

1. Ranjith Kumar., **M.Suchetha.**, “Annulment of Speckle noise in SAR images using BEMD based Adaptive filters” IEEE Transaction on Image Processing (under Review) (**Impact factor: 4.1**)
2. Navaneeth Bhaskar, **M.Suchetha.**, “A Deep-Learning-Based System for Automated Sensing of Chronic Kidney Disease”, IEEE Sensors Letters., Volume: 3 , Issue: 10 , Oct. 2019.
3. Navaneeth Bhaskar, **M.Suchetha.**, “PSO optimized 1-D CNN-SVM architecture for real-time detection and classification applications”., International Journal of Computers in Biology and Medicine, Volume 108, May 2019, Pages 85-92(**Impact factor: 2.286**)
4. Navaneeth Bhaskar, **M.Suchetha.**, “Analysis of Salivary Components as Non-invasive Biomarkers for Monitoring Chronic Kidney Disease” , International Journal of Medical Engineering and Informatics DOI: 10.1504/IJMEI.2020.10020254 (**Scopus Indexed**)
5. **M.Suchetha.**, Kumaravel.N., “IoT based Low Power Wearable ECG Monitoring System “., Journal of Current signal Transduction Therapy, Volume 14 , Issue 1 , 2019(**Scopus Indexed**)
6. S.Bhagya., **M.Suchetha.**, “Design and development of low cost Speed of sound based non-invasive MEMS Biosensor for Capnography as a diagnostic tool”, , IEEE SENSORS Journal, Vol. 19, No. 19, Oct. 1, 2019 (**Impact factor: 3.076**)
7. S.Lekha.,**M.Suchetha.**, “Real-Time Non-Invasive Detection and Classification of Diabetes using Modified Convolution Neural Network”, IEEE Journal of Biomedical and Health Informatics, Vol. 10, No.99, 2017 (**Impact factor: 4.217**)
8. S.Smruthy.,**M.Suchetha.**, “Real-Time Classification of Healthy and Apnea Subjects Using ECG Signals with Variational Mode Decomposition”, IEEE Sensors Journal, Vol. 17, No. 10, 2017 (**Impact factor: 3.076**) (**Listed in Top 50 most popular articles**)
9. S. Lekha ., **Suchetha.M.**, “A Novel 1-D Convolution Neural Network with SVM Architecture for Real-Time Detection Applications”, IEEE Sensors Journal, Vol. 3, No. 99, 2017 (**Impact factor: 3.076**)
10. Smruthy A, **M. Suchetha.**, “Iterative Instantaneous Frequency and Amplitude Features from VMD of ECG signal for Real-Time Classification of Sleep Apnea”, IEEE Sensors Journal (under publication process) (**Impact factor: 3.076**)
11. S.Lekha.,**M.Suchetha.**, “Mathematical Modeling and Simulation Analysis of a Modified Butterworth van Dyke Circuit Model for Non-Invasive Diabetes Detection”, IET circuits, devices and systems. (**Impact factor: 1.319**)
12. S.Lekha.,**M.Suchetha.**, “Non-invasive detection of diabetes from breath: A Literature review”, International Journal of Biomedical Engineering and Technology, Int. J. Biomedical Engineering and Technology, Vol. 24, No. 1, 2017 (**Impact factor: 0.397**)
13. **Suchetha, M.**, Kumaravel. N., “A Novel Approach for the Reduction of 50Hz Noise in Electrocardiogram using Variational Mode Decomposition” International Journal of Current Signal Transduction Therapy, Vol.12, No.1, April 2017, pp: 39-48. (**Scopus Indexed**)

