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DEPARTMENT OF MECHANICAL ENGINEERING

STAFF PROFILE INFORMATION



Name of Staff:-	Mr. Rahul UdayUrunkar
Designation: -	Assistant Professor
Qualification:-	M.Tech., Ph.D. (Thesis Submitted)
Area of Specialization:-	Mechanical Design, Hydrogen Energy, CFD
Experience:	10 Years
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> RESEARCH PUBLICATIONS:

RESEARCH CITATIONS

Google Scholar Citations: 50,

H-Index: **3**, i-10 index: **2**

PUBLICATION SUMMARY

International	National	International	National	Book	Total
Journals	Journals	Conferences	Conferences	Chapters	
04	-	04	-	02	06

PATENTS

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RESEARCH PUBLICATIONS: INTERNATIONAL JOURNAL

Sr. No	TITLE	JOURNAL	VOLUME	ISSN
1.	Enhancement of heat and mass transfer characteristics of metal hydride reactor for hydrogen storage using various nanofluids	International Journal of Hydrogen Energy Publisher - Elsevier Impact Factor - 7.2 CiteScore – 12.1 Quartile – Q1 H-Index – 263	Volume 46, Issue 37, May 2021 , Pages: 19486– 19497.	0360- 3199
2	Performance analysis of sodium alanate hydride reactor with different nanofluids	International Journal of Hydrogen Energy Publisher - Elsevier Impact Factor - 7.2 CiteScore – 12.1 Quartile – Q1 H-Index – 263	Volume 48, Issue 96, Dec. 2023, Pages: 37944-37953	0360- 3199
3	Study of Drive Mechanisms of Bicycle, Tricycle or Like Vehicles to Optimize Operating Performance-A Review	International Journal of Engineering Research and Applications (UGC Approved Journal)	4	2248- 9622
4	Design and development of multipurpose machine for sawing, drilling and grinding	International Journal of Creative Research Thoughts (UGC Approved Journal)	6	2320- 2882

PAPER PUBLICATIONS: - INTERNATIONAL CONFERENCE

Sr. No	TITLE	CONFERENCE	VOLUME	ISSN
1.	Numerical Study on Performance Evaluation of Multi-Tubular Sodium Alanate Hydride Reactor by Enhancing Heat and Mass Transfer Characteristics Using Nanofluids	26 th National& 4 th International ISHMT- ASTFE Heat Mass Transfer Conference (IHMTC-2021), Organized by IIT Madras , India	Vol. 2021 Pages 2613-2618 Paper no.IHMTC2021-665. DOI: 10.1615/IHMT C-2021.3950	ISSN Online: 2688-7231 ISBN Online: 978-1-56700- 524-0
2	Effect of change in flow rate on performance parameters of shell and helical tube type heat exchanger AIP Conference Proceedings	1 st International Conference on Advances in Mechanical Engineering, Industrial Informatics and Management (AMEIIM- 2022), Organized by NIT Raipur	Vol. 020008 (2023) Pages: 0200081- 0200087 DOI: 10.1063/5.0186 184	1551-7616
3	Numerical investigation on improvement of heat andmass transfer attributes of sodium alanate hydride reactor using variousnanofluids	2 nd International Conference on Renewable Energy (ICRE 2022)Organized by Centre for non-conventional energy resources (CNCER), University of Rajasthan, Jaipur, India in association with International Association for Hydrogen Energy (IAHE), USA & MRSI, Rajasthan chapter	1	0360-3199
4	A review on hydrogen as a fuel, its storage technologies and related heat and mass transfer studies	2 nd International Conference on Renewable Energy (ICRE 2022)Organized by Centre for non-conventional energy resources (CNCER), University of Rajasthan, Jaipur, India in association with International Association for Hydrogen Energy (IAHE), USA & MRSI,	1	0360-3199

	Rajasthan chapter	

Book Published

Book Chapters:

S. No.	Title of Book	Year	Name of Publisher	ISBN
1	Book Title: Hydrogen Fuel Cell Technology for Mobile Applications	2023	IGI Global Publication	DOI: <u>10.4018/978-1-</u> 6684-6721-3.ch008
	Chapter Title: Hydrogen Storage Technologies and Related Heat and Mass Transfer Studies			
2	Book Title: Developing Advanced Technologies for Hydrogen Storage and Production		IGI Global Publication	Chapter Approved (Waiting for DOI)
	Chapter Title: Navigating the Path to a Hydrogen Based Economy-Opportunities and Hurdles			

> Research IDs:

1	Google scholar ID	https://scholar.google.com/citations?hl=en&user=bnm0p UQAAAAJ
2	ORCID ID	00000-0001-8377-9475

Reviewer of International Journals:

- **1.** International Journal of Hydrogen Energy (Elsevier Publication; SCOPUS, SCI Indexed International Journal)
- 2. Applied Thermal Engineering (Elsevier Publication; SCOPUS, SCI IndexedInternational Journal)
- **3.** Energy Engineering (SCOPUS IndexedInternational Journal)
- **4.** International Journal of Applied Power Engineering (SCOPUS Indexed International Journal)

