

# Dr. Kishor S. Rambhad

Associate Professor & HOD, Mechanical Engineering Department at St. John College of Engg. and Management, Palghar

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Current Location: Palghar (West), Maharashtra, India

Date of Birth: 16/07/1985



## Career Objective

To Utilize my Academic, Administration and Research Experience in Making an Organization Successful.

## Present Job

**Organization:** St. John College of Engineering and Management, Palghar.

**Designation:** -Associate Professor

**Responsibilities:** - HOD in Mech. Engg. Department

- IQAC and NAAC Coordinator (*College Received NAAC A+ Grade on 1<sup>st</sup> May 2023*)

## Educational Qualifications

S.N.	Degree	Branch/ Specialization	University	Year of Passing	Percentage/ CGPA	Division
1.	Ph.D.	Mechanical Engineering	R.T.M. Nagpur University, Nagpur	January 2020	NA	NA
		Title: An Experimental Investigation in Application of Concentric Solar Collector in Solid Desiccant Dehumidification.				
2.	M.Tech.	Heat Power Engineering	Visvesvaraya National Institute of Technology (VNIT), Nagpur	2011	7.08	First
3.	B.E.	Mechanical Engineering	R.T.M. Nagpur University, Nagpur	2007	63.07	First

## Professional Experience

S.N.	Organization	Designation	From	To	Duration
1.	St. John College of Engineering and Management, Palghar (MU)	Associate Professor & HOD	01.07.2022	Till Date	3 Years
		Sr. Gr. Assistant Professor & HOD	18.08.2021	24.06.2022	11 Months
2.	JSPM Narhe Technical Campus, Pune (SPPU)	Assistant Professor	08.12.2018	12.08.2021	2 years 8 Months
3.	G. H. Rasoni College of Engineering Nagpur (Autonomous)	Assistant Professor	28.05.2012	07.12.2018	6 years, 6 months
4.	Smt. Radhikatai Pandav College of Engineering Nagpur (RTMNU)	Lecturer	16.10.2007	25.05.2012	4 years, 7 months
5.	Bajaj Steel Ind. Limited, Nagpur	Supervisor	06.06.2007	12.10.2007	4 months
<b>Total Experience</b>				<b>18 Years</b>	

### Technical Software Skills

- AutoCAD
- Inventor (CAD Modeling)
- ANSYS (Fluent/CFD)

### Area of Specialization/Interest/Research

- Thermal Engineering
- Adsorption Technology
- Heat Transfer Augmentation Technique
- Solar Energy Application

### Publications in Journal and Conference

Publication/Indexing	SCI	Scopus	ESCI	UGC Care	Other	Total
Research Paper	4	21	1	1	-	27
Book Edited	-	-	-	-	1	1
Book Chapter	-	2	-	-	1	3
International Conference	-	15	-	-	6	21
National Conference	-	-	-	-	6	6
<b>Total</b>						<b>55</b>

**ORCID** 0000-0001-5673-3076

**Google Scholar Link** <https://scholar.google.com/citations?user=vB5uF0IAAAAJ&hl=en&oi=ao>

**Scopus Link** <https://www.scopus.com/authid/detail.uri?authorId=57094012900>

**Web of Science Link** <https://www.webofscience.com/wos/author/record/M-6149-2019>

**VIDWAN ID** <https://vidwan.inflibnet.ac.in//profile/395987>

### International Journal-27

1. Exploring the evolution and impact of automatic feeding mechanisms in sheet metal processing: From manual labor to automation. *AIP Conf. Proc.* 31 January 2025; 3255 (1): 040002. <https://doi.org/10.1063/5.0254987> (**Scopus**)
2. Investigations in effect of various alloy metal concentration in aluminum alloys on mechanical properties manufactured by automated direct chill casting process. *AIP Conf. Proc.* 31 January 2025; 3255 (1): 040001. <https://doi.org/10.1063/5.0254632> (**Scopus**)
3. Evaluation of tensile property of SiO<sub>2</sub> dispersed SLA 3D printed epoxy composites, *Materials Today: Proceedings*, 16 May 2024, ISSN: 2214-7853 (**Scopus**)
4. Experimental investigation of desiccant dehumidification with four different combinations of silica gel desiccant wheel on indoor air quality, *SN Applied Science*, 5, 277 (2023). (03 September 2023) <https://doi.org/10.1007/s42452-023-05505-6>, ISSN 2523-3971 (**ESCI, Scopus**).
5. CFD analysis of a butterfly valve to optimize its design, *AIP Conf. Proc.* Vol. 2839, Issue 1 (29 September 2023) 020033-1-020033-11(2023), ISSN: 978-0-7354-4645-8, <https://doi.org/10.1063/5.0167691> (**WoS, Scopus**).
6. Comparison of alternative fuels in single cylinder diesel engine using CFD, *AIP Conf. Proc.* Vol. 2839, Issue 1 (29 September 2023) 020034-1-020034-18 (2023), ISSN: 978-0-7354-4645-8, <https://doi.org/10.1063/5.0167692> (**WoS, Scopus**).
7. Manufacturing of foldable bicycle with finite element analysis of push-pull clamp, *AIP Conf. Proc.* Vol.

