



*Shiksha Mandal's*

# **BAJAJ INSTITUTE OF TECHNOLOGY, PIPRI, WARDHA**

## **Faculty Achievements**

**Research Papers Published in  
Journals**

**Session 2024-25**



Shiksha Mandal's  
**BAJAJ INSTITUTE OF TECHNOLOGY, PIPRI, WARDHA**

**List of Journal Publications (UGC approved /CARE/Refereed Journals only)**

Sr. No.	Name of Department	Name of Teacher(s)	Title of Research Paper	Name of the Research Journal	ISSN Number (Print &/ Online)	Year of Publication	UGC/Care/Scopus (Yes/No)	Peer Reviewed (Yes/No)	Web Link to Paper/ Article/ Abstract of the Journal (DOI)
1	Mechanical Engineering	Deepak Bhope, Sudhir Burande	Viscoelastic Performance Analysis Of Steel Strip Embedded E-Glass Fibre Hybrid Laminate	Advances in Materials and Processing Technologies	2374-0698	2024	Yes	Yes	<a href="https://doi.org/10.1080/2374068X.2024.2402973">https://doi.org/10.1080/2374068X.2024.2402973</a>
2	Computer Engineering	Abhishek Kinhekar, Priti A. Khodke, Amol P. Bhagat	Comparative Assessment Of Approaches For Security Of Big Data Environments	Grenze International Journal of Engineering and Technology	2395-5295(Online); 2395-5287(Print)	2025	Yes	Yes	<a href="https://thegrenze.com/index.php?display=page&amp;view=journalabstract&amp;absid=6499&amp;id=8">https://thegrenze.com/index.php?display=page&amp;view=journalabstract&amp;absid=6499&amp;id=8</a>
3	Computer Engineering	Mr. Ahtesham Kazi <sup>1</sup> , Dr. Dinesh Chaudhari <sup>2</sup>	Design Of An Iterative Method For Mapreduce Scheduling Using Deep Reinforcement Learning And Anomaly Detection	Communications on Applied Nonlinear Analysis	ISSN: 1074-133X	2024	Yes	Yes	<a href="https://internationalpubs.com/index.php/cana/article/view/953">https://internationalpubs.com/index.php/cana/article/view/953</a>
4	Mechanical Engineering	"Pravin Katare", "Santosh Bopche", "Suraj Vairagade", "Meenakshi Tumane", "Ling Shing Wong", "Choon Kit Chan"	Experimental Investigation Into Multistage Parabolic Dish Concentrators For Small Village Energy Applications	International Journal of Advanced and Applied Sciences	2313-3724	2025	Yes	Yes	<a href="https://drive.google.com/open?id=1wSjL85YZ5nybViFGL5KIOd1Qjzef69S-">https://drive.google.com/open?id=1wSjL85YZ5nybViFGL5KIOd1Qjzef69S-</a>
5	Mechanical Engineering	"Shiv Chafle", "Santosh Bopche", "Suraj Vairagade", "Narendra Kanhe"	Development Of A Wired Cavity Type Solar Receiver For Enhanced Radiative Heat Gain	Indian Journal of Technical Education,	0971-3034	2025	Yes	Yes	<a href="https://drive.google.com/file/d/1FK0HAXgijm4dTWOT3-NOS6v4WKrENpxZ/view?usp=sharing">https://drive.google.com/file/d/1FK0HAXgijm4dTWOT3-NOS6v4WKrENpxZ/view?usp=sharing</a>

6	Mechanical Engineering	Suraj Vairagade, Narendra Kumar, Ravi Pratap Singh, Santosh Bopche, Narendra Kanhe	Advances In Thermal Performance Characteristics Of Additively Manufactured Heat Exchanger Devices	Indian Journal of Technical Education	0971-3034	2025	Yes	Yes	<a href="https://drive.google.com/file/d/1K-xaMXDpaTJvrOeg9U5TooXCNHViq7il/view?usp=sharing">https://drive.google.com/file/d/1K-xaMXDpaTJvrOeg9U5TooXCNHViq7il/view?usp=sharing</a>
7	Mechanical Engineering	Pravin Katare, Santosh Bopche, Suraj Vairagade, Meenakshi Tumane, Ling Shing Wong, Choon Kit Chan	Experimental Investigation Into Multistage Parabolic Dish Concentrators For Small Village Energy Applications	International Journal of Advanced and Applied Sciences	2313-3724	2025	Yes	Yes	<a href="https://www.science-gate.com/IJAAS/2025/V12I5/1021833ijaas202505016.html">https://www.science-gate.com/IJAAS/2025/V12I5/1021833ijaas202505016.html</a>
8	Electrical Engineering	L. Navinkumar Rao, Rahul Somalwar, H. S. Dalvi, Satyavir Singh, P. S. Subudhi	Photovoltaic Battery Storage System For Maximum Power Point Tracking Using Hybrid Firefly And Perturbation And Observation Algorithm	Intellectual Journal of Energy Harvesting and Storage	2963-6272	2024	No	Yes	<a href="https://iaesprime.com/index.php/ehs/article/view/320/237">https://iaesprime.com/index.php/ehs/article/view/320/237</a>
9	Electrical Engineering	Navinkumar L. Rao, Rahul Somalwar, Kantilal Joshi, Partha Sarathi Subudhi	An Improved Mppt Algorithm For Performance Improvement Of 50 Kw Grid Connected Pv System	INTERNATIONAL JOURNAL of SMART GRID	2602-439X	2025	Yes	Yes	<a href="https://www.ijsmartgrid.org/index.php/ijsmartgridnew/article/view/381/pdf_1">https://www.ijsmartgrid.org/index.php/ijsmartgridnew/article/view/381/pdf_1</a>

