

Personal Profile

Dr. Sapna Prabhu

In-Charge Principal, Fr. CRCE

PhD (Technology) in Electronics Engineering

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Areas of interest: Computer Architecture, Embedded Systems, Biomedical Electronics, Internet of Things, High Performance Computing

Professional Summary

A visionary academic leader with 33 years of teaching experience in Engineering Education, Institutional Development, Accreditation processes (NAAC, NBA) and Academic administration. She has held various key positions in the Institution like Head of Department, Dean (Quality Control), etc. A strong academician, she remains committed to building an innovative, inclusive, and future-ready learning ecosystem.

Educational details:

BE (Electronics)	Specialization- Advanced Microprocessors, Digital Design Mumbai University/ Fr. CRCE Graduated in 1992
ME(Electronics)	Specialization- Bio-medical Instrumentation Mumbai University/ VJTI 2000
PhD (Electronics)	Specialization- Computer Architecture Mumbai University /VJTI 2017

Professional Experience:

- In-Charge Principal: October 2025 onwards
- Head of Department (Electronics and Computer Science): From June 2019- October 2025
- Dean (Quality Control) /IQAC Co-ordinator: July 2024 -October 2025
- Co-ordinator of Unfair Means Committee:Present
- Admission Co-ordinator : 2024
- Dean (Academics) : June 2016- May 2019
- Program Co-ordinator (Department of Electronics for NBA): January 2016-May 2019
- Chairperson (Alumni Association, Fr. CRCE): Year 1995- 2024
- Co-ordinator (Women 's Development Cell, Fr. CRCE):2013-2024
- Secretary Fr. Agnel ISTE Chapter: 2008-2014
- Cultural In -Charge: 2009-2010
- Debate In -Charge: 2015-16

AWARDS: Professor Y. K. Bhushan Most Influential Professors award at World Education Congress 2023

PATENTS: Title- Helmet for better airflow and slots for Electronic Hardware integration using lattice structures

Books Published: "Mathematical modelling of the Human Respiratory Control system: A compartmental approach with dynamic gas exchange mechanisms to simulate responses under various biological conditions", Jayen Modi, Sapna Prabhu, Deepak Bhoir, Lambert Academic Publishing

PUBLICATIONS:

1. Sapna Prabhu, Rohin Daruwala, "Shared-resource management in multi-core systems using LV Competition model ", Int. J. High Performance Computing and Networking, Vol. 9, No. 3, 2016, Pgs .206-217.
2. Prabhu. S, Daruwala, R., "Measuring Performance Degradation in Multi-core Processors due to Shared Resources", International Journal of Engineering Research and Applications (IJERA), Issue 1, March 2013 .
3. Prabhu. S, Daruwala, R., "Methods for Cache Contention analysis in Multi-core processors :A Survey ", International Conference and Workshop on Emerging Trends in Technology , ICWET 2012, TCET , Mumbai, 24-25 February, 2012,ISBN No. 973-93-80864-47, Pgs. 63-67.
4. Prabhu. S, Daruwala, R., "Performance Variability of SPECCPU 2006 programs in Multi-core systems", India Conference (INDICON), 2013 Annual IEEE, IITB, 13-15 December 2013, ISBN No. 978-1-4799-2274-1, Pgs. 1-6.
5. Prabhu S, Daruwala, R, Workload Characterization for Shared-Resource Management in Multi-core systems", Proceedings of International Conference in Computing, Communications and Informatics ,ICACCI 2014, September 24-27, 2014, ISBN No. 978-1-4799-3078-4, Pgs.607-612.
6. Prabhu. S, Daruwala, R.D, "Improving the scalability of shared-cache multi-core systems", India Conference (INDICON),2014 Annual IEEE,YASHADA,12-14 December,2014, ISBN No. 978-1-4799-5362-2, Pgs.1-6.
7. Kailash Nair, Manoah Jeyaraj, Dr. Sapna Prabhu and Noel James, " Smart User Authentication using Keystroke Dynamics", International Journal of Advanced and Innovative Research.
8. Aparna Vishwanath, Ramesh Vulavala, Sapna U. Prabhu, "Task Scheduling in Homogeneous Multiprocessor Multi-Network Systems using Evolutionary Techniques", International Journal of Engineering Research & Technology, Vol. 3 - Issue 10 (October - 2014), e-ISSN: 2278-0181, Pgs.632-636.
9. Parshvi Shah, Sapna Prabhu, "Hybrid Learning-Based Branch Predictor ", International Journal of Engineering Research & Technology, Vol. 3 - Issue 8 (August - 2014), e- ISSN: 2278- 0181, Pgs.1135-1140.
10. Sachin Shinde, Sapna Prabhu, "Labview-Based Digital CRO for Electronic Measurement Techniques", International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622, Vol. 3, Issue 1, January -February 2013, pp.693-698.

