

Dr. Smita Vishal Katkar

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Department of Computer Science
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Education

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|-------------------------------|---|
| Ph.D.(Awarded)2020 | Shivaji University, Kolhapur |
| M.C.A. (Computer Science)2012 | Shivaji University, Kolhapur, Secured First Class |
| B.C.S.(Computer Science)2009 | Shivaji University, Kolhapur, Secured First Class |

Ph.D Topic: Modeling and simulation of energy conversion and storage devices

Indian Patent Filed

1. A Method to Predict Efficiency of Tandem Silicon Solar Cells Using ANN (Patent Application No: **201921053638**)
2. Design of Higher Efficiency Perovskite Solar Cells Using Artificial Neural Network (Patent Application No: **202021002743**)
3. Computational Modeling Methods for Fabrication of Thermistors (Patent Application No: **202021002741**)
4. Artificial Neural Network (ANN) Based Method For Prediction of Various Parameters of Cd(Sse) Solar Cell (Patent Application No: **202021002735**)
5. An Intelligent Method to Predict Properties of Electro chromic Smart Window (Patent Application No: **202021002737**)
6. An Elegant Way of Calculating Charge Capacity Using ANN for Lithium-Ion Batteries (Patent Application No: **202021004254**)
7. ANN Based Smart Calculation Technique for Various Parameters of $\text{Bi}_2(\text{S}_{1-x}\text{Sex})_3$ Solar Cell (Patent Application No: **202021004253**)

Academic Appointments

Total Teaching and Research Experience: 9+ Years

Field of Interests: Soft Computing, Data mining

22 Jul 2023 to Till date	Assistant Professor	Department of computer science Shivaji University, Kolhapur
10 Feb 2023 to 03 Jul 2023	Assistant Professor	Department of computer science Shivaji University, Kolhapur
18 Oct 2022 to 15 Dec 2022	Assistant Professor	Department of computer science Shivaji University, Kolhapur
26 Oct 2021 to 25 sept 2022	Assistant Professor	Department of computer science Shivaji University, Kolhapur
9 Sep 2020 to 30 June 2021	Assistant Professor	Department of computer science Shivaji University, Kolhapur
13 Aug 2019 to 14 May 2020	Assistant Professor	Department of computer science, Shivaji University, Kolhapur
20 July 2018 to 16 May 2019 Science,	Assistant Professor	Department of Computer Shivaji University, Kolhapur.
16 Aug 2017 to 24 May 2018	Assistant Professor	Yashwantrao Chavan School of Rural Development, SUK
Sep 2016 to May 2017	Assistant Professor	Department of Commerce and Management Shivaji University, Kolhapur
July 2015 to May 2016	Assistant Professor	Department of Commerce and Management Shivaji University, Kolhapur
Aug 2014 to May 2015	Assistant Professor	Department of Commerce and Management Shivaji University, Kolhapur

June 2013 to April 2014	Assistant Professor	The New College, Kolhapur
Dec 2012 to April 2013	Assistant Professor	Kamala college, Kolhapur

Administrative Appointments

- ❖ Appointed as Senior supervisor for MCA Exam in Department of commerce and management , Shivaj University, Kolhapur to be held in November 2016 and April 2017.
- ❖ Appointed as External Examiner for “Web Designing” certified course and Paper setter for “c & c++ programming” certified course in Department of Adult Education, Shivaji University, Kolhapur to be held in March 2014.
- ❖ Appointed as External examiner for Project viva MCA-II in Yashwantrao Chavan School of Rural Development, Shivaji University, Kolhapur.2017
- ❖ Appointed as External examiner for Project viva MCA-III in Yashwantrao Chavan School of Rural Development, Shivaji University, Kolhapur.2017
- ❖ Appointed as External examiner for Project viva M.Sc(Tech)-II in Department of Mathematics, Shivaji University, Kolhapur.2018.
- ❖ Appointed as External examiner for Project viva M.Sc(Tech)-II in Department of Mathematics, Shivaji University, Kolhapur.2019
- ❖ Appointed as External examiner for Practical MCA-I in Government Engineering college karad,2019
- ❖ Appointed as External examiner for Practical and Project viva BCA-III in Chatrapati Shahaji Kolhapur,2019
- ❖ Appointed as paper setter in theory for the subject Bridge course MCA(Science)Part II Lateral Entry, Yashwantrao Chavan School of Rural Development, Shivaji University,Kolhapur,2019.
- ❖ Appointed as Internal Examiner for Mini Project-III Examination of MCA(R.I), Yashwantrao Chavan School of Rural Development, Shivaji University, Kolhapur, 2019.

