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Present Position

Associate professor, Department of Electronics and Communication Engineering, College of Engineering Guindy, Anna University, Chennai from November-2014.

Present Additional Responsibility

- TECHNICAL MANAGER, National Hub for Healthcare Instrumentation Development, Anna University, Chennai.

Previous Positions

- Assistant Professor, , College of Engineering Guindy, Anna University, Chennai during October-2008 and November-2014.
- Lecturer, Department of Electronics and Communication Engineering, College of Engineering Guindy, Anna University, Chennai during February-2005 and October-2008.
- Teaching Research Associate, Department of Electronics and Communication Engineering, College of Engineering Guindy, Anna University, Chennai during August-2001 and February-2005.

Previous Additional Responsibility

- Pg Chief Superintendent, Department of Electronics and Communication Engineering, Anna University, Chennai during January-2019 and May-2020.
- Deputy Controller Of Examination, , Anna University, Chennai during September-2015 and March-2018.
- Nri Student Counselor, , Anna University, Chennai during June-2009 and December-2014.

Degree

- ❖ M.E. in Medical Electronics, College of Engineering Guindy, Anna University (1999 - 2001).
- ❖ B.E. in ELECTRONICS AND INSTRUMENTATION ENGG , Annamalai University (1991 - 1995).

Research Degree

- ❖ Ph.D. in Medical Image Processing from Faculty of Information & Communication Engineering, College of Engineering Guindy, Anna University (2001 - 2009).
Title: Automatic Segmentation and Classification of Focal Liver Lesions Using Ultrasound Images.

Area of Specialisation

- Biomedical Instrumentation
- Medical Image Processing

Membership in Professional Organization

- Biomedical Engineering Society of India

Research Guidance

Number of Ph.D Scholars Guided	: 2
Number of Ph.D Scholars Guiding	: 8
Number of M.E./ M.Tech. Projects Guided	: 119
Number of M.E./ M.Tech. Projects Guiding	: 7

Papers Published in Journals

Research Papers Published in International Journals	: 35
Research Papers Published in National Journals	: 3

1. S.Poonguzhali, G.Ravindran, "Evaluation of Feature Extraction Methods for Classification of Liver Abnormalities in Ultrasound Images", International Journal of Biomedical Engineering and Technology, Vol. 1, Issue 2, pp. 134-143 (2007).
2. S.Poonguzhali, G.Ravindran, "Automated detection of abnormal masses in ultrasound images", International Journal of Bio Medical Engineering and Technology, Vol. 1, Issue 3, pp. 250-258 (2008).
3. S.Poonguzhali, G.Ravindran, "Automatic Classification of Focal lesions in Ultrasound Liver images using combined texture features", Information Technology Journal , Vol. 7, Issue 1, pp. 205-209 (2008).
4. D. Sreenivasan, S.Poonguzhali, "An Electronic Aid for Visually Impaired in Reading Printed Text", International Journal of Scientific & Engineering Research, Vol. 4, Issue 5, pp. 198-203 (2013).

5. Mohanavelu K., Adalarasu K., Srinivasan J., Kartik S.N., Poonghuzhali S., Padaki V.C, "Cognitive Workload Evaluation Using Wavelet Packet Decomposition (WPD) of EEG", International Congress on Neurology and Epidemiology, published by Karger. pp. 267 (2013).
6. M.A.Shahira Banu, S.Vanaja, S.Poonguzhali, "UWB Microwave Breast Cancer Detection using SAR", International Journal of Advanced Electrical and Electronics Engineering, Vol. 2, Issue 2, pp. 87-91 (2013).
7. K.Geetha, S.Poonguzhali, "Diagnosis of Liver Tumor using 3D segmentation method for selective internal radiation therapy", International Journal of Advanced Electrical and Electronics Engineering, Vol. 2, Issue 2, pp. 115-119 (2013).
8. Nithyaa, A.N, Poonguzhali.S, Kanchana, D., "Management of Hemiplegia for adult survivors: A review on therapeutic procedures", International Journal of Applied Engineering Research, published by Research India Publications. Vol. 9, Issue 14, pp. 2657-2666 (2014).
9. Minerva.R, Saranya.S, Poonguzhali.S, " Gait Analysis Using Wearable MEMS Tri-Axial Accelerometer System", Applied Mechanics and Materials, Vol. 573, pp. 830-835 (2014).
10. Prabhakar Telagarapu, S. Poonguzhali, "Feature Based Active Contour Method for Automatic Detection of Breast Lesions Using Ultrasound Images", Applied Mechanics and Materials, Vol. 573, pp. 471-476 (2014).
11. L. Vidhya, S. Saranya, S. Poonguzhali, "Analysis of lower extremity muscle activation using EMG", Applied Mechanics and Materials, Vol. 573, pp. 797-802 (2014).
12. R.SREEJA, E.VINODHINI, S.VANAJA, S. POONGUZHALI, "Radar Based Breast Cancer Detection Using SAR", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, published by Research and Reviews. Vol. 3, Issue 2, pp. 477-483 (2014).
13. Prabhakar Telagarapu, Poonguzhali S, "Analysis of Contourlet Texture Feature Extraction to Classify the Benign and Malignant Tumors from Breast Ultrasound Images", International Journal of Engineering and Technology, Vol. 6, Issue 1, pp. 293-305 (2014).
14. Praveen I.V., Kamalakkanan Ravi, Balamurali M and Poonguzhali. S, "Assistive Device for the speech impaired", Electronics for You, Vol. 47, Issue 10, pp. 116-119 (2015).
15. Allwyn S. Rajamani, Ashwin Rammohan , Sasikala Mohan, Poonguzhali Srinivasan, Shanmugam Arthanari, Umamaheshwaran Muthusamy, Vijayanand Sivasubramanian, Palaniappan Ravichandran, "Prospective Evaluation of Innovative Force Assessing Firmware in Simulation to Improve the Technical Competence of Surgical Trainees", World Journal of Surgery, Vol. 40, Issue 14, pp. 773-778 (2015).
16. Umamaheshwari.V and Poonguzhali.S, "Automatic Detection of Lumbar Spine from Ultrasound Images Using Fuzzy Clustering Techniques", Research Journal of Pharmaceutical, Biological and Chemical Sciences, Vol. 7, Issue 4, pp. 920-928 (2016).
17. S.Poonguzhali, P.Ravichandran, M.Sasikala , Ashwin K Whitchurch, A.Rajan, "Design and development of ligature force measurement system for whipples surgery", Biotechnology and Biomedical sciences , Vol. 2, Issue 1, pp. 48-50 (2016).

