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| Name: Jyoti Vishnu Joglekar | | E-mail: jyoti.joglekar@somaiya.edu | |
| Contact No: 9594980587 | | | |
| Department/Section: Department of Computer Engineering | | | |
| Institute / School : K J Somaiya School of Engineering | | | |
| DOJ Somaiya: 18/12/2017 | Career Experience: 33 +Yrs | Industry Experience: 3 + Yrs | Teaching Experience: 30 + Yrs |
| Present Academic Designation: Professor (Professor/Associate Professor/Assistant Professor) | | Present Administrative Designation: - | |

| Area of research/specialization and Courses Delivered |
|---|
| Research domain/interests/areas |
| 1. Computer Vision 2. AI 3. ML 4. Data Science |
| Courses Delivered |
| 1. Computer Vision 2. Data Science 3. ML 4. Big Data Analytics |

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| Recognition as a teacher by any University | UG: Yes/No | PG: Yes/No | Ph.D : Yes/No |
| Details of Recognitions:- | | | |

| Education | | | | | |
|------------------|---------------------|--------------------|---|------|-----------------|
| Examination | Name of the Degree | University/Board | Institute/College | Year | CPI/SPI/ %Marks |
| Ph.D | PhD | IIT Bombay, Mumbai | Indian Institute of Technology Bombay | 2015 | - |
| PG | ME Computer Engg. | Mumbai University | Thadomal Shahani College of Engineering | 2004 | 68% |
| UG | BE Electrical Engg. | Shivaji University | Walchand College of Engineering | 1990 | 71% |

| Notable Experience Details | | | | | |
|-----------------------------------|--------------------------|---------------------|-----------------|-----------------|--------------------|
| Sr. No | Name of the organization | Designation | Date of Joining | Date of Leaving | Experience (Years) |
| 1. | SAKEC Chembur | Associate professor | 17-01-2005 | 09-01-2017 | 12 |
| 2. | DJS COE Vile Parle | Professor | 16-01-2017 | 30-11-2017 | 0.9 |
| 3. | KJSCE & KJSSE | Professor | 18-12-2017 | Till date | 8.2 |

| Research Accomplishments and Projects | | | | | |
|--|--|--|---|--|--|
| No of students pursuing Ph.D as on date: 03 | | | No of students completed Ph.D as on date: 0 | | |
| No of students completed PG thesis / Project work as on date: 14 | | | No of students / groups completed UG projects as on date: 40+ | | |
| Publications Total: 51 | Number of Peer review Journal papers: 11 | | Number of Conference papers: 25 | | |
| Details of Publications: | | | | | |

