

CURRICULAM VIATE

Dr. Sudhir Gangadharrao Akojwar
Principal(I/c)
L.S.P. Government College of
Engineering, Ratnagiri.



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Brief –

- **Principal(I/c), Loknete Shamrao Peje, Government College of Engineering, Ratnagiri.**
- **Associate Professor**, Instrumentation Engineering, Department of Mechatronics, L. S. P. **Government College of Engineering, Ratnagiri.**
- **Heartfulness Trainer from last 13+ Years, conducted more than 700 Meditation Sessions in about more than 20 institutions.**
- **Principal, GCOE, Chandrapur from 1st Nov 2020 to 28 Jun 2023.**
- **Associate Professor** (Instrumentation Engg.), at Government College of engineering, Chandrapur from 13th July 2016 to 28 Jun 2023.
- **Principal at DBNCOET, Yavatmal, 10th May 2010 to 30th Sep 2012(2+ Yrs.)**
- Worked as Professor (Electronics) at RCERT, Chandrapur.
- **36+ Years of teaching experience.**
- **77 research publications** at National and International conferences and journals. Fundamental Academician, researcher and accepted as guiding leader by fellow colleagues. Soft-spoken, Honest disciplinary academician.
- Vast subject base in field of Electrical, Electronics, Instrumentation, Computer science, Information Technology.
- Liking – spiritual, education, human self-development. Heartfulness Practitioner from last 25 years, Heartfulness Trainer from last 10 years.
- Ph.D Guide at **SGB Amaravati University, RTM Nagpur University & Godawana University, Gadchiroli. 7 candidates are awarded Ph.D. degree.**
- **Ph.D Guide in Electronics and Allied Subjects at Dr. Babasaheb Ambedkar Technological University, Lonere**
- Chairman Board of studies in Electronics & Instrumentation Engineering, Godawana University, Gadchiroli from Aug 2013 till Jun 2023
- **Member of the Academic Council Gondwana Univeristy, Gadchiroli. 2017 till 2023.**

EXPERIENCE:

Principal(I/c), Loknete Shamrao Peje, Government College of Engineering, Ratnagiri.

Associate Professor, Instrumentation Engineering, Department of Mechatronic, Government College of Engineering, Ratnagiri, from 29th June till Date.

Principal (I/c), Government College of Engineering, Chnadraput from 1st Nov 2020 to 28 Jun 2023.

Associate Professor (Instrumentation Engg.), at Government College of engineering, Chandrapur from 13th July 2016 till 28 June 2023.

Professor and Head, Department of Electronics Engineering from 1st sep 2012, Earlier Principal at Dr. BNCOET, Yavatmal for 2 & 1/2yr., *Initially at RCERT as Professor for 3 Months, 12 years as Assistant Professor, 7 years as Lecture. (33+ years teaching)*

Worked as **Principal, at Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatamal**, from 20th May 2010 till 31st Aug 2012. Earlier worked as Professor in the Department of Electronics Engineering, Rajiv Gandhi College of Engineering Research & Technology, Chandrapur, from 15th March 2010 – 19th May 2010, as Assistant professor from 23rd August 1997 and as Lecturer from 17th August 1990.

Awards Received –

1. Paper titled “Neural Networks for Wireless Sensor Networks” at IMAPS India National conference 2005 at IIT, Bombay, is **awarded best paper of the conference.**
2. ***Best Teacher’s Award for the session conferred by Gondwana University, on 4th Oct 2017.***



**2016-17
Gadchiroli**

Elected member of First Academic Council of Gondwana University, Gadchiroli. Jan 2017 to Aug 2023

Chairman of Board of Studies in Instrumentation Engineering, Electronics Engineering at Gondwana University, Gadchiroli from 2013 till June 2023.

Organized FOUR National conferences.

Area of Specialization: Wireless Sensor Networks, Embedded systems, Microcontroller based system design.

Subjects taught: Advance Microprocessor and Microcontroller, Microprocessor and Interfacing, Embedded system, Neural Networks and Fuzzy logic.

Work Experience : Teaching 35+ Years				
Sr. No.	Worked at	Position	From	To
01	Rajiv Gandhi College of Engineering Research and Technology, Chandrapur	1. Lecturer 2. Lecturer Senior Scale 3. Lecturer Selection grade 4. Assistant Professor 5. Professor	1 /07/ 1991 01/07/1996 01/07/2001 01/07/1997 15/03/2010	30/06/1996 30/06/2001 14/03/2010 14/03/2010 19/05/2010
02	Dr Bhausaheb Nandurkar College of Engineering & Technology, Yavatmal	Principal	20 May 2010	31 Aug 2012
03	Rajiv Gandhi College of Engineering Research and Technology, Chandrapur	Professor and Head of Department, Electronics Engineering	1st sep 2012	12th July 2016
04	Government College of Engineering, Chandrapur	Associate Professor Deptt. of Instrumentation Engg	13th July 2016	Till 28th June 2023
05	Government College of Engineering, Ratnagiri	Associate Professor Instrumentation Engg, Deptt. of Mechtronics Engg.	29th June 2023	Till Today

EDUCATIONAL QUALIFICATION:

- **Ph.D.** (Visvesvaraya National Institute of Technology, Nagpur). Thesis Titled “**Improvement in Lifetime of Wireless Sensor Networks using Classification Techniques and Perfect Difference Set Network**”, under the guidance of Prof. R.M.Patrikar, Professor and Head, Deptt. of Electronics and Computer Science Engineering, VNIT, Nagpur.
- **M.Tech** (Electronics Instrumentation)
National Institute of Technology, Warangal.
(Formerly R.E.C., Warangal,) 1994 76.47 % Distinction
- **B.E.** (Instrumentation)
S.G.G.S.Govt.College of Engg. & Tech. Nanded. 1990 75.45 % Distinction
- **Diploma** in Electrical Engg.
Govt. Polytechnic College, Yeotmal, 1987 73.45 % First Class

PROJECT WORK:

1. Microprocessor Based Pyrometric Radiation Scanner (Final Year B.E. Project)
2. PC and on card - "Interrupt Driven ADC card" (M.Tech. Mini Project)
3. M.Tech Dissertation on
"Software Implementation of Microcontroller Based Gear Controller for Battle Tank using Microcontroller 80C51FA"
Implemented at Electronics Corporation of India Ltd.(ECIL), Hyderabad, India.

GUIDE / MENTOR:

For post graduate course "M.S. in software system" of BITS Pillani, India, for the session 1995-97.

Publication Statistics/ Papers Published	
Patents Published	07
No. of Ph.D. Scholars awarded degree.	07
No. of Ph.D Scholar submitted Thesis	00
No. of Ph.D. Scholars working	00
AICTE MODROB Grant. 2013-14 (Rs.5L)	01
2018-19 (Rs.12L)	01
AICTE Travel Grant 2006-07	01
Conducted AICTE-ISTE STTP (Rs. 2L)	01
AICTE grant for SPDP (Rs. 16L)	01
International Journals.	35
National Journals	00
International Conference	22
National conferences	16
BOOK Chapters	04
Total Publications	77
National Conferences/ Tech. Events Organized	05
Expert Lectures delivered	22
Conferences, Workshops, STTP attended	32

Books Published	02
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Dr. Sudhir Akojwar

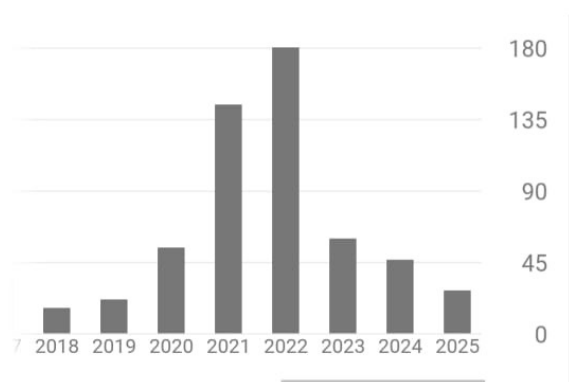
Associate Professor Instrumentation Engineering
Government College of Engg, Ratnagiri
Verified email at gcoec.ac.in - [Homepage](#)

Wireless Sensor Networks Embedded System

ARTICLES CITED BY CO-AUTHORS

All Since 2021

Citations	697	459
h-index	16	12
i10-index	19	12



SUMMER SCHOOL & REFRESHER COURSES ATTENDED :

1. Twelve weeks course on "Microprocessor Based System Design", at Centre for Electronics Design & Technology, Govt. of India. 1st April to 21st June 1991