Membership of Professional Bodies

- ❖ Member, Paper Setter for MCA (Commerce) Exam, Shivaji University, Kolhapur.
- ❖ Member, Paper Setter for MCA and M.Sc computer science Exam, Shivaji University, Kolhapur.
- ❖ BoS Member in MCA I Computer Science ,2018.
- ❖ Worked as BOS member for B.Sc –III information Technology Entire 2019.
- ❖ BoS Member in M.Sc II Computer Science, 2019.
- ❖ BoS Member in B.Sc II Animation for 2022-23.
- ❖ BoS Member in M.Sc I Computer Science, 2021.
- ❖ BoS Member in M.Sc II Computer Science, 2019.
- ❖ BoS Member in B.Sc I Entire Computer Science, 2021
- ❖ BoS Member in M.Sc II Computer Science, 2023.
- ❖ BoS Member in BCA II Computer Science, 2023.
- ❖ BoS Member in M.Sc II Computer Science Online Mode, 2023.
- ❖ BoS Member in MCA II Computer Science, 2023.

Awards

- ❖ Stood 3rd in Avishkar competition (Intra University Research Project Competition) held in Shivaji University 2016-17.
- ❖ Stood 3rd in Avishkar competition (Intra University Research Project Competition) held in Shivaji University 2019-20.
- ❖ Inspirational Women Award 2020 for Young Scientist,
On the occasion of International Award Conference on Empowering Girls for Brighter Tomorrow 2020 by SNTD Women's University, Mumbai.

Workshops Attended

1. **Advanced Data Mining Techniques** (ADMT-2013) organized by Department of computer science 17 and 18 Dec 2013.
2. **Faculty Development program** (FDP) organized by Department of Education Shivaji University Kolhapur in 2014.

3. A workshop on “**Outcome Based Modular Syllabus**” organized by, Internal Quality Assurance Cell (IQAC) Under Lead College Scheme, Shivaji University, Kolhapur, 6th August, 2014.
4. Two day National workshop on "**Big Data Analytics with Hadoop**" organized by Department of Computer Science, Shivaji University, Kolhapur in association with C-DAC, Pune on 5th & 6th April 2017.
5. A Faculty Training Programme on “**GST**” organized by Center for Skill and Entrepreneurship Development, Department of Commerce and Management, Shivaji University, Kolhapur, in association with ICA Edu. Skills Pvt. Ltd., on March 18th, 2017.
6. UGC-CPE Sponsored” **One Week Short Term Training Program (STTP) on Machine Learning**”, Chatrapati Shahu Institute of Business Education and Research (CSIBER), Kolhapur, and 27th Dec to 31st Dec 2017.
7. A Workshop on “**Intellectual Property Rights**” Organized by IPR cell, Shivaji University, Kolhapur, 10th March 2018.
8. Participated in Seven Days Faculty Development Program on “**Cyber Security**” Security sponsored by MHRD under the scheme Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) at National Resource Centre in Cyber Security”; Data Sciences, Department of Computer Science, Shivaji University, Kolhapur during 26/11/2018/ to 02/12/2018.
9. One day Workshop on “Activities of Students Development Cell” held on 18th February, 2020 at Shivaji University, Kolhapur.
10. Participated in one week **FDP on R-Language for analytics and Data Science** organized at Sinhgad College of Engineering, Pune in association with spoken tutorial project, IIT Bombay during 27/04/2020 to 02/05/2020.
11. Webinar entitled “**Fuzzy Logic for Fundamental Research**” organized by Department of Electronics, Physics and Computer Science, Dattajirao Kadam Arts, Science and Commerce College, Ichalkaranji, held on Friday, 22nd January, 2021.
12. One Day National Workshops (Online) on Virtual Laboratory: Importance and Applications for Computer Science, conducted by SRTM University's Vlab Nodal Centre, 15th January 2021.
13. IET sponsored five days online Faculty Development Program on Internet of Things organized by School of Computer Engineering and Technology, Faculty of Engineering and Technology, MIT World Peace University, Pune from 21st to 25th June, 2021.

