

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

STAFF PROFILE INFORMATION

1	Name of Faculty	Dr. Suhas Gajanan Sapate			
2	Designation	Principal			
4	Date of Joining the Institute	01/07/2024			
5	Contact No.	7020146521			
6	E-mail	suhasgsapate@gmail.com			
7	Date of Birth				
8	Specialization	Medical Image Analysis, Machine Learning, Deep Learning, Computer Vision			
9	Qualification	UG	PG	Ph.D.	
		BE CSE	ME CSE	CSE	
10	Total Experience	Academic	Research	Total	
		24	03	24	
11	Publications (Journals)	National	International	Total	
		02	10	12	
12	Publications (Conferences)	National	International	Total	
		07	11	18	
13	PG/Ph.D. Projects Guided	PG Projects	Ph.D. Projects	Total	
		14	02	16	
14	Books Published/IPRs/Patents	3			
15	Professional Bodies Memberships	LM-ISTE(48635)			
16	Consultancy Activities	1			
17	Awards / Achievements	3			
18	Grants Received	2			

➤ RESEARCH PUBLICATIONS:

RESEARCH CITATIONS

Google Scholar Citations: **105**, H-Index: **5**, i-10 index: **4**

PUBLICATION SUMMARY

Patent Filed	International Journals	National Journals	International Conferences	National Conferences	Book Chapters	Editor Conf. Proceedings	Total
01	10	02	11	07	02	01	34

PATENTS

Title: AI Based Smart Meter For Municipal Waste Water Treatment By Electrochemical Technique And Quality Monitoring Using IoT

PATENT INFORMATION

Application ID	202241010481
Invention Field	PHYSICS
Date of Application	2022-02-27
Publication Number	11/2022
Type	Published
Role	Applicant

RESEARCH PUBLICATIONS: INTERNATIONAL JOURNAL

Sr. No	TITLE	JOURNAL	VOLUME	ISSN
1.	Radiomics based Detection and Characterization of Suspicious Lesions on Full Field Digital Mammograms	(Elsevier's) Computer Methods and Programs in Biomedicine, (Impact Factor - 7.027, Cite Score – 10.1)	Vol.163, Sept. 2018, Pages 1-20	ISSN: 0169-2607

2	Breast cancer diagnosis using abnormalities on ipsilateral views of digital mammograms	Biocybernetics and Biomedical Engineering, Pages 290-305 (Impact Factor-6.4, CiteScore 11.6)	Vol. 40, Issue 1, January–March 2020	ISSN: 0208-5216
3	Segmentation of pectoral muscle from digital mammograms with depth-first search algorithm towards breast density classification	Biocybernetics and Biomedical Engineering, (Impact Factor-6.4, CiteScore 11.6).	Vol. 41(3), 2021 , pp-1224-1241	ISSN: 0208-5216
4	Multi-channel Dense-Net Architecture for classification of mammographic breast density in Breast Cancer Detection	Frontiers in Public Health, (Impact Factor-6.461, CiteScore 4.0)	Vol. 10, 2022	ISSN: 2296-2565
5.	Prediction of electrocoagulation treatment of tannery wastewater using multiple linear regression based ANN: Comparative study on plane and punched electrodes	Elsevier's: Desalination and Water Treatment.	Vol. 319, July 2024	ISSN 19443986, 19443994
6.	Recent Trends And Advances In Machine Learning Techniques For Classification Of Text From Health Domain	Technische Sicherheit	Vol, 24, Issue 1, 2024	ISSN NO: 1434-9728
7.	A Comprehensive Survey of Machine Learning Techniques For Ear Recognition System	International Journal of Advanced Networking and Applications (IJANA)	Vol. 15 Issue 04 Pages:100-200 (2023)	ISSN: 0975-0290
8.	Past, Present and Future of Automated Mammographic Density Measurement for Breast Cancer Risk Prediction	Journal of Physics,	Vol. 2327 (2022) 012076	doi:10.1088/1742-6596/2327/1/012076
9.	Recent Trends and Advances in Deep Learning Techniques for classification of landslides using satellite images	IOP Conference Series: Earth and Environmental Science	Vol. 1285 (012024)	DOI 10.1088/1755-1315/1285/1/012024

