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Academic Profile:

- M. Sc., Nagpur University, Nagpur (1987)
- National Eligibility Test in Physics (1988)
- M. Phil., Nagpur University, Nagpur (1988)
- Ph. D., Nagpur University, Nagpur (1999)

Positions Held:

- Lecturer in Electronics, Seth Kesarimal Porwal College, Kamptee, Nagpur (5th September 1988 to 4th September 1995)
- Sr. Lecturer in Electronics, Seth Kesarimal Porwal College, Kamptee, Nagpur (5th September 1995 to 4th September 2000)
- Reader in Electronics, Seth Kesarimal Porwal College, Kamptee, Nagpur (5th September 2000 to 3rd December 2008)
- Associate Professor in Electronics, Department of Electronics and Computer Science, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur (4th December 2008 – 3rd December 2011)
- Professor (CAS) in Electronics, Department of Electronics and Computer Science, Rashtrasant Tukadoji Maharaj, Nagpur University, Nagpur (since 4th December 2011 till date)
- Hon. Director, Inter Institutional Computer Centre, RTM Nagpur University, Nagpur (August 1, 2011 to December 31, 2015)
- Hon. Director, Inter Institutional Computer Centre, RTM Nagpur University, Nagpur (August 1, 2022 till date)
- Hon. Director, IT Cell, RTM Nagpur University, Nagpur (December 16, 2022 till date)

Field of Specialization:

Acoustics, instrumentation in ultrasonics, virtual instrumentation, embedded systems, artificial neural network, nano-science and nano-technology

Awards and Recognition:

- First prize in the Inter-Collegiate Students' Seminar in Physics (1985)
- Second in the order of Merit in M. Sc. Examination (1987)

- Visiting Scientist: International Centre for Theoretical Physics (ICTP), Trieste, Italy, 1999
- Best Paper Award, International Conference and Exhibition on Ultrasonics (ICEU-99), National Physical Laboratory, New Delhi, Dec. 2-4, 1999
- Indian National Science Academy Visiting Fellowship to visit IIT Kanpur (India) 2005-06
- Awarded Summer Research Fellowship by Indian Academy of Science-Indian National Science Academy-National Academy of Science 2006-07
- Visiting Consultant: Sultan Qaboos University, Muscat, 2008
- Best Paper Award, National Conference Nanotrends 2008 held at Nagpur, on Sept. 27, 2008
- Best Paper Award, National Conference on Recent Trends in Basic and Applied Materials organized by Institute of Science, Nagpur, on Jan. 10-11, 2009
- Best Paper Award, National Conference on Synthesis and Characterization of New Materials and its Applications, organized by Kamla Nehru College, Nagpur, on March 15, 2009
- Best paper award, International Symposium on Ultrasonics (ISU – 2015), organised by Department of Physics, RTM Nagpur University, Nagpur in association with the Ultrasonic Society of India, on Jan. 22-24, 2015
- Best paper award, National Symposium on *Advances in Physics and Material Science*, Department of Physics RTM Nagpur University and Physics Society Promotion Trust, Nagpur, on February 28, 2015
- Best Researcher Award of the RTM Nagpur University, Nagpur in 2015
- Referee: J. Non Destructive Testing (IEEE)
- Best paper award, International Conference on Innovation & Research in Engineering, Science and Technology, ICIREST 2018, held at Tulsiramji Gaikwad Patil College of Engineering, Nagpur, on February 23-24, 2018
- Best poster presentation award, One Day Inter-Disciplinary National Conference on Recent Trends in Mathematical Modeling, Simulation Methods, Computations and Physical Sciences (MMSCP-2019), held at Hislop College, Nagpur, on March 11, 2019
- Lifetime Achievement Award, International Scientist Awards on Engineering, Science and Medicine, by the VD Good Professional Association, India, on November 16-17, 2019
- Best paper award, International Conference and Research Frontiers in Sciences (ICRFS-2021) online, February 5-6, 2021

Professional Affiliations:

- Fellow, Institution of Electronics and Telecommunication Engineers
- Life Member, Ultrasonic Society of India (NPL, New Delhi)
- Life Member, Instrument Society of India (IISc, Bangalore)
- Life Member, Indian Physics Association (TIFR, Mumbai)
- Life Member, University Teachers' Association (Nagpur)

- Life Member, Indian Association of Solid State Chemists and Allied Scientists (Jammu University)
- Life Member, Society for Material Chemistry (BARC, Mumbai)
- Member, Material Research Society, Singapore (NUS, Singapore)

Research guidance:

- Development of PC based Techniques for Acoustic Measurements: Mr. Vilas Ghodki (2008)
- Ultrasonic Signal Processing for Characterizations of Matter : Mr. Vyankatesh Vyaghra (2008)
- Design and Study of Instrumentation for Characterisation of Polymers: Mr. Premshankar K. Dubey:(2008)
- Simulation Models for Acoustical Studies using Artificial Neural Network: Miss. Rashmi S. Dashputre : (2009)
- Electrical Characterisation of Some Nano-materials: Mr. A. S. Lanje: (2010)
- Acoustics of Worship Spaces: Mr. Allan Tavares (2010)
- Development of PC Based Pulse Techniques for Ultrasonic Measurements: Mr. V. M. Pendsey: (2013)
- Control of Virtual Instrumentation using Wireless Technology: Mr. Gopesh K. Singh (2014)
- Design of Virtual Instruments for ultrasonic Characterisation: Mr. Anup Balharpure (2017)
- Design of Instrumentation for Characterisation of Gels using Ultrasonic Technique: Ms. Aditi Pande: (2017)
- An Embedded System based approach to Pulsed Ultrasonic Instrumentation: Ms. Rakhi V. Vyaghra (2019)
- Study of Electrical Characteristics of Some Metal Oxide Nanoparticles: Mr. Sachin T. Bahade (2020)
- Use of Ultrasonic Pulse-echo Technique for Study of Nanoparticle Material: Mr. Sanjeev U. Dubey (2021)
- Biomedical Signal Processing using Wireless Sensor Networks: Mr. Rajesh K. Parate (2022)

Teaching Experience:

Involved in teaching Electronics in undergraduate and post graduate since 1988

Sponsored Research Projects:

- Characterization of Nano-particle Gels Using Ultrasonic Technique (Rs. 30,000), UGC (WRO) Pune, 2000-2002
- Development of Virtual Lab for Precise Ultrasonic Measurements (Rs. 3,60,000), UGC, New Delhi, 2004-2007
- Development of Database comprising of Compilation of Information on Ultrasonic Propagation Studies in Polymers (Rs. 55,000), UGC (WRO), Pune, 2004-2006
- Development of Multimedia Electronics Laboratory (Rs. 75,000), UGC (WRO), Pune, 2007-2009
- Synthesis of Functional Nanomaterials using Ultrasonic Reactor, UGC, New Delhi

- Development of Lab VIEW based Technique for Broadband Ultrasonic Spectroscopy (Rs. 8,40,000), UGC, New Delhi, 2011-2014
- Synthesis of Functional Nano-particles using Ultrasonic Reactor (Rs. 2,10,000), RTM Nagpur University, Nagpur, 2018-2020

Books Published:

- *Ultrasonic Propagation Studies in Polymers*, Himalaya Publishers, Nagpur (2003)
- *Measurements of High Frequency Acoustic Characteristics: Development of PC- based Techniques*, Lambert Academic Publishing, Germany (2010)
- *Signal Processing for High Frequency Characterisation of Liquids: Advanced Digital Techniques*, Lambert Academic Publishing, Germany (2011)
- *Fundamentals of Microprocessor 8085: Programming Techniques for Microprocessor*, Lambert Academic Publishing Co. Germany (2012)
- *Functional Nanomaterial Synthesis and Characterisation: Electrical, Magnetic and Optical*, Amrut S. Lanje, Satish J. Sharma and Ramchandra B. Pode, Lambert Academic Publishing Co. Germany (2014)
- *Advanced Microprocessors*: Vilas M. Ghodki, Satish J. Sharma and Tripti A. Dange, Create Space Publishers, USA (2014)
- *Control of Virtual Instruments using Wireless Technology*: Gopesh Singh, Satish Sharma and Amrut S. Lanje, Lambert Academic Publishing Co. Germany (2022)

Selected Publications:

1. S. Rajagopalan and S. J. Sharma: Study of Silk Races using an Ultrasonic Technique: *Acoust. Letts.* 23(5), 93(1999)
2. S. Rajagopalan and S. J. Sharma: Phase Separation Studies Using Ultrasonic Technique in Cellulose Acetate-High Impact Polystyrene: *J. Pure and Appl. Ultrason.* 22(2), 60(2000)
3. S. Rajagopalan and S. J. Sharma: Adiabatic Compressibility and Solvation Studies of Cellulose Acetate in Cyclohexanone and in Carbon Tetrachloride: *J. Pure & Appl. Ultrason.* 24(1), 1(2002)
4. S. Rajagopalan, S. J. Sharma and V. Y. Nanotkar: Ultrasonic Propagation in Silver Nanoparticles: *J. of Metastable and Nanocryst. Mat.* 23, 271-274, January(2005)
5. S. Rajagopalan, S. J. Sharma and V. Y. Nanotkar: A Study of Effect of Polymer Matrix on the Ultrasonic Propagation in Silver Nanoparticles: *J. of Metastable and Nanocryst. Mat.* 23, 319-322, January (2005)
6. S. Rajagopalan, S. J. Sharma and R. S. Dashaputre: Ultrasonic Velocity Propagation in Refrigerants through Artificial Neural Network Approach: *J. Mats. & Equip. for Proc. Ind.* 24(12),24-26 (2006)
7. S. Rajagopalan, S. J. Sharma and P. K. Dubey: Measurement of Ultrasonic Velocity with improved Accuracy in Pulse Echo Set-up: *Rev. Sci. Instrum.* 78,085104 (2007)

8. S. Rajagopalan, S. J. Sharma and R. S. Dashaputre: Analysis of Ultrasonic Velocity in Refrigerants using Artificial Neural Network: *Phys. and Chem. of Liquids* 45(3), 351–358(June 2007)
9. M. A. P. S. Tavares, S. Rajagopalan and S. J. Sharma: Comparative Acoustical Studies of Two Goan Churches: *Proceedings of 19th ICA, Madrid (2007) paper rba-16-009, Special issue of the Journal Revista de Acoustica* 38, 3-4 (2007)
10. N. S. Gajbhiye, R. Singh, A. Ahmed, D. K. Panda, S. S. Umare and S. J. Sharma: Redispersible Li⁺ and Eu³⁺ co-doped CdS Nanoparticles: Luminescence Studies: *Pramana* 70(2), 313-321(2008)
11. R. S. Ningthoujam, N. S. Gajbhiye, A. Ahmed, S. S. Umare and S. J. Sharma : Redispersible Li⁺ and Eu³⁺ Co-Doped Nanocrystalline ZnO: Luminescence and EPR Studies. *Journal of Nanoscience and Nanotechnology* 8, 1-4 (2008)
12. S. Rajagopalan, S. J. Sharma, V. M. Pendsey, V. R. Vyaghra and P. K. Dubey: High Resolution Ultrasonic Attenuation Measurements in Pulse-echo Set up: *MAPAN J. Met. Soc. Ind.* 23(4), 245-252 (2008)
13. R. S. Ningthoujam, S. S. Umare, S. J. Sharma, R. Shukla, Sajith Kurian, R. K. Vatsa, A. K. Tyagi, R. Tewari and N. S. Gajbhiye: Magnetic and Mossbauer Studies of Co_{1-x}Li_xFe₂O₄ (x=0,0.2): *Hyperfine Interact* 184, 227-233 (2008)
14. S. S. Umare, R. S. Ningthoujam, S. J. Sharma, S. Shrivastava, Sajith Kurian and N. S. Gajbhiye: Mossbauer and Magnetic Studies on Nanocrystalline NiFe₂O₄ Particles Prepared by Ethylene Glycol Route: *Hyperfine Interact* 184, 235-243 (2008)
15. M. A. P. S. Tavares, S. Rajagopalan, S. J. Sharma and A. P. O. Carvalho: Prediction of Acoustic Comfort and Acoustic Silence in Catholic Churches: *Proceedings of 38th Inter-noise 2009, Ottawa (Canada)* (2009)
16. N. S. Karan, A. Agrawal, P. K. Pandey, P. Smitha, S. J. Sharma, D. P. Mishra and N. S. Gajbhiye: Diffusion Flame Synthesis of Hollow Anatase TiO₂ Nanoparticles: *Mat. Sc. & Engg. B.* 163, 128-133 (2009)
17. M. A. S. M. Tavares, S. Rajagopalan, S. J. Sharma and A. P. O. Carvalho: The Effect of Source Location, Posture and Language on Speech Intelligibility in Goan Churches: *Build. Acoust.* 16(3), 283-297 (2009)
18. G. K. Singh, V. M. Pendsey, S. J. Sharma and S. Rajagopalan: Ultrasonic Velocity Measurements using GSM Network: *J. Instrum. Soc. India* 39(4), 256-258 (2009)
19. A. S. Lanje, S. J. Sharma and R. B. Pode: Magnetic and Electrical Properties of Nickel Nanoparticles prepared by Hydrazine Reduction Method: *Arch. Phys. Res.* 1(1) 49-56 (2010)
20. S. Rajagopalan, S. J. Sharma and V. M. Ghodki: Design of Virtual Sing around System for Precise Ultrasonic Velocity Measurements: *Elect. J. Technical Acoust.* 5, 1-8 (2010)