11. Nibha Desai , Deepak V. Bhoir, Sapna Prabhu, "Simulation and Implementation of Electronic Cochlea", International Conference in Advances in Computing, Communication and Control, Volume 361 of the series Communications in Computer and Information Science ,Pgs. 558-569.
12. Mitali R. Ambekar, Sapna Prabhu," A Novel Algorithm to Obtain Respiratory Rate from the PPG Signal ", International Journal of Computer Applications (0975 – 8887) Volume 126 – No.15,September 2015, Pgs. 9-12.
13. Sangeeta P, D.V.Bhoir, Sapna Prabhu, “ Leakage Power Reduction using Multi - Threshold Voltage CMOS Technique”, International Journal of Scientific and Engineering Research (IJSER), Volume 4, Issue10, October 2013
14. A Chaudhari, S Prabhu, R Pinto, "Frequency estimator to improve short range accuracy in FMCW Radar", Advances in Computing, Communications and Informatics (ICACCI), 10-13 Aug. 2015,Pgs. 640-644.
15. Meghna Punjabi, Sapna Prabhu, “An ANN- based detection of obstructive sleep apnea from simultaneous ECG and SpO2 recordings”, International Conference on ISMAC in Computational Vision and Bio-Engineering (ISMAC - CVB 2018) and Springer - Lecture Notes in Computational Vision and Biomechanics, May 2018
16. Nagdeote S. and Prabhu S., “Hybrid UNet Architecture based on Residual Learning of Fundus Images for Retinal Vessel Segmentation”, in Journal of Physics Conference Series, 2021, vol. 2070,doi:10.1088/1742-6596/2070/1/012104.
17. Sumanto Kar, Scriptu J Rajan, Sebastian Dmello and Sapna Prabhu. Improving the Performance in Sentiment Analysis. International Journal of Computer Applications 183(7):19-24, June 2021.
18. A. Xavier, V. R. Basker and S. Prabhu, "Unknown Terrain modelling using 3D mapping," *2021 5th International Conference on Computing Methodologies and Communication (ICCMC)*, 2021, pp. 761-765, doi: 10.1109/ICCMC51019.2021.9418346.
19. F. Mendonca, R. Manihar, A. Pal and S. U. Prabhu, "Intelligent Cardiovascular Disease Risk Estimation Prediction System," *2019 International Conference on Advances in Computing, Communication and Control (ICAC3)*, 2019, pp. 1-6, doi: 10.1109/ICAC347590.2019.9036738.
20. J. A. Baikerikar, S. K. Surve and S. U. Prabhu, "Comparison of Load Balancing Algorithms in a Grid," *2010 International Conference on Data Storage and Data Engineering*, 2010, pp. 20- 23, doi: 10.1109/DSDE.2010.13.
21. Baikerikar, J., Surve, S., & Prabhu, S. (2011, January), Consensus based dynamic load balancing for a network of heterogeneous workstations. In *International Conference on Advances in Computing, Communication and Control* (pp. 116-124). Springer, Berlin, Heidelberg.
22. Baikerikar, J., Surve, S., & Prabhu, S.," Graph Partitioning for a Network of Heterogeneous Workstations ", 2010 International Conference on Advances in Communication, Network, and Computing, pp.240-244, DOI 10.1109/CNC.2010.64.