10.	A prototype model for detection and classification of landslides using satellite data	Journal of Physics: Conference Series	Vol. 2327 (2022) 012076	doi:10.1088/1742-6596/2327/1/012076
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PUBLICATIONS as EDITOR: - INTERNATIONAL CONFERENCE PROCEEDINGS

Sr. No	TITLE	JOURNAL / CONFERENCE	VOLUME	ISSN
1.	AIP Conference Proceedings Melville, New York, 2023, indexed by Scopus and Web of Science .	International Conference on Innovations in Computer Science, Electronics & Electrical Engineering-2022”,	Vol. 2717 (2022) organized by ADCET, Ashta 416113 during 14–15 February 2022.	ISBN: 978-0-7354-4495-9 ISSN: 0094-243X,

PAPER PUBLICATIONS: - INTERNATIONAL CONFERENCE

Sr. No	TITLE	CONFERENCE	VOLUME	ISSN
1.	Review on pre-processing algorithms for breast density classification using digital mammograms AIP Conference Proceedings Melville, New York, 2023, indexed by Scopus and Web of Science	Int. Conf. on Innovations in Computer Science, Electronics & Electrical Engineering-2022	Vol. 2717 (2022)	ISBN: 978-0-7354-4495-9 ISSN: 0094-243X,

2	<p>PollX- Polling Assistant</p> <p>Received “Best Presentation Award”.”</p> <p>Springer Conference Series organized by SKN Sinhgad College of Engineering, Pandharpur 413304</p>	<p>Int. Conf. on Innovations in Artificial Intelligence and Machine Learning (ICIAIML)- 2022</p> <p>at Ambassador Hotel Bangkok, Thailand during 20-21 August 2022.</p>	Vol. 2327 (2022) 012076	Publication in Process
3	<p>Disease detection on pomegranate fruits using machine learning approach”,</p> <p>AIP Conference Proceedings Melville, New York, 2023</p>	<p>Int. Conf. on Innovations in Computer Science, Electronics & Electrical Engineering- 2022</p>	Vol. 2717 (2022)	<p>ISBN: 978-0-7354-4495-9</p> <p>ISSN: 0094-243X</p>
4	<p>Past, Present and Future of Automated Mammographic Density Measurement for Breast Cancer Risk Prediction</p> <p>Journal of Physics: Conference Series</p>	<p>4th Int. Conf. on Intelligent Circuits and Systems</p>	Vol. 2327 (2022) 012076, IOP Publishing	<p>doi:10.1088/1742-6596/2327/1/012076. Published under licence by IOP Publishing Ltd.</p>

5	<p>Social distance monitoring at public places using YOLO V3 and euclidean distance</p> <p>AIP Conference Proceedings Melville, New York, 2023,</p>	<p>Int. Conf. on Innovations in Computer Science, Electronics & Electrical Engineering-2022</p>	Vol. 2717 (2022)	<p>ISBN: 978-0-7354-4495-9</p> <p>ISSN: 0094-243X</p>
6	<p>A prototype model for detection and classification of landslides using satellite data</p> <p>Journal of Physics: Conference Series Published under licence by IOP Publishing Ltd.</p>	<p>4th Int. Conf. on Intelligent Circuits and Systems, IOP</p>	Vol. 2327 (2022) 012076	<p>Publishing, doi:10.1088/1742-6596/2327/1/012076.</p>
7	<p>Dynamic Trust Management for community-based application using IoT</p> <p>AIP Conference Proceedings Melville, New York, 2023</p>	<p>Int. Conf. on Innovations in Computer Science, Electronics & Electrical Engineering, 14–15 February 2022.</p>	Vol. 2717 (2022)	<p>ISBN: 978-0-7354-4495-9 ISSN: 0094-243X</p>
8	<p>A Second Order Energy Consumption Model For Improving Performance Of 802.15.4</p>	<p>Int. Conf. on Innovations in Computer Science, Electronics & Electrical Engineering,</p>	Vol. 2717 (2022)	<p>ISBN: 978-0-7354-4495-9 ISSN: 0094-243X</p>