2. ISTE-GSFC programme on "Advance process control techniques", at Gujarat State Fertiliser Company, Baroda, India (One Week) 7th to 12th Oct. 1996
3. Science & Engg. Research Council's School on "Reliability, Availability & Maintainability Engg.", at India Institute of Technology, Delhi, India (Two Weeks) 14th to 25th April 1997
4. AICTE - ISTE STTP on "High Speed Networking" at Regional Engg. College, Warangal. (Two Week) 4th to 15th Oct. 1999
4. AICTE - ISTE STTP on "Developing COM / DCOM, Active x components using VB6.0". at Dr. B.A. Tech. University, Lonere, (Two Weeks) 26th Nov. to 8th Dec. 2001
5. ISTE-STTP on "Role of Industries in Performance Improvement of Technical Teachers", Rajiv Gandhi College of Engineering, Research & Technology, Chandrapur. (Two Week) from 23rd April to 3rd May 2003.
6. TEQIP-II Sponsored - STTP on 3D Printing and additive Manufacturing: The 3rd Industrial Revolution, 26-30 September 2016, Government College of Engineering, Chandrapur.
7. MCEP, Indore. Management Capacity Enhancement Program, 23-29 Aug 2016, organized by IIM, Indore.
8. MCEP: Top Management Safety Leadership Program, 17-21 Oct 2016, Portblair.
9. TEQIP-II Sponsored - STTP on RF and Microwave Communication, Fundamental, design and Application, Two Weeks, 04-17, May 16, Deptt of E & TC, Government College of Engineering, Chandrapur.
10. Basic Sensor Technology, 2-3 March 2017, GCOE, Chandrapur.
11. STP: **Foundation Training Program for Class-I officers of Higher & Technical Education Department**, Government of Maharashtra, 8th November to 19th December 2017, at Yashwantarao Chavan Academy of Development Administration, Pune.
12. Foundation Program in **ICT for Education**, conducted by Indian Institute of Technology Bombay from August 3, to September 7, 2017.
13. Pedagogy for Online and **Blended Teaching-Learning Process**, conducted by Indian Institute of Technology Bombay from September 14 to 8 October, 2017.
14. Organized and Participated in one week STTP on "**Digital Skills for Professionals**" sponsored by **ISTE-AICTE**, during 3rd – 8th Dec 2018 at Government College of Engineering, Chandrapur as Coordinator.
15. One week Faculty Development Program on "**NBA outcome**", during 10-14 Dec 2019, at Government College of Engineering, Chandrapur. Approved by DTE Mumbai.

16. One week Faculty Development Program, during 03-07 February 2020 on “**Industry 4.0 – Opportunities & Challenges**” at Government College of Engineering, Chandrapur, Approved by DTE Mumbai, DTE letter no. DTE/17/Tashisa/one week TP/2019/311 dated 20/09/2019.
17. AICTE-ISTE approved Orientation/Refresher program on **Environmental Challenges: Process and Pulp Industry**” held during 16.03.2021 to 22.03.2021 organized by Government College of Engineering, Chandrapur, Maharashtra.
18. One week Faculty Development Program, during 08-12 February 2022 on “**Research Tools for Advanced Instrumentation and Control System**”, organized by Department of Instrumentation Engineering, Government College of Engineering, Chandrapur. Approved by DTE Mumbai.
19. One week FDP on “**Ethics and Values in Higher Education**”, during 13-06-22 to 17-06-22 at Asia Plateau, Panchagani, Organised by Maharashtra state Faculty Development Academy, Pune, in collaboration with Initiatives of Change-India.
20. Successfully completed 5 days FDP on “**Ancient Indian Technology and Science**” 18-22 Dec 2023, organized by MSFDA Pune and Deccan College Pune, Certificate No. 1020406019.
21. Introduction to **Embedded Systems and Robotics**, 4-5 July 2024, **IIT Bombay**.
22. **NEP2020 ORIENTATION & SENSITIZATION PROGRAMME** organized by Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) Organized by UGC-Malaviya Mission Teacher Training Centre (MMTTC), Panjab University, Chandigarh, during 06.02.2025 to 18.02.2025 (Ref. No.: 4019to4083/180225)
23. One week FDP on “**Inculcating Universal Human Values in Technical Education**” organized by (AICTE) in online mode during 24th June to 28th June 2024. (F.No AICTE/FDP-SI/ Online Workshop/229/224094).
24. Successfully completed 3 days FDP on “**Ancient Indian Technology and Science**” 18-22 Dec 2023, organized by MSFDA Pune and Deccan College Pune, Certificate No. 1020406019.
25. Successfully completed Navonmesh : **Faculty orientation Workshop on NEP-2020**, 23-25 Sep 2025 at Dr. Khatri Mahavidyalay Chandrapur, organized by MSFDA, Pune and Gondawana University, Gadchiroli.
26. Successfully completed One-week **International Faculty development Program on Generative AI and Large Language Models (LLM)** organized by iBase Electrosoft LLP in association with International Community of Artificial IntelligenceUK, GenAinstein in collaboration with School of computing MIT Art, Design & Technology, Pune held from 9th Nov to 15th Nov 2025.

CONFERENCES & WORKSHOPS ATTENDED:

1. 25th Annual Conference of India Society for Technical Education at Vishveshwaraya Regional College of Engg., Nagpur, India during Dec. 29th to 31st 1995.
2. Two days workshop on "Reprogramming of Computer Education for Engineering colleges & Polytechnics" at Center for Advance Computing (C-DAC), Pune, India, during October 10th and 11th 1996.

3. National workshop on "Neuro-Fuzzy controllers" at Electronics Research & Development Corporation, Trivendrum, India, during Nov. 29th to 1st Dec. 1996.
4. First Annual Convention of Maharashtra-Gao section of ISTE at Walchand College of Engineering, Sangali, India, during Nov. 29th to 1st Dec. 1996.
5. Annual Technical Convention (ACT'98) of Institution of Electronics and Telecommunication Engineers at IETE Centre, Osmania University Campus, Hyderabad, held during 26th and 27th Sept. 1998.
6. One day National Workshop on "Wireless Sensor networks" on **29th Dec 2005**, organized by C-Dac Hyderabad.
7. Workshop on "Research Methodology in Engineering and Technology" on 15-16 Nov 2008, organized by RCERT, Chandrapur.
8. One Day workshop on "curriculum development for Electronics/Electronics & Telecommunication/ Electronics and communication Engineering" at S.B.Jain Institute of Technology, Management and Research, Nagpur, on 5th sep 2009.
9. Workshop on "Syllabus revision of electronics Engineering" at Julelal Institute of Technology, Nagpur, on 8th Dec 2009.
10. National program for Placement officers, Deans and Principals of Engineering Colleges, "Transformation of Students into Industry – Suitable work force: Enhancement in Employability and beyond (TRANSEE), 25-26 Nov 2011, IIT Madras Research Park, Chennai.
11. Two-Days works shop on "Shaping of S & T Resource Centre (SRTC) at Gondawana University, Gadchiroli, Jan 18-19 2013.
12. Work Shop on National Program on Technology Enhanced Learning at IIT Madras, on 20th Sep 2013.
13. Coordinator for zonal round of ROBO GALAXY 2013-14, a national level robotics championship held on 4th & 5th OCT 2013 at RCERT, Chandrapur, organized by UV Softs Technologies Pvt. Ltd.

Publications:

1. "Mutual expectation between Industry and Institution" at First Annual Convention of Maharashtra-Gao Section of ISTE, at Walachand college of Engineering, Sangali, 1995.
2. Digital Speed Measurement Technique using Microcontroller 80C51FA, Sudhir G. Akojwar, Nitin Bidikar, V.Vasudeva Rao, International conference on Computer Applications in Electrical Engineering at Roorkee University, Roorkee, India, during September 8th to 11th 1997.

National Conference Papers –

1. Sudhir G. Akojwar, R.M.Patrikar, **Neural networks for Wireless Sensor Networks**, IMAPS India National Conference on Microelectronics and VLSI (IINC 2005), Mumbai, Dec 19-21, 2005, **IIT Powai, (Awarded The Best First Paper of the conference)**
2. Nischal S. Puri, P.Kulkarni and **S. Akojwar**, “**Dynamically Adjusted Flooding Scheme for Vehicular Ad-Hoc Networks**”, National Conference on Emerging Trends in Electronics Engineering and Computing (E³C 2010), 9-10 Feb 2010, J D College of Engineering , Nagpur.
3. C.Satyanarayana, **Sudhir Akojwar**, ”A Survey of Localisation Algorithms in Wireless sensor Networks and Possible Future Developments”, National Conference on Recent Trends in Engineering Sciences 2010, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Oct 11-12, 2010.
4. S.D. Borkar, M.V.Gaikwad, **S.G.Akojwar**, ”Mobile Agent Based Wireless sensor Networks”, National Conference on Recent Trends in Engineering Sciences 2010, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Oct 11-12, 2010.
5. K.G.Deshpande, M.V. Gaikwad, **S.G.Akojwar**, “Routing Techniques in Wireless sensor Networks”, National Conference on Recent Trends in Engineering Sciences 2010, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Oct 11-12, 2010.
6. S.J.Joshi, M.V. Gaikwad, **S.G.Akojwar**, ”Energy Aware Routing for Wireless sensor Networks”, National Conference on Recent Trends in Engineering Sciences 2010, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Oct 11-12, 2010.
7. Sunil R. Gupta, **Sudhir.G.Akojwar**, Network Topology for Wireless sensor Networks using Perfect Difference Set”, National Conference on Recent Trends in Engineering Sciences 2010, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Oct 11-12, 2010.
8. S.Y. Kanawade , **S.G. Akojwar**, ” A Low Power Wireless Sensor Network For Healthcare Applications”, National conference on Biomedical Electronics Engineering and Bioinformatics, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Jan 10-11, 2011.
9. Sunil R Gupta, **Sudhir Akojwar**, ”Developments and Challenges in Wireless Biomedical Sensor Network (WBSN)”, National conference on Biomedical Electronics Engineering and

Bioinformatics, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Jan 10-11, 2011.