18. Telagarapu Prabhakar, S Poonguzhali, "Filtering Based Feature Extraction to Classify the Benign and Malignant Lesions from Breast Ultrasound Images", Journal of Medical Imaging and Health Informatics, published by American Scientific Publishers. Vol. 6, Issue 6, pp. 1469-1474 (2016).
19. Telagarapu Prabhakar and Poonguzhali Srinivasan, "Denoising and automatic detection of breast tumor in ultrasound images", Asian Journal of Information and Technology, published by Medwell Publishing. Vol. 15, Issue 18, pp. 3506-3512 (2016).
20. Vanaja Selvaraj, Poonguzhali Srinivasan, Rahul Krishnan, "A Compact UWB Antenna for IEEE802.11a Standard Communication System", International Journal of Control Theory and Applications, Vol. 9, Issue 5, pp. 2363-2368 (2016).
21. Telagarapu Prabhakar and Poonguzhali Srinivasan, "Analysis of Level set methods for Lesion Segmentation on Breast Ultrasound Images", Journal of Pure and Applied Mathematics, published by Academic Publications, Ltd.. Vol. 114, Issue 10, pp. 119-130 (2017).
22. Vanaja Selvaraj, Poonguzhali Srinivasan, Jegadish Kumar.K.J, Rahul Krishnan, Karunakaran Annamalai, "Highly Directional Microstrip Ultra Wide Band Antenna for Microwave Imaging System", Acta Graphica, published by Acta Graphica. Vol. 28, Issue 1, pp. 35-40 (2017).
23. K.Mohanavelu, R.Lamshe, S.Poonguzhali, M.Jagannath, "Assessment of Human Fatigue during Physical Performance using Physiological Signals: A Review", Biomed Pharmacol Journal, published by Oriental Scientific Publishing Company. Vol. 10, Issue 4, (2017).
24. Vanaja Selvaraj and Poonguzhali Srinivasan, "Interaction of an EM wave with the breast tissue in a microwave imaging technique using an ultra-wideband antenna", Biomedical Research, published by Allied Academies. Vol. 28, Issue 3, pp. 1025-1030 (2017).
25. Chelladurai . R, Selvakumar.R, S. Poonguzhali,, "Automatic segmentation of multiple lesions in ultrasound breast image", International Journal of Engineering & Technology , published by SPC. Vol. 7, Issue 3, pp. 665-670 (2018).
26. Mohanavelu, K., Poonguzhali, S., Banuvathy, R., Adalarasu, K., Jagannath, M., " Biosignal processing approaches for detecting mental fatigue", Indian Journal of Public Health Research and Development, published by R.K. Sharma, Institute of Medico-Legal Publication. Vol. 9, Issue 10, pp. 236-241 (2018).
27. Vanaja Selvaraj, Divya Baskaran, P.H. Rao, Poonguzhali Srinivasan & Rahul Krishnan, "Breast Tissue Tumor Analysis Using Wideband Antenna and Microwave Scattering", IETE Journal of Research, published by Taylor and Francis. Vol. 65, Issue 1, pp. 1-8 (2018).
28. Telagarapu Prabhakar and Poonguzhali Srinivasan, "ADAPTIVE HAAR FILTERING BASED MORPHOLOGICAL FEATURE EXTRACTION TO CLASSIFY THE TUMOR IN BREAST ULTRASOUND IMAGES", International Journal of Pure and Applied Mathematics, published by Academic Publications, Ltd.. Vol. 120, Issue 6, pp. 10657-10676 (2018).
29. Chelladurai . R, Selvakumar.R, S. Poonguzhali, "Automatic segmentation of multiple lesions in ultrasound breast image", International Journal of Engineering & Technology, published by SPC. Vol. 7, Issue 3, pp. 665-670 (2018).

30. V. Umamaheswari, P.M. Venkatasai & S. Poonguzhali, " A Multi-Level Set Approach for Bone Segmentation in Lumbar Ultrasound Images", IETE Journal of Research, published by Taylor and Francis. pp. 1-13 (2019).
31. Telagarapu Prabhakar,S.Poonguzhali, " Filtering and Statistical Feature based Automatic Detection of Breast Lesions in Ultrasound Images", International Journal of Innovative Technology and Exploring Engineering, published by Blue Eyes Intelligence & Sciences Publication. Vol. 8, Issue 3, pp. 63-67 (2019).
32. Srividhya, G., Saranya, S., Poonguzhali, S., "Effect of BMI on lower limb muscle coactivation during leg strengthening exercises", Indian Journal of Public Health Research and Development, published by R.K. Sharma, Institute of Medico-Legal Publication. Vol. 10, Issue 5, pp. 805-809 (2019).
33. Vanaja Selvaraj, Poonguzhali Srinivasan, Divya Baskaran, Rahul Krishnan, " Characterization of Breast Tissue using compact Microstrip antenna", International Journal of Biomedical Engineering and Technology , published by InderScience. Vol. 31, Issue 2, pp. 161-175 (2019).
34. AN Nithyaa, S Poonguzhali, N Vigneshwari, "'Three-dimensional modelling of wheelchair contrived with lower limb exoskeleton for right hemiplegic dysfunction", The Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine., published by SAGE. Vol. 234, Issue 7, pp. 652-659 (2020).
35. S. Saranya S. Poonguzhali, S.Karunakaran, "Gaussian mixture model based clustering of Manual muscle testing grades using surface Electromyogram signals", Physical and Engineering Sciences in Medicine, published by Springer. (2020).
36. S. Saranya, S. Poonguzhali, Madhu Baala,S. Karunakaran, " S. Saranya, S. Poonguzhali, Madhu EMG Analysis of Lumbar Muscle Activations During Resisted and Unresisted Core Strength Exercises", International Journal of Biomedical and Clinical Engineering, published by IGI Global. Vol. 9, Issue 2, pp. 12-24 (2020).
37. K. Mohanavelu, S. Poonguzhali, D. Ravi, Pushpendra K. Singh, Mistu Mahajabin, Ramachandran K., Upendra Kumar Singh, Srinivasan Jayaraman, "Cognitive Workload Analysis of Fighter Aircraft Pilots in Flight Simulator Environment", Defence Science Journal, published by Defence Scientific Information & Documentation Cen. Vol. 70, Issue 2, pp. 131-139 (2020).
38. Nijisha Shajil, Sasikala Mohan, Poonguzhali Srinivasan, Janani Arivudaiyanambi Arunnagiri Arasappan Murrugesan, " Multiclass Classification of Spatially Filtered Motor Imagery EEG Signals Using Convolutional Neural Network for BCI Based Applications", Journal of Medical and Biological Engineering , published by Springer. Vol. 40, Issue 1, pp. 663-672 (2020).