Journal Publications

- 1) T.D.Dongale,S.V.Katkar,K.V.Khot,K.V.More,S.D.Delekar,P.N.Bhosale, „Simulation of randomly textured tandem silicon solar cells using quadratic complex rational function approach along with artificial neural network, Journal of Nanoengineering and Nanomanufacturing,Vol.6(2),pp. 103-108, 2016.
- 2) S.V.Katkar, T.D.Dongale, R.K.Kamat, Calculation of Electrical parameters of Solar cell using java based framework, Journal of Science and Technology, Vol 5 July-Dec 2017.
- 3) Priyanka Shinde, S.V.Katkar, R.K.Kamat, K.S.Oza Big Data predictive Model: Towards digital health Vol 5 July-Dec 2017.
- 4) S.V.Katkar, R. K. Kamat, K.G.Kharade, S.K.Kharade, “Inclusion of .NET framework for Calculating electrical parameters of solar cell”, “International Journal of Research in electronics and Computer Engineering (IJRECE)”, ISSN: 2393-9028 (PRINT) | ISSN: 2348-2281 (Online), Vol. 7 Issue 1 (January- March 2019), PP 1167-1169
- 5) S.V.Katkar, R.K.Kamat, K.G.Kharade, S.K.Kharade, R.S.Kamath, “Simulation of Cd(SSe) Solar Cell Using Artificial Neural Network”, “International Journal of Advanced Science and Technology”, ISSN: 2005-4238 (Print), 2207-6360 (Online) Vol. 29, No.02, January 2020, pp. 2583-2591 (Scopus)
- 6) K.G.Kharade, S.K.Kharade, S.V.Katkar, “Cyber Security-A Method of Generic Authentication of Data with IP Security” in “International Journal of Information Systems”, ISSN (print) 2229-5429 Volume IX, Issue II, January-May 2019, Impact Factor 5.406 PP 63-66.
- 7) K.G.Kharade, R. K. Kamat, S.K.Kharade, S.V.Katkar, “Automation of Paper Setting Process to Improve Effectiveness of the Examination System of the University” International Journal of Emerging Technologies and Innovative Research” (www.jetir.org), ISSN: 2349-5162, Vol.6, Issue 2, page no.490-493, February-2019
- 8) S.K.Kharade, K.G. Kharade, R.K.Kamat, S.V.Katkar, “Designing an Online Learning System with Data Mining Techniques”, “Our Heritage”, ISSN: 0474-9030, Vol 68 (27) February 2020, PP 63-68.
- 9) Priyanka P. Shinde , Varsha P. Desai , Smita V. Katkar, Kavita S. Oza ,R.K. Kamat, Chetan M. Thakar “Big data analytics for mask prominence in COVID pandemic”, Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2021.11.620>.

- 10) Suvarna M Patil, Ayesha R Mujawar, K.G.Kharade, S.K.Kharade, S.V.Katkar, R.K.Kamat, Drowsy Driver Detection Using Opencv And Raspberry Pi3, Webology, ISSN: 1735-188X Volume 19, Issue 2, 2022, PP 6003-6010(Scopus)