	MAC AIP Conference Proceedings Melville, New York, 2023	14–15 February 2022.		
9	Machine Learning Approach towards Mammographic Breast Density Measurement for Breast Cancer Risk Prediction: An Overview”, (April 8, 2020). Proceedings of the	3 rd Int. Conf. on Advances in Science & Technology (ICAST) 2020,	SSRN: https://ssrn.com/abstract=3599187 or	http://dx.doi.org/10.2139/ ssrn.3599187
10	Diverse Operations in Uncertain and Probabilistic Database – Trio	3 rd Int. Conf. on Intelligent Sustainable Systems (ICISS 2020)	organized during 3 rd – 5 th December, 2020	By SCAD Institute of Technology, Palladam, India.
11.	Pectoral Muscle Extraction using Gaussian Mixture Model	International conference on Computer Vision and Image Processing CVIP-2016	26 th to 28 th February 2016	By IIT, Roorkee

PAPER PUBLICATIONS: NATIONAL JOURNAL

Sr. No	TITLE	JOURNAL / CONFERENCE	VOLUME	ISSN
1.	Online Era and Intellectual Property Rights-Challenges in Technical Education in India”,	Proceedings of 43 rd ISTE National Convention 2013,	TKIET, Warananagar, 19 th – 21 st Dec, 2013 ,	ISBN 978-93-5142-315-7
2	Innovations in Technical Education for Modern Industrial Scenario	Proceedings of 43 rd ISTE National Convention 2013,	TKIET, Warananagar, 19 th – 21 st Dec, 2013 ,	ISBN 978-93-5142-315-7

PAPER PUBLICATIONS: NATIONAL CONFERENCE

Sr. No	TITLE	JOURNAL / CONFERENCE	VOLUME	ISSN
1.	Steganography: Hiding Data within Data” published and presented at a “	National Conference on Communication and Computational Techniques	organized by DIT, Dehradun during 10 th -11 th Feb. 2006	---
2	Digital Steganography with different filters Received “ Best Presentation Award ”.	National Conference on Information Security INSEC – 2007”	organized by WCE Sangli (during 17 th -18 th August 2007).	--
3	Locating Friends & Family Members Using Mobile Phones	National Conference On Recent Advancements In Engineering (NCRAE-12)	organized by SETI, Panhala, Maharashtra, during 22 nd -23 rd June, 2012	ISBN-978-93-82062-39-4
4.	Content based video retrieval using video signatures	National Conference On Recent Advancements In Engineering (NCRAE-12)	organized by SETI, Panhala, Maharashtra, during 22 nd -23 rd June, 2012	ISBN-978-93-82062-39-4
5.	Pre-processing techniques for Breast Density Measurement using Digital Mammograms	National Conference on Emerging Trends in AI and Machine Learning	organized by Pune Institute of Computer Technology, Pune on 12 th June 2020	---

6.	Smart Phone Based Automatic Drip Irrigation System	National Conference on Advances in Computer Science Engineering and Technology	organized by KLE's Institute of Technology, Chikkodi during 9th-10th March, 2018	----
7.	Mobile Agents	National Conference on Communication and Computational Techniques	organized by DIT, Dehradun, 10 th -11 th Feb 2006	----

➤ Book Published

Book Chapters:

S. No.	Title of Book	Year	Name of Publisher	ISBN
1	An Overview of Pectoral Muscle Extraction Algorithms Applied to Digital Mammograms” In: Dey N., Bhateja V., Hassanien A. (eds) Medical Imaging in Clinical Applications. Studies in Computational Intelligence,	(2016)	vol 651. Springer , Cham.	https://doi.org/10.1007/978-3-319-33793-7_2
2	Advances in Machine Learning and Deep learning Approaches for Mammographic Breast Density Measurement for Breast Cancer Risk Prediction: An overview”, In: R. S. Mangrulkar, A. Michalas, N. M. Shekokar, M. Narvekar, P. V. Chavan (eds) Design of Intelligent System using Machine Learning and Deep Learning. Abingdon: Routledge.	2021	Taylor & Francis Group's Chapman and Hall/ CRC Press , Pages-19,	eBook ISBN 9781003133681.