Papers Presented in Programmes

Research Papers Presented in International Programmes	: 40
Research Papers Presented in National Programmes	: 44

1. Poonguzhali.S and Ravindran.G, "Segmentation of ultrasound images using feature based region growing" presented in a International level conference on BIO medical Electronics and telecommunications, organised by Andhra University, India from 09-Dec-2004 to 10-Dec-2004.
2. Poonguzhali.S, Ravindran.G, "Classification of tissue characteristics in Ultrasound images using Texture Analysis" presented in a National level conference on Biomedical Engineering, organised by College of Engineering Gitam, Visakhapatnam, India from 23-Dec-2004 to 24-Dec-2004.
3. Poonguzhali .S, Ravindran.G, "Classification of tissue characteristics in ultrasound images using Run length based texture analysis" presented in a National level conference on Technological Trends, organised by 6 th National conference on Technological Trends, India from 23-Mar-2005 to 23-Mar-2005.
4. Poonguzhali.S and Ravindran.G, "Automatic segmentation of masses in Ultrasound Images" presented in a International level conference on Cognition and recognition, organised by P.E.S College of Engineering, India from 22-Dec-2005 to 23-Dec-2005.
5. Srinivasa Goud, Poonguzhali.S, Ravindran.G, "Comparative Analysis of various Region Growing Algorithms for segmentation of masses on ultrasound Image" presented in a National level conference on communication Technologies, India from 10-Mar-2006 to 11-Mar-2006.
6. Anitha, Poonguzhali.S, "Ultrasonic Tissue Characterization using Gabor features" presented in a National level conference on Communication Technologies, organised by National conference on communication Technologies, India from 10-Mar-2006 to 11-Mar-2006.
7. Selvaraj.D, Poonguzhali.S, "Region growing algorithm based on extended gradient vector flow field for ultrasonic image segmentation" presented in a National level conference on Advances in embedded system and VLSI design, organised by National conference on the advances in embedded system and VLSI design, India from 22-Mar-2006 to 22-Mar-2006.
8. Selvaraj.D, Poonguzhali.S, "Segmentation of ultrasound image based on extended gradient vector flow model" presented in a National level conference on Signals, systems and communication, organised by National Conference on signals, systems and communication, India from 29-Mar-2006 to 29-Mar-2006.
9. Lakshmidevi.K, Poonguzhali.S, "Comparison of performance of feature extraction methods in classifying abnormalities in ultrasound Liver images" presented in a National level conference on Trends in Industrial and commercial Application of electronics, organised by National conference on Trends in Industrial and commercial Application of electronics, India from 26-Apr-2006 to 26-Apr-2006.
10. Anitha., Poonguzhali.S, Ravindran.G, "Classification of Liver abnormalities in ultrasound Image using Neural Network by gabor feature" presented in a International level conference on Intelligent systems and control, organised by Karpagam College of Engineering, India from 27-Apr-2006 to 28-Apr-2006.
11. Poonguzhali.S, Ravindran.G, "Performance evaluation of feature extraction methods for classifying liver abnormalities in ultrasound images using neural network" presented in a International level conference on EMBS, organised by IEEE, United States of America from 31-Aug-2006 to 03-Sep-2006.

12. Lakshmi devi.K, Poonguzhali.S, Ravindran.G, "Comparison of feature extraction methods in classifying Abnormalities in Ultrasound Images" presented in a International level conference on Frontier Technologies Need for the industry, Business and Education, organised by ISTE Chapter , India from 06-Sep-2006 to 08-Sep-2006.
13. Poonguzhali.S , Ravindran G., "A complete Automatic Region Growing method for segmentation of masses on ultrasound Images" presented in a International level conference on IEEE-Biomedical and pharmaceutical Engineering, organised by Nanyang Technological University, Singapore from 11-Dec-2006 to 14-Dec-2006.
14. Deepalakshmi.B, Poonguzhali.S, Ravindran.G, "Optimal feature selection and automatic classification of abnormal masses in ultrasound liver images" presented in a International level conference on IEEE-Signal processing and Networking, organised by MIT Campus, Anna University, India from 22-Feb-2007 to 24-Feb-2007.
15. Poonguzhali .S, Ravindran.G, "Evaluation of speckle Filtering Techniques in Ultrasound Imaging of the Abdomen" presented in a National level conference on Advanced Communication Techniques, organised by Alagappa Chettiar College of Engg. & Tech., India from 23-Apr-2007 to 23-Apr-2007.
16. Sujatha.B, Poonguzhali.S, Ravindran.G, "Automatic Detection and segmentation of Lesions in Ultrasound Liver Image" presented in a National level conference on Emerging Technologies, organised by TPGIT, Vellore, India from 25-Apr-2007 to 25-Apr-2007.
17. Moorthy.M, Poonguzhali.S, "Segmentation of medical images of the brain by Neural Network" presented in a National level conference on Trends in Communication, organised by National Conference on Trends in Communication, India from 26-Apr-2007 to 26-Apr-2007.
18. Anandaraman.G, Poonguzhali.S, Ravindran.G.(, "Performance Evaluation of speckle filtering techniques in ultrasound images of the Abdomen using Texture analysis" presented in a International level conference on Emerging Trends in High performance Architecture, Algorithm and computing, India from 27-Jul-2007 to 28-Jul-2007.
19. Poonguzhali.S, Deepalakshmi.B, G.Ravindran, "Automatic classification of focal liver lesions in Ultrasound Liver images using combined Texture parameter Vector" presented in a International level conference on Information systems and Computer Engineering, organised by Waseda University, Japan from 06-Aug-2007 to 09-Aug-2007.
20. Poonguzhali.S, Sujatha B, Ravindran.G, "Automatic Detection and Segmentation of Lesions in ultrasound Liver images based on Region growing" presented in a International level conference on Information systems and Computer Engineering, organised by Waseda University, Japan from 06-Aug-2007 to 09-Aug-2007.
21. Deepalakshmi.B, Poonguzhali.S, G.Ravindran, "Automatic Classification of Focal Lesions in Ultrasound Liver Images using Principal component Analysis and Neural Networks" presented in a International level conference on IEEE EMBS, organised by IEEE, France from 23-Aug-2007 to 26-Aug-2007.
22. Anitha.,Poonguzhali.S.,Ravindran.G, "Development of a portable Colorimeter for Biochemical Analysis" presented in a National level conference on Innovations in biotechnology and their Commercialization, organised by Adhyaman college of Engineering, India from 16-Apr-2008 to 16-Apr-2008.