10	Electrical Engineering	S. Muthulakshmi, P. Elaiyaraja, M. Elumalai, C. Suresh, S. Yuvaraj, Jothi Ramalingam Rajabathar, Dhaifallah M. Al-Dhayan, S. Revathi, Chandra Sekhar Dash, M. Sundararajan, Partha Sarathi Subudhi, S. Muruganantham	Investigation Of Magnetic And Optical Characteristics Of Mgfe2O4 And Mgfe2- XbixO4 Nanoparticles Synthesized By Combustion Method	Journal of Electronic Materials	1543-186X	2025	Yes	Yes	<a href="https://link.springer.com/article/10.1007/s11664-025-11930-7#citeas">https://link.springer.com/article/10.1007/s11664-025-11930-7#citeas</a>
11	Electrical Engineering	Anirudha S. Marothiya, Pradyumn Chaturvedi, Madhuri A. Chaudhari	Real-Time Impact Study Of 2-Wheeler Ev Charging On The Distribution Network	International Journal of Emerging Electric Power Systems (IJEEPS)	2194-5756	2025	Yes	Yes	<a href="https://doi.org/10.1515/ijeeeps-2024-0353">https://doi.org/10.1515/ijeeeps-2024-0353</a>
12	Electrical Engineering	L. Navinkumar Rao , Rahul Somalwar , Kantilal Joshi , Partha Sarathi Subudhi	An Improved Mppt Algorithm For Performance Improvement Of 50 Kw Grid Connected Pv System	INTERNATIONAL JOURNAL of SMART GRID	Online ISSN: 2602-439X	2025	Yes	Yes	<a href="https://doi.org/10.20508/ijsmartgrid.v1i1">doi.org/10.20508/ijsmartgrid.v1i1</a>
13	Mechanical Engineering	Suraj Vairagade, Narendra Kumar, Ravi Pratap Singh	Experimental Investigations For Enhancing The Performance Of Hemispherical Cavity Receivers Using Additively Manufactured Heat Exchangers	ENERGY SOURCES, PART A: RECOVERY, UTILIZATION, AND ENVIRONMENTAL EFFECTS	1556-7230	2024	Yes	Yes	<a href="https://doi.org/10.1080/15567036.2024.2386090">https://doi.org/10.1080/15567036.2024.2386090</a>

14	Mechanical Engineering	Suraj Vairagade, Narendra Kumar & Ravi Pratap Singh	Investigation Of Stretchable Conductive Composites Developed Using Thermoplastic Polyurethane/Multi-Walled Carbon Nanotubes/ Graphene For Enhanced Thermal Management	Advanced Composite Materials	0924-3046	2025	Yes	Yes	<a href="https://doi.org/10.1080/09243046.2025.2511365">https://doi.org/10.1080/09243046.2025.2511365</a>
15	Mechanical Engineering	Suraj Vairagade, Narendra Kumar, and Ravi Pratap Singh	Investigating Conductive Polymer Composites Developed Using Acrylonitrile Butadiene Styrene/Graphene/ Multi-Walled Carbon Nanotubes For Effective Thermal Management	Journal of Materials Engineering and Performance	1544-1024	2024	Yes	Yes	<a href="https://doi.org/10.1007/s11665-024-10323-x">https://doi.org/10.1007/s11665-024-10323-x</a> ?ASM
16	Civil Engineering	"Monali Wagh", "Charuta Waghmare", "Amit Gudadhe", "Nisha Thakur", "Salaj J. Mohammed", "Sameer Algburi", "Hasan Sh. Majdi", "Khalid Ansari"	Predicting Compressive Strength Of Sustainable Concrete Using Advance Ai Models: DInn, Rf, And Mars	Asian Journal of Civil Engineering	Print ISSN 1563-0854 & Online ISSN 2522-011X	2025	Yes	Yes	<a href="https://link.springer.com/article/10.1007/s42107-025-01278-y">https://link.springer.com/article/10.1007/s42107-025-01278-y</a>
17	Electrical Engineering	Jayesh Deorao Ruikar , Saurabh Chaudhury	Mulf Rr-lqa: Multi-Feature Based Reduced Reference Image Quality Assessment	Procedia Computer Science (j.procs)	1877-0509	2025	Yes	Yes	<a href="https://www.sciencedirect.com/science/article/pii/S1877050925010324">https://www.sciencedirect.com/science/article/pii/S1877050925010324</a>
18	Mechanical Engineering	Shiv Chafle, Santosh Bopche, Suraj Vairagade, Narendra Kanhe	Development Of A Wired Cavity Type Solar Receiver For Enhanced Radiative Heat Gain	Indian Journal of Technical Education (IJTE)	0971-3034	2025	Yes	Yes	<a href="https://www.isteonline.in/Viewtopics.aspx?MenuId=ISTE_Journal_45">https://www.isteonline.in/Viewtopics.aspx?MenuId=ISTE_Journal_45</a>

19	Mechanical Engineering	Suraj Vairagade, Narendra Kumar, Ravi Pratap Singh, Santosh Bopche, Narendra Kanhe	Advances In Thermal Performance Characteristics Of Additively Manufactured Heat Exchanger Devices	Indian Journal of Technical Education	0971-3034	2025	Yes	Yes	<a href="https://www.isteonline.in/Viewtopics.aspx?MenuId=2025_1505">https://www.isteonline.in/Viewtopics.aspx?MenuId=2025_1505</a>
20	Electrical Engineering	Dr, Snehal Pachpor	Design And Analysis Of A Double-Sided Lim	Advanced Engineering Science	2096-3246	2025	Yes	Yes	<a href="https://drive.google.com/file/d/1gLqx_SRhUGuZUE-4qMD8x1QfEUhzK2O3/view?usp=drive_link">https://drive.google.com/file/d/1gLqx_SRhUGuZUE-4qMD8x1QfEUhzK2O3/view?usp=drive_link</a>



  
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**BAJAJ INSTITUTE OF  
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**Faculty Achievements**

**Patents Granted/Published**

**Session 2024-25**



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**List of Patents Granted/Published**