23. S. Nagdeote and S. Prabhu, "A Review on Computer-assisted Techniques to Analyze Histopathological Images of the Breast," *2023 International Conference on Power, Instrumentation, Energy and Control (PIECON)*, Aligarh, India, 2023, pp. 1-6, doi: 10.1109/PIECON56912.2023.10085880.
24. Nagdeote, S., Prabhu, S. A model to perform prediction based on feature extraction of histopathological images of the breast. *Multimed Tools Appl* 83, 18119–18146 (2024).<https://doi.org/10.1007/s11042-023-1624>(<https://doi.org/10.1007/s11042-023-16245-5>)
25. Nagdeote, Sushma, Sapna Prabhu, and Jayashri Chaudhari. "Enhanced Power Law Transformation for Histopathology Images of Breast Cancer." *International Journal of Image and Graphics* (2024): 2550028.
26. Sushma Nagdeote and Sapna Prabhu, "Enhanced U-Net Framework for Nuclei Segmentation in Triple Negative Breast Cancer," *2024 Second International Conference on Intelligent Cyber Physical Systems and Internet of Things (ICoICI)*, Coimbatore, India, 2024, pp. 1321-1326, doi: 10.1109/ICoICI62503.2024.10696356
27. Sushma Nagdeote, Sapna Prabhu, Jayashri Chaudhari, Enhanced Computer-aided Digital Imaging Technique for Predictions in Breast Cancer, *Recent Advances in Electrical & Electronic Engineering*; Volume 18, Issue 3, Year 2025, e23520965282930.DOI: 10.2174/0123520965282930240417113057

TRAINING PROGRAMS CONDUCTED:

1. Co-ordinator of Faculty Development Program (2 days) on "Neural Networks", 2011-2012
2. Co-ordinator of Faculty Development Program (1 day) on "ARM MBED platform", 2013-14

PARTICIPATION IN TRAINING PROGRAMS :

1. "Object -Oriented Modelling and Design with UML", 19th November 2001- 30th November 2001, ITW, SNTD, ISTE-STTP (Two weeks)
2. "Networking: Theory to Practice", June 9-20, 2003 , Fr. CRCE (Bandra), ISTE-STTP (Two weeks)
3. "Advanced Microcontrollers and Embedded Systems ", January 19-24, 2004, Vidyavardhini's College of Engineering and Technology, Vasai, ISTE-STTP (One week)
4. "VLSI and Embedded Systems", June 12-16, 2006, Fr. CRCE (Bandra), ISTE-STTP (One week)
5. "Introduction to Project Management", January 9-13, 2012, Fr. CRCE, ISTE-STTP (One week)
6. "Research Methodology" conducted by IITB at VJTI (Mumbai), ISTE-STTP (One week)
7. "FPGA Design" at IIT (Bombay) on September 30-October 1, 2003 in association with CG-CoreEL Programmable Solutions Pvt. Ltd.
8. National Conference on Bio-Medical Engineering (NCBME-2006) on March 28-29, 2006 held at Sardar Patel Institute of Technology (SPIT)
9. Workshop on "Orientation on Embedded systems" conducted by the ISTE Chapter of Don Bosco Institute of Technology on October 4, 2005

10. Seminar on "Recent developments in Bio-Medical Instrumentation" on August 31-September 1, 2007 Fr. CRCE(Bandra)

11. One-day Seminar on "VLSI" dated April 19, 2002 at Fr. CRCE

12. Seminar on "Research Career: Success and Survival tips" at Fr. CRCE

INTERACTION WITH OUTSIDE WORLD:

1. Program Co-ordinator for Electronics and Computer Science Branch (University of Mumbai)[2019-2023]
2. Member of UG syllabus Committee [Mumbai University]
3. Member of PG Syllabus Committee [Mumbai University]
4. BOS member in Electronics and Computer Engineering at Goa University
5. Member of Department Advisory Board (DAB) at Shah and Anchor Kutchi Engineering College (SAKEC)
6. Academic Auditor for EXTC Department (D J Sanghvi College of Engineering): 2016- 17
7. Reviewed paper for Elsevier Journal "Microprocessors and Microsystems"
8. Reviewer for SPRINGER NATURE Conferences and books
9. Resource person at SAKEC in one-week STTP on "Internet-of-Things and its applications): 2016-17
10. Resource person at Student training program at Xavier Institute of Engineering
11. Session Chair in several Conferences

PROFESSIONAL AFFILIATIONS : ISTE Life Member (LM 24031)