CFD Analysis of Hydraulic Cylinder to Evaluate Performance of Cushioning in Cylinder”, 2012.
4. Paper presented in Int. Conference on Manufacturing Trends in Mechanical & Industrial Engineering, N. P. Gulhane, & G. Guru, entitled “Prediction of Temperature Rise in Busbars of switchgear using CFD”, ISBN 978-93-81693-89-6, 2012.

2013

5. Paper presented in National Conference held at Singarh College of Engineering, Lonavala on “Aerodynamics of Jet Pack”, in March 2013.
6. Paper presented in International Conference held at College of Engineering, Pune on “Optimization of Aerodynamics of Canard Configuration by Computational Fluid dynamics”, in May 2013.
7. Paper presented in International Conference held at College of Engineering, Lonavala, Gulhane, N.P. & Rajput Priyanka on, “Optimization of Canard Configuration by change of angle of incidence”, during 15-17th May 2013.

2014

8. Paper presented in International Conference on Renewable and Sustainable Development at International Symposium on Engineering and Technology, Pune on “A Critical Technological Literature Review of Solar Photovoltaic/ Thermal Collectors System”, during 09 -10 January, 2014.
9. Paper presented in Int. Conf. held at S.B. Patil College of Engg., Indapur on “Study of Iodine Removal Efficiency in self-priming venturi scrubber”, during Feb. 21-22. 2014.
10. Paper presented in Int. Conf. held at S.B. Patil College of Engg., Indapur on “CFD Simulation of Self Priming Venturi Scrubber”, during Feb. 21-22. 2014.
11. Paper accepted in Proceedings of the ASME 2014 Pressure Vessels & Piping Conference PVP2014 on “Pressure Variation in Low Pressure Side of Shell and Tube Heat Exchanger after Tube Rupture”, July 20-24, 2014, Anaheim, California, USA.
12. Paper presented in Int. conference on Environment and Energy (ICEE) held at Jawaharlal Nehru Technological University Hyderabad (JNTUH) India on “Performance Investigation of Compound Parabolic Collector Using Triangular Absorber System”, during 15- 17th Dec. 2014.

2015

13. Paper presented in International Seminar on Renewable Energy and Sustainable Development (RES-2015), on “Experimental and fluid structure interaction study of triangular receiver with square fin arrangement using compound parabolic collector”, Royal University of Bhutan, 15th -17th June 2015, Bhutan.
14. Paper presented in 2nd Mechanical Engineering Graduate Research Symposium (MEGRES 2015), on “Comparative Study of Photovoltaic / Thermal (PV/T) Performance using Compound Parabolic Collector”, by Kaustubh Chavan, Jitendra Satpute, Nitin Gulhane at IIT Bombay, 2015.
15. Paper presented in 5th International Conference on Advances in Energy Research at IIT Bombay on “Effect of Extended Surfaces and Fluid Structure Interaction on the Performance of Triangular Receiver using Compound Parabolic Concentrator” during 15-17th Dec. 2015.

2016

16. Paper presented in 9th International Conference on Computational heat and Mass transfer-2016 by N.P. Gulhane, Siddique Mohd. Umair, on “Numerical Investigation of Heat Transfer Augmentation through Pin Fin Heat sink by laterally impinging Air Jet”, at Cracow, Poland, during 23-26 May 2016. Elsevier, Procedia Engineering 157, pp. 89-97, 2016.
17. Sainath Waghmare, Kaustubh Chavan and Nitin P. Gulhane “Numerical simulation of tracking modes for compound parabolic collector with tubular receiver”, proceeding of 1st IEEE International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES-2016), Delhi Technological University, New Delhi, pp. 731-735, during 04th to 6th July 2016.
18. Rashed Ali, Nitin P Gulhane, Experimental Investigation on condensation in helical coiled tube, International Conference on Recent Trends in Engineering, Science and Technology (ICRTEST- 2016) organizing by St. Peters Engineering College, Hyderabad during 25th- 27th October 2016.
19. Paper presented by Umair Siddique, Dr. N. P. Gulhane, Ganesh Bhise, Abhijeet Kolawale entitled ‘On Numerical Investigation of Nusselt Distribution Profile of Flat plate using Lateral Impingement of Air jet’, Proceedings of International Conference on Advance Technologies for societal Applications organised by COEP, Pandharpur, Techno-Societal Springer Publications, 20th -21st Dec 2016.

2017

20. Jitendra Satpute, Kaustubh Chavan, Nitin Gulhane, “Thermal Performance Investigation of Concentrated Solar Collector Using Novel Aluminium Absorber” 7th International Conference on Material Processing and Characterisation (ICMPC-2017), organised by Gokaraju Rangaraju Institute of Engineering and Technology, Hyderabad, 17th to 19th March 2017. Materials Today: Proceedings, 5(2), pp. 4059-4065.