International Journals

1. Jyoti Joglekar, Shirish S. Gedam, B. Krishna Mohan, "Image Matching using SIFT Features and Relaxation Labeling Technique – A Constraint Initializing Method for Dense Stereo Matching", IEEE Transaction, Transaction on Geoscience and Remote Sensing, Vol. 52, Issue 12, 20 Jan. 2014, DOI: 10.1109/TGRS.2013.2291685, (Web of Science)
2. M. Mahato, S. Gedam, J. Joglekar and K. M. Buddhiraju, "Dense Stereo Matching Based on Multi-objective Fitness Function—A Genetic Algorithm Optimization Approach for Stereo Correspondence," in IEEE Transactions on Geoscience and Remote Sensing, vol. 57, no. 6, pp. 3341-3353, June 2019, (Web of Science)
3. Jyoti Joglekar, Shirish S. Gedam, Jan 2012, Area Based Image Matching Methods- A Survey, International Journal in Emerging Trends and Advanced Engineering, Vol. 2 Issue 1. (Scopus)
4. Jyoti Joglekar, Shirish S. Gedam, 'Image Matching With SIFT Features – A Probabilistic Approach, International Archives of the Photogrammetry And Remote Sensing, ISPRS, 2010, (web of science, Scopus)
5. Jyoti Joglekar, Shirish S. Gedam, 'Area Based Stereo Image matching technique using Hausdorff distance and texture analysis', International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, ISPRS, 2011, (Web of science, Scopus)
6. R. H. Bhalerao, S. S. Gedam, Jyoti Joglekar, Scanline Optimization for Tri-Stereo Planetary Images, International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XL-3, ISPRS, 2014, Elsevier Publication, (Web of Science, Scopus)
7. Krupa Popat, Jyoti Joglekar, November 2014, Novel Composite Approach to Reduce Broadcast Storm Problem, International Journal on Recent and Innovation Trends in Computing and Communication, Vol. 2, Issue 11, ISSN: 2321-8169. (Scopus)
8. Shilpa Kalantri, Jyoti Joglekar, 'Comparison of Algorithms for Detecting Firewall Policy Anomalies', International Journal of Advance Computational Engineering and Networking (IJACEN), 2015. 9. (Scopus)
9. Dushyant Bhat, Jyoti Joglekar, Mobile Devices Forensics & Data Security – A Review, International Journal for Scientific Research & Development, Vol. 4, Issue 08, 2016, ISSN 2321-0613. (Scopus)
10. Radha Adinarayanan and Jyoti Joglekar, 'Online Banking Security Issues - A Review', International Journal of Innovation in Engineering Research and Management, ISSN: 2348-4918, Vol. 03, Issue 05, October 2016. (Scopus)
11. Vidyullata Devmane, B. K. Lande, Jyoti Joglekar, Hemant Kothari, 'Achieving Authentication of Remotely Stored Data', International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075 (Online), Volume-9 Issue-3, January 2020, Page No. 882-884, <https://www.ijitee.org/download/volume-9-issue-3/> (UGC approved: journal number 63975)
12. Vidyullata Devmane, B. K. Lande, Hemant Kothari, Jyoti Joglekar, 'Homomorphic Cryptosystems for Data Security in Cloud Storage' International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249-8958 (Online), Volume-9 Issue-2, December, 2022, (Scopus)
13. Devmane, V., Lande, B.K., Joglekar, J. et al. Preserving Data Security in Cloud Environment Using an Adaptive Homomorphic Blockchain Technique. Arab J. Sci. Eng. 47, 10381–10394 (2022). <https://doi.org/10.1007/s13369-021-06347-3> (SCI and Scopus)

National Journals: Nil

Conferences

International Conference Publications

1. Jyoti Joglekar, Shirish S. Gedam, 2012, Optical flow measurement by correlation methods for sensing scene. Structure, Geomatrix' 12, International Conference, IIT Bombay, Mumbai.
2. Jyoti Joglekar, Shirish S. Gedam, 2011, Area Based Stereo Image matching technique using Hausdorff distance and texture analysis, ISPRS WG III/4 International conference, Munich, Germany. (CPCI of Web of Science , Scopus)
3. Jyoti Joglekar, Shirish S. Gedam, 2011, Area based Image Matching Method – A Survey, International Conference on Recent Trends in Information Technology and Computer Science, India. (Scopus)
4. Jyoti Joglekar, Shirish S. Gedam, 2010, Image matching with SIFT Features – A Probabilistic approach, ISPRS WG III/2 International Conference, Paris, France. CPCI of Web of science, Scopus)
5. Raghavendra H. Bhalerao and Shirish S. Gedam and Jyoti Joglekar, 2012 "Fast method for disparity map generation using Surface Geometry" in Remote Sensing and Photogrammetry Society's Annual Conference, London.