Sr. No.	Name of the Faculty Member	Department of Faculty Member	Title of Patent or Industrial Design or Copyright	Application Number	Present Status	Date of Grant of Patent (or Year of Grant)	Google Drive Link for Patent certificate
1	Anirudha S Marothiya	Electrical Engineering	Automatic Solar Powered Food Dehydrator	395160-001	Published, Certificate of Registration of Design	22-03-2024	<a href="https://drive.google.com/file/d/1VQ1od-O12wUjGLit0s9viT7qUoATZkaZ/view?usp=sharing">https://drive.google.com/file/d/1VQ1od-O12wUjGLit0s9viT7qUoATZkaZ/view?usp=sharing</a>
2	Dr. Prathik Kulkarni	Civil Engineering	A Device For Disposal Of Biomedical Waste	202321002119 A	Published	12-07-2024	<a href="https://drive.google.com/file/d/1Lb5-bi4FX8AoEYmLDGA6Bdt4VDU81F05/view?usp=sharing">https://drive.google.com/file/d/1Lb5-bi4FX8AoEYmLDGA6Bdt4VDU81F05/view?usp=sharing</a>
3	Ruikar Jayesh Deorao	Electrical Engineering	A Device For Disposal Of Biomedical Waste	202321002119 A	Published	12-07-2024	<a href="https://drive.google.com/file/d/18ZDFftLXzWpwDQk8IPuVX7UC4Puxe3C/view?usp=sharing">https://drive.google.com/file/d/18ZDFftLXzWpwDQk8IPuVX7UC4Puxe3C/view?usp=sharing</a>
4	Ruikar Jayesh Deorao	Electrical Engineering	An Automated Wheel Health Monitoring And Alert System And A Method For The Same	202321052089	Granted	20-06-2024	<a href="https://drive.google.com/file/d/1ciN6w5IK-S6sOc9rGfDdJL3NDKw8eI4/view?usp=sharing">https://drive.google.com/file/d/1ciN6w5IK-S6sOc9rGfDdJL3NDKw8eI4/view?usp=sharing</a>
5	Partha Sarathi Subudhi	Electrical Engineering	Intelligent Controller For Wireless Charging Of Electric Vehicles	201841043115	Granted	23-01-2024	<a href="https://drive.google.com/file/d/1-EC-NT7983fEegfRqPI7ITTBPEy6D5qU/view?usp=sharing">https://drive.google.com/file/d/1-EC-NT7983fEegfRqPI7ITTBPEy6D5qU/view?usp=sharing</a>
6	Partha Sarathi Subudhi	Electrical Engineering	Multi-Coil Power Transfer System For Charging Electric Vehicles	420493-001	Granted	30-07-2024	<a href="https://drive.google.com/file/d/1BfSA5BrJnusCKCwThlqFbKxFKW2CS061/view?usp=sharing">https://drive.google.com/file/d/1BfSA5BrJnusCKCwThlqFbKxFKW2CS061/view?usp=sharing</a>
7	Dr. Snehal Pachpor	Electrical Engineering	Ai Based Smart Grid Energy Distribution Device	457204-001	Granted	30-04-2025	<a href="https://drive.google.com/file/d/13zWgKYHKAK1RePJai6GRP60IMd5Z41B6/view?usp=sharing">https://drive.google.com/file/d/13zWgKYHKAK1RePJai6GRP60IMd5Z41B6/view?usp=sharing</a>
8	Dr. Pawan Chandak	Mechanical Engineering	A Foldable Attachment System For Mounting Of B-Type Oxygen Cylinder On A Wheelchair	202221036663	Granted	12-03-2025	<a href="https://drive.google.com/file/d/1w0c6kaYz1vrEnOIFyVzJKD1E_d0J-8CA/view?usp=sharing">https://drive.google.com/file/d/1w0c6kaYz1vrEnOIFyVzJKD1E_d0J-8CA/view?usp=sharing</a>
9	Dr. Deepak Bhope	Mechanical Engineering	A Foldable Attachment System For Mounting Of B-Type Oxygen Cylinder On A Wheelchair	202221036663	Granted	12-03-2025	<a href="https://drive.google.com/file/d/1NMLxLa9gg9rsOqF7BOubx9KQ_90iCnSC/view?usp=sharing">https://drive.google.com/file/d/1NMLxLa9gg9rsOqF7BOubx9KQ_90iCnSC/view?usp=sharing</a>
10	Dr Harshit Dalvi	Electrical Engineering	Novel Design Of Multipurpose Kit	CBR :453870-001	Granted	01-04-2025	<a href="https://drive.google.com/file/d/1vI5WY7_KidZdPVP64TPSf5_16A8o51IQ/view?usp=sharing">https://drive.google.com/file/d/1vI5WY7_KidZdPVP64TPSf5_16A8o51IQ/view?usp=sharing</a>
11	Dr. Kantilal Joshi	Electrical Engineering	Statcom Ultracapacitor Based Power Controller	201821011783	Granted	29-08-2024	<a href="https://drive.google.com/file/d/1YMCXMmFq6VYHDmXC82HV7gd21BZCuclZ/view?usp=sharing">https://drive.google.com/file/d/1YMCXMmFq6VYHDmXC82HV7gd21BZCuclZ/view?usp=sharing</a>



  
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# **BAJAJ INSTITUTE OF TECHNOLOGY, PIPRI, WARDHA**

## **Faculty Achievements**

**Papers published in International /  
National Conference / Books / Book  
Chapters**

**Session 2024-25**



Shiksha Mandal's  
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**List of Books Published**

Sr. No.	Name of the Teacher/s	Department of the Teacher	Title of Book Published	National/ International	Calendar Year of Publication	Month of Publication	ISBN Number	Affiliating Institute at the time of Publication	Name of Publisher	Web Link of Book to the Source/ Publisher Website
1	Dr. Partha Sarathi Subudhi	Electrical Engineering	Power Systems Amid The 4Th Industrial Revolution	International	2024	Mar	978-8770226752	BIT	IEEE: CRC Press	<a href="https://ieeexplore.ieee.org/book/10466656">https://ieeexplore.ieee.org/book/10466656</a>
2	Dr. Partha Sarathi Subudhi	Electrical Engineering	Basic Electrical And Electronics Engineering Lab Manual	International	2025	Jan	979-8307983003	BIT	Amazon Kindle	<a href="https://www.amazon.com/gp/product/B0DV3VK25X/ref=ewc_pr_img_1?smid=A1Y53T3O3O25L8&amp;pse=1#detailBullets_feature_div">https://www.amazon.com/gp/product/B0DV3VK25X/ref=ewc_pr_img_1?smid=A1Y53T3O3O25L8&amp;pse=1#detailBullets_feature_div</a>
3	Dr. Partha Sarathi Subudhi	Electrical Engineering	Hands-On Guide To Switchgear And Protection: A Laboratory Manual	International	2025	Feb	979-8308631248	BIT	Amazon Kindle	<a href="https://www.amazon.com/Hands-Guide-Switchgear-Protection-Laboratory/dp/B0DWX9LBSJ/ref=tmm_pap_swath_0#detailBullets_feature_div">https://www.amazon.com/Hands-Guide-Switchgear-Protection-Laboratory/dp/B0DWX9LBSJ/ref=tmm_pap_swath_0#detailBullets_feature_div</a>
4	Anirudha S Marothiya	Electrical Engineering	Hands-On Guide To Switchgear And Protection: A Laboratory Manual	International	2025	Jan	979-8308631248	BIT	Kindle Edition	<a href="https://www.amazon.in/Hands-Guide-Switchgear-Protection-Laboratory-ebook/dp/B0DS62R443#detailBullets_feature_div">https://www.amazon.in/Hands-Guide-Switchgear-Protection-Laboratory-ebook/dp/B0DS62R443#detailBullets_feature_div</a>



  
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**List of Books Chapters Published**