23. Priya.M, Poonguzhali.S, "Fractal Feature Analysis for Classification of liver sonogram based on Wavelets" presented in a National level conference on Recent Trends in Electronics, Computers and Communication, organised by MIT Anna University, India from 22-Apr-2008 to 22-Apr-2008.
24. Jayasree.T, Poonguzhali.S, "Control of wheelchair using Voice Recognition technology" presented in a National level conference on Signals, Systems and Communication, organised by 4th National Conference on Signals, Systems and Communication, India from 23-Apr-2008 to 23-Apr-2008.
25. Guhapriya.S, Poonguzhali.S, "Digital Eye Camera" presented in a National level conference on Signals, Systems and Communication, organised by 4th National Conference on Signals, Systems and Communication, India from 23-Apr-2008 to 23-Apr-2008.
26. Sherly.V, Poonguzhali.S, "Determination of Corneal Parameters and Endothelial Cell Density Using Slit lamp" presented in a National level conference on Signals, Systems and Communication, India from 23-Apr-2008 to 23-Apr-2008.
27. Punitha Mary.P, Poonguzhali.S, "Contrast enhancement method for digital cephalic radiographs using smoothed Gamma Map" presented in a National level conference on Recent Trends in Communication Techniques, organised by NoorulIslam College of Engineering, India from 25-Apr-2008 to 25-Apr-2008.
28. Priya.M, Poonguzhali.S, "Texture Classification and Segmentation of MRI images using Sub-band filtering" presented in a National level conference on Recent Trends in Communication Techniques, organised by NoorulIslam College of Engineering, India from 25-Apr-2008 to 25-Apr-2008.
29. Poonguzhali.S , Ravindran G., "Combining texture features with extended gradient vector flow field for detection and segmentation of Liver lesions in ultrasound Images" presented in a International level conference on Bio medical Engineering, organised by University of Malaya, Malaysia from 25-Jun-2008 to 28-Jun-2008.
30. Jayandhi.G, Poonguzhali.S, "Wheel Chair Movement Control by Recognition of Hand Gesture" presented in a National level conference on Signals and communication Technologies, organised by Anna University, Chennai from 10-Apr-2009 to 11-Apr-2009.
31. Varshini.K.P.S, Poonguzhali.S, "Automatic Detection of Closed Angle Glaucoma Using Ultrasound Images of Eyes" presented in a National level conference on Signal and Image processing, organised by National Conference on Signal and Image processing, India from 17-Apr-2009 to 17-Apr-2009.
32. C.Geetha, Poonguzhali.S, "Design of an electronic tonometer for detection of a glaucoma" presented in a National level conference on Digital Convergence, organised by Second National Conference on Digital Convergence, India from 18-Apr-2009 to 18-Apr-2009.
33. Veni.N, Poonguzhali.S, "Hand talk: Assistive Technology for the Deaf and Dumb" presented in a National level conference on Digital Convergence, organised by Second National Conference on Digital Convergence, India from 18-Apr-2009 to 18-Apr-2009.

34. Vinothkumar.D, Poonguzhali.S, "Antibiogram through 96 well microtitre fluorescent Image analysis" presented in a National level conference on Emerging Trends in Engineering and Technology, India from 21-Apr-2009 to 21-Apr-2009.
35. Sathies Kumar. T, Poonguzhali.S, "Detection of tumors in ultrasound breast images" presented in a National level conference on Emerging Trends in Engineering and Technology, India from 21-Apr-2009 to 21-Apr-2009.
36. Asha N.D, Poonguzhali.S, "An Instrumentation system for measuring Low physiological Pressures" presented in a National level conference on Recent advances in Communication Engineering, India from 24-Apr-2009 to 24-Apr-2009.
37. Linda Simon Fernando, Poonguzhali.S, "Biomechanical Finite element analysis of human femur bone" presented in a National level conference on Convergent Communication technologies in Electronics and Communication Engineering, organised by Thiagarajar Engineering College, India from 02-May-2009 to 02-May-2009.
38. Raja.M, Poonguzhali.S, "Region –Based power – Law transformation method for improved visualization of CTA images" presented in a National level conference on Intelligent Computing and Automation, organised by Thiagarajar College of Engineering, India from 02-May-2009 to 02-May-2009.
39. I.Arul Albert , Poonguzhali.S, "Automated Perimetry for Analysing Visual Field Defects" presented in a National level conference on Emerging trends in advanced computing, organised by Jayaram College Of Engineering & Technology, India from 03-May-2010 to 04-May-2010.
40. C.Muralidharan, Poonguzhali.S, "Cardio aid for paraplegic using game cycle exercise system" presented in a National level conference on Information, Networking and Communication technologies, organised by Dr. Mahalingam college of engineering and technology, India from 06-May-2010 to 07-May-2010.
41. Seema C.S, Poonguzhali.S,MuraleedharanC.V, "Characterization techniques for identifying regurgitation from closing sound of tilting disc artificial heart valves" presented in a International level conference on System Dynamics and Control, organised by Manipal University, India from 19-Aug-2010 to 20-Aug-2010.
42. Prathiba.S,Poonguzhali.S, "Automatic voice activated Bio-Mechatronic artificial hand for writing for wrist amputees" presented in a National level conference on Control,Communication and Information Technology, organised by Easwari Engg College, India from 01-Apr-2011 to 02-Apr-2011.
43. Kavitha Kannan, Poonguzhali.S, "Segmentation of Appendiceal Orifice in a Colonoscopic Video" presented in a National level conference on Next Generation Communication Systems and Techniques, organised by Sri Venkateshwara College of Engineering, India from 02-Apr-2011 to 02-Apr-2011.
44. Vani Damodaran, Srinivasa Jayaraman,Poonguzhali. S, "A Novel method to extract ECG morphology from scanned ECG records" presented in a International level conference on IEEE-Biomedical and Pharmaceutical Engineering, organised by Nanyang Technical University, Singapore from 14-Apr-2011 to 16-Apr-2011.