- 2839, Issue 1 (29 September 2023) 020035-1–020035-8, (2023), ISSN: 978-0-7354-4645-8, <https://doi.org/10.1063/5.0167693> (WoS, Scopus).
8. Optimization of fluidity and mechanical properties of the sand casting A518 alloy by using grey relational analysis method, AIP Conf. Proc. Vol. 2839, Issue 1 (29 September 2023) 020032-1–020032-10, (2023), ISSN: 978-0-7354-4645-8, <https://doi.org/10.1063/5.0167643> (WoS, Scopus).
  9. Development and investigation of thermal composite insulation from environmentally hazardous waste fly ash, Materials Today: Proceedings, ISSN: 2214-7853 Available online 6 July 2023, <https://doi.org/10.1016/j.matpr.2023.06.434> (WoS, Scopus).
  10. Thermal analysis of hybrid nanofluid flowing inside the automobile radiator, Materials Today: Proceedings, ISSN: 2214-7853 Available online 29 June 2023, <https://doi.org/10.1016/j.matpr.2023.06.200>, (WoS, Scopus).
  11. An insight into conversion of internal combustion engine (ICE) vehicle to electric vehicle for green transportation technology, Multidisciplinary Science Journal, Vol. 5 Issue 4 (2023) (26 May 2023) ISSN: 2675-1240, <https://malque.pub/ojs/index.php/msj/article/view/585> (Scopus).
  12. Two-wheeler tyre pressure monitoring through K-nearest neighbours algorithm trained using wheel hub vibrations acquired using ADXL335 accelerometer, International Journal of Vehicle Noise and Vibration, 2022 Vol.18 No.3/4, pp.232 - 246, DOI: 10.1504/IJVNV.2022.10053307 (16 Jan 2023) ISSN 14791471 (Scopus).
  13. Multi-Point Face Milling Tool Condition Monitoring Through Vibration Spectrogram and LSTM-Autoencoder, International Journal of Performability Engineering, 2022, Vol. 18, Issue (8), pp 570-579. doi: 10.23940/ijpe.22.08.p5.570579 (31/08/2022) ISSN: 09731318 (Scopus)
  14. Transforming Conventional Construction Binders and Grouts into High-Performance Nanocarbon Binders and Grouts for Today's Constructions, Buildings, 12, 1041. <https://doi.org/10.3390/buildings12071041> (19 July 2022), EISSN 2075-5309 (SCI, Scopus)
  15. Experimental and theoretical study for suitability of hybrid nano enhanced phase change material for thermal energy storage applications, Journal of Energy Storage (Elsevier) 51(2022)104431, <https://doi.org/10.1016/j.est.2022.104431> (July 2022), ISSN 2352-152X (SCI, Scopus)
  16. An approach towards higher electrical conversion efficiency of solar photovoltaic module using phase change materials, Energy Storage, Wiley Publication, <https://doi.org/10.1002/est2.379>, ISSN: 25784862 (13 June 2022), (ESCI, Scopus)
  17. Vibration monitoring system based on ADXL335 accelerometer and Arduino Mega2560 interface, Journal of Algebraic Statistics, Volume 13, No. 2, p. 2291-2301 <https://publishoa.com> ISSN: 1309-3452 (26 May 2022), (ESCI)
  18. Surface roughness and hole size in BTA drilling using an artificial neural network, Samriddhi: A Journal of Physical Sciences, Engineering and Technology, Volume No. 14, Issue- 2, April - June 2022, ISSN: 2229-7111 (UGC Care)
  19. Modification in gate valve using flexible membrane pipe for flow measurement, SN Applied Science (Springer), 3,852 (03 November 2021), <https://doi.org/10.1007/s42452-021-04831-x>, ISSN 2523-3971 <https://doi.org/10.1007/s42452-021-04831-x> (ESCI, Scopus).
  20. Heat Transfer and Fluid Flow Analysis for Turbulent Flow in Circular Pipe with Vortex Generator. SN Applied Science (Springer) 3, 709 (25 June 2021). ISSN 2523-3971, <https://doi.org/10.1007/s42452-021-04664-8> (ESCI, Scopus)
  21. Performance evaluation of energy storage system coupled with flat plate solar collector using hybrid nanofluid of CuO+Al<sub>2</sub>O<sub>3</sub>/water, Journal of Physics: Conference Series (IOP), June 2021, 1913 (2021) 012067, doi:10.1088/1742-6596/1913/1/012067 (WoS, Scopus) <https://iopscience.iop.org/article/10.1088/1742-6596/1913/1/012067>

22. Performance of oil-based thermal storage system with parabolic trough solar collector using Al<sub>2</sub>O<sub>3</sub> and soybean oil nanofluid, International Journal of Energy Research (Willey), (03 May 2021), 1-22, ISSN: 1742-6588, <https://doi.org/10.1002/er.6808> (**SCI, Scopus**)
23. An insight into biomechanical study for replacement of knee joint, Materials Today: Proceedings, Volume 47, Part 11, May 2021, Pages 2957-2965. <https://doi.org/10.1016/j.matpr.2021.05.202>, ISSN: 2214-7853 (**WoS, Scopus**).
24. Enhancing the effectiveness of green technology in manufacturing industry, Materials Today: Proceedings, Volume 47, Part 14, May 2021, Pages 4298-4305, <https://doi.org/10.1016/j.matpr.2021.04.592>, ISSN: 2214-7853 (**WoS, Scopus**).
25. New diesel-neem biodiesel blend (D75NB25) containing nano iron oxide, silicon dioxide and zinc oxide for diesel engine: An experimental investigation, Materials Today: Proceedings, Volume 47, Part 11, May 2021, Pages 2701-2708 <https://doi.org/10.1016/j.matpr.2021.03.004>, ISSN: 2214-7853 (**WoS, Scopus**).
26. Regeneration of composite desiccant dehumidifier by parabolic trough solar collector: An experimental investigation, Materials Today: Proceedings, December 2018, Vol 5, Issue 11, pp 24358–24366 <https://doi.org/10.1016/j.matpr.2018.10.231>, ISSN: 2214-7853 (**WoS, Scopus**).
27. Solid desiccant dehumidification and regeneration methods: A review, Renewable and sustainable energy reviews (Elsevier), (18 January 2016), Vol 59, pp 73–83, (**SCI, Scopus**) <https://doi.org/10.1016/j.rser.2015.12.264>, ISSN: 1364-0321