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6. R. H. Bhalerao, Shirish S. Gedam, Jyoti Joglekar, A. Almansa, 2013, Lunar Impact Crater Modeling using Trinocular Stereoscopic depth Impainting, IEEE International Conference on Image Information, India.
7. R. H. Bhalerao, S. S. Gedam, Jyoti Joglekar, 2014, Scanline Optimization For Tri-Stereo Planetary Images, ISPRS, International Conference, International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XL-3, 2014, ISPRS Technical Commission III Symposium, 5-7 September 2014, Zurich, Switzerland
8. Krupa Popat, Jyoti Joglekar, 2014, Composite Approach to Reduce Broadcast Storm Problem, International Conference on Engineering Confluence, Equinox, 2014, Terna Engineering College, Nerul, Navi Mumbai.
9. M. H. Khan, Jyoti Joglekar, 2014, A review paper on Cryptographic Hash Functions, International conference on recent trends in computer and electronics engineering, Mumbai.
10. Shilpa Kalantri, Jyoti Joglekar, 2014, System and Information Security by Firewalls – A Survey, International Conference on Engineering Confluence, Multicon, Mumbai
11. Shilpa Kalantri, Jyoti Joglekar, 2015, Comparison of Algorithms for Detecting Firewall Policy Anomalies, International Conference on Electrical, Electronics Computer science and Mathematics physical education and Management (ICEECMPE), Mumbai.
12. Vidyullata Devmane, B. K. Lande, Jyoti Joglekar, 2016, Remote Data Integrity Achieving Schemes in Cloud Storage: A Survey, International Conference on Data Engineering and Communication Technology, Lavasa, Pune.
13. Manimala Mmahato, Shirish Gedam, Jyoti Joglekar, B. Krishna Mohan, 'Regularization Based Dense Stereo Matching for Remotely Sensed Stereo Images', International ASPRS conference, Picora 20, held in November 2017 at USA.
14. Manimala Mmahato, Shirish Gedam, Jyoti Joglekar, 'A Variational Model with Adaptive Regularization Based Dense Stereo Matching For Remotely Sensed Stereo Images', International conference, ASRS, at Delhi, India, held in October 2017.
15. Jyoti Joglekar, Simran Bhutani, Nisha Patel, Pradnya Soman, 'Lightweight Elliptical Curve Cryptography (ECC) for Data Integrity and User Authentication in Smart Transportation IoT system', International conference ICSCN held at, Chennai, India, July 2019
16. Jignasha Sosa, Jyoti Joglekar, 'Smart Home Automation using Fuzzy Logic and Internet of Things Technologies', 4th International Conference on Inventive Computation Technologies [ICICT 2019] held at Coimbatore, India, Aug 2019
17. Jyoti Joglekar Bhagyashree Zodge, 'Knowledge Base Creation for Prediction and Detection of Forest Fire', Proceedings of the, 3rd International Conference on, Sustainable Communication Networks, and Application, 29-30 July 2021
18. Jyoti Saxena, Jyoti Joglekar, Preprocessing of CT Imagery for Detection of Infection of Covid and Tuberculosis, International Conference on Recent Innovations in Computer Science, Engineering and Technology (ICRICSET - 2022) at Delhi, India on 20-21 February 2022 by SciencePlus
19. Harsh Bharat Shah, Jyoti Joglekar, Content Based Document Image Retrieval using Computer Vision and AI Techniques, International Conference on Information and Communication Technology for Intelligent Systems, Ahmedabad , India on 27-28 April 2023 by Springer
20. Darshan Mhapsekar, Jyoti Joglekar, Detection of Water body using Multispectral Imagery for a Geospatial Area, International Conference on Interdisciplinary Academic
21. Research and Innovation (IARI – 24), at Nashik, India on 10th August 2024 by Society For Education (SFE) (Scopus)
22. Kalantre, O., Joglekar, J. (2026). Optimized Bounding Box Fitting Method for Object Detection. In: Fong, S., Dey, N., Joshi, A. (eds) ICT Analysis and Applications. ICT4SD 2025. (scopus)
23. Mrunali Desai, Jyoti Joglekar, 'Feature Extractions for knowledgebase creation from EEG Signal, Useful as Low-Cost Biomarkers for Alzheimer's like Brain Diseases', CML 2025 (scopus)