Sr. No	Name of the Teacher/s	Department of the Teacher	Title of Book/ Book Chapter Published	Title of the Chapter	National/ International	Calendar Year of Publication	Month of Publication	ISBN Number	Affiliating Institute at the time of Publication	Name of Publisher	Web Link of Book Chapter to the Source Website
1	<b>Dr. Ram Subhashrao Wanare</b>	Civil Engineering	Proceedings of the Indian Geotechnical Conference (IGC 2024), Volume 1 Ground Improvement Techniques	Effect of Sustainable Stabilization on Cracking Characteristics of Marine Soil	National	2024	May	978-981-96-2444-7	BIT, Wardha	Springer, Singapore	<a href="https://doi.org/10.1007/978-981-96-2444-7_31">https://doi.org/10.1007/978-981-96-2444-7_31</a>
2	<b>Dr. Santosh Bopche</b>	Mechanical Engineering	Advances in Clean Energy Technologies	Solar Thermal Collection Efficiency Improvement Using Various Cavity Receivers	International	2024	Dec	978-9819600083	BIT, Wardha	Springer Nature	<a href="https://link.springer.com/book/10.1007/978-981-97-6548-5?page=2#toc">https://link.springer.com/book/10.1007/978-981-97-6548-5?page=2#toc</a> , <a href="https://link.springer.com/chapter/10.1007/978-981-97-6548-5_32">https://link.springer.com/chapter/10.1007/978-981-97-6548-5_32</a>
3	<b>Dr. Amol S. Jumde</b>	Computer Engineering	Disruptive technologies in Computing and Communication Systems	Extracting Trending Topics from Social Media Posts Using Word Embedding Based Clustering	International	2024	Jun	9781032665535_	BIT, Wardha	CRC Press	<a href="https://www.taylorfrancis.com/chapters/edit/10.1201/9781032665535-36/extracting-trending-topics-social-media-posts-using-word-embedding-based-clustering-mahalle-chatur-deorankar-waghmare-jumde">https://www.taylorfrancis.com/chapters/edit/10.1201/9781032665535-36/extracting-trending-topics-social-media-posts-using-word-embedding-based-clustering-mahalle-chatur-deorankar-waghmare-jumde</a>
4	<b>Dr. Suraj Vairagade</b>	Mechanical Engineering	Advances in Clean Energy Technologies	Solar Thermal Collection Efficiency Improvement Using Various Cavity Receivers, Springer Book Chapter Details	International	2025	Dec	978-9819600083	BIT, Wardha	Springer Nature	<a href="https://link.springer.com/book/10.1007/978-981-97-6548-5?page=2#toc">https://link.springer.com/book/10.1007/978-981-97-6548-5?page=2#toc</a> , <a href="https://link.springer.com/chapter/10.1007/978-981-97-6548-5_32">https://link.springer.com/chapter/10.1007/978-981-97-6548-5_32</a>
5	<b>Dr. Partha Sarathi Subudhi</b>	Electrical Engineering	Conference: Advancing Energy Solution - Residential Grid Integration with DC-DC Converter	IECON 2024 - 50th Annual Conference of the IEEE Industrial Electronics Society	International	2024	Nov		BIT, Wardha	IEEE	<a href="https://ieeexplore.ieee.org/abstract/document/10906023">https://ieeexplore.ieee.org/abstract/document/10906023</a>



  
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**BAJAJ INSTITUTE OF TECHNOLOGY, PIPRI, WARDHA**  
**List of Papers published in International / National Conference**