#### **Book Edited-01**

1. **Title-** Recent Advances in Mechanical Engineering and Nanomaterials (Volume 1), RAME Publishers Book Published on - 15 November 2021. ISBN – 978-81-954945-0-7 [https://www.rame.org.in/books/book\\_ramen\\_vol1.html](https://www.rame.org.in/books/book_ramen_vol1.html)

#### **Book Chapter-03**

1. Performance Investigation of Automotive Radiator Using Water-Al<sub>2</sub>O<sub>3</sub> and Ethylene Glycol Nanofluid Blends. Renewable Energy: Accelerating the Energy Transition. Energy Systems in Electrical Engineering. **Springer**, Singapore, pp 197-208, 15 November 2023, Print ISBN 978-981-99-6115-3, Online ISBN 978-981-99-6116-0 [https://doi.org/10.1007/978-981-99-6116-0\\_11](https://doi.org/10.1007/978-981-99-6116-0_11) (**Scopus**)
2. Performance Enhancement of Thermal Energy Storage Systems Using Nanofluid, Energy Storage Systems. Engineering Optimization: Methods and Applications, pp 135–149, 05 October 2022 Print ISBN 978-981-19-4501-4, online ISBN 978-981-19-4502-1 **Springer**, Singapore. [https://doi.org/10.1007/978-981-19-4502-1\\_6](https://doi.org/10.1007/978-981-19-4502-1_6) (**Scopus**)
3. Performance Investigation of Desiccant Wheels for Air Dehumidification. Smart Technologies for Energy, Environment and Sustainable Development, Vol 2. Springer Proceedings in Energy. **Springer**, Singapore. [https://doi.org/10.1007/978-981-16-6879-1\\_26](https://doi.org/10.1007/978-981-16-6879-1_26) (17.02.2022) ISBN 978-981-16-6879-1, pp 257–264.

#### **International Conference-21**

1. Comparative study of CFD simulation of flow boiling in heated pipe and subchannel of Nuclear reactor in the 5th International Conference on Recent Advances in Mechanical Engineering and Nanomaterials (ICRAMEN 2025) during 16-17 May 2025 at St. John Colelge of Engineering and Management, Palghar
2. Design & fabrication of steering system for go-kart in the 5th International Conference on Recent Advances in Mechanical Engineering and Nanomaterials (ICRAMEN 2025) during 16-17 May 2025 at St. John Colelge of Engineering and Management, Palghar
3. Design and fabricate multipurpose agricultural machine, in the 5th International Conference on Recent Advances in Mechanical Engineering and Nanomaterials (ICRAMEN 2025) during 16-17 May 2025 at St. John Colelge of Engineering and Management, Palghar

4. Experimental Investigation on single cylinder four strokes Tri- charged diesel engine at different boost operating conditions in the International Conference on Futuristic Advances in Mechatronics Engineering for Aerospace and Defence: ICFAMEAD-2024 during 04-05 October 2024 at Symbiosis Institute of Technology,
5. Exploring the Evolution and Impact of Automatic Feeding Mechanisms in Sheet Metal Processing: From Manual Labor to Automation, International Conference on Robotics, Automation and Intelligent Computing, ICRAI-2024, 18-19 May 2024.
6. Investigations in Effect of Various Alloy Metal Concentration in Aluminium Alloys on Mechanical Properties Manufactured by Automated Direct Chill Casting Process, International Conference on Robotics, Automation and Intelligent Computing, ICRAI-2024, 18-19 May 2024.
7. Development and Investigation of Thermal Composite Investigation From Environmentally Hazardous Waste Fly Ash, Indo-European Conference on Advanced Manufacturing and Materials Processing (IECAdvaMAP-2023), 06-08 February 2023.
8. Thermal Analysis of Hybrid Nanofluid flowing inside the Automobile Radiator, Indo-European Conference on Advanced Manufacturing and Materials Processing (IECAdvaMAP-2023), 06-08 February 2023.
9. Optimization of fluidity and mechanical properties of the sand casting A518 alloy by using Gray Relational Analysis Method, International Conference on Innovations in Science, Hybrid Materials and Vibration Analysis (IC-ISHVA 2022), Organized by Research Association of Masters of Engineering, Pune India, on 16-17 July 2022.
10. CFD analysis of Butterfly valve to optimize its design, International Conference on Innovations in Science, Hybrid Materials and Vibration Analysis (IC-ISHVA 2022), Organized by Research Association of Masters of Engineering, Pune India, on 16-17 July 2022.
11. Comparison of alternative fuels in single cylinder diesel engine using CFD, International Conference on Innovations in Science, Hybrid Materials and Vibration Analysis (IC-ISHVA 2022), Organized by Research Association of Masters of Engineering, Pune India, on 16-17 July 2022.
12. Manufacturing of foldable bicycle with finite element analysis of Push- Pull Clamp, International Conference on Innovations in Science, Hybrid Materials and Vibration Analysis (IC-ISHVA 2022), Organized by Research Association of Masters of Engineering, Pune India, on 16-17 July 2022.
13. Enhancing the Effectiveness of Green Technology in Manufacturing Industry, International Conference on Futuristic Research in Engineering Smart Materials (FRESM-21), Department of Mechanical Engineering, CMRIT, Bengaluru, India & Core-Facility Centre for Photochemistry and Nanomaterials, GNU, South Korea, held Online on 23- 24 April, 2021
14. Performance evaluation of flat plate solar collector coupled with thermal storage system using hybrid nanofluid of  $\text{CuO}+\text{Al}_2\text{O}_3/\text{water}$ , International conference on research frontier in science (ICRFS-21), 5-6 Feb. 2021, G. H. Raisoni College of Engineering, Nagpur.
15. Performance investigation of desiccant wheel for air dehumidification, International conference on smart technologies for energy, environment and sustainable development (ICSTEESD-20), 4-5 December 2020, G. H. Raisoni College of Engineering Nagpur.
16. Performance investigation of automotive radiator using blend of  $\text{Al}_2\text{O}_3/\text{water}+\text{EG}$  nanofluid, International conference on smart technologies for energy, environment and sustainable development (ICSTEESD-20), 4-5 December 2020, G. H. Raisoni College of Engineering Nagpur.
17. An experimental investigation of solar assisted solid desiccant dehumidifier fabricated with silica gel and composite desiccant materials, international conference on advanced in Mechanical and Electrical Engineering ICAMEE-19, 24-25 August 2019, G. H. Raisoni College of Engineering Nagpur.
18. Regeneration of composite desiccant dehumidifier by parabolic trough solar collector: An experimental investigation, Int. conference on advances in materials and manufacturing applications, IConAMMA