National Conference Publications

1. Jyoti Joglekar, A. Athawale, H. B. Kekre, 2004, 'Information Hiding Techniques Using Steganography', national Conference on Image Processing, TSEC, Bandra, Mumbai.
2. Jyoti Joglekar, Shirish S. Gedam, 2011, 'Composite Stereo Image Matching Technique With Edge Extraction and Texture Analysis', Geomatrix' 11, National Conference, CSRE, IIT Bombay, Mumbai
3. Jyoti Joglekar, Atharva Gole, Sahil Mankad, Ashish Chavan, 2019, 'Multispectral Satellite Image Classification by Optimization of Intensity Range – A Decision Tree Algorithm Based Approach', 4th ISSE conference INAC-4 held at SAC, ISRO Ahmedabad, India, 26-27 September 2019

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Books/Book Chapters

1. Co-author of the Book titled 'Internet of Things' by Oxford University Press, published in April 2021
2. Book Chapter, J. Sosa, J. Joglekar., 'Smart Home Automation using Fuzzy Logic and Internet of Things Technologies' in Lecture Notes in Network and Systems, vol. 57. Prof. Dr. Janusz Kacprzyk, Ed. Coimbatore: Proceedings by Springer, 2019, pp.
3. Book Chapter: on ECC paper, 'Lecture Notes on Data Engineering and Communications Technologies', ISBN 978-3-030-34514-3 ISBN 978-3-030-34515-0 (eBook), <https://doi.org/10.1007/978-3-030-34515-0>, Springer Nature Switzerland AG 2020
4. Book Chapter: Bhagyashri Zodge, Jyoti Joglekar, 'Knowledge Base Creation for Prediction and Detection of Forest Fire', Sustainable Communication Networks and Application as part of the book series, 'Lecture Notes on data Engineering and Communication Technologies', Electronic ISSN 2367-4520, Print ISSN 2367-4512, Indexed by SCOPUS, INSPEC, EI Compendex.
5. Book Chapter: H. Shah and J. Joglekar, 'Content Based Document Image Retrieval Using Computer Vision and AI Techniques', in eBook titled 'Smart Innovation, Systems and Technologies' ISBN: 978-981-99-3982-4, Print ISBN: 978-981-99-4039-4, <https://www.springer.com/series/8767>, Indexed by SCOPUS, EI Compendex, INSPEC, WTI Frankfurt eG, zbMATH, Japanese Science and Technology Agency (JST), SCImago, DBLP, by Springer, September 2023
6. Book Chapter: Omkar Kalantre, Jyoti Joglekar, 'Optimized Bounding Box Fitting Method for Object Detection', as part of the book series, 'Lecture Notes on data Engineering and Communication Technologies', Electronic ISSN 2367-4520, Print ISSN 2367-4512, Indexed by SCOPUS, INSPEC, EI Compendex.

Patents/Copy Rights

1. Indian Patent granted with patent number: 426697, on 24th March 2023, titled, 'A method and a processing system for fundamental matrix generation to estimate efficiently epipolar geometry', Ref ID/application number: 202121009040, application date: 03 April 2021
2. Indian patent granted on 07/12/2023, with patent number: 478860, as Indian Patent titled, 'System and method to generate optimized flight path for UAV', Ref ID/application number: 202221034673, application date: 17 June 2022
3. Filed copyright (IPR) by Vidyullata Devmane, B. K. Lande, Jyoti Joglekar, Hemant Kothari, for title, 'Design and Development of A Novel Protocol for Remotely Stored Data Security Using Bilinear Pairing of Elliptic Curve points (BPECC)', Reg No.: L98799/2021, application date: 20 Jan 2021
4. Filed Copyright (IPR) by Mrunali Desai, Jyoti Joglekar for title, "Baseline Correction Method for EEG signal using frequency-time domain", Dairy Number: 27323/2024-CO/L, Application date: 30 Aug 2024.