➤ **Research Contributions:**

Research Grants: (Details of grants received)

S. No.	Funding Agency	Year	Title of the project	Amount in Rs.
1	Taif University Researchers Supporting Project , Taif University, Taif, Saudi Arabia, under Grant TURSP-2020/36	2020-21	Multi-channel Dense-Net Architecture for Classification of Mammographic Breast Density for Breast Cancer Detection	US \$1300
2.	Karnataka State Council for Science and Technology	2010-11.	Multimodal Interfaces for hearing/visually impaired individuals	Rs. 3000/- . (Completed)

➤ **Research IDs:**

1	Google scholar ID	https://scholar.google.co.in/citations?user=Whk5lwAAAAJ&hl=en
2	Researcher ID	
3	ORCID ID	https://orcid.org/0000-0002-4755-695X

➤ **Reviewer of**

1. **Computer Methods and Programs in Biomedicine**” Publisher: Elsevier ISSN: 0169-2607 **Impact factor: 7.027 CiteScore 10.1**
2. **Computers in Biology and Medicine** Publisher: Elsevier ISSN: 0010-4825 **Impact factor: 6.698 Citescore 9.2**
3. “International journal of imaging systems and technology” Online ISSN:1098-1098 © Wiley Periodicals, LLC.Impact factor:1.925
4. **International** Conference on Innovations in Artificial Intelligence and Machine Learning (ICIAIML)-2022
5. **International Conference** on Innovations in Computer Science, Electronics & Electrical Engineering-2022
6. Research Symposium 2019, 2022 by Walchand College of Engineering, Sangli
7. IEEE Eu-Reka 2020, an initiative of IEEE Pune section for raising the Education-Reka of our country

8. IEEE International Conference on Blockchain and Distributed Systems Security (ICBDS) 2023, in International Institute of Information Technology, Naya Raipur, India.
9. Virtual National Conference "PRECcon 2022" on Recent Trends in Engineering and Technology

➤ **Number of Ph. D. scholars guiding:**

Sr.	Details of Research Scholar	University	Title
1.	Mr. Shivaji Dattatray Pawar Reg. No. 41800386 (2018) Ph.D. defended on 1st March 2022	Lovely Professional University, Phagwara, Jalandhar, Punjab	Design and Development of Novel Algorithm for Mammogram Classification for Breast Cancer Detection.
2.	Mr. Vijaykumar Kummari Reg. No. 41900766 (2019) Course Work completed; Research in Progress; ETP-1 completed.		Detection of Early Stage Diseases and grading in pomegranate fruits using Deep Learning Techniques
3.	Ms. Akanksha Sharma Reg. No. 42000381 (2020) Course Work completed; Research in Progress		Semi-automatic Detection and classification of Land Sliding using Artificial Intelligence Techniques

ONGOING RESEARCH WORK as a Ph.D. Co-Supervisor at VTU Belagavi Karnataka

Appointment order is received. Candidates are not yet allocated.

➤ **Member of Professional Bodies:**

Life Member of ISTE Regn. No. LM-48635

➤ **Achievements**

- **“Best Presentation Award” in the **International** Conference on Innovations in Artificial Intelligence and Machine Learning (ICIAIML) 21-22 August 2022, Bangkok, Thailand.**
- **“Best Presentation Award” in the National Conference INSEC – 2007 by Walchand College of Engineering Sangli (during 17th- 18th August, 2007)**
- **Qualified GATE-2000 and GATE-2016**

➤ **Details of Faculty Development Programs (Workshop/Conference/Training Program)**