45. Vimal Prabhu.P,Poonguzhali.S, "Detection of Vascular elasticity using photo plethysmography" presented in a National level conference on Digital Convergence, organised by Fourth National conference and Digital Convergence, India from 20-Apr-2011 to 20-Apr-2011.
46. K.N.T. Karunagaran, Mohanavelu.K and Poonguzhali.S, "Measurement of energy Expenditure During Human Physical Activities Using Wearable Triaxial MEMS Accelerometer" presented in a National level conference on Communication Networks and Sensor Technology, India from 27-Apr-2011 to 27-Apr-2011.
47. G.Thiyagarajan,Poonguzhali.S, "Cardiac Aid for the Paraplegic patient" presented in a National level conference on Signal Processing, Communication and VLSI Design, organised by Anna University of Technology, India from 06-May-2011 to 07-May-2011.
48. Mohamed Faeik Ruzaij; S.Poonguzhali, "Design and implementation of low cost intelligent wheelchair" presented in a International level conference on IEEE-Recent Trends In Information Technology, organised by MIT, CHENNAI, India from 20-Apr-2012 to 21-Apr-2012.
49. Athertya, Jiyo.S.; Poonguzhali.S, "3D CT image reconstruction of the vertebral column" presented in a International level conference on IEEE-Recent Trends In Information Technology, organised by MIT, CHENNAI, India from 20-Apr-2012 to 21-Apr-2012.
50. Pounraj.T, Poonguzhali.S, "Microwave characterization of Breast Cancer Model" presented in a International level conference on Electromagnetic Interference and Compatibility, India from 23-Apr-2012 to 24-Apr-2012.
51. R.Chelladurai, Poonguzhali.S, "Automatic location of Lesions in Ultrasound Breast Images" presented in a International level conference on Electronics and Electrical Engineering, India from 26-Apr-2012 to 27-Apr-2012.
52. Ponnuraj kirthi priya, Poonguzhali.S, "Detection of Breast cancer using Microwave Absorption Loss" presented in a International level conference on Electronics and Communication Engineering, India from 27-Apr-2012 to 28-Apr-2012.
53. M.NareshKumar, Poonguzhali.S, P.Ravichandran, "Development of Tactile Sensor based Suture controller" presented in a International level conference on Computing and Communication Engineering, organised by Dr.MGR Educational and Research Institute University, India from 27-Apr-2012 to 28-Apr-2012.
54. Sindhuja.S, Poonguzhali.S, "Ultrasound bone image segmentation of the lumbar vertebra" presented in a International level conference on International Conference on recent trends in computer science, India from 30-Apr-2012 to 30-Apr-2012.
55. M.Vasanth Kumar,Poonguzhali.S, "Automated Visual Saliency based Hybrid Compression of Medical Images" presented in a National level conference on Computers and Information Technology in Helathcare Systems, organised by SMK FOMRA Institute of Technology, India from 27-Feb-2013 to 27-Feb-2013.
56. K.Geetha, S.Poonguzhali, "Diagnosis of liver tumor using 3-D segmentation for selective internal radiation therapy" presented in a International level conference on Advanced Electrical and Electronics Engineering, India from 28-Mar-2013 to 29-Mar-2013.