- 10.C. Satyanarayana, **Sudhir Akojwar**, Wireless Intelligent Sensors in Health Care, National conference on Biomedical Electronics Engineering and Bioinformatics, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Jan 10-11, 2011.
- 11.M.K.Gajaghathe, **Sudhir G. Akojwar**, "Comparative Study of Renewable Energy Sources", National conference on "The Renewable Energy Sources – a Plausible solution to Looming Energy crisis", **Sponsored by Ministry of New and Renewable Energy**, Govt. of India and organized by Shrinathji Institute of Technology and Engineering, Nathdwara, Rajashtan, 25-26 June 2011.
- 12.C. Satyanarayana, **Sudhir Akojwar**, Rajesh Pande, U. Appalaraju, Maximising the life time of Wireless Sensors Networks: A survey and a possible indegenious solution to further enhance the lifetime of WSNs, National conference on Information Technology and Computer Engineering, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Jan 20-21, 2012.
- 13.S.Y.Kanwade, **S.G. Akojwar**, Energy Efficient Protocols for Wireless Ad Hoc Networks, National conference on Information Technology and Computer Engineering, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Jan 20-21, 2012.
- 14.H.M. Baradkar, **S.G.Akojwar**, Implementation of Cyclostationary Feature Detection Method for Spectrum Sensing in Cognitive Radio Based Embedded Wireless Sensor Network Node, National Conference on Wireless Communication & Networking, WCN-13, Sept 7, 2013. Organised by Department of EXTC ENG. St. V.P. College of Engineering, Nagpur.

International Conference Papers –

- 15.**Sudhir G. Akojwar**, R.M.Patrikar, **Real Time Classifier For Industrial Wireless Sensor Network Using Neural Networks with Wavelet Preprocessors**, *IEEE* International Conference on Industrial Technology (ICIT 2006), Mumbai, DEC 15-17 2006. page(s) 512-517. (Peer Reviewed)
- 16.**Sudhir G. Akojwar**, R.M.Patrikar, **Classification techniques for sensor data and clustering architecture for wireless sensor networks**, IAENG International conference on communication systems and applications (ICCSA'07), HONG KONG, 21-23 MARCH, 2007. IMECS07 page(s) 1246-1251. (Peer-reviewed)
- 17.**Sudhir G. Akojwar**, R.M.Patrikar, **Neural Networks based Real Time Classifier for Wireless Sensor Networks and Framework for VLSI Implementation**, 2007 *IEEE*

International Symposium on Industrial Electronics, [ISIE 2007] June 4-7 2007, Vigo, Spain, page(s) 1381-1386. (Peer-reviewed)

18. **Sudhir G. Akojwar** and Rajendra. M. Patrikar, **Classification Techniques with Cooperative Routing for Industrial Wireless Sensor Networks**, International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 07- Online conference) December 3 - 12, 2007.

Proceeding book ISBN 978-1-4020-8740-0, page(s) 503-508. (Peer-reviewed)

19. **Sudhir G. Akojwar** R.B.Deshmukh, Rajendra. M. Patrikar, **Multiprocessor Architecture For Wireless Sensor Networks**, The First International Workshop on Sensor Networks (SN 2008) [ICCCN 2008, August 4-7, 2008, Virgin Islands, USA](#) . [accepted not registered]. (Peer-reviewed)

20. Rajendra. M. Patrikar and **Sudhir G. Akojwar**, **Neural Network Based Classification Techniques For Wireless Sensor Network with Cooperative Routing**, 12th WSEAS International Conference on COMMUNICATIONS, Heraklion, Greece, July 23-25, 2008, page(s) 433-438. (Peer-reviewed)

www.wseas.us/e-library/conferences/2008/crete/communications/66-com.pdf

21. **Sudhir G. Akojwar** and Rajendra. M. Patrikar, **Perfect Difference Set – Networks for Wireless Sensor Networks**, 4th *IEEE* International Conference on Communications and Sensor Networks, IIIT Allahabad, INDIA, WCSN 2008 Dec 27-29, 2008. pp57-62. (Peer-reviewed)

22. Sachin R. Jain, **Sudhir G. Akojwar**, Nileshsingh V. Thakur, **“Intelligent Node Scheduling of Sensor Nodes in Wireless Sensor Networks”**, *SENNET-09* : International Conference on Sensors & Related Networks, VIT University Vellore, India. Dec 08-10, 2009, pp.548-553. Proceeding Vol-II, ISBN no – 978 – 81 – 8424 – 542 – 4. (Peer-reviewed)

23. Anand.D.G.Donald, **Sudhir G. Akojwar**, **“Network models for road traffic”**, Second International conference on biosensors & nanotechnology, organized by Department of Computer Science & Engineering, Raghu Engineering college ,Vishakhapatnam, 20th-21st January 2010. (Peer-reviewed)

24. Anand.D.G.Donald, **Sudhir G. Akojwar**, **“Modeling of vehicular networks “**, International Conference on Emerging Trends in Computer Science & Engineering, Organized by Department of Computer Science and Engineering, V R Siddhartha Engineering College, Vijayawada. 12th -13st February 2010. (Peer-reviewed)

25. Mohammed Akram Syed, **S.G. Akojwar**, U.B.Vaidya **“Low Power Measurement Using Temperature Sensor”**, International Conference on Science, Engineering and Spirituality, 2010,

Organised by S.E.S. College of engineering, Navalnagar, Dhule, April 1st -2nd 2010. (Peer-reviewed)

26. *H.M. Baradkar, S.G.Akojwar, Implementation of Energy Detection Method for Spectrum Sensing in Cognitive Radio Based Embedded Wireless Sensor Network Node*, IEEE International Conference on Electronic Systems, Signal Processing and Computing Technologies (ICESC-2014) from 9-11 January 2014 in association with University of Massachusetts Lowell, USA, University of the District of Columbia, Washington, DC, USA and American Society for Engineering Education. (Peer-reviewed)
27. Alka Sawalikar, **S. G. Akojwar**, Power Optimization of Wireless Sensor Networks using Encryption and Compression Technique, IEEE International Conference on Electronic Systems, Signal Processing and Computing Technologies (ICESC-2014) from 9-11 January 2014 in association with University of Massachusetts Lowell, USA, University of the District of Columbia, Washington, DC, USA and American Society for Engineering Education. (Peer-reviewed)
28. Pankaj M.Pandit, **Sudhir G. Akojwar**, Salim A. Chavan, “Dynamic and Competitive Skeletonization for Recognition of Decorative Characters”, IEEE International Conference on Electronic Systems, Signal Processing and Computing Technologies (ICESC 2014), 9-11 January 2014 in Nagpur, Maharashtra, India. (Peer-reviewed)
29. **Sudhir Akojwar**, Pravin Kshirsagar, Vijetalaxmi Pai “Feature Extraction of EEG Signals using Wavelet and Principal Component analysis”, National Conference On Research Trends In Electronics, Computer Science & Information Technology And Doctoral Research Meet, Feb 21st & 22nd ,2014. (Peer-reviewed)
30. Pravin Kshirsagar, **Sudhir Akojwar**, “Novel Approach for Classification and Prediction of Non Linear Chaotic Databases”, International IEEE Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT) – 2016. (Peer-reviewed)
31. Pravin Kshirsagar, **Sudhir Akojwar**, “Prediction of Neurological Disorders using PSO with GRNN”, IEEE International Conference on Communication Networks, DOI10.1109/ICCN.2015.13 (Peer-reviewed)
32. Pravin Kshirsagar, **Sudhir Akojwar**, “Classification and Prediction of Epilepsy using FFBPNN with PSO”, IEEE International Conference on Communication Networks, DOI10.1109/ICCN.2015.13 (Peer-reviewed)
33. Manjusha Mangrulakar, **Sudhir G Akojwar**, “A Simple and Efficient Solar Energy Harvesting for Wireless Sensor Node” in 2016 Second International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN) <http://ieeexplore.ieee.org/document/7813638/?reload=true> (Peer-reviewed)

34. Manjusha Mangrulakar, **Sudhir G Akojwar** ,“Review on Green Energy Harvesting for Wireless Sensor Network “ in IEEE Sponsored 3rd International Conference on Electronics and Communication Systems (ICECS 2016) on 25th and 26th February, 2016. (Peer-reviewed)
35. Manjusha Mangrulakar, **Sudhir G Akojwar** ,“A Piezoelectric Power Source for Energy Harvesting Employed in Wireless Sensor Network “ in IEEE Sponsored 3rd International Conference on Innovation in Information, Embedded and Communication Systems (ICIIECS’ 16) on 17th and 18th March, 2016. (Peer-reviewed)
36. Harish Rajurkar, **Sudhir G Akojwar**,. “Bandwidth Enhancement of Microstrip Patch Antenna for Wireless Sensor Network”, Proceedings of the 2nd International Conference on Inventive Computation Technologies (ICICT 2017),IEEE Xplore Compliant - Part Number:CFP17K52-ART, ISBN:978-1-5090-6697-1. (Peer-reviewed)