Book Chapter Published

1. S. V. Katkar, K. G. Kharade, S. K. Kharade, R. K. Kamat, “An Intelligent Way of Modeling and Simulation of WO_3 for Supercapacitor” Recent Studies in Mathematics and Computer Science Vol.3, Chapter 11, Editor- Dr. Narayan Thapa, Print ISBN: 978-93-90149-52-0, eBook ISBN: 978-93-90149-51-3, PP 109-117, Publication Date: 15/08/2020, DOI: <https://doi.org/10.9734/bpi/rsmcs/v3>
2. S. K. Kharade, K. G. Kharade, S. V. Katkar, R. K. Kamat, “Simulation of Dye Synthesized Solar Cell Using Artificial Neural Network: Brief Overview” Emerging Trends in Engineering Research and Technology Vol. 1, Chapter 6, Editor- Dr. Anuj Kumar Goel, Print ISBN: 978-93-89816-50-1, eBook ISBN: 978-93-89816-51-8, P.P. 73-86, Publication Date: 02/03/2020, DOI: <https://doi.org/10.9734/bpi/etert/v1>.
3. K. G. Kharade, S. K. Kharade, S. V. Katkar, R. K. Kamat, “Performance Improvement Using Covering Index to Reduce Row Identifier Lookups” Recent Advances in Science and Technology Research Vol.3, Chapter 11, Editor- Dr. Mohd Rafatullah, Print ISBN: 978-93-90149-41-4, eBook ISBN: 978-93-90149-40-7, PP 114-119, Publication Date: 25/07/2020, DOI: <https://doi.org/10.9734/bpi/rastr/v3>
4. K. G. Kharade, S. K. Kharade, S.V.Katkar, R. K. Kamat, “Selection of Small Index to Reduce the Number of Pages for Improving Efficiency” Recent Studies in Mathematics and Computer Science Vol.4, Chapter 5, Editor- Dr. Luigi Giacomo Rodino, Print ISBN: 978-93-90206-11-7, eBook ISBN: 978-93-90206-12-4, P.P. 66-71, Publication Date: 15/08/2020, DOI: <https://doi.org/10.9734/bpi/rsmcs/v4>
5. S. V. Katkar, S. K. Kharade, K. G. Kharade, R. K. Kamat, “Integration of Technology for Advancement In Supply Chain Management”, New Paradigms in Business Management Practices Vol 3 Chapter 15, Editor- Sruthi S, ISBN: 979-8-579-38928-2, PP 116-123, Publisher:Amazon, Publication date: 31/12/2020, kindle link: https://www.amazon.com/dp/B08RP1MX5P/ref=sr_1_1?dchild=1&keywords=e+w+paradigms+in+business+Management+practices&qid=1609345501&sr=8-1

6. K. G. Kharade , S. V. Katkar ,S. K. Kharade ,M. S. Sawant , R. K. Kamat “Review of Home Automation Strategies Analysis using Sensors ”Progression in Science, Technology and Smart Computing Chapter 34, ISBN – 978-81-948061-2-7,PP-246-251.Publisher: Prarup Publications,2021.
7. K. G. Kharade , S. V. Katkar, S. K. Kharade , M. S. Sawant, R. K. Kamat” Influence of Content Delivery Network during Content Delivery”, Progression in Science, Technology and Smart Computing Chapter 45, ISBN – 978-81-948061-2-7,pp-334-328, Publisher: Prarup Publications,2021.
8. S. V. Katkar,K. G. Kharade, N. S. Patil, V. R. Sonawane,S. K. Kharade and R. K. Kamat ”Predictive Modeling of Tandem Silicon Solar Cell for Calculating Efficiency”, Springer Nature Switzerland AG 2021, ICACDS 2021, CCIS 1441, pp. 183–194, 2021, https://doi.org/10.1007/978-3-030-88244-0_18.
9. K. G. Kharade, S. V. Katkar, N. S. Patil, V. R. Sonawane, S. K. Kharade, T. S. Pawar and R. K. Kamat ”Text Summarization of an Article Extracted from Wikipedia Using NLTK Library” Springer Nature Switzerland AG 2021, ICACDS 2021, CCIS 1441, pp. 195–207, 2021., https://doi.org/10.1007/978-3-030-88244-0_19.
10. Kharade, K. G., Kharade, S. K., Sonawane, V. R., Bhamre, S. S., Katkar, S. V., & Kamat, R. K. (2021). IoT Based Security Alerts for the Safety of Industrial Area. In Advances in Parallel Computing (pp. 98–103). IOS Press.
11. Katkar S.V., Kharade K. G., Kharade S. K., Muppalaneni N.B., Vengatesan K.,Kamat R.K. (2022) Implementation of ANN for Examining the ElectricalParameters of Cadmium Sulfide Solar Cell. In: Satyanarayana C., Gao XZ., TingCY., Muppalaneni N.B. (eds) Machine Learning and Internet of Things for Societal Issues, Chapter 12. Advanced Technologies and Societal Change.Springer, Singapore. https://doi.org/10.1007/978-981-16-5090-1_12 PP 137-146.
12. K. G. Kharade, S. V. Katkar, S. K. Kharade, V.S.Kumbhar Potential Use of Blockchain in Supply Chain Management, December 2023,In book: Futuristic Trends in information Techonology Publisher: Sankalp Publication.
13. S.V.Katkar, S.S.Gaikwad ,Role of Artificial Intelligence in Cyber Security, December 2023,In book: Futuristic Trends in information Techonology Publisher: Sankalp Publication.
14. S.V.Katkar, S.S.Gaikwad Impact of 5G Network on IoT, December 2023,In book: Futuristic Trends in information Techonology Publisher: Sankalp Publication