21. Divyesh Ubale, S. S. Umale, N. P. Gulhane, "Experimental Investigation of Condensation heat transfer in vertical Shell and Helical Coil Heat Exchanger", 2nd international conference on Mechanical and Manufacturing Engineering ICMME-2017, organised by SCSVMV University Enathur, Kanchipuram, India during 6th and 7th April 2017.
22. Siddique Mohd. Umair, N.P. Gulhane, On Numerical Investigation of Semi-Empirical relations representing local Nusselt number at Lower nozzle-target spacing's, ICCHM2T, Seoul, South Korea, 28th May – 1st June 2017, Journal of Power Technology.
23. Rashed Ali, Nitin P Gulhane, "Experimental study on condensation heat transfer in helical tube", Sixth International Congress on Computational Mechanics and Simulation (ICCMS), 27th June-1st July 2017, IIT, Bombay jointly organised by IIT Bombay and VJTI.
24. Umair Siddique, N.P. Gulhane, "On Numerical Investigation of Empirical Relations representing the non-uniformity concerned with the Nusselt Profile", UK Heat Transfer Conference, London, September 2017.
25. Ramola Sinha, Nitin P. Gulhane, Mathematical Modeling of Heat Losses from Cylindrical Cavity Receiver in Solar Parabolic Dish, Energy Procedia-International Conference on Advances in Energy Research (ICAER-2017), IIT during 12th -14th, Dec. 2017
26. Ramola Sinha, Vijay Tamboli and Nitin P. Gulhane, Numerical Investigation of Total heat loss from Cylindrical Solar Cavity Receiver under Wind Conditions, International Conference on Advances in Energy Research (ICAER-2017), IIT Bombay, 12th -14th December 2017.
27. DK Dond, Nitin P Gulhane, CL Dhamejani, "Mathematical Modelling and MATLAB Simulation of Diesel Engine", International Conference on Advances in Thermal Systems, Materials and Design Engineering (ATSMDE2017) December 21, 2017.
28. Rashed Ali, Nitin P Gulhane, "Experimental Study of condensation heat transfer in helical coil heat exchanger", International Conference on Advances in Thermal Systems, Materials and Design Engineering (ATSMDE2017) December 21, 2017.
29. Siddique, Umair M. and Shaikh, Salman A. and Gulhane, Nitin P., "Heat Transfer Augmentation using Pulse Jet with Lateral Impingement of Air on Flat Plate", International Conference on Advances in Thermal Systems, Materials and Design Engineering (ATSMDE2017) December 21, 2017.
30. Ramola Sinha, Nitin P. Gulhane, Effect of Boundary Condition on Heat Losses from Solar Cavity Receiver, International Conference on Advances in Thermal System, Material and Design Engineering (ATSMDE-2017) VJTI, Mumbai. 21st -22nd December 2017.
31. Ramola Sinha, Nitin P. Gulhane, "Heat loss from cylindrical cavity receiver in solar parabolic dish system: a review, Proceedings of the 24th National and 2nd International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMT-ASTFE-2017), BITS-Pilani Hyderabad, India. 27th -30th December 2017.

32. Paper presented in International Conference by Dr. N. P. Gulhane, Kanwaljeet Jaura on “Design Optimization of Water-cooled chillers using 3D computational tools for effective distribution of Refrigerant in Evaporator Tubes”.
33. Prasanna Godbole, Nitin P Gulhane, Manish Kulkarni, Alexander Berg, “CFD Analysis of Hot air Recirculation in cooling system of off road vehicles”, International Conference on Advances in Thermal Systems, Materials and Design Engineering (ATSMDE2017) VJTI, Mumbai. 21st -22nd December 2017.

2018

34. Kumbhar, V., Bhingare, S., Kadam, S., Mohite, S., Gulhane, N.P., Gejage, S., Lidhade, S., Jadhav, V. Numerical analysis and optimization of thermohydraulic performance in tube provided with thin wire rib roughness by taguchi approach”, 5th International Conference on Computational Methods for Thermal Problems, THERMACOMP 2018, Bengaluru, India, 9 July to 11 July 2018, pp. 668-674.
35. Nitin Pandey, Ishant Jain, E Sudhakar Reddy, Nitin P Gulhane, “Experimental Analysis of Electro-Thermal Contact Resistance of Al and Cu Surfaces”, 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON), IEEE, pp 1-7, 2018.
36. Umair Siddique, Gulhane Nitin, Abdul rahman A. Al-Robaian, Sher Afghan Khan, “On Numerical Investigation of Heat Transfer Augmentation study of flat plate with lower nozzle-target spacing”, Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power (FMFP). December 10-12, 2018, IIT Bombay, Mumbai, India.

2019

37. Deepak D. Gupta, Nitin P. Gulhane, Sachin B. Paramane, “Dynamics of Hot Streaks and its effect on Flow Distribution in Transformer Winding”, 12th International Conference on Thermal Engineering: Theory and Applications, February 23-26, 2019, Gandhinagar, India.
38. Kadam, S.B. and Gulhane, Nitin P., Performance Review of Venturi Scrubber, Proceedings 2019: Conference on Technologies for Future Cities (CTFC). (March 29, 2019). Available at SSRN: <https://ssrn.com/abstract=3362216> or <http://dx.doi.org/10.2139/ssrn.3362216>.
39. Sinha, R and Gulhane, Nitin P. Gulhane, Paweł Oćłoń, Jan Taler, Rahimi Gorji, “The wind test on heat loss from three coil cavity receiver for a parabolic dish collector”, ICCHMT 2019, e3s web of Conference 128- 01006, 2019 12th international conference on heat, mass and momentum transfer (ICCHMT-2019), Rome, Italy, 3rd -6th September 2019.
40. K. S. Wasankar, S C. Yadav, R. Sinha, N. P. Gulhane, “Numerical investigation of heat losses through cascaded fully open cavity receiver at high temperatures up to 500^oC”, ICCHMT 2019, e3s web of

Conference 128- 01018, 2019 -12th International Conference on Computational Heat , Mass and Momentum Transfer (ICCHMT-2019), September 3rd-6th, Rome, Italy, 2019.