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| No of Research / consultancy / projects completed: 02 <u>Rs:40+ Lakhs</u> | No of Research / consultancy / projects on-going: <u>Rs: 0</u> | No of Research / consultancy / projects on applied as on date: <u>Rs: 50 lakhs</u> |
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Details of Research / consultancy / projects:

Completed

1. Worked on Chandrayan-1 data on a funded project by SAC, ISRO, Ahmedabad, India under the aegis of IITB –ISRO cell a funded project with IITB
2. A Technology development research proposal is written, submitted and presented by me in the duration Nov 2018 to Feb 2019. The Title is, 'Design and development of a Physical Working Prototype to showcase an optimized algorithm and software for image acquisition and processing using Swarm of Autonomous UAVs (Drones)'. Is completed as PI/ Focal person for this TDP research project with NESAC, ISRO for which research fund grant of Rs 1095000/- is received. For this work a patent is granted
3. The research proposal in Dec 2017, titled, 'Development of methods for in-season monitoring of sugarcane crop in Peninsular India using Earth Observations for precision water and nitrogen management', for Indo-Russian fund grant and this proposal received DST-RFBR fund grant in July 2018, Somaiya group received fund grant of Rs 24 Lacs from DST and the Russian partner received same amount grant from RFBR. I played a role of expert adviser for this project

On-going: Nil

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Applied

1. To DRDO under IDEX ADITI scheme in 2024
2. To DRDO under IDEX ADITI scheme in 2024
3. An application for partner/consultancy for BHARAT Gen project with IIT BOMBAY in 2025
4. In discussion with industry/startups for consultancy

IPR/ Copyrights

1. Indian Patent granted with patent number: 426697, on 24th March 2023, titled, 'A method and a processing system for fundamental matrix generation to estimate efficiently epipolar geometry', Ref ID/application number: 202121009040, application date: 03 April 2021
2. Indian patent granted on 07/12/2023, with patent number: 478860, as Indian Patent titled, 'System and method to generate optimized flight path for UAV', Ref ID/application number: 202221034673, application date: 17 June 2022

FDPs/Seminars/Workshops/Training Programs Attended/ Organized/ Delivered

Attended

1. SAR workshop at SAC ISRO Ahmedabad in Nov 2024
2. Attended workshop on HPC at IIT Bombay in 2016
3. Attended NBA workshop of 3 days at KJSCE in 2015
4. Attended the meeting as a member of Mumbai University syllabus setting committee ME Computer Engineering for the subject 'Image Analysis and Interpretation'.

Organized

1. CO PI for the capacity development training program for GIS by NGP-DST with received DST grant of Rs10 Lakh, which is conducted in KJSCE, SVU in June 2024
2. Expert talk of Prof B. K. Mohan organized in KJSCE in JAN 2018 on Image Analysis
3. Organised meeting as a convener for the subject IOT at DJSCOE in 2017
4. Organized STTP of 6 days on Internet of Things in SAKEC, Mumbai in Dec 2017.
5. Organized as a convener a meeting on behalf of Mumbai University for finalizing ME Computer Engineering Syllabus, July 2016.
6. Organized as a convener a meeting for Syllabus Revision 2016, for University of Mumbai for BE Computer Engineering Subjects DSIP and Computer Vision.
7. Organised meeting as a convener for the subject ML at SAKEC in 2015
8. Organized and conducted One Day Workshop on 'Self Assessment Report Criteria' on 7th March 2015 at SAKEC for promoting NBA activities.
9. Organized various CSI-SAKEC Programs from 208 to 2012

Delivered

1. Expert Talk delivered at IIT Ropar in a workshop, titled 'Computer Vision and AI Techniques for Agricultural Applications', in July 2021
2. Expert Guest Lectures delivered in QIPs at CSRE, IIT Bombay in the years 2011, 2012, 2013, 2014.
3. Expert talk at Online QIP by FRCRCE, Bandra on 'Introduction to Deep Learning' in May 2020
4. Expert talk at STTPs in LTCOE, Navi Mumbai and DBIT Kurla in 2018
5. Delivered expert guest lecture on 'Cryptography and Cryptanalysis', at Vivekanand Polytechnic, Chembur, 18th Dec 2014