Sr. No.	Name of the Teacher/s	Department of the Teacher	Title of Paper	Title of Proceedings of the Conference	Name of the Conference	National/ International	Calendar Year of Publication	Month of Publication	ISBN/ ISSN Number of Proceedings	Affiliating Institute at the time of Publication	Name of Publisher	Google Drive Link of the Conference Paper / Book/ Book Chapter
1	Ajay Kumar Sahu	Computer Engineering	Predicting Cyber Identity Theft: A Cutting-Edge Approach using Cascaded ResNet-LSTM Deep Learning Models	International Conference On Ubiquitous Computing And Intelligent Information Systems (Icuis)	International Conference on Ubiquitous Computing and Intelligent Information Systems (ICUIS)	International	2025	Feb	979-8-3315-2963-5	BIT, Wardha	IEEE	<a href="https://drive.google.com/open?id=1znGrRbbaEaXnO2s92fhzgidTPcjqn4gb">https://drive.google.com/open?id=1znGrRbbaEaXnO2s92fhzgidTPcjqn4gb</a>
2	Abhishek Kinhekar	Computer Engineering	Comparative Assessment of Approaches for Security of Big Data Environments	Sixteenth International Conference On Advances In Computing, Control, And Telecommunication Technologies - Act 2025	Sixteenth International Conference on Advances in Computing, Control, and Telecommunication Technologies ACT 2025	International	2025	Jun	-	BIT, Wardha	GRENZE International Journal of Engineering and Technology (GIJET)	<a href="https://drive.google.com/open?id=1FT3FbtUNDK86o5VZXNvu-iv-DoaL1e5D">https://drive.google.com/open?id=1FT3FbtUNDK86o5VZXNvu-iv-DoaL1e5D</a>
3	Deepak Bhope	Mechanical Engineering	Damaged Skull Prototyping using Artificial Intelligence Techniques: A Review	Aip Conference Proceedings	International Conference on Joint Innovations in Sustainable Engineering, Project Management and New Transformations in Computing and Communication, JSPM Narhe Technical Campus Pune, 27-28 June 2024	International	2025	May	1551-7616	BIT, Wardha	AIP Publishing	<a href="https://drive.google.com/open?id=1E0-iEeoX0NHQrBHO9zzL09MUiqueRLU">https://drive.google.com/open?id=1E0-iEeoX0NHQrBHO9zzL09MUiqueRLU</a>
4	Dr. Santosh Bopche	Mechanical Engineering	Development of a Wired Cavity Type Solar Receiver for Enhanced Radiative Heat Gain	International Conference On Applications Of Engineering For Sustainable Development [Icaesd2024]	International Conference on Applications of Engineering for Sustainable Development [ICAESD2024]	International	2024	Dec	0971-3034	BIT, Wardha	Indian Society for Technical Education (ISTE)	<a href="https://drive.google.com/open?id=19LlOziFLEIdgB60SvbS9iyld8qUO9um">https://drive.google.com/open?id=19LlOziFLEIdgB60SvbS9iyld8qUO9um</a>
5	Dr. Santosh Bopche and Dr. Suraj Vairagade	Mechanical Engineering	Advances in Thermal Performance Characteristics of Additively Manufactured Heat Exchanger Devices	International Conference On Applications Of Engineering For Sustainable Development [Icaesd2024]	International Conference on Applications of Engineering for Sustainable Development [ICAESD2024]	International	2024	Dec	0971-3034	BIT, Wardha	Indian Society for Technical Education (ISTE)	<a href="https://drive.google.com/open?id=1mSP63UjdbZMx8jAeEhDMsqeLJKUfP4">https://drive.google.com/open?id=1mSP63UjdbZMx8jAeEhDMsqeLJKUfP4</a>
6	Dr. Santosh Bopche	Mechanical Engineering	Experimental Investigations on Multi-passage Finned Type Solar Receiver	The 3Rd International Conference On Innovations In Clean Energy Technologies,Icet 2025	the 3rd International conference on INNOVATIONS IN CLEAN ENERGY TECHNOLOGIES,ICET 2025, MANIT Bhopal	International	2025	Feb	--	BIT, Wardha	Conference paper was published as a book chapter by Springer after one year	<a href="https://drive.google.com/open?id=1aNxcnm7vVxvDAtcgCTAl-vWw6JDDPmEN">https://drive.google.com/open?id=1aNxcnm7vVxvDAtcgCTAl-vWw6JDDPmEN</a>
7	Dr. Partha Sarathi Subudhi	Electrical Engineering	Advancing Energy Solution - Residential Grid Integration with DC-DC Converter	Iecon 2024 - 50Th Annual Conference Of The Ieee Industrial Electronics Society	IECON 2024 - 50th Annual Conference of the IEEE Industrial Electronics Society	International	2025	Mar	978-1-6654-6454-3	BIT, Wardha	IEEE	<a href="https://drive.google.com/open?id=1FhIAVvIDSBYo_dCfDcPVFv68EYFJLS">https://drive.google.com/open?id=1FhIAVvIDSBYo_dCfDcPVFv68EYFJLS</a>
8	Ruikar Jayesh Deorao	Electrical Engineering	MULF RR-IQA: Multi-feature based reduced reference image quality assessment	Seventh International Conference On Recent Trends In Image Processing And Pattern Recognition (Rtip2R-2024)	Seventh International Conference on Recent Trends in Image Processing and Pattern Recognition (RTIP2R-2024)	International	2024	Dec	1877-0509	BIT, Wardha	Elsevier	<a href="https://drive.google.com/open?id=1StgA1TFvsmg0UqUuc03qgyeEjsQFc9">https://drive.google.com/open?id=1StgA1TFvsmg0UqUuc03qgyeEjsQFc9</a>
9	V. M. THAKUR	Civil Engineering	Seismic behaviour of steel-braced RC frames in seismic zone IV	Structural Integrity	5th International integrity conference & exhibition (SICE 2024)	International	2025	Aug	ISBN: 9798331326487	BIT, Wardha	Elsevier	<a href="https://drive.google.com/open?id=1evlwbB-j6Dkb2jFuCk-">https://drive.google.com/open?id=1evlwbB-j6Dkb2jFuCk-</a>
10	Dr. Nisha Thakur	Civil Engineering	Seismic Behavior of Steel-braced RC Frames in Seismic Zone IV	Sciencedirect Procedia Structural Integrity	5th International Structural Integrity Conference & Exhibition (SICE 2024)	International	2025	Aug	979-8331326487	BIT, Wardha	ELSEVIER	<a href="https://drive.google.com/open?id=18J8aBayerOcdlkrEP45fApIIV2TkyYq">https://drive.google.com/open?id=18J8aBayerOcdlkrEP45fApIIV2TkyYq</a>
11	Dr. Nisha Thakur	Civil Engineering	Performance of Eco-Sustainable Geopolymer Mortar with Neem Fibre	Sciencedirect Structural Integrity Procedia	Structural Integrity and Interactions of Materials in Civil Engineering Structures (SIIMCES-2025)	International	2025	Jul	ISSN 2452-3216	BIT, Wardha	ELSEVIER	<a href="https://drive.google.com/open?id=1B_NoWeAPh2rZEwztrbjlO5mkMcZ9LvaF">https://drive.google.com/open?id=1B_NoWeAPh2rZEwztrbjlO5mkMcZ9LvaF</a>
12	Dr. Harshad Phadke	Civil Engineering	Seismic Behavior of Steel-braced RC Frames in Seismic Zone IV	Procedia Structural Integrity 71 (2025) 233–240 2452-	5th International Structural Integrity Conference & Exhibition (SICE 2024)	International	2025	Aug	2452-3216	BIT, Wardha	ELSEVIER	<a href="https://drive.google.com/open?id=1UjipK_EoMb8ybR3LXFkOSp4REuCTGHP">https://drive.google.com/open?id=1UjipK_EoMb8ybR3LXFkOSp4REuCTGHP</a>
13	Dr. Suraj Vairagade	Mechanical Engineering	Development of a Wired Cavity Type Solar Receiver for Enhanced Radiative Heat Gain	International Conference On Applications Of Engineering For Sustainable Development [Icaesd2024]	International Conference on Applications of Engineering for Sustainable Development [ICAESD2024]	International	2024	Dec	0971-3034	BIT, Wardha	Indian Society for Technical Education (ISTE)	<a href="https://drive.google.com/open?id=1VxvNINfHT954Fd2p8JTG1kRX2GHdavGb">https://drive.google.com/open?id=1VxvNINfHT954Fd2p8JTG1kRX2GHdavGb</a>
14	Dr. Suraj Vairagade	Mechanical Engineering	Advances in Thermal Performance Characteristics of Additively Manufactured Heat Exchanger Devices	International Conference On Applications Of Engineering For Sustainable Development [Icaesd2024]	International Conference on Applications of Engineering for Sustainable Development [ICAESD2024]	International	2024	Dec	0971-3034	BIT, Wardha	Indian Society for Technical Education (ISTE)	<a href="https://drive.google.com/open?id=1cew8Zun6hL75vmXWau3DDcwGZDy0qz">https://drive.google.com/open?id=1cew8Zun6hL75vmXWau3DDcwGZDy0qz</a>