41. Sinha, R and Gulhane, Nitin P., Mathematical Analysis of Convection Heat Loss from Solar Cavity Receiver Dish Concentrator, Energy Procedia- 7th International Conference on Advances in Energy Research (ICAER) 2019, held on 10-12 December 2019. Springer Proceedings in Energy.

42. D K Dond, N P Gulhane, “Predict the Effect of Combustion Parameter on Performance & Combustion Characteristics of Small Single Cylinder Diesel Engine”, 7th International Conference on Advances in Energy Research (ICAER 2019) held on 10-12 December 2019, IIT Bombay, Springer Proceedings in Energy.

2020

43. Sinha, R and Gulhane, Nitin P., “Mathematical modelling of Heat losses from cylindrical Cavity Receiver in Solar Parabolic Dish”. Advances in Energy Research, Vol 2, ICAER 2017 at IIB.

2022

44. Swapnil Shinde, Nitin Gulhane, “Experimental study on the performance of wet cooling towers using different packing materials”, ICAME-2022: 2nd International Conference & Exposition on Advances in Mechanical Engineering College of Engineering Pune (COEP) Pune, India, June 23-25, 2022

45. Nitin A Kubde, N P Gulhane, “An analytical study of the variation in the constituents like moisture, ash, and lignin in the biomass cultivated at various maturation ages in the Indian territory”, International Conference on Frontiers in Materials Engineering (ICFME-2022) December 14 – 16, 2022 (Accepted for publication in Springer)

2023

46. Nitin A Kubde, N P Gulhane, “Green Processing of Biomass through Fractionation technique to Produce Clean Fibers for an Effective Biofuel and co products generation with special reference to Napier Grass as a Biomass”, International Conference on Environment Sustainability (ICES 2023) VJTI Mumbai.

Development of course material /monograph

(i) Prepared and delivered course material/session on CFD in TEQIP sponsored programme on, CFD in Engineering Domain Using Computing Software’s, held in VJTI during 8-12th July, 2013

(iii) Prepared and delivered course material/session on CFD in AICTE sponsored programme on, CFD Application and Engineering Analysis Using Computing Software’s, held in VJTI during 11-15th Nov., 2013

(iii) Design and developed syllabus and course material for Pressure Vessel Design Post Graduate Course under MoU between VJTI and L&T. Review Meeting and Visit date 26th Nov., 2013.

(iv) Committee member of Departmental Industry Advisory Board to structure and revise undergraduate syllabus for the year 2014-15 & 2015-16. email dated Jan. 22nd, 2016

Other Academic/Scientific Activities

- Coordinated Round Table discussion with American and Korean Students and a Noble Laureate Dr. John Byrne University of Delaware, USA with Thane Municipal Corporation (TMC) Commissioner Shri. Rajeev and Mayor Shri. Patil and TMC Engineering expert Mr. Pote on the topic 'Exploring the possibility of implementing in Thane City the concept of 'Sustainable Energy Utility (SEU)' proposed by CEEP UD that may lead to evolve sustainable energy policy of TMC in support of SCP in long run.
- Played crucial role in signing MoU between IIT Bombay and VJTI, L&T and VJTI. Emerson & VJTI
- Awarded PhD scholarship to 04 students under different scheme of TEQIP and BARTI, Pune.
- Worked as session chair and Reviewer for International Conference on Recent Advances in Engineering, Technology and Management organised by Sardar Patel College of Engineering, Andheri, Mumbai during May 31-June 2, 2012.
- Worked as session chair and Reviewer for International Conference on Advances in Mechanical Engineering organised by College of Engineering, Pune during 29-31st May, 2013.
- Worked as session chair and Reviewer for National Conference on Green Technology & Sciences for Sustainable Development organised by Anuradha Engineering College, Chikhali, Buldhana during 26-27 Mar, 2015.
- Invited as speaker in 3rd International Conference and Exhibition on, Mechanical and Aerospace Engineering (Mech. Aero 2015) during Oct. 5-7th, 2015 at San-Francisco, USA.
- Experimental Study of Iodine Removal Efficiency in Self-Priming Venturi Scrubber **article has been downloaded or viewed 397 times since publication.** Source: email from Elsevier publication dated 10th March 2016.
- Conference session chair at Rizvi COE Mumbai on 30th Mar 2016, email dated 22nd Mar 2016.
- Invited talk at M.S. University Baroda Gujarat on 8th April 2016 on BARC funded project Nuclear Safety.
- Board of Studies and research committee member in Institute of Chemical Technology (ICT formerly UGCT), Matunga-Mumbai from year 2013-14 to till date.
- Awarded Travel Grant from AICTE- Delhi to present paper in 9th International conference on Heat transfer in South Korea in May-2017 and Rome Italy in Sept 2019.
- Board of Studies member for Mechanical Engineering Department of Tulshiramji Gaikwad Patil College of Engineering, Nagpur for the Academic year 2017-18.