International Journals -

37. Sudhir G. Akojwar and Rajendra. M. Patrikar, “**Improving Life Time of Wireless Sensor Networks Using Neural Network Based Classification Techniques With Cooperative Routing**”, International Journal of Communications, issue 1 vol -2 2008 pp 75-86. (Peer-reviewed)
<http://www.naun.org/journals/communications/>.
38. Sachin Jain , **S.G.Akojwar**, N.V.Thakur, Strategic Intelligent Node Deployment in View of Optimal Scheduling for sensor network, “**International journal of computer Science and Applications** , Vol. 3, No.2, July –August 2010”, ISSN:0974-1003. (Peer-reviewed)
39. Mohammed Akram Syed, **S.G. Akojwar**,U.B.Vaidya “Low Power Measurement Using Temperature Sensor”, **International Journal of Emerging Technology and Applications in Engineering, Technology and Sciences (IJ-ETA-ETS)**, ISSN:0974-3588 April 2010. (Peer-reviewed)
40. Pankaj Manohar Pandit, **Sudhir Gangadharrao Akojwar**,”Performance evaluation of object recognition Using skeletal shock graph: challenges and Future prospects” **International Journal of Advances in Engineering & Technology**, March 2012. IJAET ISSN: 2231-1963, Vol. 3, Issue 1, pp. 418-426, March 2012.
(Peer-reviewed)
41. Salim A. Chavan, **Sudhir G. Akojwar**, Gradual Transition Detection Algorithms in Video Segmentation: A Survey, International Journal of Scientific & Engineering Research Volume 4, Issue 2, February-2013 1,ISSN 2229-5518,IJSER

42. Pankaj Manohar Pandit, Dr. Sudhir Gangadharrao Akojwar, “Pixel by pixel skeletonization and pruning using Group-wise Medial Axis Transform” International Journal of Advances in Engineering & Technology(IJAET), ISSN: 2231-1963 ,Vol. 6 , Issue 3, PP 1332-1339 July 2013. (Peer-reviewed)
43. H.M. Baradkar, **S.G.Akojwar**, Embedded cognitive radio sensor network Node: A Review, International Journal of Engineering Science and Technology (IJEST), Vol. 5 No.05S May 2013. (Peer-reviewed)
44. Alka Sawalikar, **S.G.Akojwar**, Security Level Enhancement In Noisy Environment, International Journal of Engineering Science and Technology (IJEST), Vol. 5 No.05S May 2013. IJSET----- ISSN : 2277-1581. (Peer-reviewed)
45. Pravin Kshirsagar, **S.G.Akojwar**, Detection of Neurological Disorders Using Soft Computing Technique, *International Journal of Advanced Research in Electronics and Communication Engineering (IJARECE)*, Volume 4, Issue 7, July 2015, ISSN: 2278 – 909X. (Peer-reviewed)
46. Pravin Kshirsagar, **Dr. Sudhir G. Akojwar**, Hybrid Model for Classification and Detection of Neurological Disorders, *International Journal of Advanced Research in Computer and Communication Engineering*, Vol. 4, Issue 7, July 2015, IJARCCCE DOI 10.17148/ IJARCCCE. 2015, ISSN (Print) 2319-5940.\
47. **Dr. Sudhir G. Akojwar** et.al. “An overview research on prediction of chaotic signal using optimize neural network’s Transaction on Electrical and Electronics Engineering (ITSI- TEEE)ITSI Transaction on Electrical and Electronics Engineering (ITSI- TEEE)ISSN (Print)- 2320-8945, Volume 3, Issue 4, 2015.
48. Pravin Kshirsagar, Dr. Sudhir Akojwar, “Performance Optimization of Generalized Regression Neural Network using Particle Swarm Intelligence”, Int. Journal of Artificial Intelligence and Soft Computing.
49. Pravin Kshirsagar, Dr. Sudhir Akojwar, “Classification & Detection of Neurological Disorders using ICA & AR as Feature Extractor”, International Journal Series in Engineering Science (IJSES), Volume 1, Issue 1, 2015. **(SCI Journal)**
50. Pravin Kshirsagar, Dr. Sudhir Akojwar, “Chaotic Time Series Prediction using correlation Dimension and Adaptive Neuro-Fuzzy Inference System International Journal of Engineering Research and General Science Volume 3, Issue 5, September-October, 2015 ISSN 2091-2730. (Peer-reviewed)

51. Pravin Kshirsagar, Dr. Sudhir Akojwar, "Hybrid Model for Classification and Detection of Neurological Disorders", International Journal of Advanced Research in Computer and Communication Engineering Vol. 4, Issue 7, July 2015. (Peer-reviewed)
52. Pravin Kshirsagar, Dr. Sudhir Akojwar, "Detection of Neurological Disorders Using Soft Computing Technique", International Journal of Advanced Research in Electronics and Communication Engineering (IJARECE) Volume 4, Issue 7, July 2015. **(Peer-reviewed)**
53. Miss. Priyanka K. Kharalkar, Dr. Sudhir Akojwar, Simulation & Performance Evaluation of Optimal LEACH Subject to other Protocols in Wireless Sensor Network, International Journal of Engineering and Applied Sciences (IJEAS) ISSN: 2394-3661, Volume-2, Issue-6, June 2015, pp95-98. (Peer-reviewed)
54. Harish Rajurkar, **Sudhir Akojwar**, "On the parameter consideration & analysis of meander line antenna for wireless sensor network, Int. Journal of engineering and technology, 7(2.13), 2018, pg. no. 201-204, **SCOPUS**
55. Harish Rajurkar, **Sudhir .Akojwar**, "On the parametric analysis of bio inspired printed monopole antenna for wireless sensor network in agriculture, Springer book series of Lecture notes in electrical engineering.
56. Harish Rajurkar, Sudhir Akojwar, Design of bio-influenced printed monopole antenna with enhanced bandwidth for wireless sensor network, Int. J. Systems, Control and Communications, Inderscience 2020. **(SCOPUS)**
57. Harish Rajurkar, Sudhir Akojwar, Performance Enhancement of a Squashed Meander Antenna for Wireless Sensor Network Applications Operating in ISM Band, International Journal of Advanced Science and Technology, Vol. 28, No. 16, (2019), pp. 572-579 **(SCOPUS/ELSEVIER)**
58. Harish Rajurkar, Sudhir Akojwar, Bandwidth Augmentation of Microstrip Patch Antenna in Wireless Sensor Framework, International Conference on Intelligent Sustainable Systems (ICISS 2019), IEEE Xplore Part Number: CFP19M19-ART; ISBN: 978-1-5386-7799-5 **(Peer-reviewed)**
59. Harish Rajurkar, Sudhir Akojwar, On the Parametric Analysis of Bio Inspired Printed Monopole Antenna for Wireless Sensor Network in Agriculture, Springer Nature Switzerland AG 2019, J. Hemanth et al. (Eds.): ICICI 2018, LNDECT 26, pp. 587–594, 2019. **(SPRINGER BOOK CHAPTER)**

60. Harish Rajurkar, Sudhir Akojwar, On the Parameters consideration and analysis of menderline antenna for wireless sensor networks, International Journal of Engineering and Technology, (2017) ,Vol 217,2.23(SCOPUS)
61. Harish Rajurkar, Sudhir Akojwar, Wireless Sensor Network Operating with Directive Antenna - A survey ,Int. Journal of Advance research, National Conference On Research Trends In Electronics, Computer Science and Information Technology And Doctoral Research Meet, Feb 21st and 22nd, 2015 **(Peer-reviewed)**
62. Alka Sawlikar, S.G.Akojwar (2013), “Security Level Enhancement in Noisy Environment”, International Journal of Scientific Engineering and Technology, ISSN : 2277-1581, pp.1044-1048. **(Peer-reviewed)**
63. Alka Sawlikar, S.G.Akojwar (2015), “Wireless Network Data Transfer Energy Optimization Algorithm”, International Journal of Advance Research In Science And Engineering ,UGC Approved Journal, Refereed journal, , ISSN-2319 8354, pp.412-418. **(Peer-reviewed)**
64. Alka Sawlikar, S.G.Akojwar (2013), “Analysis of Different Cryptographic and Encryption Techniques using Message Authentication Code (MAC) in Wireless Sensor Networks”, International Journal of Engineering Science Invention UGC Approved Journal, Serial Num:2573, Refereed Journal, ISSN : 2319 – 6726, pp.9-13. **(Peer-reviewed)**
65. Alka Sawlikar, S.G.Akojwar (2014), “Power Optimization of Wireless Sensor Networks Using Encryption and Compression Techniques”, IEEE xplore Digital Library ,International Conference published in Electronic System, Signal Processing and Computer Technique(ICESC) IEEE xplore, pp.222-227. **(Peer-reviewed)**
66. Alka Sawlikar, S.G.Akojwar (2016), “Mathematical Analysis of Novel Compression Algorithm used in OFDM for Security”, IEEE,Jaipur, International Conference on Advances in Computing, Communications and Informatics (ICACCI),IEEE xplore , pp.1689-1693. **(Peer-reviewed)**
67. Alka Sawlikar, S.G. Akojwar (2016),”Parametric Evaluation of Different Cryptographic Techniques for Enhancement of Energy Efficiency in Wireless Communication Network”, Springer Book Chapter; “Intelligent Techniques in Signal Processing for Multimedia Security” ,ISBN-978-3-319-447896, pp.177-197. **(Peer-reviewed)**
68. Alka Sawlikar, S. G. Akojwar, (2016) “Efficient energy saving cryptographic techniques with software solution in wireless network” IGI Journal, International Journal of Synthetic Emotions (IJSE) , pp.78-96. **(Peer-reviewed)**
69. Alka Sawlikar, S.G. Akojwar (2017) “Pseudorandom Key Image Encryption and Compression Technique”, International Journal of Electronics, Electrical and Computational System Academic Science, ISSN 2348-117X, pp.64-69. **(Peer-reviewed)**
70. Kirti Samir Vaidya, C. G. Dethe, S. G. Akojwar (2021) , Design of a Power-Efficient Low Complexity Non Maximally Coefficient Symmetry Multi Rate Filter Bank for Wideband Channelization, INTERNATIONAL JOURNAL OF CIRCUITS, SYSTEMS AND SIGNAL PROCESSING, E-ISSN: 1998-4464, PP- 883-894, DOI: 10.46300/9106.2021.15.95, Vol-15 2021.
71. Kirti Samir Vaidya, C. G. Dethe, S. G. Akojwar, (2021) Low Complexity Non Maximally Coefficient Symmetry Multi Rate Filter Bank for Wideband Channelization, WSEAS TRANSACTIONS on CIRCUITS and SYSTEMS, E-ISSN: 2224-266X, PP-57-65, DOI:

72. Pravin Kshirsagar, Dr. Sudhir Akojwar ... , Mental task classification using wavelet transform and support vector machine, *Int. J. Biomedical Engineering and Technology*, Vol. 37, No. 4, 2021. (SCI/SCOPUS)

Book Chapter –

73. **Book Chapter** in the book: **Recent Advances in Communications Systems and Electrical Engineering**, Springer International. Submitted 6th June 2007, Published March 2008

Chapter 4: Classification techniques and clustering architecture for wireless sensor networks. pp 33-49

Authors: Sudhir G. Akojwar, R.M. Patrikar,

Editors: Xu Huang, Yuh-Shyan Chen and Sio-Iong Ao

Publisher: Springer International

ISBN: 978-0-387-74937-2

74. **Book Chapter** in the book: **Wireless sensor Network**

Chapter Title: Improvement in Lifetime of Wireless Sensor Networks

using Perfect Difference Set- Networks, pp 1-25, Submitted 31st Dec 2009, Published 2011.

Authors: Sudhir G. Akojwar, R.M. Patrikar

Editors: Liam I. Farrugia

Publisher: Nova Science Publishers, USA.

ISBN: 978-1-61728-125-9

73. **Springer Book Chapter:**

Book Title: "Intelligent Techniques in Signal Processing for Multimedia Security"

Chapter Title : "Parametric Evaluation of Different Cryptographic Techniques for Enhancement of Energy Efficiency in Wireless Communication Network"

Authors: **Sudhir G. Akojwar** et. Al.

http://link.springer.com/chapter/10.1007/978-3-319-44790-2_9

Books Published :

1. **Brain Tumor Classification and Detection using Neural Network**,

Sudhir Akojwar , Pravin Kshirsagar, Schoolars Press (2017-03-24), No. Pages – 104. ISBN 13: 978-3-330-65105-0, ISBN-10 3330651059, EAN 97833306510-50.

<https://books.google.co.in/books?id=xy3oswEACAAJ>

Abstract - Brain Tumor is one of the most harmful Neurological Disorder. This Neurological Disorder must have accurate detection and early particular treatment which helps to reduce its harmful effect on human body. Now a days the process or technique which is used for the diagnosis or detection of Brain Tumor is really a very time consuming process and there may be chances of human error. In

order to reduce the time and human error Neural Network is used for detection and classification of Brain tumor.

2. Biomedical Signal Processing: Soft Computing Techniques, Sudhir Akojwar, Pravin Kshirsagar, LAP LAMBERT Academic Publishing (2018-05-11). No. Pages – 160, ISBN -13 : 978613-7-34016-5, ISBN-10 6137340163, EAN : 9786137340165.

<https://www.lap-publishing.com/catalog/details/store/gb/book/978-613-7-34016-5/biomedical-signal-processing-soft-computing-techniques>

Abstract - This book proposes two novel algorithms for function classification and prediction that extends a three layered Feed Forward Neural Network (FFNN) and the standard Generalized Regression Neural Network (GRNN). In this book genetic algorithm (GA) is used inside the particle swarm optimization (PSO) algorithm to bring the worst particle in PSO search space nearer to the food. This helps in faster convergence of PSO algorithm and the possibility of the algorithm to get stuck at the local minima is eliminated. The detailed analysis of results and comparisons show that the proposed algorithms have effectively improved the performance of a neural network as a classifier and predictor and obtained the better accuracy with minimum mean square error than the non optimized neural networks.

Expert Lectures Delivered:

1. “Sensor & AdHoc Network Applications, Routing protocols etc....” at Ramdeobaba Kamal Nehru Engineering College, Nagpur, on 8th Aug 2009.
2. “Recent Research in Wireless Sensor Networks”, during AICTE sponsored Staff Development Program on “Wireless and Mobile Communication, during Sep 7-17, 2009, on 15th Sep, at Priyadarshani college of Engineering Nagpur.
3. “Embedded System Design using 8051 microcontroller” at Embedded Systems Workshop, from 30th Sep to 1st Oct 2009, at Institute of Technology and Management, Gwalior.
4. “Pedagogy for teaching Vocational Education”, at Guidance and Training Programme organized by Directorate of Vocational Education and Training, Maharashtra, on 29/12/2010.
5. “Wireless Sensor Networks”, Key-note speaker for “National workshop on Emerging trends in Computer Simulation – 2011”, 28-29 Jan 2011 at Om college of Engineering, Inzapur, Wardha.
6. “Pedagogy for teaching Vocational Education”, at Guidance and Training Programme organized by Directorate of Vocational Education and Training, Maharashtra, on 11/10/2011.

7. Expert lecture on “Wireless Sensor Networks”, at Govt. women’s residential Polytechnique, Yavatmal., on 10th Jan 2012 at 3.00pm.
8. Guest Lecture on “Research avenues in Wireless Sensor Networks’, at Jawaharlal Darda Institute of Technology, Yavatmal, on 21st Jan 2012, 11.00am
9. Key-note Lecture on “Wireless sensor networks and its applications”, at BDCOE, Sewagram, on 26th Nov 2012, during one week STTP on Wireless networking.
10. Expert lecture on “WSN applications in industrial automation”, at GCOE Chandrapur on 7th Dec 2012. during one week STTP on Industrial automation, Sponsored under TEQUP-I
11. Expert lecture on “Perfect difference set networks in WSN”, at GHRCOEM Amaravati, on 8th Dec 2012, during two day workshop on Wireless Sensor networks.
12. Expert Lecture on “Wireless Sensor Networks: research opportunity”, on 14th June 2013, during two weeks AICTE FDP at Priyadarshini Institute of Engineering and Technology, Nagpur.
13. Expert Lecture on “Wireless Sensor Networks: research opportunity”, on 19th Aug 2013, at Usha Mittal Institute of Technology, SNDT University, Mumbai.
14. Expert Lecture on “WSN and Research opportunities”, On 24th Nov 2014 at Anjuman College of engineering and Technology, Nagpur, during two weeks ISTE STTP on **WIRELESS SENSOR NODES AND ITS POWER CONSUMPTION AND REDUCTION.**
15. Expert Lecture on “Modelling and Simulation of WSN Using Ptolemy-II”, during One Week ISTE orientation course on Soft Computing Techniques for Engineering Solution, on 2-12December 2015, at RCERT , Chandrapur.
16. Expert Lecture on “Research opportunities in WSN”, On 11th Feb 2017 at H.V.P.M. College of Engineering and Technology, Amaravati.

17. Expert lecture on “Research methodology & How to Begin research” during one week STTP on "LATEX for Researcher" on 22/05/2017, at Department of Electronics and Telecommunication, Jagadambha College of Engineering and Technology, Yavatmal.
18. Key note lecture delivered on “ Wireless sensor Networks – Recent advances : Perfect difference set network.” At S.B. JAIN INSTITUTE OF TECHNOLOGY, MANAGEMENT & RESEARCH , NAGPUR, during two days workshop on “Recent Trends in Wireless Smart Sensor Network” , on 11/10/2017.
19. Key note lecture on “Signal Processing in Wireless Sensor Networks” during two weeks AICTE sponsored FDP on “Signal Processing Perspective in Wireless Communication” from 19-28 Dec 2019, on 19th Dec 2019, at Babasaheb Naik College of Engineering , Pusad.
20. Expert lecture on “Mind management & evolution of conscious”, during ATAL faculty development program ,during 14-18 June 2021 on “EMERGING TECHNOLOGIES IN PRODUCT DESIGN & DEVELOPMENT”, held on 17/06/2021, at Government College of Engineering Chandrapur.
21. Expert lecture on “Mind management & evolution of conscious”, on 08-12-2022, organized by Department of Civil Engineering, College of Engineering, Pune.
22. Expert lecture on “Mind management & evolution of conscious”, during one week faculty development program , during 08-12 Feb 2022 on “ Research Tools for Advanced Instrumentation and Control System”, organized by Department of Instrumentation Engineering, Government College of Engineering, Chandpur. Approved by DTE Mumbai.
23. Expert conduction of Meditation for Stress free working environment on 08,09,10 Aug 2023 for Faculty and Staff Members of Government College of Engineering, Ratnagiri.
24. Expert conduction of Heartfulness meditation sessions during Induction program of first year students of Government College of Engineering, Ratnagiri on 21,22,23,24,25 Aug 2023, on topics – Connection & Core, Context & Choices, Causality & Community.
25. Expert conduction of session on Mind Management and Evolution of Consciousness for Holistic Wellbeing, during one week FDP on Navonmesh – Yoga for Holistic Health on 27th,28th,29th Aug 2023, organized by MSFDA & Kavikulguru Kalidas Sanskrit Vidyapith, Ratnagiri Sub center.
26. Expert conduction of Heartfulness Meditation sessions during Induction program of first year students of Bajaj Chandrapur Polytechnics, Chandrapur 14,15,16 Sep 2023. Day - 1 - 14/09/23 - Importance of Meditation , Practical conduction of Relaxation & Meditation. Day -1- 14/09/23 - Importance of Meditation, Practical conduction of Relaxation & Meditation. Day - 2 - 15/09/23 - Inner cleaning for better Meditation. Day - 3 - 16/09/23 - Connecting with Inner Self.