57. D.Sreenivasan, Poonguzhali.S, "An Electronic Aid for Visually Impaired in Reading Printed Text" presented in a National level conference on Advancements in Electronic Technology and Allied Science in Engineering, India from 17-Apr-2013 to 18-Apr-2013.
58. P.Sriram,Dr.S.Poonguzhali,V.Umamaheswari, "Automatic Registration of CT And Ultrasound Image for Pedicle Screw Placement" presented in a International level conference on Recent Advances in Engineering and Technology, organised by SSN College of Engineering, India from 24-Apr-2013 to 24-Apr-2013.
59. B.Balasuganya, S.Poonguzhali, Telagarapu Prabhakar, "An evaluation of different feature extraction methods for classification of tumor in breast ultrasound images" presented in a International level conference on International Conference on Computation of Power, Energy, Information and Communication, organised by Adhiparasakthi Engineering College, India from 25-Apr-2013 to 25-Apr-2014.
60. T.D.Poondevi, S.Poonguzhali, "Design and Development of Exoskeleton Orthosis for Upper Limb" presented in a National level conference on Cloud Computing and Network Security, organised by MIT Anna University, India from 25-Apr-2013 to 24-Apr-2013.
61. T.Allwin Geoffry Prince, S.Poonguzhali, K.Mohanaavelu, "Computation of kinematic parameters of human knee joint using single wireless MEMS triaxial Accelerometer" presented in a National level conference on Embedded Systems, VLSI & Signal Processing, organised by Sri Lakshmi Ammal Engineering College, India from 26-Apr-2013 to 26-Apr-2013.
62. S.Dinesh, S.Poonguzhali, P.Ravichandran, "Development of an automated wireless system for suture control" presented in a National level conference on Recent Trends in Computer Applications and Technology, organised by Jaya Engineering College, India from 26-Apr-2013 to 26-Apr-2013.
63. M.A.Shahira Banu, S.Vanaja, S.Poonguzhali, "UWB Microwave Detection of Breast Cancer using SAR" presented in a International level conference on International Conference on Energy Efficient Technologies for Sustainability, India from 16-May-2013 to 17-May-2013.
64. S.Shanmuga Priya, Dr.S.Poonguzhali, "An intensity based Medical Image Registration using Genetic Algorithm" presented in a International level conference on International Conference on Innovations in Electronics, Communications & Computing, organised by Vellammal Engineering College, India from 10-Apr-2014 to 11-Apr-2014.
65. Prabhakar Telagarapu, Poonguzhali.S, "Feature Based Active Contour Method for Automatic Detection of Breast Lesions Using Ultrasound Images" presented in a International level conference on Advancements in Automation and Control, organised by Syed Ammal Engineering College, Ramanathapuram, India from 11-Apr-2014 to 12-Apr-2014.
66. Kathiravan.M, Prabhakar Telegarapu, Poonguzhali.S, "Optimal Feature Selection and Classification of Breast Lesion using Ultrasound Images" presented in a International level conference on Emerging Trends in Science, Engineering and Technology, organised by Jerusalem college of engineering, India from 18-Apr-2014 to 19-Apr-2014.
67. Venkatesh K, Dr. S. Poonguzhali, K. Mohanaavelu, Dr. K. Adalarasu, "Sleep Stages Classification Using Neural Network Using Single Channel EEG" presented in a International level conference on Computer Science, Electronics and Communication Engineering, organised by IRD india, India from 18-Apr-2014 to 19-Apr-2014.

68. Sandeep A, Poonguzhali.S, "Development of Mobile Based Voice Recognition System for Paralyzed Using Neural Network" presented in a International level conference on Recent Trends in Computer Science Engineering, India from 02-May-2014 to 02-May-2014.
69. Geetha.P, Poonguzhali.S, "Electronic Gloves Communication for Speech Impaired" presented in a National level conference on Recent Trends in Electronics Engineering & Communication Network, organised by Thangavelu Engineering College, India from 03-May-2014 to 03-May-2014.
70. Sadhiq Basha.S, Poonguzhali.S, "Ultrasound Liver Image Segmentation and Classification" presented in a National level conference on Recent Trends in Electronics Engineering & Communication Network, organised by Thangavelu Engineering College, India from 03-May-2014 to 03-May-2014.
71. Madhavan.R, Vanaja.S, Poonguzhali.S, "Microwave based Breast Cancer Detection and Localization Using Array of Antenna" presented in a International level conference on Science, Engineering and Technology, organised by VIT University, India from 06-May-2014 to 07-May-2014.
72. Shanmugam.A, Poonguzhali.S., "Rehabilitation Aid for Upper Limb Movement" presented in a National level conference on Innovative & Emerging Trends in Engineering and Technology, organised by Panimalar Institute of Technology, India from 06-May-2014 to 06-May-2014.
73. Lamshe R, Poonguzhali S, "Selection of Physiological Features for Fatigue Recognition" presented in a National level conference on Recent Advances in Computer Technologies (NCRACKT), India from 07-Mar-2015 to 07-Mar-2015.
74. Subhrata Sarangi, Umamaheswari V, Poonguzhali S, "An Automated Approach for Spine Detection in Prenatal Ultrasound Image" presented in a National level conference on Recent Advances in Computer Technologies (NCRACKT), India from 07-Mar-2015 to 07-Mar-2015.
75. Renuga V,Prabhakar Telagarapu, Poonguzhali S, "Morphological and Fractal Feature extraction to classify the tumor using breast ultrasound images" presented in a International level conference on Technological convergence for Information, Health, Food and Energy Security(TC-IFES 2015), organised by Central Leather Research Institute(CLRI), India from 16-Apr-2015 to 17-Apr-2015.
76. Neela Harish, S.Poonguzhali, "Design and development of hand gesture recognition system for speech impaired people" presented in a International level conference on IEEE-Industrial Instrumentation and Control (IIC), India from 28-May-2015 to 30-May-2015.
77. L.Manigandan, S.Saranya, S.Poonguzhali, "Design and Development of Multichannel wireless EMG system for Movement Analysis" presented in a International level conference on Development in Engineering Research, India from 28-May-2015 to 30-May-2015.
78. V. Renugadevi, S.Poonguzhali, "Simulation of Coronary Artery and analysis of its characteristics" presented in a International level conference on Development in Engineering Research, India from 28-May-2015 to 30-May-2015.

79. S.Poonguzhali, P.Ravichandran, M.Sasikala, Ashwin K Whitchurch, A.Rajan, "Design and development of ligature force measurement system for whipples surgery" presented in a International level conference on Public Health: Issues, Challenges, Opportunities, prevention, awareness, India from 15-Jan-2016 to 16-Jan-2016.
80. Telegrapu Prabhakar, S.Poonguzhali, "Evaluation of texture feature to classify the breast tumor from Ultrasound image" presented in a International level conference on Biomedical Systems, Signals and Images, organised by IIT Madras, India from 24-Feb-2016 to 26-Feb-2016.
81. K.K.Megavarthini, B.Amurutha, A.Keerthana, S.Poonguzhali, G.Arumaikannu, "Pneumatic Artificial Muscle Actuator for Ankle foot orthosis" presented in a International level conference on Biomedical Systems, Signals and Images, organised by IIT Madras, India from 24-Feb-2016 to 26-Apr-2016.
82. Telegrapu Prabhakar, S.Poonguzhali, on Automatic Detection and Classification of Benign and Malignant Lesions in Breast Ultrasound Images using Texture Morphological and Fractal Features, organised by Hokkaido University, Hokkaido, Sapporo, Japan from 31-Aug-2017 to 02-Sep-2017.
83. Mubtasim Rafid Chowdhury, S. Poonguzhali, Aravind Balan K R, Suresh R, Md. Nurunnabi Mollah, M. Raihan and Abu Shakil Ahmed, "Simplistic Approach to Design a Prototype of an Automated Wheelchair Based on Electrooculography " presented in a International level conference on Computer, Communication, Chemical, Material and Electronic Engineering (IC4ME2), Rajshahi, Bangladesh from 08-Feb-2018 to 09-Feb-2019.
84. Saranya.S, Poonguzhali.S, Madhubaala, Karunakaran.S, "Assessment of Lumbar Muscle Activation during core strength exercises" presented in a International level conference on 1st IEEE EMBS International student conference, organised by RMIT, India from 19-Dec-2018 to 21-Dec-2018.