14. **Suchetha, M.,** Kumaravel, N., Saravana Kumar “A comparative analysis of EMD based filtering methods for 50 Hz noise cancellation in ECG signal”, Journal of Medical Informatics unlocked, vol. 8, **No.1**, Jan 2017, pp: 54-59. (**Scopus Indexed**)
15. V.Deepika.,**M.Suchetha.,** “A feature based detection method using segmented MRI images for Alzheimers disease diagnosis”, Journal of Chemical and Pharmaceutical sciences, Vol.09, No.01, 2016, pp. 506-509. (**Scopus Indexed**)
16. S.Lekha.,**M.Suchetha.,** “Non- invasive technique using breath analysis for detection and classification of diabetes”, International Journal of Engineering and Technology, vol.4, No. 3, 2015. (**Impact factor: 0.468**)
17. S.G. Sangeetha., **M.Suchetha.,** “Performance of M-ary quadrature amplitude modulation -based orthogonal frequency division multiplexing for free space optical Q1 transmission”, IET Optoelectronics, vol.01, No.07, 2015. (**Impact factor: 1.667**)
18. M.Dayanandha.,**M.Suchetha.,** “Dual AGC model based implementation of auditory nerve”, Journal of Chemical and Pharmaceutical sciences”, Vol.09,No.01,2016,pp.494-497. (**Scopus Indexed**)
19. V.Deepika.,**M.Suchetha.,** “MRI Image Fusion Method based on Classification of BEMD Components”, International Journal of Applied Engineering Research, vol.10, No.17, 2015. (**Scopus Indexed**)
20. **M.Suchetha.,** “Detection and Classification of Premature Ventricular Contraction using Cross Wavelet Transform” International Journal of P2P Network Trends and Technology, Vol.7, Apr. pp. 8-11, 2014. (**Scopus Indexed**)
21. **M.Suchetha.,** Kumaravel.N., “Classification of Arrhythmia using Electrocardiogram by support vector machine” European Journal of Scientific Research Vol. 97, No 3, pp.354-362, Mar. 2013 (**Impact factor: 0.2**)
22. **M.Suchetha.,** Kumaravel.N., “Empirical Mode Decomposition Based Filtering Techniques for Power Line Interference Reduction in Electrocardiogram using various Adaptive Structures and Subtraction methods” Journal of Biomedical Signal Processing and Control ,Vol.8, No.6, pp.575-585, Nov. 2013. (**Impact factor: 3.321**)
23. **M.Suchetha.,** Kumaravel.N., “Reduction of Power Line Interference in ECG using Different Wavelet Families” International Journal of Artificial Intelligent Systems and Machine Learning Vol. 1, June 2013 , DOI:AIML062013007. (**Impact factor: 0.2**)
24. **M.Suchetha.,** Kumaravel.N., “Classification of Arrhythmia in electrocardiogram Using EMD based features and Support Vector Machine with Margin Sampling”, International Journal of Computational Intelligence and Applications Vol.12, No.3, Sep. 2013. (**Impact factor: 0.345**)
25. **M. Suchetha.,** Kumaravel, N., “Empirical Mode Decomposition based Subtraction Techniques for 50 Hz Interference Reduction from Electrocardiogram”, **IETE** Journal of Research vol. 59, issue 1, Feb 2013, pp. 55-62. (**Impact factor: 0.909**)
26. **M.Suchetha.,** Kumaravel.N., “ECG arrhythmia detection and classification using RVM”, Science Direct, Procedia Engineering., June 2012. (**Scopus Indexed**)