27. Expert conduction of Heartfulness Meditation sessions during Induction program of first year students of Bajaj Chandrapur Polytechnics, Chandrapur 15,16,17 Sep 2025. Day - 1 - 15/09/25 - Importance of Meditation , Practical conduction of Relaxation & Meditation. Day -1- 16/09/25 - Importance of Meditation, Practical conduction of Relaxation & Meditation. Day - 2 - 17/09/23 - Inner cleaning for better Meditation. Day - 3 - 16/09/25 - Connecting with Inner Self.
28. Expert conduction of Heartfulness Meditation sessions during Induction program of first year students of Bajaj Chandrapur Polytechnics, Chandrapur 16,17,18 Sep 2025. Day - 1 - 16/10/25 - Importance of Meditation, Practical conduction of Relaxation & Meditation. Day -1- 17/10/25 - Importance of Meditation, Practical conduction of Relaxation & Meditation. Day - 2 - 15/09/25 - Inner cleaning for better Meditation. Day - 3 - 18/10/25 - Connecting with Inner Self.
29. Expert Lecture on “Wireless Sensor Networks and its applications “ on 17th Oct 2025, in the Deptt of Computer Science and Engineering, Rajiv Gandhi college of Engineering, Research and Technology, Chandrapur.
30. Expert conduction of “Meditation and Relaxation” for the participants of MSFDA & Gondawana University conducted 3 days faculty orientation program on NEP 2020 for Higher Education during 23-25 Sep 2025, on 24/09/25 at Dr Khatri Mahavidyalay, Chandrapur.
31. Expert talk on “Wireless Sensor Networks and Meditation for Improving Stress free learning” at Government College of Engineering & Research, Awasari, on 02/09/2025.
32. Expert talk on “Wireless Sensor Networks” at Government College of Engineering, Chandrapur. on 20/09/2025.
33. Conducted “Meditation Session “at Charitrakar Padmabhushan Dr. Dhananjay Keer, Ratnagiri Sub-Campus, University of Mumbai on 21st June 2025 on the occasion of international Yoga Day.
34. Delivered Expert Session on “Mind Management, Emotional Intelligence for Stress free Learning Environment” on 16/01/2026 at Department of Information Technology, Government College of Engineering, Karad, during five days faculty development program on “Next-Gen AI: Models to Ethics”, 13th -17th January 2026, sponsored by DTE, Mumbai.

Conference Organization:

1. Session Chair for “Wheel Spin Feb 08” organized by Bapurao Deshmukh College of Engineering Sevagram.
2. Session Chair for “Jigyasa Feb 08” organized by Priyadarshani college of Engineering Nagpur.

3. Session Chair for IEEE conference “ICETET Dec 08” organized by G.H.Raisoni college of Engineering Nagpur.
4. Session Chair for National Conference on “Recent trends in Electronics and computer science”, Jan 9-10 2010, organized by J D College of Engineering, Nagpur.
5. Chairman, National Conference on Recent Trends in Engineering Sciences, 11-12 OCT 2010, (NCRTE-2010), at Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal.
6. Chairman, National Conference on Biomedical Electronics Engineering and Bioinformatics (NCBEB 2011), organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal, Jan 10-11, 2011.
7. Organizing Chair, National Technical Symposium -ANTRATECH-2011, 16-17 Feb 2011, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal.
8. Chairman, National Conference on Information Technology and Computer Engineering, NCITCE-2011), Jan 20-21, 2011. organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal,
9. Organizing Chair, National Technical Symposium -ANTRATECH-2012, 6-7 Feb 2012, organized by Dr. Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal.
10. Member Advisory Committee, National Conference on Wireless Communication and Networking, WCN-13, Sep 7th 2013, St. Vincent College of Engineering Pallotti College of Engineering and Technology, Nagpur.
11. Convenor, National Conference on Research Trends in Electronics, Computer science & Information Technology And Doctoral Research Meet, NCDRM-2014, 21st – 22nd Feb 2014, Rajiv Gandhi College of Engineering Research and Technology, Chandrapur.
12. Session Chairman, Electronics Engineering Track, 2015 , Dubai, 21-23 Nov 2015.



ICSET -

Professional & Academic Services –

1. School Management Committee Member of Narayana Vidyalayam, Chandrapur, for a term of three years commencing from 1st July 2018 to 30 June 2021.
2. Member of College Development Committee, F.E.S. Girls College, Chandrapur, for a period of five years from session 2017 to 2022, as per Maharashtra university act, 2016.

MEMBERSHIP of Professional Societies:

1. Senior member IEEE, from Dec 2012.
2. Fellow of The Institution of Engineers (FIE), INDIA, from 2012 [F-117057-4]

3. **Fellow of Institution of Electronics & Telecommunication & Engineers (IETE), New Delhi, from 1998, [F-123527]**
4. Member of India Society for Technical Education (ISTE), New Delhi, from 1995, [LM 20207]
5. Member of Institution of Electronics and Electrical Engineers (IEEE) and IEEE Computer society, from 2000, [M 41271253]
6. Member of Biomedical Engineering Society of India (BMESI), from 2010 [L937].

Affiliation to Various R.T.M. Nagpur, University works:

1. Member of Subject Examination Committee in Electronics (U.G.) for the session 1999 & 2000.
2. Member Board of Studies in Information Technology/Computer Engg., R.T.M, Nagpur University, for the sessions 2001 to 2003.
3. Officer In charge for summer 2003 and summer 2010, Nagpur University Examinations, at RCERT, Chandrapur.
4. **Chairman Board of studies - Information Technology/Computer Engg., R.T.M, Nagpur University** , for the sessions 2003 - 2004 & 2004- 2005.
5. Examiner for Graduate and Post Graduate Programs of R.T.M. Nagpur University

Affiliation to Various SGB Amaravati, University works:

1. Examiner for Graduate and Post Graduate Programs of SGB Amaravati University.
2. Invited Member Board of Studies in Biomedical Engineering, SGB Amaravati University for the session 2010-12
3. **Chairman Board of studies** in Biomedical Engineering, SGB Amaravati University, for the session 2012-13.

Affiliation to Various Gondwana University, Gadchiroli, works:

1. **Member Academic Council, Gondwana University Gadchiroli, 2017-2022.**
2. Member of Selection Committee as V.C. Nominee.
3. **Chairman Board of studies in Electronics Engineering, GUG, from Aug 2013 till June 2023**
4. **Chairman Board of studies in Instrumentation Engineering, GUG,from Aug 2013-2015. 2020 till June 2023.**
5. **Member Board of Research, GUG, 2019 -2022.**
6. Member of the **Finance Committee** of GUG 2021 -2022.

Affiliation to Professional Society's working:

- Worked as **Secretary-cum-Treasurer** of ISTE Chapter of Chandrapur Engineering. College, Chandrapur (Now RCERT), during 1995-1999.
- **Chairman** Electronics and telecommunication division, Chandrapur Local Chapter, Institute of Engineers, for session Dec 2010-11
- **Chairman ISTE Chapter**, Dr.Bhausahb Nandurkar College of Engineering and Technology, Yavatmal. From Jan 2011- Sep 2012.

Reviewer/Referee for National and International Conferences and Journals**Ph.D. Supervisor**

- Recognized Guide for Ph.D. and M.E. by research in Electronics Engineering in the faculty of Engg. and Technology, by Rashtra Sant Tukdoji Maharaj Nagpur university, Nagpur. (Approval Letter No. Ph.D. (Cell)/RRC/Guide/46/B/89 Dated – 01/12/2010)
- Recognized Guide for Ph.D. in Electronics Engineering in the faculty of Engg. and Technology, by Sant Gadge Baba Amaravati University, Amaravati. (Notification No. 55/2011 Dated – 26/05/2011)
- Recognized Guide for Ph.D. in Electronics Engineering in the faculty of Engg. and Technology, by Gondawana University, Gadachiroli. (GUG/Ph.D. Sup. Rec./450/2014)
- **Recognized Guide for Ph.D. in Electronics Engineering, by Dr Babasaheb Ambedkar Technological University, Lonere. Recongized vide Notification/s: 1) Call for Ph.D. Supervisor Recognition in DBATU dated 13th June 2024; 2) Notification by the Registrar vide DBATU/REG/Ph.D.Super/2024/2496 dated 19th October 2024**
- **No. of Schoolars awarded with Ph. D. – 07**

Sponsored Project and Grants Received:

1. Received travel grant from AICTE for conference IEEE international symposium on Industrial electronics ,at Spain, on 4-7 June 2007, for amount of Rs. 68970/-
2. Received grant under the MODROB scheme of AICTE during the session 2013-14 for the amount Rs. 5, 00,000/- for the UHF and Microwave Laboratory, at RCERT Chandrapur. AICTE Ref. No. 9-226/RIFD/MODROB/Policy-1/2013-14 (Pvt.)