Notable Key Scholastic Achievements

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| 1. | Fellow membership granted by IETE in 2016 |
| 2. | Indian patent granted. The work is associated with scientists of North East Space Application Centre on 07/12/2023, with patent number: 478860, as Indian Patent titled, 'System and method to generate optimized flight path for UAV', Ref ID/application number: 202221034673, application date: 17 June 2022 |

Notable Positions and Responsibility

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| 1. | <ul style="list-style-type: none"> • Internal Complaint Committee, presiding officer of Somaiya Vidyavihar University from Jan 2022 to Jan 2025. • Research and consultancy committee member of KJSCE. • Women development cell member of KJSCE |
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| | <ul style="list-style-type: none"> • Currently acting as KJSCE, SVU institute coordinator for the IIRS-ISRO Outreach Programme for Distance Learning • Life member of Indian Society of Remote Sensing (ISRS) • Life member of ISTE. • Local Investigation Committee (LIC)member of SAKEC for 5 years • Anti-Harassment Committee member at SAKEC for 3 years • HoD of Computer dept in 2014 as In charge HoD at SAKEC. |
| 2. | <ul style="list-style-type: none"> • Invited as a subject expert for faculty appraisal approval team of MPSTE, NMIMS in Dec 2025 • Invited as a reviewer of research proposal at IIT Kanpur in Nov 2025 • Subject Expert for UGC interview panel at MPSTE NMIMS Vile Parle, NMIMS Shirpur, N MIMS Khargar, TCET Kandivali, DJSCOE Mumbai, SVKM's Bhagubai Engineering from 2016 to 2025 for many invites. • Board of Studies (BoS) at S K Somaiya Science college and at KJSCE at SVU • Board of Studies member at the Department of Computer Engineering, Mukesh Patel school of Technology, NMIMS, Mumbai • Board of Studies member at the Department of Information Technology, Cummins College of Engineering, Pune from 2021 to 2024. • Conferred Distinguished Fellowship by IIT alumni Council in Dec 2020 • Reviewer of international and national research journals of repute such as IEEE Transaction TGRS and, IEEE letters, Springer, IET, ISRS • Prize winner for paper presentation of research work on Classification of Multispectral images, at INAC-4 conference by ISSE and ISRO held at SAC, ISRO, Ahmedabad in September 2019 • An active member of the SIH Innovative Product Drive Ecosystem and has mentored three of the students' winning teams in Smart India Hackathon (SIH) in 2018 and 2019 • Mentored as domain expert to start-ups such as Koteleo, Kodoy • Reviewer of research papers for many International and National Conferences. • Invited as session chair for the International Conference ICCUBA at Pimpri Chinchwad Engineering college Pune in Feb 2018 • Invited as session chair for the International Conference on Engineering Confluence (ICEC), September, 2015 at Terna Engineering College, Nerul, Navi Mumbai. • Presented research papers in reputed, indexed ISPRS International conferences at France in 2010 and at Germany in 2011. • Invited as Session Chair for the International Conference ICAC3'2015, FRCRCE, 1st April 2015, Bandra, Mumbai. • Research proposal expert for reviewing research proposal at NMIMS MPSTM, Vile Parle, July 2016. • Examiner for APS at research centres RGIT, Varsova, Mumbai 2015, Feb and August 2016. • Examiner for APS at research centres Pillai Engineering college, Panvel, Navi Mumbai, Mumbai 2015, Feb and August 2016. • Worked as NBA Coordinator for Comp and IT programmes of SAKEC • Worked as a faculty Coordinator CSI-SAKEC organized various CSI-SAKEC Programs |



Dr Jyoti Joglekar
Signature of Faculty Member

Date: 15 / 12 / 2025