27. **Suchetha, M.**, “Colour Image compression using data clustering techniques”, International Journal of Artificial Intelligent systems and Machine Learning, 2010, Vol 2, No 10, pp. 391-394.
28. Smruthy.,**M.Suchetha.**, “An Empirical Mode Decomposition based Method for Feature Extraction and Classification of Sleep Apnea” , Proceedings of International Conference on NextGen Electronic Technologies : Silicon to Software, March 23-25, 2017.
29. A.Abisree., **M.Suchetha.**, “Real-Time Detection and Classification of Drowsiness State from EEG signal”., Proceedings of National Conference on Science, Technology and Engineering., September 24-25, 2017 (**Awarded as the best paper**).
30. S.Lekha., **M.Suchetha.**, “A Method for Detection and Classification of Diabetes Non-Invasively”, Proceedings of International Conference on NextGen Electronic Technologies : Silicon to Software, March 23-25, 2017.
31. Monika., **M.Suchetha.**, “A Hardware Model to Sense the Knee Sound for Detecting the Abnormality”., Proceedings National Conference on Science, Technology and Engineering., 2016 (**Awarded as the best paper**)
32. Monika., **M.Suchetha.**, “ Assessment of Osteoarthritis by Acoustic Emission”., Proceedings of National Conference on Science, Technology and Engineering., May 2-3, 2017 (**Awarded best poster paper with societal Impact**).
33. **Suchetha, M.**, Kumaravel N. and Benisha, B., “Denoising and Arrhythmia Classification using EMD based features and Neural Network”, Proceedings of International Conference on IEEE Xplore Digital Library, Communications and Signal Processing (ICCSP), 2013, pp. 883-887.
34. S.Lekha.,**M.Suchetha.**, “Non- Invasive Diabetes Detection and Classification Using Breath Analysis”, Proceedings of International Conference on Communication and Signal Processing April 3-5, 2015.
35. Benisha, R. B., **Suchetha, M.** and V. Latha. “Image registration using Uniform Spherical Region Descriptor." Proceedings of International Conference on Information & Communication Technologies (ICT), 2013, pp. 1019-1024.
36. **Suchetha, M.**, “Development of Wireless Portable Integrated Cardio-Pulmonary Device” Proceedings of International Conference on International Conference, 2013.
37. **Suchetha, M.**,Kumaravel N. and Benisha, B., “Denoising and arrhythmia classification using EMD based features and neural network”, Proceedings of International Conference on Communications and Signal Processing (ICCSP), pp. 883-887,2013.
38. **Suchetha, M.**, “Reduction of Power Line Interference in ECG using Different Wavelet Families”, Proceedings of National Conference , EXCITE 2013.
39. **Suchetha, M.**, “An electronic design for wireless charging of E-vehicle and identification using RFID”, Proceedings of National Conference, Chennai 2013.
40. **Suchetha, M.**, “Fire and gas leakage detection robot with auto dial-up facility”, Proceedings of International Conference, 2012.
41. **Suchetha, M.**, “ECG arrhythmia detection and classification”, Proceedings of International Conference, 2012.

42. **Suchetha, M.**, “An efficient method for ECG arrhythmia detection &classification”, Proceedings of National Conference, 2012.
43. **Suchetha, M.**, “Color Image compression using data clustering techniques”, Proceedings of International Conference, 2011.
44. **Suchetha, M.**, “Weak bio signal denoising using wavelet transform” , International Conference , Nagarcoil, 2010
45. **Suchetha, M.**, “Adaptive filtering of heart sound from lung sound using FX-LMS algorithm” Proceedings of IETE National Conference , Chennai 2009
46. **Suchetha, M.**, “Detection and removal of line scratches using Wavelet Transform”, Proceedings of National Conference , NCVLSI’09, Chennai , 2009
47. **Suchetha, M.**, “Neuromime in VLSI using PSPICE and VHDL”, Proceedings of National Conference, NCVLSI’09, Chennai , 2009
48. **Suchetha, M.**, “Detection of Epilepsy and Seizure in EEG signal using Wavelet Transform”, Proceedings of National Conference, ATT’09, Madurai 2009.
49. **Suchetha, M.**, “Detection and removal of line scratches in motion picture films” Proceedings of National Conference ,NATCON’07, Chennai , 2007
50. **Suchetha, M.**, “Need of teaching methodology to visualize industrial requirements”, ISTE National seminar VIBRANZ- 2004 , Sivakasi,2004
51. **Suchetha, M.**, “Design of encoder and decoder using VITERBI algorithm”, ISTE National seminar VIBRANZ- 2004 , Sivakasi,2004
52. **Suchetha, M.**, “Performance of soft decision VETERBI Decoding with adaptive Quantizer”, Proceedings of National Conference, NATCON’04, Chennai , 2004

BOOK PUBLICATION

1. Published a Book titled “**Signals and Systems**”, published by Magnus publishers in July 2014 (first edition).
2. Second edition of the Book “**Signals and Systems**” is under progress.
3. Published a Book titled “**Vision based Assistive System for Object and Label Detection**”, published by Lambert International Academic Publishing.
4. Published a Book titled “**Digital Signal Processing**”, published by Magnus publishers in June 2015.
5. Published book on Anna University Question papers with answers for the title “**Problem Solving and Programming**” by Sruthi publishers in September 2017.
6. A Book titled “**Problem Solving and Programming**” published by Magnus publishers in June 2018.
7. Published the book chapter titled “**Biosignal denoising techniques**” for the book Information Security in Biomedical Signal Processing, by IGI International publisher.
8. A book chapter entitled “**1-D Conventional neural networks for signal processing applications,**” for the book, "Handbook of Research on Deep Learning Innovations and Trends." By IGI Publishers is under process.