15. S.V.Katkar, S.S.Gaikwad PRIVACY AND SECURITY ISSUE IN BIGDATA, December 2023, In book: Futuristic Trends in information Technology Publisher: Sankalp Publication
16. S.V.Katkar, S.S.Gaikwad An Overview Internet of Things(IoT), December 2023, In book: Futuristic Trends in information Technology Publisher: Sankalp Publication
17. S.V.Katkar, Mr N S Jamdar, Mr R J Patil, Jaykumar Bhosale Analysis of Blockchain Architecture and Consensus, December 2023, In book: Futuristic Trends in information Technology Publisher: Sankalp Publication
18. S.V.Katkar, Mr N S Jamdar, Mr R J Patil, Jaykumar Bhosale Analysis of Blockchain Architecture and Consensus, December 2023, In book: Futuristic Trends in information Technology Publisher: Sankalp Publication
19. S.V.Katkar, Mr S B Salunkhe Mr P R Shinde,, Jaykumar Bhosale , Study Of Big Data Analytics, December 2023, In book: Futuristic Trends in information Technology Publisher: Sankalp Publication
20. S.V.Katkar, Mr S B Salunkhe Mr P R Shinde,, Jaykumar Bhosale , Study Of Big Data Analytics, December 2023, In book: Futuristic Trends in information Technology Publisher: Sankalp Publication
21. S.V.Katkar, P T Kadate, Shraddha Kharade, K. G. Kharade ,R.K.Kamat Recommendation System for Crop Varieties Based on Machine Learning.2023.

Conference Publications

- 1) Mrs.Smita V. Katkar, Mr. K.G.Kharade K-means clustering Algorithm: Approach towards increasing export of commodities in India National Conference on latest Advances, Trends in Electronic Science & Technology, on 14-15 February 2015 at Department of Computer science, Shivaji University, Kolhapur.
- 2) Mrs. Smita V. Katkar ,Miss.N.U.Khamkar, Warana 30-km marketing a smart way of emarketing International conference on Demographic dividend and industrial development with inclusive approach: A Road ahead, at Department of Commerce and Management, Shivaji University, Kolhapur March 2-3, 2015.
- 3) Mrs.Smita Vishal Katkar, Prof.Dr.R.K.Kamat, Mr.Kabir G. Kharade ,Role of WhatsApp for Farmers welfare National conference on Rural Livelihood models for sustainable

development, at Yashwantrao Chavan School of Rural Development ,Shivaji university Kolhapur 14,15 Sep 2017.

- 4) Mrs.Smita Vishal Katkar, Miss Trupti S. Satpute, Prof.(Dr.)R.K.Kamat Role of Augmented Reality for Enhanced learner Experience in Higher education International Interdisciplinary conference on Curriculum Reforms in Higher Education: Global Scenario, at Department of Education, Electronics, Computer Science and Internal Quality Assurance Cell, Shivaji University, Kolhapur Feb 4-6, 2018.
- 5) Mrs. Smita Vishal Katkar, Miss. Trupti S. Satpute, Role of Dairy Co-operatives in Women Empowerment, National seminar on: Strengthening of Cooperative sector in India, at Yashwantrao Chavan School of Rural Development, Shivaji University Kolhapur, 16th and 17th March 2018.
- 6) S.V.Katkar, S.K.Kharade, K.G.Kharade, R.K.Kamat, Study of Cloud Computing And Its Architecture, One day International Conference on Recent Trends in Science and Technology organized by Willingdon College, Sangli, held on 29/06/2022
- 7) S.K.Kharade, S.V.Katkar, K.G.Kharade,V.S.Kumbhar, R.K.Kamat, The Role of Computer-Assisted Language Learning in Language Learning, One day International Conference on Recent Trends in Science and Technology oregonized by Willingdon College, Sangli, held on 29/06/2022