2017, 17-19 August 2017, Bangalore, India, pp.1-9.

19. An experimental study and analysis of parabolic trough solar collector with and without aluminum coil, international conference on advances in mechanical engineering (ICAME-16), ISBN: 978-93-5265-488-8, 3-4 June 2016, G. H. Raison College of Engineering Nagpur, pp 192-197.
20. An experimental analysis of parabolic trough solar collector for air heating, International Conference on Recent Trends in Engineering, Science and Technology 2016, 1 June 2016, Hyderabad, India, pp 367-373.
21. Heat transfer and friction factor in circular tube fitted with a ring sector, second international conference on mechanical, electronics and mechatronics engineering (ICMEME' 2013), **London, UK.** 17-18 June 2013, pp 157-160.

#### **National conferences-06**

1. Component design verification and modification to improve machine efficiency of double roller ginning machine, national conference on advances in mechanical engineering (NCAME-2014), ISBN 198-98-5196-216-8, 17-18 December 2014, pp. 109-113.
2. Daylight harvesting system: A contribution towards green building, , national conference on advances in mechanical engineering (NCAME-2014), ISBN 198-98-5196-216-8, 17-18 December 2014, pp. 142-148.
3. Nanomaterial based Solar Cell, National conference on Advances in Renewable Energy Engineering, 3rd and 4th Dec.-13, pp 40-42, ISBN: 978-93-5137-583-8.
4. Solar Assisted Solid Desiccant Dehumidification and Regeneration Techniques, National conference on Advances in Renewable Energy Engineering, 3rd and 4th Dec.-13, pp 80-86, ISBN: 978-93-5137-583-8.
5. Simultaneous heating and cooling using CO<sub>2</sub> (R-744) as a refrigerant: - National level paper presentation and intercollegiate poster competition SPARK-2013, 22<sup>nd</sup> March, 2013, K.D.K. College of engineering, Nagpur
6. Twin parabolic solar collector with tracking system: - National level paper presentation and intercollegiate poster competition SPARK-2013, 22<sup>nd</sup> March, 2013, K.D.K. College of engineering, Nagpur

#### **Patents Granted (02)**

1. **Title- Design and fabrication of Bricks handling system, Inventors-** K. S. Rambhad, Piyush Chikhale, Junaid Sheikh and Dnyanesh Kanhere, **Applicants-** G. H. Raison College of Engineering, Nagpur and G.H.R. Labs and research Centre, Nagpur, Authority-Indian Patent Office patent, **Patent No.: 547336**, Patent application no.-3859/MUM/2013, Date of file 10/12/2013, **Date of Grant: 08/08/2024**, Date of publication-31.07.2015,
2. **Title- CHARCOAL COOLER, Inventors-** K. S. Rambhad, Anurag Chaudhary, Himanshu Sharma, Himanshu Warudkar, Ashwin Badhiye, **Applicants-** G. H. Raison College of Engineering, Nagpur and G.H.R. Labs and research Centre, Nagpur, Authority- Indian Patent Office, **Patent No.: 525130**, Patent application no.-201821012328, **Date of Grant: 14/03/2024**, Date of file -31/03/2018, Date of publication-04.10.2019,

#### **Patents Filed (02)**

1. **Title- IOT Based multipurpose agricultural machine for chili farming, Applicant-** 1. St. John College of Engineering and Management 2. Dr. Kishor Rambhad 3. Dr. Buddharatna Godbole 4. Dr. Nilesh Deotale 5. Mr. Kiran Beldar 6. Mr. Chirag Kale 7. Mr. Sagar Patil, Authority-Indian Patent Office patent, Patent application no.-455338-001, Date of file 15/04/2025.
2. **Title- Portable desalination unit for portable water generation, Applicant-** 1. St. John College of Engineering and Management 2. Dr. Buddharatna Godbole 3. Dr. Kishor Rambhad 4. Mr. Keval Kini 5. Mr. Adarsh Karkera 6. Mr. Soham Patil, Authority-Indian Patent Office patent, Patent application no.-457608-001, Date of file 05/05/2025.