9. A book chapter entitled “**Deep Learning for SAR image processing applications,**” for the book, "Handbook of Research on Deep Learning Innovations and Trends." By IGI Publishers is under process.

DETAILS OF PATENTS FILLED

1. Development of a Non-Invasive Detection and Classification System of Five Types of Diabetes through Breath
2. Method and apparatus for non-invasive detection of chronic kidney disease by monitoring saliva urea.
3. Speed of sound based capnographic sensor using acoustic virial Equation
4. Method and apparatus for non-invasive Detection and Classification of Five types of Diabetes from sweat.

FUNDED PROJECTS

S.No.	Grant agency	Title of the project	Duration(from mm/yy to mm/yy)	Completed/ ongoing	Amount in lakh Rs.
1.	Tamil Nadu State Council for Science and Technology	Development of an Automatic Mobile Charger from Human Pressure using Piezoelectric Material	December 2011- July 2012	6 months (Completed)	12000/-
2.	IEEE Robotics and Automation	Start-up grant	20/01/2019	On-going	40,000/-

3.	Indian Space Research Organisation	MST Radar Signal Processing using Variational Mode Decomposition based Adaptive Structures	2 years	Sanctioned	28,42,000/-
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SHORT TERM COURSE / CONFERENCE / WORKSHOPS CONDUCTED

1. Co-ordinator for **TechnoVIT ‘ 2019** -Design and Printing team
2. Co-ordinator for **Vibrance 2019** -Design and Printing team
3. Co-ordinator for **TechnoVIT ‘ 2018** Design and Printing team
4. Co-ordinator for **Convocation** Committee
5. Organizer for the **National Level Conference on Science, Engineering and Technology**, May 2017.
6. Organizer for the **National Level Conference on Science, Engineering and Technology**, September 2017
7. Co-ordinator for **24 hours National level event Signal Processing Code-a-thon** conducted on 23-24 September 2017.
8. Organizer for **LIKE YOU event in International Technical Extravaganza**, TechnoVIT conducted at VIT Chennai on 16/09/2017
9. Organizer of **International Conference on NextGen Electronic Technologies: Silicon to Software, ICNETS²** during March 23-25, 2017.
10. Organized a Value Added Programme with **Hands-on in Signal and Image Processing: Practice to Research** during August 6-7, 2016 at VIT University, Chennai.
11. Organized a Value Added Programme on **Applied Soft Computational Learning on Signals and Image Processing** using MATLAB during October 24–25, 2015 at VIT University, Chennai.
12. Co-ordinator for Technical seminar **Techno-Quorum Seminar Series** for the duration 2015-2017 at VIT University, Chennai.
13. Organizer for the one day National level workshop on **“Photonics”** on April 2015 at VIT University, Chennai.
14. Event Co-ordinator for **Technivit’15 & Technivit’16** at VIT University, Chennai.
15. Organizer for the one days National level workshop on **“Brain SENSE”** on 28th March 2015
16. Organizer for Two days course on **“Advanced Digital Signal Processing”** at Mepco Schlenk Engineering College, Sivakasi.
17. One Day course on **“Project Display Contest AYTIDA 6.8”** at Velammal Engineering College, Chennai.

18. Co-ordinator for technical symposium **INNOWIZ'11** at Velammal Engineering College, Chennai.
19. Co-ordinator for **INNOWAH** competition 2010 at Velammal Engineering College.