3. Organised one week STTP on “Digital Skills for Professionals” sponsored by ISTE-AICTE, during 3rd – 8th Dec 2018 at Government College of Engineering, Chandrapur as Coordinator.
4. Coordinator for “Skill and Personality Development Program for SC/ST Students” (SPDP) sponsored by AICTE, with grant of Rs. 16, 82,353/-. AICTE File no. – 65-8/RIFD/SPDP/Policy-1/2016-17.
5. Received grant under the MODROB scheme of AICTE during the session 2018-19 for the amount Rs. 12, 00,000/- for the Wireless Sensors & Transducer Network Laboratory, at GCOE, Chandpur. AICTE Ref. No. 9-31/RIFD/MOD// Policy-1/2018-19. Dated 19-01-2020.
6. Convener for, one week ATAL faculty development program, held during 14-18 June 2021 on “EMERGING TECHNOLOGIES IN PRODUCT DESIGN & DEVELOPMENT”, at Government College of Engineering Chandpur.
7. Convener for one week faculty development program, during 08-12 Feb 2022 on “Research Tools for Advanced Instrumentation and Control System”, organized by Department of Instrumentation Engineering, Government College of Engineering, Chandpur. Approved by DTE Mumbai
8. Convener for one week faculty development program, during 16-20 Jan 2023 on “Autonomous car, connected car and electric vehicles”, organized by Department of Mechanical Engineering, in collaboration with Center for Invention, Innovation, Incubation and Training (CIIT) at Government College of Engineering, Chandpur. Approved by DTE Mumbai (vide DTE letter No. Desk No. 1/DTE/One Week FDP/2022-23/205 Dated: 04.11.2022)
- 9. Worked as Mentor for IEEE Professional Mentoring Program for Young Faculty Members from 1st oct to 31st Dec 2023, conducted by IEEE India Council.**
10. Ph. D. Guide approved by **DBAT University Loner**. Notification by the Registrar vide DBATU/REG/Ph.D.Super/2024/2496 dated 19th October 2024, List published Date- 25-04-2025

Verified that the above information is correct to the best of my knowledge, hence signed.

Dated: 16/02/2026

SUDHIR G. AKOJWAR

Summary of Ph. D. Guide & Ph. D. awarded Students

Dr. Sudhir G. Akojwar,
Associate Professor, Instrumentation Engineering, Department of
Mechatronics Engineering. L. S. P. Government College of Engineering,
Ratnagiri.

- Recognized Guide for Ph.D. and M.E. by research in Electronics Engineering in the faculty of Engg. and Technology, by **Rashtra Sant Tukdoji Maharaj Nagpur university**, Nagpur. (Approval Letter No. Ph.D. (Cell)/RRC/Guide/46/B/89 Dated – 01/12/2010)
- Recognized Guide for Ph.D. in Electronics Engineering in the faculty of Engg. and Technology, by **Sant Gadge Baba Amaravati University**, Amaravati. (Notification No. 55/2011 Dated – 26/05/2011)
- **Recognized Guide for Ph.D. in Electronics Engineering in the faculty of Engg. and Technology, by Gondawana University, Gadchiroli. (GUG/Ph.D. Sup. Rec./450/2014 Dated 03/01/2024).**
- **Ph. D. Guide approved by DBAT University Loner.** Notification by the Registrar vide DBATU/REG/Ph.D.Super/2024/2496 dated 19th October 2024, List published Date- 25-04-2025.

No. of Scholars awarded with Ph. D. – 07

No. of Ph D. Scholars awarded Ph D. : 07		
Sr. No.	Name of Scholar	Title
1	Salim Chanvan (SGBAU)	DEVELOPMENT OF GRADUAL TRANSITIONS DETECTION ALGORITHMS IN VIDEO SEGMENTATION
		Notification No. 139/2017 Monday 13th February 2017 SGBAU/Ph.D./ELECT.EN/4905/2011, w.e.f. 15.07.2011 File No. 4905
2	Pankaj Pandit (SGBAU)	DEVELOPMENT OF OBJECT RECOGNITION ALGORITHM USING SKELETON SHOCK GRAPH AND ARTIFICIAL INTELLIGENCE APPROACHES
		Notification No. 141/2017 Saturday 18th February 2017 SGBAU/Ph.D./ELECT.EN/4906/2011, w.e.f. 15.07.2011 File No. 4906
3	Hemant Baradkar (SGBAU)	Development of Cognitive Radio for Embedded Wireless Sensor node.
		Notification No. 141/2017 Saturday 18th February 2017 SGBAU/Ph.D./ELECT.EN/4904/2011, w.e.f. 15.07.2011 File No. 4904
4	Pravin Kshirsagar (GUG)	PREDICTION OF CHAOTIC BEHAVIOUR IN BIOMEDICAL SIGNALS USING SOFT COMPUTING TECHNIQUES

		Notification No.GUG/PHD Cell/79/2018 Dated -31/01/2018
5	Alka Sawlikar (RTM NU)	Some Aspects of Cryptographic Technique for Speech Security Level Enhancement in Wireless Communication Networks with Energy Efficient Operation.
		Notification No.: RTMNU/Ph.D. (Cell)/18/1289 Dated – 09/03//21
6	Harish Rajurkar (GUG)	Design and Development of Antenna for Performance improvement in WSN.
		Notification No. GUG/PHD Cell/381/2022 Dated- 07 April 2022
7	Kirti Vaidya (GUG)	Experimental Studies of Reconfigurable Architecture and Techniques for Channelizer of Software Defined radio.
		Notification NO./GUG/Ph.D. Cell/315/2023 Date – 21/11/2023

Summary of Patents

Dr. Sudhir G.Akojwar,
Associate Professor, L.S.P.Government College of Engineering,
Ratnagiri.

Sr.No.	Description	Impact on Institute Development.			
		Date of filling	Name of Investigator	Name of Principal Investigator	Any other Point
1		2016/09/07	Pravin Kshirsagar	Dr. Sudhir G. Akojwar	
	Publication No. 39/2016, Application No.201621030617, Date of Publication - 2016/09/16 TITLE: OPTIMIZATION OF GENERALIZED REGRESSION NEURAL NETWORK (GRNN) USING SOFT-COMPUTING METHODS. Description: Present invention provides specially a novel algorithm which incorporates two of the well-known soft-computing methods, particle swarm optimization (PSO) and genetic algorithm (GA), to optimize the spread factor of a generalized regression neural network (GRNN) which is a variant of radial basis function network (RBFN). Instead of taking any random value for spread factor as in case of a normal GRNN for simulation of the network, the spread factor value is been optimized by using PSO and GA so that the network converges faster with greater accuracy and minimum mean square error (MSE). First some random values of the spread factor are calculated as the positions in PSO algorithm and then the more unrealistic values of the spread are converted to realistic values using improved GA. The algorithm is applied on UCI machine learning benchmark databases such as diabetic dataset and Fisher Iris dataset for classification and Mackey series and Box Jenkins databases for prediction. The designed algorithm is also applied on realistic Brain Death EEG dataset for prediction which was acquired from Central India Institute of Medical Science, Nagpur (M.S.) India. First the GRNN is trained using a part of the dataset and then it is used for testing on the remaining datasets. A comparison is made between normal GRNN with random spread factor and GRNN with PSO and GA optimized spread factor. It is seen that the proposed algorithms classify and predict the benchmark databases with very less mean square error and high accuracy.				
		2016/11/07	Pravin Kshirsagar	Dr. Sudhir G. Akojwar	
	Publication No. 52/2016, Application No. 201621038040 Date of Publication - 2016/12/16				

2	TITLE : PERFORMANCE OPTIMIZATION OF NEURAL NETWORK USING GA INCORPORATED PSO			
	Present invention provides feed forward neural network (FFNN) optimized by genetic crossover and mutation process (GA) incorporated by particle swarm optimization (PSO) which is applied for optimizing the hidden layer neuron for the neural network. The main pursuit is to reduce the size of the network that can be rehearsed expedite than the simple back propagation algorithm while keeping the same or superior performance. The process is optimized not only number of hidden layers but also the number of neurons in each hidden layer and processing it to deal with a few connections in network structure so as to enhance the speed and efficiency of the neural network.			
3		2016/10/10	Salim Chavan	Dr. Sudhir G. Akojwar
	Publication No. 49/2016 , Application No. 201621034595 Date of Publication - 2016/11/25			
	TITLE : PROCESS FOR DETECTION OF WIPES IN PRESENCE OF MOTION AND ILLUMINATION.			
	Present invention provides specially method and process for wipe transition detection. In the proposed process, the presence of wipe is detected by means of discrete wavelet transform and then using color histogram the range and type of wipe can be declared. Applying the proposed process on the whole video to detect wipes is computationally expensive. Our approach can directly be applied for all frames and even then it takes small computational time. We extensively tested our proposed process on several genres of video data. Experimental results are carefully evaluated using the performance metrics Recall, Precision, F1 measure, and Detection Rate. Our proposed process achieved a relatively better tradeoff between Recall and Precision as compared to other processes. We tested the proposed approach on twenty three different wipe effects and obtained Detection Rate of 97.06, 100, 90 and 100 for Star War III, Star War I, Jodhaa Akbar and Bhootnath respectively. The proposed method successfully avoids false positives caused due to object and camera motion. Following invention is described in detail with the help of Figure 4 of sheet 2 showing variation of normalized values of mean of approximate wavelet coefficient and normalized value of color histogram difference against frame index.			
		2016/11/22	Salim Chavan	Dr. Sudhir G. Akojwar
	Publication No. 52/2016, Application No. 201621039858 Date of Publication - 2016/12/16			