- Worked as NBA coordinator for Mechanical Department Accreditation during Compliance visit in 2017 for 6 year accreditation in total.
- Organizing Secretary for International Conference on Advances in Material Design & Manufacturing Engineering held in VJTI during 21-22 Dec., 2017
- Worked as a mentoring team member for Government College of Engineering, Gaya for NBA accreditation process and placement drive under TEQIP III twinning Activity during 2018-19.
- Worked as Research Recognition Committee (RRC) member for Punyashlok Ahilyadevi Holkar, Solapur University Solapur for the year 2021.
- Board of Studies member for Mechanical Engineering Department of PCCOE, Pune for the academic year 2020-2023 mail dated 27th May 2023.
- Board of Studies member for General Engineering Department, ICT Mumbai on 18 June 2022 mail dated 16th June 2022 and 22 July 2023 mail dated 18th July 2023.
- Board of Studies member for Mechanical Engineering Department, Ramdeobaba College of Engineering mail dated 6 September 2023.
- Board of Studies member for Mechanical Engineering Department, Prof. Ram Meghe Institute of Technology & Research, Amravati letter dated PRMITR/MECH/BOS/2024

Adequate extension and field outreach activities

2011

1. Working as M. Tech Coordinator for Thermal Engg. Since, August 2011 to till date.

2012

2. Invited and worked as a Judge for Technical paper presentation event in INNOVISION 2012 at MCT's Rajiv Gandhi Institute of Technology, Andheri, Mumbai on 26th March. 2012 letter dated 13-03-2012.
3. Worked as liasoning officer for MH-CET DTE examination during Feb-May 2012. RO DTE order: No4/ViKaMu/TanShi/Tantrik3/Training/2012/1520 dated 6th June 2012.
4. Worked as External Examiner for evaluating M.E Mechanical (Heat Power Engg.) Dissertation at Rajarshi Shahu COE Pune on 7th May 2012.
5. Worked as External Examiner for M. Tech Defense (Viva-Voce) for M. Tech in Aerospace Engg. Department at IIT Bombay, on June 4th, 2012. A letter dated 30th May 2012.
6. Guidance regarding the National Mission on Education through ICT with IIT Bombay as Remote center at Goa COE Farmagudi letter dated June. 5th 2012.
7. Participation for establishing the Remote Centre under Eklawyya Projects scheme of IIT Bombay, at Shri Sant Gajanan Maharaj COE, Shegaon letter dated July, 20th 2012.

8. Library Committee member from 2012 to 2016.
9. Worked as External Examiner for M. Tech Defense (Viva-Voce) for M. Tech at SPCOE, Andheri dated July 18th, 2012.
10. Worked as Departmental Coordinator for M. Tech admission in 2012, office order dated 3rd Aug 2012.
11. Worked as a member of Selection Committee under the career advancement scheme for ICER Scientist at Central Institute for Research on Cotton Technology letter dated Sept., 21st 2012.
12. Participated as Interview panel Board nominee for the interview of Scientist through CAS in Central Institute for Research on Cotton Technology, Matunga, Mumbai on 12 Oct. 2012.
13. Worked as External Examiner for evaluating M.E Mechanical Dissertation at Rajarshi Shahu COE Pune, letter dated 7th May 2012 and 3rd Nov 2012.
14. As a VJTI-L&T coordinator, Initiated Post Graduation project activity with L&T under MoU between L & T and VJTI and deputed Seven PG students in L&T for Pressure Vessel Design Project work during 2012-13.
15. Initiated in MoU with IIT B for research activities.
16. Worked as PG thesis examiner in Aerospace Engg. Dept. IIT Bombay.
17. Worked as ARC Coordinator Mumbai-Kokan region first year engineering degree admission MH-CET-2012.
18. Expert lecture delivered on, Vehicle Dynamics in Aircraft at Govt. Polytechnic, Thane in 2012.
19. Contributed as session Chairperson in International Conference held at Sardar Patel College of Engineering (SPICON 2012) Andheri-Mumbai.

2013

20. Worked as Reviewer of Extended abstracts of Subtheme 10-Nano and microfluids International Conference on Advances in Mechanical Engineering, COE Pune, dated March., 18th 2013.
21. Worked in Departmental Purchased Committee for period of two years from May 22nd, 2013 letter dated 22nd May, 2013.
22. Worked as a faculty advisor for ISHARE chapter at VJTI Mumbai, dated May, 22nd 2013 and conducted industrial visit, organized guest lecture of IIT faculty and TUDelft Netherland faculty in 2013 & 2014.
23. Research Project in collaboration with Nuclear Power Corporation of India NPCIL Mumbai in 2013 and worked as a Principal Investigator for M. Tech Thermal Engg project on the topic CFD analysis of heat and mass transfer inside Venturi nozzle and experimental validation during, academic year 2012-13 letter dated June 13th, 2013.