SHORT TERM COURSE / CONFERENCE / WORKSHOPS ATTENDED

1. Attended in the Faculty Development Programme (FDP) / Workshop on "**Anechoic Chamber Training**" on 6th October 2017
2. Attended FDP on "**Signal, Image and Video Processing using Advanced DSP Processors**" at VIT Chennai on October 07, 2017.
3. Attended in the Faculty Development Programme (FDP) / Workshop on "**Basics of Patenting Inventions and Innovations**" on 25th October 2017
4. Attended in the Faculty Development Programme (FDP) / Workshop on "**Happiness and fulfillment in Life**" on 20th April 2017
5. Attended in the Faculty Development Programme (FDP) / Workshop on "**LaTeX for Researchers**" 13th April 2017
6. Attended in the Faculty Development Programme (FDP) / Workshop on "**LaTeX for Researchers**" 21st April 2017
7. Attended in the Faculty Development Programme (FDP) / Workshop on "**Power of Punctuation**" on 23rd August 2017
8. Attended in the Faculty Development Programme (FDP) / Workshop on "**Strategies to Connect with Millennials**" on 23rd August 2017
9. Attended FDP on "**Gait Analysis and Rehabilitation**" held on 4th and 5th October, 2017.
10. Attended one day training on "**Human rights for women**" held at VIT University on 13/11/2015.
11. Attended one day workshop on "**Fiber Interferometric Applications in Communications and Sensors**" held at IIITD&M, Kancheepuram on December 19, 2014
12. Three days faculty development program on "**Big Data Analysis**" at VIT University, Chennai during 9th to 11th October 2014.
13. Attended **Linux Orientation** Program conducted at VIT Chennai on 15/12/2014
14. Attended **Faculty Orientation** workshop conducted at VIT Chennai from 2/6/14 to 27/6/14.
15. Four days course on "**Instructional Design and Delivery System**" at Velammal Engineering College, Chennai, India during 27th to 1st June-July 2011.
16. One day seminar on "**Theoretical and Practical aspects of Networking**" at Velammal Engineering College, Chennai, India on 25th Jan. 2010.
17. Attended three days International conference on signals, system & communication at

- Anna University, Chennai, India during 2009.
18. Two days course on “**Research Methodologies**” at Velammal Engineering College, Chennai, India during 23rd to 24th Feb. 2009.
 19. One day course on “**Recent trends in Sensor Technology**” at Velammal Engineering College, Chennai, India on 31st July 2009.
 20. One week course on “**High Impact Teaching Skills**” at Wipro Technologies Chennai, India during 30th to 1st June-July 2008.
 21. Two days course on “**Virtual Instrumentation using Lab VIEW**” at Velammal Engineering College, Chennai, India during 4th and 5th Nov. 2008.
 22. Five days course on “**Recent Trends in Biomedical Signal processing**” at Mepco Schlenk Engineering College, Sivakasi, India during 27th to 30th March 2007.
 23. Four days course on “**VLSI implementation using Embedded System**” at Noorul Islam college of Engineering, Nagercoil, India during 5th to 7th Nov. 2007.
 24. Two days course on “**MATLAB and its Applications**” at NITTTR, Taramani, India from 29th Nov. to 30th Nov. 2007.
 25. Six days course on “**Latest trends in Probability, Statistics and Random processes**” at Mepco Schlenk Engineering College, Sivakasi, India during March 20th to 25th, 2006.
 26. Twelve days course on “**Network routing algorithm**” at Mepco Schlenk Engineering College, Sivakasi, India, during 13th to 24th Nov. 2006.
 27. One week course on “**Communication systems**” at Mepco Schlenk Engineering College, Sivakasi, India during 2003.
 28. One week course on “**Digital Signal Processing**” at Mepco Schlenk Engineering College, Sivakasi during 9th June to 13th June 2003.
 29. Two days Technical Seminar **Technovision’03**, by Computer India Limited, Coimbatore, India during 11th and 12th July 2003.

GUEST LECTURE DELIVERED

1. Delivered a talk on “**Biosignal Denoising Techniques**” on Ukeiri sponsored three days’ workshop in IITDM, Kancheepuram, Chennai, 2016.
2. Delivered a talk on “**Wavelet in Signal Processing**” in the Value Added Programme with Hands-on in Signal and Image Processing: Practice to Research during August 6-7, 2016 at VIT University, Chennai.
3. Delivered a talk on “**Signal Processing in denoising applications**” in the Value Added Programme on Applied Soft Computational Learning on Signals and Image Processing using MATLAB during October 24–25, 2015 at VIT University, Chennai.
4. Delivered a talk on “Physical Medicine and Biotelemetry” in VPM College of Engineering, Srivilliputhur, 2005.