15	<b>Dr. Santosh Bopche</b>	Mechanical Engineering	Effect of Selective Coating on the Efficiency of Conical Shaped Solar Cavity Receiver	National Symposium On Green Energy Lnterventions To Support Msmes In Technology-Deprived Areas' Mgriri Wardha	National Symposium on Green Energy Interventions to Support MSMEs in Technology-Deprived Areas' MGIRI Wardha	National	2025	Jan	NA	BIT, Wardha	NA	<a href="https://drive.google.com/open?id=1EuNyQhpcoCejxcRBD7BanBCNm1S7jdW1">https://drive.google.com/open?id=1EuNyQhpcoCejxcRBD7BanBCNm1S7jdW1</a>
16	<b>Dr. Suraj Vairagade</b>	Mechanical Engineering	Experimental Investigations on Multi-passage Finned Type Solar Receiver	3rd International Conference On Innovations In Clean Energy Technologies, ICET 2025	3rd International Conference On Innovations In Clean Energy Technologies, ICET 2025	International	2025	Feb	--	BIT, Wardha	Conference paper was published as a book chapter by Springer after one year	<a href="https://drive.google.com/open?id=1HkuTSweE6zpgend4fRiDNajSZnOlz9GH">https://drive.google.com/open?id=1HkuTSweE6zpgend4fRiDNajSZnOlz9GH</a>
17	<b>Dr. Partha Sarathi Subudhi</b>	Mechanical Engineering	Conference: Advancing Energy Solution - Residential Grid Integration with DC-DC Converter	Iecon 2024 - 50Th Annual Conference Of The Ieee Industrial Electronics Society	IECON 2024 - 50th Annual Conference of the IEEE Industrial Electronics Society	International	2024	Nov		BIT, Wardha	IEEE	<a href="https://ieeexplore.ieee.org/abstract/document/10906023">https://ieeexplore.ieee.org/abstract/document/10906023</a>



  
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**BAJAJ INSTITUTE OF  
TECHNOLOGY, PIPRI, WARDHA**

**Faculty Achievements**

**Session 2024-25**



Shiksha Mandal's  
**BAJAJ INSTITUTE OF TECHNOLOGY, PIPRI, WARDHA**

## Faculty Achievements (2024-2025)

Sr. No.	Department	Academic Year	Faculty Name	Achievment	* PDF of Proof of Faculty achievement	
1	Civil Engineering	2024-2025	Dr. Ram Subhashrao Wanare	Paper Reviewer	<a href="https://drive.google.com/open?id=1B5zmOZMd6-0hO_8uP_36HXsXcmNuLY3p">https://drive.google.com/open?id=1B5zmOZMd6-0hO_8uP_36HXsXcmNuLY3p</a>	
2	Civil Engineering	2024-2025	Dr. Ram Subhashrao Wanare	Paper Reviewer	<a href="https://drive.google.com/open?id=1i3iK61ZhnjPJxmphS_70rUPrLUnWt26o">https://drive.google.com/open?id=1i3iK61ZhnjPJxmphS_70rUPrLUnWt26o</a>	
3	Civil Engineering	2024-2025	Dr .Ram Subhashrao Wanare	Paper Reviewer	<a href="https://drive.google.com/open?id=1dn8IUzP1J9z018PwxWZnC-GXGRZ8AIje">https://drive.google.com/open?id=1dn8IUzP1J9z018PwxWZnC-GXGRZ8AIje</a>	
4	Civil Engineering	2024-2025	Vikas Thakur	Paper Reviewer	<a href="https://drive.google.com/open?id=1J5DLnl_uVB4RuIBFWjMyyP9XOtBakoRuK">https://drive.google.com/open?id=1J5DLnl_uVB4RuIBFWjMyyP9XOtBakoRuK</a>	
5	Civil Engineering	2024-2025	Dr. Vikas Thakur	Consultancy	<a href="https://docs.google.com/spreadsheets/d/1aJxbYc45fLGaHqoLzQzAeygvnV6LuMsu/edit?gid=1749057889#gid=1749057889">https://docs.google.com/spreadsheets/d/1aJxbYc45fLGaHqoLzQzAeygvnV6LuMsu/edit?gid=1749057889#gid=1749057889</a>	
6	Civil Engineering	2024-2025	Dr. Vikas Thakur	Consultancy		
7	Civil Engineering	2024-2025	Dr. Vikas Thakur Dr. Prathik Kulkarni	Consultancy		
8	Civil Engineering	2024-2025	Dr. Vikas Thakur Dr. Harshad Phadke	Consultancy		
9	Civil Engineering	2024-2025	Dr. Vikas Thakur	Consultancy		
10	Civil Engineering	2024-2025	Dr. Vikas Thakur Dr. Harshad Fadke	Consultancy		
11	Civil Engineering	2024-2025	Dr. Vikas Thakur Dr. Prathik Kulkarni	Consultancy		
12	Civil Engineering	2024-2025	Dr. Vikas Thakur Dr. Harshad Fadke	Consultancy		
13	Civil Engineering	2024-2025	Dr. Vikas Thakur	Consultancy		
14	Civil Engineering	2024-2025	Dr. Vikas Thakur Dr. Harshad Fadke	Consultancy		
15	Civil Engineering	2024-2025	Dr. Vikas Thakur Dr. Prathik Kulkarni	Consultancy		
16	Civil Engineering	2024-2025	Dr. Prathik Kulkarni	Consultancy		
17	Mechanical Engineering	2024-2025	Dr. M.D. Pasarkar	Conference Committee Chair for 9th International Conference		<a href="https://drive.google.com/file/d/1SoSmhbI9A5bm7FVV1-iBKUOKZFKGyHk_/view?usp=drive_link">https://drive.google.com/file/d/1SoSmhbI9A5bm7FVV1-iBKUOKZFKGyHk_/view?usp=drive_link</a>
18	Mechanical Engineering	2024-2025	Dr. D.V. Bhope	Advisory Committee Member, International Conference		
19	Electrical Engineering	2024-25	Harshit Dalvi	Reviewer for International Conference		
20	Electrical Engineering	2024-25	Partha Sarathi Subudhi	Evaluator- SIH 2025		
21	Electrical Engineering	2024-25	Partha Sarathi Subudhi	Editorial Board Member-Scopus Indexed Distributed Generation and Alternative Energy Journal		