### **Copyright Granted (02)**

1. Ppt Title: Experimental Performance of Solar Powered Solid Desiccant Dehumidification System, ROC Number: L-105347/2021, Diary Number: 12705/2021-CO/L, Date of Application: 08/06/2021, **Date of Receipt: 08/06/2021.**
2. Poster title: Experimental Analysis of Solar Assisted Solid Desiccant Dehumidification System, ROC Number: L-92550/2020, Diary Number: 6536/2020-CO/L, Date of Application: 12/05/2020, **Date of Receipt: 03/07/2020.**

### **Externally Funded Project (03)**

1. Received grant for fabrication of Rs. 42950/- from Prithvi Enterprises, Boisar, for “Design and Development of Scrubber System to Control Air Pollution from Combustion” in A.Y. 2022-23.
2. Received grant for fabrication of Rs. 31,550/- from Prithvi Enterprises, Boisar, for “Design and Development of Turbine for Electricity Generation Using Chimney Flue Gases” in A.Y. 2021-22.
3. Received grant of Rs. 1,00,000/- from Innovation & Entrepreneurship Development Cell (IEDC), for “Design and fabrication of Bricks handling machine” in A.Y. 2013-14.

### **Seed Money Received (01)**

1. Seed Money of Rs. 80,000/- Received from St. John College of Engineering and Management for Project titled “Design and fabrication of multi-purpose agriculture machine” on 06/01/2024.

### **Professional Society Membership (03)**

1. International Association of Engineers Membership.
2. IAENG Society of Artificial Intelligence.
3. IAENG Society of Mechanical Engineering.

### **Conference Organized (07)**

1. **Convener for 5<sup>th</sup> International Conference** On Recent Advances In Mechanical Engineering And Nanomaterials (ICRAMEN-2025) organized St. John College of Engineering and Management, Palghar from 16-27 May 2025
2. **Coordinator for International Conference** on 3rd international conference on Robotics, automation and intelligent computing ( ICRAIC 2K25) organized by Research Association of Masters of Engineering, India on 15 February 2025.
3. **Convener for International Conference** On Recent Advances In Mechanical Engineering And Nanomaterials (ICRAMEN-2024) organized by Research Association of Masters of Engineering, India from 16-17 March 2024
4. **Convener for International conference** on innovations in science, hybrid materials and vibration analysis (IC-ISHVA 2022) organized by Research Association of Masters of Engineering, India from 16-17 July 2022
5. **Conference chair for, International Conference** on Trends in Engineering, Applied Sciences and Management (IC-TEAM-2022) on 08/04/2022–09/04/2022 at St. John College of Engineering and Management, Palghar.
6. **Convener for International Conference** On Recent Advances In Mechanical Engineering And Nanomaterials (ICRAMEN-2022) organized by Research Association of Masters of Engineering, India from 19-20 February 2022
7. **Convener for International Conference** On Recent Advances In Mechanical Engineering And Nanomaterials (ICRAMEN-2021), organized by Research Association of Masters of Engineering, India from 16-17 October 2021

### **FDP/Workshop/ STTP/Webinar Organized (13)**

1. One-week ISTE approved STTP on Advances in Manufacturing in the context of industry 4.0 for 3-7 Feb 2025.
2. One day workshop on Outcome-Based Education on 01/03/2025 at St. John College of Engineering and Management, Palghar.
3. One day workshop on NAAC Reforms 2024: Binary accreditation and sharing of best practices, on 31/01/2025 at St. John College of Engineering and Management, Palghar.
4. Awareness program on NDLI on 16/03/2023, at St. John College of Engineering and Management, Palghar.
5. Organized session on “Experience of NAAC peer team visit” on 15/03/2023 at St. John College of Engineering and Management, Palghar.
6. Workshop on Technical Paper Writing, on 15/03/2023, at St. John College of Engineering and Management, Palghar.
7. Workshop on CO-PO Calculation on 01/09/ 2022 and 29/01/2024 at St. John College of Engineering and Management, Palghar.
8. ISHRAE Approved Five-Days Faculty Development Program on " Python for Mechanical & Civil Engineering" from 04/07/2022 - 09/07/2022 at St. John College of Engineering and Management.
9. Webinar on “Selection of Project Title” at JSPM Narhe Technical Campus, on 18/07/2020.
10. One Day Workshop on “Research/Review Paper Writing” at JSPM Narhe Technical Campus, on 08/05/2021.
11. One Day Workshop on “Research/Review Paper Writing” at JSPM Narhe Technical Campus, on 12/05/2020.
12. One Day Webinar on Intellectual Property Rights (IPR) on 30/07/2022 at St. John College of Engineering and Management, Palghar.
13. Training of CNC on 28/01/2022, at St. John College of Engineering and Management, Palghar

### **FDP/Workshop/ STTP/Webinar Attended/Participated (41)**

1. 3-day Face-to-Face FDP on the theme “Inculcating Universal Human Values in Technical Education” organized by All India Council for Technical Education (AICTE) at St. John College of Engineering and Management, Palghar from 16th February to 18th February 2025.
2. One-week ISTE approved STTP on Advances in Manufacturing in the context of industry 4.0 for 3-7 Feb 2025, at St. John College of Engineering and Management, Palghar.
3. One-week ISTE approved STTP on “Innovation trends in VLSI and Semiconductor engineering” from 20-24 January 2025, at St. John College of Engineering and Management, Palghar.
4. One-week ISTE approved STTP on “Advance Artificial Intelligence Future for Futuristic World” from 13-17 January 2025, at St. John College of Engineering and Management, Palghar.
5. One week ATAL FDP on Industry-4.0 in Energy, Sustainability and climate change at Nutan Maharashtra institute of engineering & technology From 09/12/2024 to 14/12/2024.
6. One Week Online Short-Term Training Program (STTP) On “INNOVATIVE PRACTICES IN SAP & ERP SYSTEM”, organized by Department of Information Technology & Center of Excellence in Information Security in association with TrioGeneSys Technology Pvt. Ltd & AICTE Idea Lab from 23th September 2024 to 28th September 2024 at G H Raisonni College of Engineering, Nagpur.
7. Three days workshop on Leadership in Educational Administration of Academic Administrators of Universities and Colleges from 14/03/2024 to 16/03/2024 organized by National Institute of Educational Planning and Administration in Collaboration with University of Mumbai
8. National level one week Faculty development program (online-mode) On Additive manufacturing