24. Worked as External Examiner (Viva-Voce) for the M Tech (Thermal and Fluid Engg) Course at IIT Bombay, on June. 26th 2013 a letter dated 20th June 2013.
 25. Working as Inspection authority in Trailer Designing letter dated 8th July 2013.
 26. Worked as a Chief Coordinator/PI for the project Modernization of Heat Transfer laboratory and up gradation of lab equipment under MODROBS for year 2012-13 letter dated 6th Feb., 2013.
 27. Completed Industrial Internship projects for Post graduates four M. Tech students under continuing education for the academic year 2013-14 at Jost Engineering Company Ltd. Thane letter dated 22nd July, 2013.
 28. Worked as External Examiner for M. Tech Practical Examination in Dissertation/Thesis and Defense (Viva-Voce) Heat Power Engg Examination, summer 2013 at G. H. Rasoni COE Nagpur, letter dated July, 15th 2013
 29. Research Committee member of Department of General Engineering, Institute of Chemical Technology Mumbai Sept., 17th 2013.
 30. Worked as Principle Investigator for the Project Experimental investigation & performance analysis of a single pass Solar Photovoltaic thermal (PVT) system using Compound parabolic collector (CPC) under MoU jointly signed by VJTI & ICT letter dated Sept., 19th 2013.
 31. Presented seminar in PhD workshop/Symposium on 9th Dec., 2013 in TUHH- Germany.
 32. Design and Testing of Solar Cooker of Social Welfare Pune under Maharashtra Govt. in 2013-14.
 33. Worked as Sub-Liasoning officer for Maharashtra state Mumbai region MT-CET examination 2013.
- 2014**
34. Worked as Convener for First Year and Direct Second Year Degree Engineering admissions during Feb- August 2014, VJTI office order dated 5th Feb. 2014.
 35. Worked as a Principle Investigator for testing of Gas Cooker for Social Welfare Dept. Pune (Govt. of Maharashtra) VJTI Mumbai in 2014, letter dated March 14th, 2014.
 36. Presented paper in ASME Conference on Pressure variation in low pressure side of shell and tube heat exchanger after tube rupture and published in ASME publication New York dated March., 18th 2014.
 37. Edited chapters in 'Thermodynamics' book published by Tata McGraw Hill Publication during May 2014.
 38. Worked as expert in Bombay Municipal Corporation for Technical advice on conversion of wood/electric pyres in to PNG Furnace, letter dated May. 17th 2014.
 39. Attended Confidential work of Maharashtra Public Service Commission (MPSC) exam on May 2nd – 3rd 2013 & March 4th -5th 2014.
 40. Working as Coordinator for VJTI-Racing club (SAE BAJA and SAE AERO) letter dated 30th Sept. 2014.
 41. Worked as Reviewer for paper presentation Competition at Aerospace Department, IIT Bombay, on 03rd Oct 2014.

42. Delivered expert lecture on Thermodynamics and Heat Transfer at Shivajirao Jondhale COE & Technology Asangaon, Thane letter dated Nov. 8th, 2014.
43. Edited chapters in “Heat and Mass Transfer” book published by Tata McGraw Hill Publication during Nov-Dec 2014.
44. Worked as expert and evaluator for in–basket activities & Interview for MAHAGENCO (MSEB) at IBPS on 27th & 28th Dec 2014, letter dated Dec. 22nd, 2014.
45. Worked as a Principal Investigators for the projects under TEQIP-II at VJTI Mumbai dated Dec 29th, 2014 and received a grant of approx. 43 lacs for various research project.
46. Received AICTE RPS grant 17.82 lac and Working as Principal Investigator for the Project Experimental investigation & performance analysis of a single pass Solar Photovoltaic thermal (PVT) system using Compound parabolic collector (CPC) under RPS Scheme during financial year 2014-15.

2015

47. Working as committee member in backward class VJTI cell letter dated 13th Jan.2015.
48. Research Committee member for PhD and M Tech exam in ICT Mumbai on 29th Jan, 2015 to 2016.
49. Worked as Coordinator for AICTE-CII Survey of Industry-linked Technical Institute data for year 2012-13, 2013-14 and 2014-15. Letter dated 6th Feb., 2015.
50. IOCL sessions to Army officers: Sept 2015 and 8-9-10-23rd Feb 2015.
51. Worked as external examiner for PhD defense examination (Mech. Engg.) in S.G.B. University Amravati on 21st Feb. 2015.
52. Attended First National Conference on Green Technology and Sciences for Sustainable Development, NCGTSSD at Anuradha Engineering College, Amravati during March 26th -27th 2015.
53. Worked as member of Inspection committee on behalf of DTE letter dated 8th June 2015 at
 - i) Vidhyvardini’s College of Engineering and Technology Vasai Road Thane
 - ii) Somaiya College of Engineering Vidyavihar, Mumbai
 - iii) Harne College of Engineering Vagani, Dist. Thane
 - iv) S.J. Jondhale College of Engineering, Dombivali
54. Worked as Expert in Interview Committee for Maharashtra Public Service Commission (MPSC) dated Jun., 10th, 11th, 12th & 15th 2015.
55. Delivered Expert Lecture on Performance Investigation of Parabolic Compound Concentrators in the Program sponsored by AICTE at Pillai HOC College of Engg, during July 6-11, 2015. A letter dard 10th July 2015.
56. Worked as a Chairman/Examiner for Dissertation phase-IV (ESE July, 2015) at Walchand COE Sangli, dated Jan, 14th and July, 16th 2015.