4	TITLE : PROCESS FOR DETECTION OF FADE IN AND FADE OUT IN PRESENCE OF MOTION AND ILLUMINATION Present invention provides specially a process for detection of fade in and fades out in presence of motion and illumination. An algorithm is proposed for fade in and fades out detection. In the proposed algorithm, frames are decomposed to 5 level using db-6 discrete wavelet transform. The mean of approximate wavelet coefficients are calculated for each frame and normalized. The variation in normalized mean of wavelet coefficient against frame index gives the presence of fade in and fades out. In our algorithm, no preprocessing or post processing is required and so the computational complexity is reduced too much. The processing time is very small as compared to previous techniques. The proposed algorithm detects and identifies almost all fade in and fades out with negligible miss and false detection causing due to illumination and motion. Performance comparison of proposed algorithm with other existing techniques clearly demonstrated its effectiveness in terms of performance metrics such as Recall, Precision, F1 measure, RSI and detection rate. Another advantage of our algorithm over previous ones is that the detection rate is almost 100%.			
5		2014/05/15	Hemant Manikrao. Baradkar	Dr. Sudhir G. Akojwar
	Publication No. 23/2014, Application No. 1650/MUM/2014 Date of Publication - 2014/06/06			
	TITLE : DEVELOPMENT OF COGNITIVE RADIO FOR EMBEDDED WIRELESS SENSOR NODE ABSTRACT Present invention provides specially design and development of Cognitive Radio. As the increasing demand for Embedded Wireless Sensor Network Node, wireless communication introduces efficient spectrum utilization challenge. To address this challenge, cognitive radio can be used as the key technology, which enables opportunistic access to the spectrum. Cognitive radio increases spectrum utilization and communication quality with opportunistic spectrum access capability and adaptability to the channel conditions. As recently wireless sensor node is facing problem for data communication due to non-availability of spectrum, this research work will help to give solution for the existing problem. Implementation of cognitive radio for embedded wireless sensor node is done using MATLAB. Various modules are designed, developed & implemented whose results are shown.			

		2016/05/06	Pankaj Manohar Pandit	Dr. Sudhir G. Akojwar
6	Publication No. 40/2016, Application No. 201621015986 Date of Publication - 2016/09/23 TITLE : CLASSIFICATION OF OBJECTS USING EXTRACTED FEATURES OF SKELETAL SHOCK GRAPH AND ARTIFICIAL NEURAL NETWORK Present invention provides specially an innovative process and describes a graphical method of object recognition based on Skeletal Shock Graph, which is based on the shape or geometry of the object and artificial neural network. Shock Graph is an abstraction of the skeleton of an object's shape onto a Directed Acyclic Graph (DAG) in which the skeleton points are labeled according to the local variation of the radius function at each point. A large image data base is used, which is converted into binary images. Skeleton and its labeling of the binary image are done by applying thinning for Skeletonization process. Then next steps adopted are formation of Shock Graph, extraction of features from the data base and lastly matching the of query image features with that of database images for classification/ recognition using artificial neural network; typically a multi-layer perceptron network with suitable training.			
7	Harish Rajurkar, Dr.S.G. Akojwar Application No.201921033319 A Publication Date : 20/09/2019 Title of the invention : SMALL SIZE & HIGH RETURN LOSS LEAF SHAPE PATCH ANTENNA Abstract: Annexure III: Abstract: This invention proposes a small size and high return loss printed monopole antenna bio inspired from apta leaf. The shape of the antenna is very small and similar to that of apta plant leaf. The said antenna is very much suitable for wireless sensor network applications. The antenna is a compact size, low profile, good resonant frequency response & directive radiation pattern. The proposed bio-inspired antenna shows return loss -30.67dB & VSWR of 1.01dB. Field of Invention: This invention relates to small size and high return loss printed monopole leaf shape antenna for wireless sensor network applications.			

Achievements and Publication Statistics

Dr. Sudhir G. Akojwar

**Associate Professor – Instrumentation Engineering,
L S P Government College of Engineering, Ratnagiri.**

Awards-

1. **Best Teachers** award by Gondwana University -2016-17.
2. **Best Paper** award by IMAPS India National conference 2005 at IIT, Bombay.

1. Elected **Member of First Academic Council** of Gondwana University, Gadchiroli. Jan 2017 to Aug 2023
2. **Mentor for IEEE** Professional Mentoring Program for Young Faculty Members from 1st oct to 31st Dec 2023, conducted by IEEE India Council.
3. **Senior member IEEE**, from Dec 2012.
4. **Fellow of The Institution of Engineers (FIE)**, INDIA, from 2012 [F-117057-4]
5. **Fellow of Institution of Electronics & Telecommunication & Engineers (IETE)**, New Delhi, from 1998, [F-123527]
6. **Member of India Society for Technical Education (ISTE)**, New Delhi, from 1995, [LM 20207]
7. **Member of Institution of Electronics and Electrical Engineers (IEEE) and IEEE Computer society**, from 2000, [M 41271253]
8. **Member of Biomedical Engineering Society of India (BMESI)**, from 2010 [L937].

Ph.D. Supervisor

- Recognized Guide for Ph.D. and M.E. by research in Electronics Engineering in the faculty of Engg. and Technology, by Rashtra Sant Tukdoji Maharaj **Nagpur university**, Nagpur. (**Approval Letter No. Ph.D. (Cell)/RRC/Guide/46/B/89 Dated – 01/12/2010**)
- Recognized Guide for Ph.D. in Electronics Engineering in the faculty of Engg. and Technology, by Sant Gadge Baba **Amaravati University**, Amaravati. (**Notification No. 55/2011 Dated – 26/05/2011**)
- Recognized Guide for Ph.D. in Electronics Engineering in the faculty of Engg. and Technology, by **Gondwana University**, Gadachiroli. (**GUG/Ph.D. Sup. Rec./450/2014**)
- Recognized Guide for Ph.D. in Electronics Engineering, by Dr Babasaheb Ambedkar Technological University, Lonere. Recongized vide Notification/s: 1) Call for Ph.D. Supervisor Recognition in DBATU dated 13th June 2024; 2) Notification by the Registrar vide DBATU/REG/Ph.D.Super/2024/2496 dated 19th October 2024

Patents Published

07

No. of Ph.D. Scholars awarded degree.

07

AICTE MODROB Grant.

2013-14 (Rs.5L)

01

2018-19 (Rs.12L)

01



Dr. Sudhir Akojwar

Associate Professor Instrumentation Engineering
Government College of Engg, Ratnagiri
Verified email at gcoec.ac.in - [Homepage](#)

[Wireless Sensor Networks](#) [Embedded System](#)

ARTICLES

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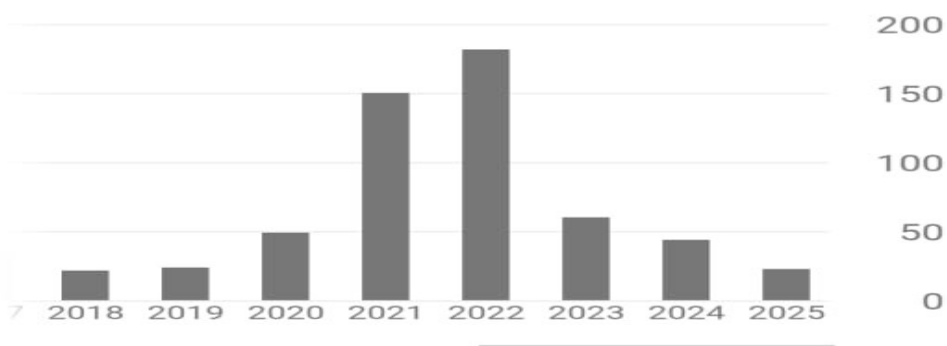
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22

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16

BOOK Chapters

04

Total Publications	77
National Conferences/ Tech. Events Organized	05
Expert Lectures delivered	22
Conferences, Workshops, STTP attended	32
Books Published	02
1. Member Board of Studies in Information Technology/Computer Engg., R.T.M, Nagpur University, for the sessions 2001 to 2003. 2. Invited Member Board of Studies in Biomedical Engineering, SGB Amaravati University for the session 2010-12 3. Chairman Board of studies in Biomedical Engineering, SGB Amaravati University, for the session 2012-13. 4. Member Academic Council, Gondwana University Gadchiroli, 2017-2022. 5. Member of Selection Committee as V.C. Nominee. 6. Chairman Board of studies in Electronics Engineering, GUG, from Aug 2013 till June 2023 7. Chairman Board of studies in Instrumentation Engineering, GUG, from Aug 2013-2015. 2020 till June 2023. 8. Member Board of Research, GUG, 2019 -2022. 9. Member of the Finance Committee of GUG 2021 -2022.	
Affiliation to Professional Society's working: • Worked as Secretary-cum-Treasurer of ISTE Chapter of Chandrapur Engineering. College, Chandrapur (Now RCERT), during 1995-1999. • Chairman Electronics and telecommunication division, Chandrapur Local Chapter, Institute of Engineers, for session Dec 2010-11 • Chairman ISTE Chapter, Dr.Bhausaheb Nandurkar College of Engineering and Technology, Yavatmal. From Jan 2011- Sep 2012.	
Reviewer/Referee for National and International Conferences and Journals Examiner for Ph.D. scholars at various universityies.	