- technology from 04/03/2024 to 08/03/2024 organized by Sandip University, Nashik
9. 2 Days workshop on NEP 2020 sensitization: Train the Trainer from 01/03/2024 to 02/03/2024 organized by Sonopant Dandekar Arts, V. S. Apte commerce and M. H. Mehta science college Palghar
  10. STTP on “Sustainable Energy Technology for Hydrogen, Solar, Wind and Biomass energy” organized by G H Raison College of Engineering, Nagpur from 4-8 July 2023.
  11. ISTE-Short Term Training Program on NEP 2020 – Building Research Culture and Enhancement of Teaching Learning Process, Organized by St. John Institute of Pharmacy and Research, Palghar from 08/05/2023 to 12/05/2023.
  12. ISHRAE Approved Five-Days Faculty Development Program on " Python for Mechanical & Civil Engineering" from 4<sup>th</sup> to 9<sup>th</sup> July 2022 at St. John College of Engineering and Management.
  13. One-week ISTE approved Online/SF-STTP/FDP Program on “Robotic Process Automation Design and Development V3.0” held during 27.06.2022 to 01.07.2022 organized by Thakur College of Engineering and Technology, Mumbai, Maharashtra
  14. AICTE Training and Learning (ATAL) Academy Online FDP on "3D Printing and Design" from 14/12/2021 to 18/12/2021 organized by Christian College of Engineering and Technology, Bhilai.
  15. AICTE Training and Learning (ATAL) Academy Online FDP on "Innovations in Manufacturing of Novel Materials and Composites" from 23/11/2021 to 27/11/2021 organized by Christian College of Engineering and Technology, Bhilai.
  16. AICTE Training and Learning (ATAL) Academy Online FDP on "Recent trends in renewable energy" from 20/09/2021 to 24/09/2021 organized by University Institute of Technology, Rajiv Gandhi technical university.
  17. Faculty Development Program on “Advancement in Renewable Energy” held from 17th to 23rd March 2021 organized by Government College of Engineering, Nagpur.
  18. Faculty Development Program on “Tools and Techniques for Effective Research Writing” held from 7th to 11th December 2020 organized by Department of Electrical and Electronics Engineering, PES Institute of Technology and Management, Shivamogga, Karnataka
  19. All India Council for Technical Education (AICTE) AQIS Sponsored One Week Short Term Training Program (STTP-Part-III) on “Perspective on Bharat Stage (BS) VI Norms in IC Engines” from 2/11/2020 to 7/11/2020, organized by Department of Automobile Engineering, Government Polytechnic, Nagpur.
  20. AICTE Training and Learning (ATAL) Academy Online FDP on "Computational Fluid Dynamics" from 28/09/2020 to 02/10/2020 organized by Govt College of Engineering and Research Avasari.
  21. Webinar on “National Education Policy 2020 - Higher Education Perspectives” Conducted by National Institute of Technical Teacher Training and Research (NITTTR), Bhopal on 17.09.2020.
  22. Workshop on “Role of Professional Bodies in Engineering” conducted by MMCOE and BVCOE on 14.09.2020 under ISHRAE Pune Chapter.
  23. Webinar on “Trending Automotive Industrial Practice” Conducted by B. N. College of Engineering and Technology, Lucknow on 21.08.2020.
  24. Two-day workshop on curriculum implementation of Engineering Thermodynamics for Second Year-Mechanical, Automobile and Mechanical (SW) conducted by Savitribai Phule Pune University on 17-20 June 2020.
  25. Awareness Program on Industrial Engineering and its Applications in Industry, conducted by JSPM Narhe Technical Campus, Pune on 22.05.2020.
  26. One-week faculty development program on “Report writing using LATEX software” conducted by JSPM Narhe Technical campus, Pune on 11-16 May 2020.
  27. Faculty Awareness Program on NAAC Revised Accreditation Framework 2020 conducted by JSPM Narhe

Technical Campus, Pune on 11-15 May 2020.