57. Design and Development and costing of MSSIDC Govt. Of Maharashtra Furniture work in 2015 as Principal Investigator, letter dated 20th May 2015 and manufacturing machinery inspection consultancy work 6th July 2015.
58. Worked as Committee member of Scrutiny Committee for Recruitment process of faculty at VJTI, letter dated 10th Aug 2015.
59. Co-coordinator for E-Cell activity in Mech. Engg. Dept., VJTI. As a faculty advisor for different student activities, Aug 2015 to Aug 2017.
60. Design and Development of PNG GAS FIRED CREMATOR for Municipal Corporation of Greater Mumbai in Sept. 2015.
61. Training to Indian Army officers in 1st – 20th September, 2015 to 2019 (twice in semester) at Indian Oil, Bandra.
62. Invited as speaker in 3rd International Conference and Exhibition on, Mechanical and Aerospace Engineering (Mech. Aero 2015) during Oct. 5-7th, 2015 at San-Francisco, USA.
63. Delivered guest lecture on ‘Solar PV Cells’ at Parshwnath College of Engineering on 8th Oct 2015.
64. Worked as External Examiner for SE/TE/BE Practical Examination at ZES’s Zeal COE Pune, dated Oct.10th 2015.
65. Delivered Expert Lecture on Performance Investigation of Parabolic Compound Concentrators in the Program sponsored by TEQIP-II at Govt. COE Amravati during Oct., 12th -16th 2015.
66. Delivered expert lecture at Government College of Engineering, Amravati, under TEQIP – II on “Towards Global Technological excellence”, 15th October, 2015.
67. Worked as a paper setter for the ESE examination of M. Tech (Thermal Engg) at SPCOE Andheri, dated Oct 20th 2015.
68. Fund and Scholarship received of 12.8 lac from BARTI Pune Govt. of Maharashtra for PhD project and working as PhD supervisor for the research proposal Numerical analysis & Experimental investigation of a single pass Solar Photovoltaic thermal (PVT) system using Compound parabolic collector (CPC) dated Nov. 5th, 2015.
69. Worked as Student advisor for VJTI-IGBC (Int. Green Building Council) student chapter and attended Green Building Congress 2015 during 20-21st Nov. 2015 at Gandhinagar. Letter dated 18th Nov, 2015.
70. Handled Consultancy work of Kamth Tobacco Co. Pvt. Ltd. Mumbai for FFS machine in 2015. Letter dated 17th Dec. 2015.

2016

71. RO, DTE work to inspect and verify backward class scholarship status in unaided Engg. Institute. Visited Acharya College of Engg. Nerul, RO DTE letter dated 7th Jan., 2016.
72. Worked as unfair means Committee member at VJTI Mumbai, dated Jan., 11th 2016.
73. Worked as a Coordinator for submission of Faculty information on MHRD portal for National Institutional Ranking (NIRF) dated Jan. 15th, 2016.
74. Worked as Coordinator for Industry-Institute Interaction guest lecture by Dr. Tim Fox on Engineering Sustainable Cold Chain transport for food in India at VJTI Mumbai, dated Jan., 20th 2016.
75. Worked as Expert in University Interview (USSC) for faculty in Mech. Engg. at ARMIET Shahapur, Dist.: Thane letter dated Jan.21st , 2016
76. Associated Start up Net Con Entrepreneurship team with Directorate of Industries Mantralaya, Mumbai on 27th Jan. 2016 email dated 31st Jan. 2016.
77. Appreciation letter for publishing paper in the International Journal of Air-conditioning & Refrigeration on acoustic analysis of condenser fan of split Air-conditioner using numerical and experimental method email dated Jan. 29th 2016.
78. Reviewed conference paper on Electronics Cooling & Heat Pipes track, email dated 24 Feb, 2016. ICNMM2016. Request to review ICNMM2016-7980. Mark Steinke msteinke@cray.com
79. Worked as member for AICTE approval process 2016-17, at Sydenham on 9th March 2016.
80. Worked as member for AICTE EVC on 22nd Mar 2016, email dated Mar 18th, 2016.
81. Reviewed a paper for Journal of Thermal Engineering, Paper ID: JTEN-2016-107 entitled, Performance analysis of an Atkinson cycle (AC) engine under realistic power (RP) and realistic power density (RPD) conditions on July 18th, 2016.
82. Worked as Head of Department, Mechanical Engineering from Aug 2016 to Aug 2018.
83. Work as evaluator for AICTE-PMKVY scheme in Sept. 2016.
84. Worked as Expert for one day workshop on “Fluid flow Behaviour in Thermal and Nuclear devices”, at Government College of Engineering, Amravati on 15th Sept 2016.
85. Consultancy work for testing machines of department C.S.S.D, Mira Bhainder Mahanagar Palika to test medical sterilization equipment’s and ultrasonic machine, 21st Nov 2016.
86. Visited Vikram Sarabhai Space Center, Trivandrum (ISRO) as member of Committee for research Collaboration on “Micro channel cooling” on 12th Dec 2016.

2017

87. Worked as Head of Department, Mechanical Engineering
88. Work as evaluator for AICTE-RPS in Jan. 2017.

89. Member of Expert Committee for AICTE Surprise visit to Kamaltai Engg. College, Naigaon, Nanded, on 31st Jan 2017.
90. AICTE AQIS Evaluation Committee member for the year 2017-18.
91. Reviewer for International Conference ICNTE-2017 organised by Fr. R. Instt. of Technology, Vashi, Navi Mumbai, Jan 17th -18th, 2017.
92. Worked as a NBA evaluator committee member during visit to Erode 3rd -5th March 2017.
93. Member of Expert Committee for AICTE Surprise visit to Matoshri College of Pharmacy, Eklahare, near ODHA Gaon, Nashik on 22nd March 2017.
94. Member of Expert Committee for AICTE Surprise visit to Sanghavi College of Engineering, Varvandi, Tal. - Dindori, Nashik on 23rd March 2017.
95. Worked as Head of Department for Mathematics Department from Jun 2017 to August 2019.
96. Co-coordinator for E-Cell activity in Mech. Engg. Dept., VJTI. As a faculty advisor for different student activities, Aug 2015 to Aug 2017.
97. Invited as Jury member for PACMACHINE 2017, The National Awards for Excellence in Packaging Machinery and Technology during 01st to 2nd Sept 2017.
98. Worked as Jury at Indian Institute of Packaging, Andheri for national awards in packaging technology during 1-2nd Sept. 2017.
99. Delivered Expert Lecture on “Pollution and Sustainable Development”, at Guru Gobind Singh College of Engineering and Research Center, Nashik on 17th Nov 2017.
100. Delivered Expert Lecture on “How to write International Conference Paper and Journal Papers”, at Loknete Gopinathji Mundhe Institute of Engineering Educatio and Research, Nashik on 16th Nov 2017.
101. Worked as Chairman of Supervising Committee for coal distribution to small and medium scale industries in Mumbai and Mumbai Suburban areas through Maharashtra state government distribution channel Dated: 17/11/2017.
102. Worked as Chairman of Supervising Committee for coal distribution to small and medium scale industries in Thane, Palghar, Raigad, Ratnagiri and Sindhudurga districts areas through Maharashtra state government distribution channel Dated: 23/11/2017.
103. Worked as committee member in AICTE and DTE for Engg. Courses approval process, Nov-Dec 2017.