22	Electrical Engineering	2024-25	Partha Sarathi Subudhi	Editorial Board Member-International Journal of Power and Energy Systems, Scopus Indexed Journal	
23	Electrical Engineering	2024-25	Kantilal D. Joshi	Paper Reviewer Scopus Journal IJAPE ISSN 2252-8792 for Paper ID 21520	<a href="https://drive.google.com/file/d/1QIMmvsQaXTaqynN0JI-NqPP4XEJCbKTq/view?usp=drive_link">https://drive.google.com/file/d/1QIMmvsQaXTaqynN0JI-NqPP4XEJCbKTq/view?usp=drive_link</a>
24	Electrical Engineering	2024-25	Kantilal D. Joshi	Completed an online course on “Active Energy Efficiency Using Speed Control”, conducted by Schneider Electric University with Certification.	
25	Electrical Engineering	2024-25	Mrs. K. H. Madan	Cleared a 12-week NPTEL course on “Microprocessors and Microcontrollers” with a Silver Delight score	
26	Computer Engineering	2024-25	Mr. Ajay Sahu	NPTEL Certification - Data Analytics with Python	<a href="https://drive.google.com/file/d/1x5yNi7PIHAuA4ypSD6HF91l2mkBfY0pU/view?usp=drive_link">https://drive.google.com/file/d/1x5yNi7PIHAuA4ypSD6HF91l2mkBfY0pU/view?usp=drive_link</a>
27	Computer Engineering	2024-25	Mr. Akshay Saraf	NPTEL Certification- Bioinformatics : Algorithm and Application's	<a href="https://drive.google.com/file/d/1-ooUQtXAm8GG1WijJ2Yk_a3YHQTWdS0n/view?usp=drive_link">https://drive.google.com/file/d/1-ooUQtXAm8GG1WijJ2Yk_a3YHQTWdS0n/view?usp=drive_link</a>
28	First Year	2024	Dr. Vivek Bhusari	Advisory board member of International Journal of Engineering Trends and Applied Sciences (IJETAS).	<a href="https://www.ijetas.online/journal/about-us/advisory-board/">https://www.ijetas.online/journal/about-us/advisory-board/</a>
29	First Year	Reviewed five papers in 2016,2017,2019(2) & 2023	Dr. Vivek Bhusari	Reviewer for Environmental progress & sustainable energy	<a href="https://orcid.org/0000-0002-7863-2935">https://orcid.org/0000-0002-7863-2935</a>
30	First Year	Reviewed one paper in 2020	Dr. Vivek Bhusari	Reviewer for International journal of environmental analytical chemistry.	<a href="https://orcid.org/0000-0002-7863-2935">https://orcid.org/0000-0002-7863-2935</a>



  
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AI ACT Mar 14, 2024



to me ▾

Dear Prof. M.D. Pasarkar,

Warmest greetings from AI ACT 2025!

Thank you for your support of AI ACT 2024, we had a successful conference with your great help.

Now, we are glad to tell you that the **2025 9th International Conference on Artificial Intelligence, Automation and Control Technologies (AI ACT 2025)** will be hosted in **Sapporo, Japan** from **February 10 to 14, 2025**. You can find more information at <https://www.aiact.net/index.html>

We would officially invite you to join AI ACT 2025 and serve on the **Organizing Committee**, your joining is important to the success of AI ACT 2025.

Hopefully, we can cooperate again, and look forward to seeing you in Sapporo!

Your early reply will be greatly appreciated.



## Invitation to Serve as Advisory Committee Member for International Conference at RCERT, Chandrapur

1 message

Dr. Anil Chitade <principal@rcert.ac.in>

Wed, 18 Jun 2025 at 4:06 pm

Reply to: principal@rcert.ac.in

To: Dr. Deepak Bhope <dvhbhope@rediffmail.com>, Deepak Bhope <dvhbhope@gmail.com>

**Date:18-06-2025**

To,  
Dr.D.V.Bhope,  
Professor,  
*Bajaj Institute of Technology,*  
Wardha.

Respected Sir,

It gives us immense pleasure to inform you that the **Department of Mechanical Engineering**, RCERT, Chandrapur, is organizing an **International Conference** on "**Fostering Interdisciplinary Collaboration: Challenges and Opportunities**" scheduled to be held on **20<sup>th</sup> and 21<sup>st</sup> November 2025**.

We are delighted to invite you to be a part of the **Advisory Committee** for this prestigious event. Your expertise, experience, and guidance would be invaluable in shaping the direction and quality of the conference. Your presence and association would greatly enhance the academic value and outreach of the conference.

We sincerely hope you will accept our invitation and extend your support in making this event a grand success. A formal brochure and further details of the conference will be shared with you shortly.

Looking forward to your kind acceptance.

Warm regards,

(Dr. Anil Z Chitade)

Principal, RCERT Chandrapur.

Ex Assistant Professor, Maulana Azad National Institute of Tech, Bhopal(M.P.)

Dean, Faculty of Sci & Tech, Gondwana University Gadchiroli.

Ex Director, Board of Examinations and Evaluation, Gondwana University Gadchiroli.

Ex Director(I/C), Innovation, Incubation and Linkages, GUG Gadchiroli

Ex Registrar(I/C), Gondwana University Gadchiroli.



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with a consolidated score of **70** %

Online Assignments	24.38/25	Proctored Exam	45.92/75
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Total number of candidates certified in this course: **10022**

**Prof. Kaushik Ghosh,**  
Professor (Chemistry)  
Coordinator CEC

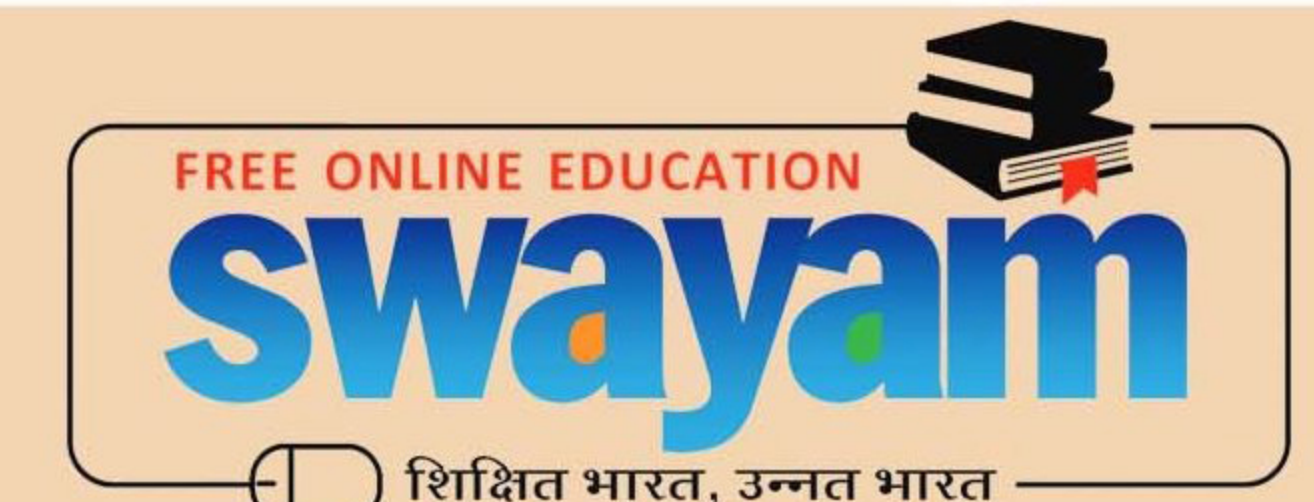
**Jan-Apr 2025**

**(12 week course)**

**Prof. Ranjana Pathania,**  
Professor (BSBE)  
Coordinator (NPTEL)



Indian Institute of Technology Roorkee





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with a consolidated score of **77** %