28. AICTE Training and Learning (ATAL) Academy Online FDP on "Operations Management" from 5/10/2020 to 9/10/2020 organized by Christian College of Engineering and Technology.
29. Faculty Awareness Program on NBA and Outcome Based Education (OBE) conducted by JSPM Narhe Technical Campus, Pune on 02.05.2020.
30. Twelve-week NPTEL course on "IC Engine and Gas Turbine" with 90% marks, conducted by Indian Institute of Technology Guwahati under SWAYAM during Jan-Apr 2020.
31. Twelve-week NPTEL course on "NBA Accreditation and Teaching-Learning in Engineering (NATE)" with 88% marks, conducted by Indian Institute of Science Bangalore under SWAYAM during Jan-Apr 2020.
32. Online certification quiz on "STEAM (Science, Technology, Engineering, Art and Mathematics) Integration with Minecraft" organized by Microsoft, on 28.12.2018.
33. Online certification quiz on "Microsoft Innovative Educator" organized by Microsoft, on 22.12.2018.
34. One-week faculty development program on "Design of solar PV System" organized by G. H. Rasoni Academy of Engineering and Technology, Nagpur on 26-30 June 2018.
35. Three-day faculty development training program on MS- Excel at GHRCE, Nagpur, 18-20 May 2017.
36. Two-day residential program for PG/PhD scholars at Indian Institute of Technology, Bombay, 22-23 December 2014.
37. Pedagogy Workshop for Teaching Faculty in the QEEE Institutes conducted by IIT Bombay. Part- I is on 12, 13, 14 June 2014; and part- II is on 24, 25, 26 July 2014.
38. Two-week course work on Research methodology and quantitative methods- for Ph.D. scholar, 01/08/2013 to 12/08/2013 at G. H. Rasoni College of Engineering, Nagpur.
39. Two-day ISTE workshop on "Research Methodology in Education Technology", conducted by Indian Institute of Technology Bombay, on 2<sup>nd</sup> and 9<sup>th</sup> Feb, 2013 at G. H. Rasoni College of Engineering, Nagpur.
40. Two-week ISTE workshop on "Engineering Thermodynamics" conducted by Indian Institute of Technology Bombay, 11–21 December, 2012 at G. H. Rasoni College of Engineering, Nagpur.
41. Two-day workshop on Value Addition of Faculty in Engineering Education, 31<sup>st</sup> July to 1<sup>st</sup> Aug. 2009 at SRPCE, Nagpur.

### **Contribution as a Resource Person**

#### **➤ Editorial Board Member**

1. Editor-in-Chief in Journal of Thermal and Fluid Science, RAME Publisher.
2. Editorial Board Member in International Journal of Analytical, Experimental and Finite Element Analysis, RAME Publisher.
3. Worked as Guest Editor for Material Today Proceedings for International Conference on Recent Advances in Mechanical Engineering and Nanomaterials, Volume 61, Issue P3, 2022.

#### **➤ Auditor**

1. Conducted NAAC mock visit at Viva Institute of Applied Arts, Virar on 29.08.2024 as an auditor

#### **➤ Reviewer in Peer Reviewed Journals**

1. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Taylor & Francis.
2. Reviewer in International Journal for Computational Methods in Engineering Science & Mechanics (Taylor and Francis)
3. Reviewer in Applied Thermal Engineering (Elsevier).
4. Reviewer in Energy Storage (Wiley online library)

5. Reviewer in International Journal of Refrigeration (Elsevier).
6. Reviewer in Journal of Thermal Science (Springer).
7. Reviewer in Environment, Development and Sustainability (Springer).
8. Nanotechnology Reviews (De Gruyter).
9. Reviewer in Environmental and Climate Technologies (Riga Technical University)
10. Reviewer in ACS Sustainable Chemistry & Engineering (American Chemistry Society, ACS Publications).
11. Reviewer in The Open Petroleum Engineering Journal (Bentham Open Journal).
12. Reviewer in Physica Scripta (IOP Science)
13. Reviewer in Journal of Advanced Research in Fluid Mechanics and Thermal Sciences (Akademia Baru Publishing (M) Sdn Bhd, Malaysia)
14. Reviewer in Part E: Journal of Process Mechanical Engineering (SAGE Publisher)

#### ➤ **Session Chaired in Conferences (08)**

1. Session Chaired at National Conference "Role of Engineers in Nation Building" at Viva Institute of Technology, Virar on 07/03/2025.
2. Judge at ANVESHNAM-2024, a ppt presentation organized by First year department of St. John College of Engineering and Management, Palghar on 30/03/2024
3. Session chaired at International Conference on Science Technology Engineering & Maths for Sustainable Development- ICSTEMSD-2024 , held at Atharva College of Engineering, Malad on 15/02/2024
4. Judge at Project competition "3ivingya" held at Atharva College of Engineering, Malad on 23.05.2023.
5. Session Chaired at National Conference on "Role of Engineers in Nation Building" Organized by VIVA Institute of Technology, Virar on 04.03.2023.
6. Session Chaired at International Conference on Innovations in Science, Hybrid Materials and Vibration Analysis (IC-ISHVA 2022), held on 16-17 July, 2022.
7. Session Chaired at International Conference on Recent Advances in Mechanical Engineering and Nanomaterials (ICRAMEN-2022) held on 19-20 February 2022.
8. Session chaired at Impetus-15, "A technical paper presentation" organized by Dr. Babasaheb Ambedkar College of Engineering and Research, Nagpur, on 2.03.2015.

#### ➤ **Expert/ Guest Lecture Delivered (09)**

1. Delivered a session on NAAC Reforms 2024: A binary accreditation in one day workshop on NAAC Reforms 2024: binary accreditation and sharing of best practices, on 31/01/2025 at St. John College of Engineering and Management, Palghar.
2. Delivered a guest lecture on project report writing on 11<sup>th</sup> October 2023, at SJCEM Polytechnic, Palghar
3. Delivered an expert lecture on "Technical Paper Writing" on 15<sup>th</sup> March 2023, at SJCEM, Palghar
4. Delivered a guest lecture on project report writing on 9<sup>th</sup> May 2022, at SJCEM Polytechnic, Palghar
5. Speaker for workshop on "How to Write Research Paper" Conducted by Civil Department, St. John College of Engineering and Management on 14.03.2022.
6. Expert lecture delivered on Subject-Thermodynamics at JSPM Narhe Technical Campus, on 01.11.2021 for Second Year Mechanical Engineering Students.
7. Speaker for one day workshop on "Research/Review Paper Writing" at JSPM Narhe Technical Campus, on 08.05.2021.
8. Speaker for Webinar on "Selection of Project Title" at JSPM Narhe Technical Campus, on 18.07.2020.
9. Speaker for one day workshop on "Research/Review Paper Writing" at JSPM Narhe Technical Campus, on 12.05.2020.