S. No.	Title of Program	Organized by (Venue)	Year	Duration
1	A short term two days workshop on “Medical Diagnostics: MR and CT” under TEQIP II	Center of Excellence (S&IP), SGGS IE&T, Nanded	2014	27th-28th September, 2014
2	A short term National workshop on “Medical Imaging”	Dept. of CSE, IIT, Kharagpur	2014	27th to 31st October, 2014,
3	A One Week Short Term Training Program on “Wavelets and its Applications”	Center of Excellence in Signal & Image Processing, SGGS IE&T, Nanded	2014	8th-12th December, 2014
4	A One Week Short Term Training Program on “Probability Statistics and Random Processes”	Center of Excellence (Signal and Image Processing), SGGS IE&T, Nanded	2015	28th Feb-1st March, 2015
5	Two Weeks Short Term Training Program on “Mathematical and Statistical Foundation to Signal and Image Processing”	Center of Excellence (S&IP), SGGS IE&T, Nanded	2015	28th May – 6th June, 2015
6	A three days workshop on “Medical Imaging: Techniques & Image Processing”	IIT, Delhi	2016	25th to 27th March, 2016
7	One week FDP on “Outcome Based Education”	at RIT Sakharale during	2019	4th-8th Nov. 2019
8	Two Days STTP on “Curriculum Design and Effective Assessment under OBE”	ADCET, Ashta	2020	10th-11th August, 2020
9	A one week FDP on “Faculty Readiness for New Tomorrow”	ADCET, Ashta	2020	17th -21st August, 2020
10.	A One-Week online FDP on “Intellectual Property Rights”	E&ICT Academy, IIT Guwahati	2021	25th – 30th October, 2021

EXPERT TALKS DELIVERED

1. **“Digital Image Processing”** at HIT Nidasoshi, Karnataka on **11th November, 2009**.
2. **“Emerging Trends in Information Technology”** at TKIET, Warananagar, (M.S.) on **8th Aug. 2012**.
3. An expert Lecture & hands-on training on **“Interactive Computer Graphics with OpenGL”** at department of CSE, Walchand College of Engineering, Sangli.
4. An expert lecture on **“Writing a Technical Research Article for Peer Reviewed Journals”** in a workshop on **“Research: What, Why and How”** organized by AMGOI, Vathar on **10th March 2018**.
5. An expert lecture and hands on session on **“MATLAB Programming”** in a 5-Days FDP on **“Technical Computing using MATLAB”** under ISTE Chapter during **18th to 22nd June 2018** at AMGOI, **Vathar**.
6. An expert lecture on **“Important Sections of IT Act 2000”** delivered on **16th December, 2021**, in a IET Sponsored Five Days Winter School Program on Cyber Security and Deep Learning during **13th -17th December 2021**, organized by Department of Information Technology, School of Computing Science, Hindustan Institute of technology and science (HITS) (Deemed to be University), Padur, **Chennai**.
7. An expert lecture and hands on session on **“Case studies of Machine Learning”** in a AICTE-ISTE Approved Refresher/Induction Program on **“AI & ML in Electronics”** organized by Shah & Anchor Kutchhi Engineering College, Chembur, **Mumbai** on **10th January, 2022**.

OTHER HONOURARY WORK

1. Event Judge at Poster Presentation in **“Avishkar-2022”** Inter University Research Competition organized by DBATU Lonere at SIT, Ichalkaranji on **10th December 2022**.
2. Chair, Machine Vision Track, **International** Conference on Innovations in Artificial Intelligence and Machine Learning (ICIAIML) August 2022 at Hotel Ambassador, Bangkok, Thailand.
3. Chair, Engineering and Technology Track, Virtual National Conference **“PRECcon 2022”** on Recent Trends in Engineering and Technology, organized during **30-31 March 2022** by Pravara Rural Engineering College, Loni, Pravarnagar.
4. Chair, Project exhibition competition **“PRO-EX 2022”** organized on **30th April, 2022** by Pravara Rural Engineering College, Loni, Pravarnagar.
5. Chair, Session-9: Computing with Computer Vision on **12-02-2022**, International Conference on Computing in Engineering & Technology (**ICCET**) **2022** by DBATU, Lonere.
6. Chair, Machine Learning Techniques Track of National e-Conference on **“Emerging Trends in Artificial Intelligence and Big Data (ETAB-2020)”** organized by the Information technology department, Pune Institute of Computer Technology on **12th June, 2020**.
7. Chair, Deep Learning Track, **IEEE PuneCon 2020** organized by VIT, Pune.
8. Judge of Poster Presentation, **4th Research Symposium on Computing (RSC) 2019** organized during **19-21 December 2019** by Walchand College of Engineering, Sangli.