Books Published

1. "Artificial Intelligence and Evolutionary Computations in Engineering Systems. Advances in Intelligent Systems and Computing" authored by Prabhakar T and Poonguzhali S and published by Springer, Singapore.(2018)

Current Sponsored Projects

1. "Design and Development of Biopotential Signal Analysis System for control of Mobility Assistive device", funded by LSRB (April-2017 - April-2020). Project Cost: 3055580.00.
2. "University with Potential for Excellence (UPE) - Automated biomedical device development of Automated AntibioGram cum Pathogen Identification device", funded by UGC (March-2017 - March-2020). Project Cost: 32950000.00.
3. "Real Time Urinometer", funded by DST (September-2018 - September-2019). Project Cost: 730000.00.

Sponsored Projects Completed

1. "Development of Tactile Sensor based ligature controller to assess pancreatic leak after Whipple's procedure", funded by DST (February-2013 - February-2017). Project Cost: 2960000.00.
2. "Establishing a Facility for Calibration and Testing of Critical Care Medical Equipment", funded by DST (December-2011 - December-2015). Project Cost: 29800000.00.
3. "Assist Device for speech impaired", funded by CTDT, Anna University (February-2014 - August-2014). Project Cost: 25000.00.
4. "Pneumatic Muscle Actuator For Ankle Foot Orthosis", funded by CTDT, Anna University (February-2015 - August-2015). Project Cost: 25000.00.
5. "Design and Development of Force Platform for Analyzing Human Body Balance", funded by CTDT, Anna University (July-2018 - January-2019). Project Cost: 25000.00.
6. "Cuffless Noninvasive Continuous Blood Pressure Measurement using Cardiac Rhythm and Photoplethysmogram", funded by CTDT, Anna University (July-2018 - January-2019). Project Cost: 25000.00.
7. "Electronic Talking Aid to Read Printed Text for Visually Impaired", funded by CTDT, Anna University (July-2018 - January-2019). Project Cost: 25000.00.

Programme Organized

1. Co-ordinator, National level Short Course on "Faculty Development Programme on Radiological Equipments" from 24-Nov-2008 to 30-Nov-2008.
2. Co-ordinator, National level workshop on "Gait Analysis and Rehabilitation" from 04-Oct-2017 to 05-Oct-2017.

Programme Attended

1. Participated in a National level workshop on "VLSI and Embedded System Tool" organized by Anna University, India from 25-Jan-2005 to 25-Jan-2005.
2. Attended a National level Short Course on "Recent Trends in Process Control and Instrumentation" organized by SRM Institute of Science and Technology, India from 22-Nov-2005 to 24-Nov-2005.
3. Attended a National level Short Course on "Recent Trends in Biomedical Instrumentation" organized by SRM Institute of Science and Technology, India from 25-Nov-2005 to 26-Nov-2005.
4. Participated in a National level workshop on "Biomedical Instrumentation" organized by Jaya Engineering College, India from 14-Dec-2005 to 15-Dec-2005.

5. Attended a National level seminar on "Open Source Softwares" organized by Jaya Engineering College, India from 19-Aug-2006 to 20-Aug-2006.
6. Participated in a National level workshop on "Real Time Embedded Systems" organized by Anna University, India from 07-Apr-2007 to 07-Apr-2007.
7. Participated in a International level workshop on "Modern Image Processing" organized by RMK Engineering College, India from 02-Aug-2007 to 03-Aug-2007.
8. Participated in a National level workshop on "Recent trends in Biomedical Signal Processing and Instrumentation" organized by PSG College of Technology, India from 30-Aug-2008 to 30-Aug-2008.
9. Attended a National level seminar on "Graphical System Design using Lab view" organized by NITTTR, India from 06-Feb-2009 to 06-Feb-2009.
10. Participated in a National level workshop on "Embedded Systems" organized by Anna University, India from 20-Feb-2009 to 20-Feb-2009.
11. Participated in a International level workshop on "Nano science and Technology" organized by Anna University, India from 23-Feb-2009 to 27-Feb-2009.
12. Attended a National level Short Course on "Faculty Development Training Programme on Power Electronics" organized by Anna University, India from 01-Jun-2009 to 07-Jun-2009.
13. Attended a National level Short Course on "Faculty Development Training Programme on Electronic Circuits" organized by Anna University, India from 15-Jun-2009 to 21-Jun-2009.
14. Attended a National level Short Course on "National Symposium on Advanced Medical Imaging" organized by SRM University, India from 04-Sep-2009 to 05-Sep-2009.
15. Participated in a National level workshop on "Bio Medical Instrumentation" organized by Indian Institute of Science, India from 30-Jan-2010 to 31-Jan-2010.
16. Participated in a International level workshop on "Bio Medical Sciences and Technologies" organized by Anna University, India from 02-Mar-2011 to 04-Mar-2011.
17. Participated in a National level workshop on "Low Power Embedded Systems Using MSP430 Microcontroller" organized by Anna University, India from 19-Apr-2011 to 20-Apr-2011.
18. Attended a National level Short Course on "Recent Trends In Industrial and Medical Instrumentation" organized by R.M.K Engineering College, India from 27-May-2011 to 10-Jun-2011.
19. Participated in a International level workshop on "Basic Electronics" organized by IIT Mumbai, India from 28-Jun-2011 to 08-Jul-2011.
20. Attended a National level seminar on "Medical Thermography" organized by SRM University, India from 22-Sep-2011 to 22-Sep-2011.