Online Assignments	21.56/25	Proctored Exam	55.5/75
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Total number of candidates certified in this course: **530**



**Prof. Andrew Thangaraj**  
Chair

Centre for Outreach and Digital Education, IITM

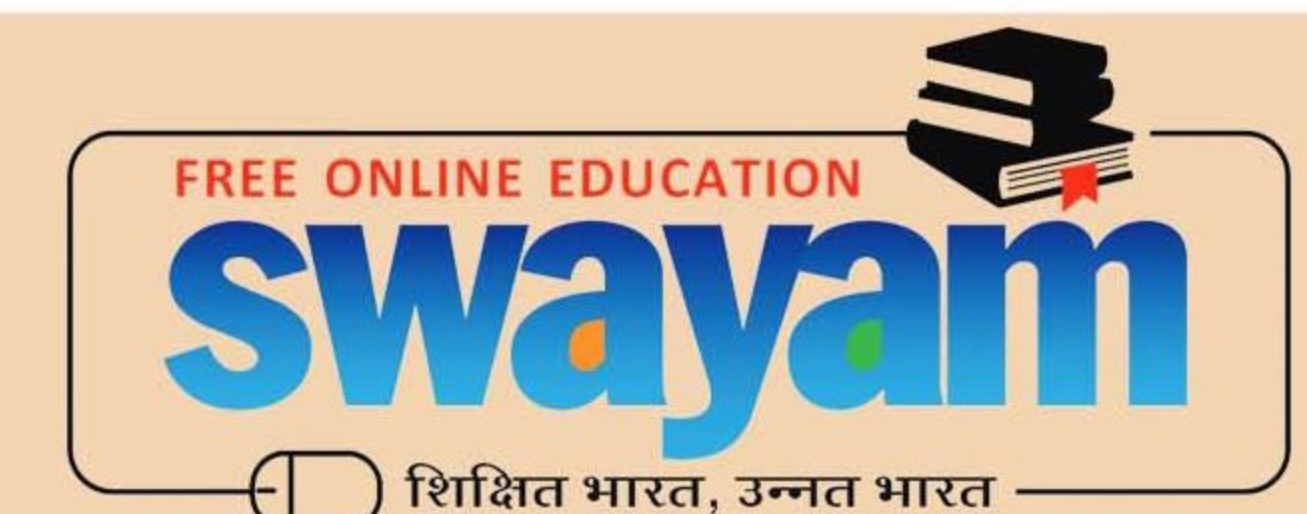
**Jan-Apr 2025**

**(12 week course)**

**Prof. Vignesh Muthuvijayan**  
NPTEL Coordinator  
IIT Madras



Indian Institute of Technology Madras



Roll No: NPTEL25BT06S352801080

To verify the certificate



No. of credits recommended: 3 or 4



## Experimental investigation into multi-stage parabolic dish concentrators for smart village energy applications



Pravin Katare<sup>1,2,\*</sup>, Santosh Bopche<sup>3</sup>, Suraj Vairagade<sup>3</sup>, Meenakshi Tumane<sup>4</sup>, Ling Shing Wong<sup>5</sup>, Choon Kit Chan<sup>1</sup>

<sup>1</sup>Faculty of Engineering and Quantity Surveying, INTI International University, Nilai, Malaysia

<sup>2</sup>Faculty of Mechanical Engineering, Marathwada Mitra Mandal's College of Engineering, Pune, India

<sup>3</sup>Faculty of Mechanical Engineering, Bajaj Institute of Technology, Wardha, India

<sup>4</sup>Gyanakshi Analytics LLP, Pune, India

<sup>5</sup>Faculty of Health and Life Sciences, INTI International University, Nilai, Malaysia

### ARTICLE INFO

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Parabolic dish

Copper receivers

Steam generation

Energy efficiency

### ABSTRACT

Due to the increased level of solar concentration, high-temperature zones ranging from 700 to 800 °C can be generated at the focal point of a solar dish collector, enabling steam production. This study presents experimental investigations of newly developed, efficient, and compact solar equipment that requires less land area. The experimental setup includes two parabolic dish collectors with diameters of 1.83 m and 3.05 m, and three copper receivers—two hemispherical (cavity-type, internally heated) and one conical (externally heated). The performance of this system is compared with that of a simple single-stage system under similar concentration ratios. At lower Reynolds numbers, the solar collection efficiency improves by 12%. The steam generated in the receiver can be further pressurized and stored for later use in various rural applications.

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### 1. Introduction

Improving the performance of solar collectors enhances the system's ability to generate steam. In rural areas, steam is needed for various purposes such as parboiling paddy (rice husk) (Kwofie and Ngadi, 2017), cooling spaces for community use, oil extraction from lemongrass, jaggery production (Sai and Reddy, 2020), sanitizing contaminated clothing and hospital items, bleaching in the textile industry, washing utensils (dishwashers), synthesizing alumina from boehmite (Padilla et al., 2014), and in dairy processing (Solanki and Pal, 2021), among others. Paraboloid collector systems have gained interest in the global research community due to their high solar concentration capability, up to a concentration ratio of 1000, which enables them to maintain temperatures of 800–900 °C at the focal point (Trieb and Müller-Steinhagen, 2008). These high temperatures can be used to generate power up to 0.5 MW (Solanki and Pal, 2021). As a result, these systems are suitable for a wide range of applications,

including agricultural drying, solar cooking (both direct and indirect heating), air and water heating, energy storage, refrigeration, and air conditioning.

The working fluid in these systems is heated in a receiver positioned at the focal point of the concentrator. Such concentrating systems are known for their compact and cost-effective designs (Bushra and Hartman, 2019). Bushra and Hartman (2019) proposed four twin-stage collector designs, including Cassegrain systems, twin-stage collectors, paraboloid dishes, and concentrating troughs. The Cassegrain design uses a paraboloid collector as the primary stage and a hyperbolic or parabolic shape as the secondary stage. In these twin-stage systems, the concentration ratio (C) is defined as the ratio of the aperture area of the primary concentrator to the area of the receiver. Collectors with C values from 1 to 10 are considered low-concentration, 11 to 100 are medium, 101 to 1000 are high, and values above 1000 are classified as extra-high concentration collectors. A combination of a secondary compound parabolic concentrator (CPC) with a primary parabolic dish can achieve concentration ratios up to 3000 (Bushra and Hartman, 2029). Even higher ratios—up to 25,000—are possible using a primary heliostat system with a secondary spherical concentrator. For daylighting applications, solar-cell-based absorbers with optical fibers are often used. When there are deviations in focusing the solar beam, larger receivers are needed to capture the

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<https://doi.org/10.21833/ijaas.2025.05.016>

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