Guest Lecture

- 1) Delivered lecture on “**Software Project Management**” in Yashwantrao Chavan School of Rural Development, Shivaji University, Kolhapur in UGC scheme of Remedial Coaching.
- 2) Delivered lecture on “**MS-Word basics**” in Department of Political science, Shivaji University, Kolhapur for Ph.D bridge course April 2017.
- 3) Invited as a Guest Speaker on “**Carrier opportunities in Animation**” in Department of computer science, Shivraj arts Commerce and Science College Gadhinglaj.
- 4) Invited as a Guest Speaker on “**Challenges in Cyber Security**” in Department of computer science, Shivraj arts Commerce and Science College Gadhinglaj.
- 5) Delivered lecture on “**MS-Word basics**” in Department of Language, Shivaji University, Kolhapur for M.Phil/Ph.D course work Dec 2021.

Events Organized

- 1) Worked as Member, Organizing Committee Member of First International Conference of Commerce and Management (ICCM) on “on March 2015 Organized by Department of Commerce and Management, Shivaji University, Kolhapur
- 2) Worked as Member, Organizing Committee Member of Second International Conference of Commerce and Management (ICCM) on “**Development Through Transformation :Prospects for Inclusive Growth**” on 30th and 31st January 2017 Organized by Department of Commerce and Management, Shivaji University, Kolhapur
- 3) Worked as Member, Organizing Committee Member of “**Commerce .Com**” Inter College Competition event on 7th March, 2017, 2016 and 2015.
- 4) Worked as Member, Organizing Committee Member of “**MAN .Com**” event on 8th March,2017
- 5) Worked as Member, Organizing committee Member Of National conference on **Rural Livelihood models for sustainable development**, at Yashwantrao Chavan School of Rural Development ,Shivaji university Kolhapur 14,15 Sep 2017
- 6) Worked as Member, Organizing committee Member Of National seminar on: **Strengthening of Cooperative sector in India**, at Yashwantrao Chavan School of Rural Development, Shivaji university Kolhapur, 16th and 17th March 2018.
- 7) Worked as Member, Organizing committee Member of “**Rural Tech-Fest2018**” event on 8th Feb, 2018.
- 8) Worked as Member, Organizing Committee Member of One day Seminar on “**Successful models of social harmony through women representatives in western Maharashtra**” on 1st March 2018, organized by Yashwantrao Chavan School of Rural Development, Shivaji University, and Kolhapur.
- 9) Worked as Member, Organizing Committee Member of one day National Seminar on” **Emerging Trends in Ideal Villages in 21st Century** ” on 23rd March 2018, organized by Yashwantrao Chavan School of Rural Development, Shivaji University, Kolhapur.
- 10) Organizing Committee Member of one day National Seminar on” **Emerging Trends in Ideal Villages in 21st Century** ” on 23rd March 2018, organized by Yashwantrao Chavan School of Rural Development, Shivaji University, Kolhapur.
- 11) Worked as Member, in Seven Days Faculty Development Program on “**Cyber Security**” Security sponsored by MHRD under the scheme Pandit Madan Mohan Malaviya National

Mission on Teachers and Teaching (PMMMNTT) at National Resource Centre in Cyber Security & Data Sciences, Department of Computer Science, Shivaji University, Kolhapur, 2018-19.

- 12) Worked as Member of **Avishkar competition** on January 2022, organized by Department of Computer Science, Shivaji University, Kolhapur.
- 13) Worked as a Organizing Committee member in 13th annual India-Japan Science and Technology Conclave: International Conference on Frontier Areas of Science and Technology (ICFAST2023).
- 14) Worked as a organizing committee member in Anveshan 2023 ,Student Research Convention (West Zone)organized by Association of Indian Universities(AIU),New Delhi and hosted by Department of Computer Science, Shivaji University ,Kolhapur 28th-29th December 2023.