21. A. S. Lanje, R. S. Ningthoujam, S. J. Sharma, R. B. Pode and R. K. Vatsa: Luminescence Properties of $\text{Sn}_{1-x}\text{Fe}_x\text{O}_2$ Nanoparticles: *Int. J. Nanotech.* 7(9-12)979-988(2010)
22. A. S. Lanje, R. S. Ningthoujam, S. J. Sharma and R. B. Pode : Luminescence and Electrical Resistivity Properties of Cadmium Oxide Nanoparticles: *Ind. J. Pure and Appl. Phys.* 49, 234-238 (2011)
23. G. K. Singh, S. J. Sharma and S. Rajagopalan: Measurement of Ultrasonic Velocity in Liquids using Wireless Technology: SMS: *IOSR J. Appl. Phys.* 1(3), 20-22 (2012)
24. G. K. Singh, S. J. Sharma and S. Rajagopalan: Remote Monitoring of Pulser-receiver setup for Ultrasonic Velocity Measurements using e-mail: *J. Instrum. Soc. Ind.* 42(3), 5-7(2012)
25. A. S. Lanje, S. J. Sharma, R. S. Ningthoujam, J. S. Ahn and R. B. Pode: Low Temperature Dielectric Studies of Zinc Oxide (ZnO) nano-particles Prepared by Precipitation Method: *Adv. Powd. Tech.* 24, 331-335 (2013)
26. S. J. Sharma, A. C. Balharpure, A. S. Pande, S. U. Dubey, G. K. Singh, V. M. Ghodki and S. Rajagopalan: Design of Embedded Sing-around System for Ultrasonic Velocity Measurements in Liquids: *J. Embedd. Syst.* 2(1), 15-17 (2014)
27. A. S. Pande, A. C. Balharpure, S. J. Sharma and S. Rajagopalan: Design of PIC 18F4550 based Pulse Echo Technique for Ultrasonic Velocity Measurements in Gelatin Gels, *Int. J. Sci. Res.* 18-20 (2015)
28. A. S. Pande, A. C. Balharpure, S. J. Sharma and S. Rajagopalan: Touch Screen based Sing-around System for Ultrasonic Velocity Measurements in Liquids, *Int. J. Sci. Res.* 14-17 (2015)
29. Rakhi Vyaghra, S. J. Sharma and S. Rajagopalan: Design of Microcontroller based Multi-frequency Ultrasonic Pulser Receiver: *Int. J. Engg. Res. & Tech.* 6(2), pt. 4 (2016)
30. R. V. Vyaghra, M. P. Dhore, S. J. Sharma and S. Rajagopalan: Development of Simulator for Calibration of Pulsed Instrumentation and Ultrasonic Characterisation, *Int. J. Adv. Sci. & Tech. Res.* 6(5), 347-356(2016)
31. L. P. Deshmukh, K. R. Bagree and S. J. Sharma: Qualitative Analysis of Fruits and Vegetables using Earth's Field Nuclear Magnetic Resonance (EFNMR) and Magnetic Resonance Imaging (MRI), *Int. J. Engg. Res. & Appl.* 7(5) Pt. 2, 26-30 (2017)
32. Tutu Sengupta and Satish Sharma: Urban Area Delineation Using Pattern Recognition Technique, *Int. J. Adv. Remote. Sens. & GIS.* 6(1), 2466-2470 (2018)
33. Amol Gurnule and Satish Sharma: Design of Cost Effective IoT based Remote Terminal Unit, *Special Issue of Int. J. Elect. Comm. Soft. Comput. Sci. & Engg.*, 301-309 (2018)
34. Diwakar Diwedi and Satish Sharma: Design of a Low Cost Cluster Computer Using Raspberry Pi, *IEEE Global Conference on Wireless Computing and Networking (GCWSN 2018)*, 11-15, 2019

35. Tutu Sengupta, Satish Sharma and Prashant Rajankar: Use of Multi-Temporal Satellite Data for Crop Identification and Monitoring, *Int. J. Innov. Sc. & Res. Tech.* 4(3), 478-486 (2019)
36. S. U. Dubey, P. K. Dubey, S. Rajagopalan and S. J. Sharma: Real-time implementation of Kalman Filter to Improve Accuracy in the Measurement of Time of Flight in an Ultrasonic Pulse-echo Setup, *Rev. Sci. Instrum.* 90(2), 025105(1-6), 2019; doi: 10.1063/1.5048966