➤ Member of Professional Bodies:

Life Member of ISTE Regn. No. LM-130587

$\blacktriangleright \ \ Details \ of \ Faculty \ Development \ Programs \ (Workshop/Conference/Training \ Program)$

S. No.	Title of Program	Organized by (Venue)	Year	Duration
1.	ISTE approved FDP on "Materials& Advanced Manufacturing"	YashodaTechnical Campus, Satara	2022	22/08/2022 to 26/08/2022.
2.	ISTE approved FDP on "Future Perspective of Non-Conventional, Renewable and Clean Energy Resources"	Sanjeevan Engineering and Technology,Panhala	2022	09/05/2022 to 13/05/2022.
3.	FDP on "Introduction to NBA"	Sanjeevan Engineering and Technology,Panhala	2022	15/03/2022.
4.	AICTE sponsored STTP on "Machine Learning: Applications in Mechanical Engineering"	Dr. J. J. Magdum College of Engineering	2022	14/02/2022 to 18/02/2022.
5.	ISTE approved FDP on "Eco Friendly Engineering: Concepts & Trends"	Vidyavardhini Institute Technology	2022	13/02/2022 to 17/02/2022
6.	ISTE approved FDP on "Simulation Tools for Research"	Sharad Institute of Technology, College of Engineering,	2022	08/02/2022 to 14/02/2022.
7.	IEEE approved FDP on "Research Methodology, Research Publications and Patent Filing"	Sharad Institute of Technology College of Engineering	2021	20/09/2021 to 24/09/2021.
8.	AICTE Quality Improvement Scheme (AQIS) sponsoredSTTP on "Innovative & Inventive Problem Solving"	AISSMS COE, Pune	2021	29/06/2021 to 04/07/2021.
9.	IEEE, Institution of Engineers(India), Kolkata and ISTE approved FDP on"Augment Reality & Virtual Reality"	AISSMS COE, Punein association with Buds Engineering Academy Pune	2021	21/06/2021 to 25/06/2021.
10.	AICTE sponsored STTP on "Artificial Intelligence & Machine Learning"	DKTE'S Textile & Engineering Institute,	2021	14/06/2021 to 19/06/2021.

		Ichalkaranji		
11.	National level workshop on "Emerging trends in thermal engineering"	Sreechaitanya college of engineering in association with ISTE	2021	03/05/2021 to 07/05/2021
12.	AICTE and ISTE sponsored orientation program on "Scope of IOT & its Applications in Automotive & Agriculture Industry"	Government College of Engineering & Research, Awasari	2021	03/05/2021 to 08/05/2021.
13.	AICTE sponsored STTP on "Energy management and control system for smart renewable energy remote power generation"	Annamacharya Institute of Technology and Sciences, Rajamapet	2021	05/04/2021 to 10/04/2021.
14.	AICTE & TEQIP sponsored National Level Workshop on "Digital Transformation & Pedagogies"	Government College of Engineering, Karad&Walchand College of Engineering, Sangli	2020	10/08/2020 to 14/08/2020.
15.	TEQIP sponsored FDP on"Applications of Finite Element Analysis (FEA) and Computational Dynamics (CFD) using ANSYS"	Government College of Engineering, Karad&Rajikiya Engineering College, Azamgarh	2020	13/06/2020 to 17/06/ 2020.
16.	Workshop on "Trends & Practices in Refrigeration & Air Conditioning"	ISHRAE Student Chapter at Deogiri Institute of Engineering & Management Studies, Aurangabad	2020	15/06/2020 to 20/06/2020.
17.	FDP on "SciLab"	Amrutvahini Polytechnic, Sangamner in associationwith Spoken Tutorial IIT, Bombay	2020	12/06/2020 to 16/06/2020
18.	FDP on "Emerging Trends in Refrigeration and Air-Conditioning"	RajarshiShahuMaharaj Polytechnic, Nashik in association with ISHRAE Nashik Chapter	2020	08/06/2020 to 12/06/2020.
19	ISTE approved faculty orientation programme on "Recent Advances inModeling and Optimization Techniques"	Sharad Institute of Technology, College of Engineering,	2020	01/06/2020 to 05/06/2020.
20.	AICTE sponsored two week FDP on "Emerging Trends and Approaches in Product Design and Development"	PVPIT, Budhagaon	2017	27/11/2017 to 09/12/2017

> Workshop Organized:

- Organized Student Development Program (SDP) on "Career opportunities in UPSC" dated
 11/09/2019. Resource Person: Dr. K.K.Jadhav (Director, Exam Reform at UPSC)
- Organized and Delivered Student Development Program (SDP) on "Introduction to Product Design" from 25/02/2023 to 27/05/2023 (only on working Saturday).
- Organized and Deliveredone day workshop on "Research Methodology" on 11th Feb. 2023.
- Organized Career guidance Program on "Career Opportunities in CAD" dated 11/01/2019.
- Worked as Resource Person/Event evaluator for Car Clay Modelling event under AUTO SPARK 2K18 technical program organized by Automobile Engg. Department SETI dated 10/03/2018.

SETI Panhala