

Institute of Engineering

Ref.: MET/BKC/IOE/Ph.D./Mech/2025/725

Date: 16/07/2025

To,
The Deputy Registrar (Academic Section),
Savitribai Phule Pune University,
Ganeshkhind,
Pune - 411 007.

Subject: Regarding submission of six monthly Progress Report from Research Centre of Mechanical Engineering

Dear Sir,

Greetings from MET's Institute of Engineering, Bhujbal Knowledge City, Nashik.

With reference to the above mentioned subject, please find the attachment regarding Progress Report of Research Centre during the period **Jan.-2025 to June-2025** from the Research Centre of Mechanical Engineering, MET's Institute of Engineering, Bhujbal Knowledge City, Nashik.

This is for your kind information.

Sincerely,

शैक्षणिक विभाग (संलग्नता कक्ष)
सावित्रीबाई फुले पुणे विद्यापीठ,
(पूर्वचे पुणे विद्यापीठ)

दिनांक 8/8/2025
स्वाक्षरी

Encl.:

1. Progress Report



Dr. V. P. Wani
Principal
MET's Institute of Engineering,
Bhujbal Knowledge City
At. Adgaon, Tal. & Dist. Nashik-3.

Institute of Engineering

Name of Research Centre :	MET's Institute of Engineering, Bhujbal Knowledge City, Nashik
Year of Establishment :	2014
Subject :	Mechanical Engineering
No. of Associated Supervisors :	10
No. of registered Candidates :	24
Candidates awarded Ph.D. :	05
	1. 28/08/2019- Harshal A. Chavan (Supervisor: Dr. V. P. Wani)
	2. 28/08/2019- Shubham R. Suryawanshi (Supervisor: Dr. J. T. Pattiwar)
	3. 28/04/2023- Tushar Y. Badgajar (Supervisor: Dr. V. P. Wani)
	4. 22/08/2023- Raghavendra R. Barshikar (Supervisor: Dr. P. R. Baviskar)
	5. 20/02/2025- Sharad K. Nirgude (Supervisor: Dr. S. D. Kalpande)
Progress Report Period	Jan-2025 to June-2025

Progress Report/RRC/Synopsis/Viva-voce Presentations:

1. 27/01/2025: Following Progress Presentations held with Research Advisory Committee-
 - Mr. Chaudhari Vishal Pramod (Supervisor: Dr. S. D. Kalpande)
 - Mr. Vadnere Amol Purushottam (Supervisor: Dr. S. D. Kalpande)
 - Mr. Patil Tushar Dattatray (Supervisor: Dr. G. N. Shelke)
 - Mr. Patil Ashwin Diliprao (Supervisor: Dr. S. D. Kalpande)
 - Mr. Palve Vishwas Mahadeo (Supervisor: Dr. G. N. Shelke)
 - Mr. Kale Kishor Wamanrao (Supervisor: Dr. S. D. Kalpande)
2. 28/01/2025: Following Progress Presentations held with Research Advisory Committee-
 - Mr. Dinesh Panchve (Supervisor: Dr. M. P. Ray)
 - Mr. Rajendra Pawar (Supervisor: Dr. M. P. Ray)
 - Mr. Ahire Nitin Bapurao (Supervisor: Dr. D. D. Deshmukh)
 - Mr. Kothawade Vaibhav Eknath (Supervisor: Dr. V. P. Wani)
 - Mr. Pagar Ganesh Jagannath (Supervisor: Dr. G. N. Shelke)
 - Mr. Pranav Gajanan Firke (Supervisor: Dr. G. N. Shelke)

Adgaon, Nashik - 422 003

Mobile: (91) 9881100099 | Tel.: (0253) 2303515 | Telefax: (0253) 2303203

E-mail: enquiries@bkc.met.edu | www.metbhujbalknowledgecity.ac.in

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3. 29/01/2025: Following Progress Presentations held with Research Advisory Committee-
 - Mr. Vadaje Yuvraj Rajaram (Supervisor: Dr. H. A. Chavan)
 - Mr. Santosh Rama Shekokar (Supervisor: Dr. H. A. Chavan)
 - Mr. Nilesh Sitaram Gaikwad (Supervisor: Dr. D. D. Deshmukh)
 - Mr. Manoj Subhash Patil (Supervisor: Dr. H. A. Chavan)
 - Mr. Ravindra Mahadeo Ghogare (Supervisor: Dr. D. D. Deshmukh)
 - Mr. Rahul Sunil Thakare (Supervisor: Dr. A. B. Kakade)
4. 20/02/2025: Viva-voce held with appointed committee by SPPU-
 - Mr. Sharad K. Nirgude (Supervisor: Dr. S. D. Kalpande)

Publications:

1. D. P. Panchve, M. P. Ray and S. R. Suryawanshi, A Review on the Effect of Metal Oxide Nanoparticles on the Performance of Refrigeration Systems, *Journal of Environmental Nanotechnology*, Vol. 14, no. 2, 514-524, 2025.
2. Nilesh S. Gaikwad, Dhiraj D. Deshmukh and Sachin P. Kakade, "Fiber-reinforced polymer matrix composites for improved defence armor -A comprehensive review", *Smart Materials in Manufacturing*, Vol. 3 (2025) 100084.
3. Vishal Pramod Chaudhari, S. D. Kalpande, Ashwin D Patil, "The Impact of manufacturing parameters on the mechanical properties in FDM 3D Printing", International Conference on Innovative Approaches in Multidisciplinary Engineering and Technology (ICIA-MET'25), 8-10 April 2025, MET IOE BKC, 2025.
4. V. E. Kothawade, V. P. Wani, "RPT Method Selection using MCDM Techniques", International Conference on Recent Trends in Engineering, Science, Technology & Management (IC-RTESTM-2025), GGSP Polytechnic, Nashik, 17-18 Feb. 2025.
5. Darshan Kulkarni, A. B. Kakade, Rahul Thakare, "Integrating AI and ML in Tribology: A Review of Current Trends and Future Prospects" at International Conference on Innovative Approaches in Multidisciplinary Engineering and Technology (ICIA-MET'25), 8-10 April 2025, MET IOE BKC.
6. R. J. Pawar, M. P. Ray, S. R. Suryawanshi, D. K. Dond, Accessing Pump Performance Using Laboratory Data and AI technique, Second International Conference on Recent Advances in Engineering and Computer Application [ICRAECA-2025], LJ School of Computer Application, LJ University Gujrat, 24-25 Jan 2025.

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7. R. J. Pawar, M. P. Ray, S. R. Suryawanshi, D. K. Dond, "Improving Pump Performance and Energy Efficiency in Centrifugal Pump Using Bionic Riblet Structure", 2nd International Conference on Engineering, Management and Social Science , Indraprastha College for Women - University of Delhi, 19-20 Feb. 2025.
8. D. P. Panchve, M. P. Ray , S. R. Suryawanshi, D. K. Dond, "Effect of Metallic Oxide Nanoparticles on Refrigeration System Performance - A Review", International Conference on Innovative Approaches in Multidisciplinary Engineering and Technology, MET's IOE, BKC Nashik, 2025.
9. M. S. Patil, H. A. Chavan, "Coupled thermal and structural analysis on different brake disc materials using finite element analysis", International Conference on Innovative Approaches in Multidisciplinary Engineering and Technology (ICIA-MET'25), 8-10 April 2025, MET's IOE BKC, 2025.
10. Amol Bharat Varandal, Shubham Rajendra Suryawanshi, Dipak Kisan Dond, "Emission reduction and enhancing performance of Diesel engine using hybrid methyl ester", First International Conference on Advances in Energy and Environmental Engineering 2024, at Dr. Vithalrao Vikhe Patil College of Engineering, Ahilyanagar (Ahmednagar), India, December 2024.
11. Amol Bharat Varandal, Shubham Rajendra Suryawanshi, "Calophyllum Inophyllum Oil-A Potential Feedstock for Biodiesel : An Overview", International Conference on Innovative Approches in Multidisciplinary Engineering and Technology" at MET's Institute of Engineering, Nashik, India, April 2025.
12. N. S. Gaikwad, D. D. Deshmukh, A. Y. Chaudhari, S. B. Patil, "Mechanical Behavior of Tungsten Carbide under the High Impact Velocity Application: A Numerical-Based Study" at International Conference on Innovative Approches in Multidisciplinary Engineering and Technology" at MET's Institute of Engineering, Nashik, India, April 2025.
13. Yuvraj Vadaje, H. A. Chavan, "Advance Tool Condition Monitoring for High Performance Machining". ICASEM, Vietnam 2-3 April 2025.
14. Ravindra M. Ghogare, Dhiraj D. Deshmukh, N. S. Hyalij, Examining the PCM based Battery Thermal Management System for Ithium ion Batteries, at International Conference on Innovative Approches in Multidisciplinary Engineering and Technology" at MET's Institute of Engineering, Nashik, India, April 2025.

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Workshop/Training/FDP:


1. Vishal Pramod Choudhari FDP on "Modelling and Simulation using MATLAB, at NITTR, Chandigarh, 16 Dec. 2024 to 20 Dec. 2024.
2. Amol Purushottam Vadnere
 - One Month (Two Credit Course) on "Research & Publication Ethics" during 17 Feb. to 22 Mar. 2025 organized by CPE, SPPU, Pune.
 - Six days ATAL FDP on "Smart Manufacturing Experience" during 27 Jan to 01 Feb 2025 organized by Sanjivani COE, Kopergaon.
 - Six days ATAL FDP on "Manufacturing Techniques for Novel Materials" during 16 to 21 Dec. 2024 organized by MET IOE, Nashik.
3. Varandal Amol Bharat One Week National Level FDP on "Engineering Excellence Integrating Thermal, Design and Material Innovations" at Dr. D. Y. Patil Institute of Technology, Pimpri, Pune-18 from 10th to 14th March 2025.
4. Ravindra M. Ghogare FDP on Advance Manufacturing Technologies from 13th to 17th May 2025, SIEM COE, Nashik.


NPTEL Courses:

1. Dipak J Choudhari NBA accreditation and teaching learning in Engineering
2. Yuvraj Rajaram Vadaje Research Methodology Jan-March 2025
3. Pranav Gajanan Firke Energy Resources and Conversion Processes (SWAYAM)




Dr. S. R. Suryawanshi
Ph.D. Co-ordinator


Dr. S. D. Kalpande
H.O.D.


Dr. V. P. Wani
Principal

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