2018

104. Worked as Head of Department for Mathematics Department.
105. Worked as Head of Department, Mechanical Engineering till August 2018.

106. Board of Studies member for Mechanical Engineering Department of Tulshiramji Gaikwad Patil College of Engineering, Nagpur for the Academic year 2017-18
107. Worked as External Expert for JRF to SRF fellowship enhancement assessment at Institute of Chemical Technology (ICT), Matunga, Mumbai on 15th March 2018.
108. Delivered Expert talk on “Recent trends in Renewable Energy Resources” during a AICTE-ISTE Sponsored STTP organised by Tulshiramji Gaikwad Patil College of Engineering, Nagpur on 23rd Jun 2018.
109. Worked as Committee member of Scrutiny Committee for Recruitment process of faculty at VJTI, letter dated 10th Aug 2015.
110. Worked as Project Evaluator for project entitled “Experimental Investigation on the machining of Various Biomedical Alloys Using Electro-Discharge Machining (EDM) Process” for financial assistance under “Assistance for Science and Technology Applications” Scheme under Rajeev Gandhi Science and Technology Commission, Mantralaya, Mumbai, 20th Oct 2018.
111. Delivered talk on Performance Investigation of Single Cylinder Diesel Engine with variation in Injection time & Injection pressure, at SS Jondhale COE, Asangaon, Mumbai on 22nd Dec. 2018.

2019

112. Worked as Observer for “SWAYAM Online Examination” Mumbai center on 22nd and 23rd May 2019.
113. Worked as Head of Department for Mathematics Department till August 2019.
114. Working as Training and Placement Officer from Sept 2018.
115. Delivered expert talk in AICTE-ISTE approved STTP on “Energy audit and management-A step towards sustainability”, organised by Vidyavardhini COE and Technology, Vasai, Mumbai on 02nd July 2019.
116. Delivered expert talk in STTP on “Research Methodology”, organised by Rajiv Gandhi Institute of Technology, Mumbai on 03rd July 2019
117. Expert on Ph. D selection Interview Committee at Sardar Patel COE, Andheri, Mumbai on 23rd July 2019.
118. Invited as Visiting Professor at Tor VERGATA University, Rome, Italy during 05th and 06th Sept 2019.
119. Training to Indian Army officers in 1st – 20th September, 2015 to 2019 (twice in semester) at Indian Oil, Bandra.
120. Delivered expert talk, on 17th Sept. 2019, in AICTE approved STTP on “Advances in Heat Transfer”, organised by JSPM Rajarshi Shahu Maharaj COE, Tathawade, Pune during 16th to 21st Sept. 2019.
121. Invited for expert talk in AICTE approved STTP on “Cooling Technology of PV Cells”, organised by Saint Palloti COE, Nagpur on 23rd Nov. 2019.

2020

122. Working as Member of National Advisory Board' for a **National Conference on Technology for Sustainable Rural Development (NCTSRD)** which was held at Sipna College of Engineering & Technology, Amravati on 27th April 2020.
123. Delivered expert session via virtual seminar on “Performance Investigation of Single Cylinder Diesel Engine with Modified Combustion System” on 16th Sept 2020 in AICTE sponsored STTP organised by Government Polytechnic, Nagpur.
124. Delivered expert session via virtual seminar on “Numerical investigation on laminar micro convection of gas and liquid” during AICTE ATAL FDP on “Advances of CFD” at Symbiosis International University on 25th Sept 2020.
125. Delivered virtual seminar on “Engineering and Internship”, for the students of Government College of Engineering Ajmer on 22th Oct 2020 under TEQIP III.
126. Delivered online webinar on “Career Guidance” for the students of Anuradha Engineering College, Chikhali on 2nd Dec 2020.
127. Delivered expert session via virtual seminar on “CFD in Microfluidics” during AICTE ATAL FDP on “Lab on Chips” at Defense Institute of Advanced Technology (DIAT)-DU, Pune on 15th Dec 2020.