#### **PG Project Guided (01)**

1. Experimental investigation on composite desiccant wheel for dehumidification of air in domestic application- 2017-18 (Projectee: Mr. Sagar Fating).

### UG Project Guided (23)

1. Design and Fabrication of Multipurpose Agriculture Machine-2023-24
2. Design and Development of Rotary Desiccant Wheel for Improving Indoor Air Quality-22-23
3. Design and Development of Scrubber System to control air pollution from combustion-22-23
4. Design and development of turbine for electricity generation using chimney flue gases-21-22.
5. Design and Fabrication of Solar electric bicycle-2021-22
6. Design and fabrication of glass cleaning robot for high building-2020-21.
7. CFD analysis of solid desiccant dehumidification system-2020-21.
8. Design and Fabrication of Automatic potato chips making machine-2020-21.
9. Simulation performance of desiccant dehumidification system for agriculture application-2019-20.
10. Testing & Performance Evaluation of Bumper Beam-2019-20.
11. Experimental analysis of hydraulic oil cooler by application of heat pipe-2018-19.
12. Design and fabrication of garbage picker machine -2017-18.
13. Design and development of Saw cutter with human protection attachment-2017-18.
14. Design and fabrication charcoal cooler -2017-18.
15. Design and development of Mobile operated automatic chips Maker-2016-17.
16. Design and development of almond seed sheller- 2016-17.
17. Design and fabrication of cauliflower cutting machine-2015-16.
18. Design and fabrication of bricks handling machine-2015-16.
19. Component design verification and modification to improve machine efficiency of double roller ginning machine-2014-15.
20. Design and fabrication of Naturolight pipe-2014-15.
21. Design and fabrication of simultaneous heating and cooling using CO<sub>2</sub> (R-744) as a refrigerant-2012-13.
22. Design and fabrication of twin parabolic collector with solar tracking system- 2012-13.
23. Design and fabrication of bricks handling system-2013-14.

### Awards / Recognition / Achievements

1. **Best paper award** for paper titled: Comparative study of CFD simulation of flow boiling in heated pipe and subchannel of Nuclear reactor in the 5th International Conference on Recent Advances in Mechanical Engineering and Nanomaterials (ICRAMEN 2025) during 16-17 May 2025 at St. John Colege of Engineering and Management, Palghar
2. **Best research paper award**, for “Experimental investigation of desiccant dehumidification with four different combinations of silica gel desiccant wheel on indoor air quality” by St. John College of Engineering and Management on 10/01/2025 during the annual day function.
3. **Best Researcher Award**, St. John College of Engineering and Management, 15/09/2023.
4. St. John College of Engineering and Management, Palghar received **NAAC A+ Grade** in 2<sup>nd</sup> Cycle under my leadership as an IQAC and NAAC Coordinator on 30<sup>th</sup> April 2023.

### Subjects Taught – PG Level

1. Thermal System Design

### Subjects Taught – UG Level

1. Thermodynamics/Engineering Thermodynamic
2. Applied Thermodynamics/Thermal Engineering

3. Internal Combustion Engine
4. Turbomachinery/Power Engineering
5. Automobile Engineering
6. Heat Transfer
7. Fluid Machinery
8. Thermal Power Plant/Energy Conversion
9. Refrigeration and Air-conditioning/HVAC&R
10. Engineering Drawing/Engineering Graphics
11. Machine Drawing

### Major Portfolios Handled

1. **HOD, Mechanical Engineering**, St. John College of Engineering and Management, Palghar, from 25.08.2021 to till date.
2. **Academic Council Member Secretary**, St. John College of Engineering and Management, Palghar, from A.Y. 2024-25
3. **IQAC Coordinator**, St. John College of Engineering and Management, Palghar, from 02.09.2021 to till date, **College received NAAC A+ Grade on 1<sup>st</sup> May 2023.**
4. **NAAC Coordinator**, St. John College of Engineering and Management, Palghar, from 08.10.2021 to till date, **College received NAAC A+ Grade on 1<sup>st</sup> May 2023.**
5. **Sr. Supervisor** for the University of Mumbai Examination May 2023, December 2023, May 2024, December 2024, May 2025 at St. John College of Engineering and Management, Palghar
6. **Asst. Sr. Supervisor** for the SPPU Exam Oct. 2020, JSPM Narhe Technical Campus, Pune
7. **PG Coordinator** of Program “**Heat Power Engineering**”, G. H. Raisoni College of Engineering, Nagpur for A.Y. 2017-18.
8. Departmental Project Coordinator, G. H. Raisoni College of Engineering, Nagpur
9. Departmental R & D Coordinator, G. H. Raisoni College of Engineering, Nagpur
10. Module Coordinator-Thermal Domain, JSPM Narhe Technical Campus, Pune
11. CAE (Class Assessment Examination) in-charge, G. H. Raisoni College of Engineering, Nagpur.
12. RTMNU University Practical Coordinator, G. H. Raisoni College of Engineering, Nagpur.
13. Engineering Graphics and Workshop Subject Coordinator, G. H. Raisoni College of Engineering, Nagpur
14. Committee Member in International Conference on Advanced in Mechanical Engineering-16 held at G. H. Raisoni College of Engineering, Nagpur
15. Skill Enhancement Program Subject Coordinator -AutoCAD, G. H. Raisoni College of Engineering, Nagpur.
16. Committee Member in National Conference on Renewable Energy Engineering-13 held at G. H. Raisoni College of Engineering, Nagpur

**Date: 16.06.2025**

**Place: Palghar**



**(Dr. Kishor S. Rambhad)**