21. Participated in a National level conference on "Healthcare Instrumentation Present and Future: Clinical & Technological Perspective" organized by National Hub for Healthcare Instrumentation Development(NHHID), Anna University and Apollo Telemedicine Networking Foundation(ATNF), India from 01-Jan-2014 to 01-Jan-2014.
22. Participated in a National level workshop on "R&D Project Proposals - Awareness, Needs & Benefits" organized by CTDT, Anna University, India from 26-Feb-2014 to 26-Feb-2014.
23. Attended a National level Short Course on "Principles of Digital signal processing" organized by DECE, CEG Campus, Anna University, Chennai, India from 08-Dec-2014 to 14-Dec-2014.
24. Participated in a National level workshop on "IoT- Technology of Tomorrow" organized by Department of ECE, CEG, Anna University, India from 26-Nov-2015 to 27-Nov-2015.
25. Participated in a National level workshop on "Critical Care and Laboratory Medicine Equipments- Maintenance and calibration ,DIVMED" organized by Stanley Medical College, Chennai, India from 04-Jan-2016 to 10-Jan-2016.
26. Participated in a International level conference on "Public Health: Issues, Challenges, Opportunities, prevention, awareness" , India from 15-Jan-2016 to 16-Jan-2016.
27. Attended a National level Short Course on "Laboratory Quality Management Systems and Internal Audit" organized by BIS, Bangalore, India from 12-Jul-2016 to 15-Jul-2016.
28. Attended a National level Short Course on "Measurement Uncertainty" organized by Bureau of Indian Standards , India from 25-Oct-2016 to 27-Oct-2016.
29. Participated in a National level workshop on "An Overview of Medical Device Regulations" organized by Indian Institute of Technology, Madras, Chennai, India from 06-Apr-2017 to 06-Apr-2017.
30. Attended a National level Short Course on "Medical Imaging Techniques" organized by Dept. of Medical Physics, Anna University, Chennai, India from 30-Oct-2017 to 10-Nov-2017.
31. Attended a National level Short Course on "Induction Program for students" organized by Anna University, India from 18-Jun-2018 to 20-Jun-2018.
32. Participated in a International level conference on "2019 IEEE International conference on distributed computing,VLSI,Electric circuits and Robotics " organized by Manipal Institute of Technology, Manipal,Karnataka from 11-Aug-2019 to 12-Aug-2019.

Special Representations

1. Life Member in Biomedical Engineering Society of India(BMESI)

Honours

1. "Best Paper Award" given by Dr.MGR Educational and Research Institute University from India (2012).

2. "Best Paper Award" given by International Conference on Electronics and Communication Engineering from India (2012).
3. "Special Prize" given by Centre for Technology Transfer and Development, Anna University from India (2013).
4. "Best Paper Award" given by International Conference on Advanced Electrical and Electronics Engineering from India (2013).
5. "Best Project Award" given by Advancements in Electronic Technology and Allied Science in Engineering from India (2013).
6. "Best Paper Award" given by International Conference on Emerging Trends in Science, Engineering and Technology 2014 from India (2014).
7. "Best Paper Award" given by International Conference on Computer Science, Electronics and Communication Engineering from India (2014).

Patents Filed

1. Filed patent rights for A HAND GESTURE RECOGNITION SYSTEM FOR SPEECH IMPAIRMENT IN India. File number: 2147483647 Filed Date: 10-Oct-2019.

Experience Abroad

1. Visited Nan Yang Technical University, Singapore from 11-Dec-2006 to 14-Dec-2006. Purpose of visit :Conference Presentation.
2. Visited University of Malaysia, Malaysia from 25-Jun-2008 to 28-Jun-2008. Purpose of visit :Conference Presentation.
3. Visited NanYang Technical University, Singapore from 29-Jun-2008 to 30-Jun-2008. Purpose of visit :NanYang Technical University Visit.
4. Visited Melbourne University, Australia from 21-Apr-2013 to 20-May-2013. Purpose of visit :Melbourne University Visit.

Invited Lectures

1. Delivered a Lecture on "Bio Medical Equipment" in Short term course on Medical Electronics for the Technical Teachers of southern Region organized by National Institute of Technical Teachers Training , Chennai (24-Jan-2006).
2. Delivered a Lecture on "Medical Imaging" in Training program on Medical Electronics for Technical Teachers of South Region organized by National Institute of Technical Teachers Training , Chennai (15-Feb-2007).
3. Delivered a Lecture on "Biomedical Instrumentation" in QIP on Medical Electronics for the Technical Teachers of South Region organized by National Institute of Technical Teachers Training , Chennai (24-Jan-2008).

4. Delivered a Lecture on "Nuclear Imaging and Hazardous effects of Radiation" in Faculty Development Programme conducted on Radiological Equipments organized by CEG Campus Anna University, Chennai (26-Nov-2008).
5. Delivered a Lecture on "Pattern Recognition" in Staff Development Programme on Bio medical signal processing and Instrumentation organized by PSG college of Technology, Coimbatore (22-Jul-2009).
6. Delivered a Lecture on "Image Analysis on Ultrasound Images" in Two days workshop on Bio Medical signal and Image processing organized by Centre for Medical Electronics, Anna University, Chennai (24-Sep-2010).
7. Delivered a Lecture on "Medical Imaging Techniques and Tele medicine" in ICMR sponsored National Seminar organized by Easwari Engineering College, Chennai (13-Mar-2012).
8. Delivered a Lecture on "Medical Imaging Techniques" in Guest Lecture organized by SA Engineering College, Chennai (20-Nov-2012).
9. Delivered a Lecture on "Radiological Equipments" in Guest Lecture organized by Vel Tech Multitech Engineering College(, Chennai (20-Nov-2012).
10. Delivered a Lecture on "SURGICAL DIATHERMY" in Workshop on Critical Care and Laboratory Medicine Equipments- Maintenance and calibration ,DIVMED organized by Stanley Medical College, Chennai (04-Jan-2016).