2021

128. Working as Member of “Board of Studies (BOS)” for Mechanical Engineering Department at Pimpri Chinchwad College of Engineering, Pune (for 2021 and 2022).
129. Worked as a subject expert/ Selection Committee member of Adhoc Faculty selection for PG programs (like M. Tech Thermal Engg and M. Tech Machine Design) at Sardar Patel College of Engineering, Andheri, Mumbai.
130. Worked as External Examiner on 21st Jan 2021 for credit seminar of research scholars in Mechanical Engineering at Rajiv Gandhi Institute of Technology, Mumbai.
131. Delivered virtual seminar on “Research Methodology: Problem Formulation and Statement” for North Maharashtra University, Jalgaon on 05th Feb 2021.
132. Delivered expert talk (through online mode) on “Step by Step Guide for Internship and Placement” in AICTE sponsored STTP, “Bridging the gap between Mechanical Engineering Practices and Mechanical Engineering Curricula” on 10th Feb, 24th Feb and 3rd March 2021, organised by Mechanical Engineering Department, Yeshvantrao Chavan College of Engineering (YCCE), Nagpur.

133. Worked as Research Recognition committee (RRC) and attended online meeting on 10th Feb 2021 for Solapur University, Solapur. (Ref No: PAHSUS/Research Section-1/2021/1090 Dt: 04/02/2021

2022

134. Delivered expert talk (through online mode) on “Awareness and Reforms on Outcome Based Education”, during AICTE-ISTE induction / refresher program on 15th Feb 2022 organized by Guru Gobind Singh College of Engineering and Research center, Nashik.

135. Worked as NBA Mock evaluator at Government College of Engineering & Research, Avasari on 21st March 2022.

136. Worked as member of NAAC Peer Team (Mock) visit at Vishwaniketan’s iMEET Khalapur on 19th and 20th September 2022.

2023

137. Outcome Based Education and Accreditation at Government Polytechnic Mumbai on 26th April 2023.

138. External examiner for Ph.D. Viva-voce of Mr. Komble Sachin at Savitribai Phule Pune University on 28th July 2023. Letter dated PGS/546/25/7/2023.

139. Delivered a Lecture at Sharada University on, “Defining level & Target of CO-PO Attainment”, dated 5th July 2023

140. Worked as NBA Convenor for one-day workshop on, “Outcome Based Education and Accreditation”, at VJTI on 11th August 2023.

141. Reviewed Ph. D Thesis for evaluation, entitled as, “Development of Graphene Oxide Nano fluid to enhance Thermal Performance of Heat Pipe Evacuated Tube Solar Collector”, ICT Mumbai. Dated 11th August 2023.

142. Delivered a lecture on, “Outcome Based Education and Assessments”, at Ramdeobaba College of Engineering on 06 September 2023.

143. External examiner for Annual Progress Seminar of Ph.D. Student at SPCE on 6 September 2023.

144. Work as Associates Dean Corporate Relation at VJTI from 27.09.2023 for the period of 2 years. Letter dated Dir. Desk/order/Associate Deans/Appt./3809/2023, 27 September 2023.

145. Worked as Member in Advisory Board of Career Development Centre at IES University, Bhopal letter dated IES/University/CDC/2023/10.

146. Worked as departmental coordinator for NBA, NAAC and NIRF letter dated NAAC Committee/2448/2023, NBA Committee/2449/2023, and NIRF Committee/2447/2023, 17 Jul 2023.

2024

147. Scientific Committee for International Conference on Information Technology for Mechanical, Automotive & space application dated 23 November 2023.

Editor for the following technical journals:

1. Associate editor for the International Journal of Petrochemical Science & Engineering (IPCSE)

Reviewer for the following technical journals:

- (i) Int. Conf. on Nanochannel, mini channel and microchannel, ASME 2016 ICNMM, Washington DC
- (ii) Int. Conf. at College of Engg. Pune, 2013
- (iii) Int. Conf. at Sardar Patel College of Engg. Mumbai, 2012
- (iv) Int. J of Engg. Technology and Research (IJETR)
- (v) Int. J of Heat and Mass Transfer, Elsevier publication
- (vi) J. of Heat Transfer, Taylor Francis Publication,
- (vii) J. of Nuclear Energy, Elsevier publication
- (viii) Int. J. of Solar Energy, Elsevier publication
- (ix) Int. Journal, Nanoscale and Microscale Thermophysical Engineering, Elsevier publication
- (x) Associate Editor for, Int. J of Petrochemical Science & Engineering, MedCrave Group.
- (xi) International Journal of Petrochemical Science & Engineering
- (xii) Journal of Thermal Engineering
- (xiii) Solar Energy, Elsevier

Membership of professional bodies:

1. LMISTE,
2. Institution of Engineers (Calcutta),
3. SAE,
4. ISHARE,
5. IGBC,
6. SAE BAJA,
7. IET

Homepage: <http://www.vjti.ac.in/index.php/academics/mechanical> Go to Faculty list and Click on "Biodata" for Dr. N P Gulhane.

Openings for prospective students:

- M. Tech students: The following three projects are available. Introductory details are given under each project. Interested students should meet me in my office for a discussion. Send me an email mentioning your cell no. and a preferred time for meeting.
 - (i) Thermal Management in Microfluidics
 - (ii) MEMS Design and Heat Transfer modeling
 - (iii) Design Optimization in Renewable Energy Devices
 - (iv) CFD in Aerothermodynamics.
- B. Tech students: The following projects are available. Introductory details are given under each project. Interested students should meet me in my office for a discussion. Send me an email mentioning your cell no. and a preferred time for meeting.
 - (i) Solar thermal Energy, ii) Aerodynamics and Propulsion Fluid flow and iii) Heat Transfer analyses in Thermal Devices, MEMS cooling, Heat Transfer using Jet Impingement.