1. Publications in National and International Conferences:

   1. R.Vani, G.Saranyadevi, Suvetha Devi D, Ananditha Natarajan, Wearable IoT device for Medical Applications, 2nd International Conference on Communication, Computing and Internet of things, Sri SaiRam Engineering College, Chennai, Feb 2020.
   2. Navin Kumar, **R.Vani**, N.Thendral, Arduino Metal Detector, International Conference on Recent Trends in Electronics, Computing and Communication Engineering ,Saveetha School of Engineering, Chennai, April 2019.
   3. D.Subitha, R.Vani, J.M.Mathana, A Novel Low Complexity Downlink Linear Precoding Algorithm for Massive MIMO, International Conference on Computer, Communication, and Signal Processing, SSN College of Engineering, Chennai, March 2019.
   4. J.C.kavitha, **R.Vani**, N.Thendral, Monitoring and Tracking of smart truck using IoT in the international conference on Cognitive IoT in Big data Cloud, Hindustan Institute of Technology & Science, 2018.
   5. **R.Vani**, Bezia, A dual clock VLSI design of HEVC optimized SAO with early termination for 8K UHD TV encoding, in National Conference on Modern Developments with Keen and renovation Techniques, March 2018.
   6. D. Joseph Jeyakumar, D. Satheeswari , R. Anandha Praba, **R.Vani** , G.Madhan, N.Subha Swetha, Remotely Controlling the Agriculture Field using GSM Module, IEEE International Conference on Technological Innovations in ICT For Agriculture and Rural Development held in Easwari Engineering College, March 2018.
   7. N.Thendral , **R.Vani** , S.Krithikaa, S.M.Gomathi , S.Nisani, Design of low power dissipation of pacemaker based on duty cycle generation using boost convertor of fixed pilse width, National conference on Signal processing, Communication and Networking, Sri Venkateswara College of Engineering, April 2017.
   8. R.Yogeshwaran, **R.Vani**, C.Sadhana, J.C.Kavitha, Autonomous Robotics Navigation using Ultrasonic Sensor, International Conference on Emerging trends in Electrical and Communication Technologies, Saveetha School of Engineering, Saveetha University, Chennai, March 30 & 31, 2017.
   9. MansiRao V, Divya Narayanan K, Merlin Sudha C, **R.Vani,** A Digital Watermarking Technique Based on Multiple Halftones, National Conference on Innovative Practices in Engineering, Sciences and Management, organized by Jupiter Publications, Chennai, January 2017.
   10. P S Suhasini, D Youbarani, C Vijayasarathi, **R Vani**, Robust Embedded Based String Recognition for Visually Impaired People, International Conference on Computer Applications, pp. 94-97, 2016.
   11. R.Harini, **R.Vani**, Predictive Hybrid Fast Motion Estimation Algorithm For High Efficient QFHD Video Coding, National conference on Signal processing and Communication Engineering, Sri Venkateswara College of Engineering, March 2016.
   12. M.Nithya, B.Girija and **R.Vani,** Video Object Tracking For Industrial applications, Proceedings of the National Conference Recent Trends Power, Control, Networking, Embedded and Communication Engineering, Karpaga Vinayaga College of Engineering & Technology, PP.16-19, 2015.

13. **Vani Rajamanickam**, Sangeetha Marikkannan, An efficient Motion Estimation Algorithm for Search point reduction in Video Coding, Proceedings of the National Conference on Recent trends in Efficiency management in industries, Department of Automobile Engineering, Saveetha School of Engineering, Saveetha University, 2015, pp. 660-666.
14. **Vani Rajamanickam,** Sangeetha Marikkannan , Analysis of Motion Estimation in H.264 Video Codec using Search Patterns, International Conference on Electrical, Communication and Computing, Tagore Engineering College, 2014, pp 920- 924.
15. **Vani Rajamanickam**, Sangeetha Marikkannan , Survey on Optimization in Motion Estimation for H.264 Video Codec, International Conference on Electrical, Communication and Computing, Tagore Engineering College, 2014, pp 994- 998.
16. **Vani Rajamanickam,** P.Davis, Sangeetha Marikkannan, Survey on High Efficiency Video Coding Standard, First International Conference on Knowledge Collaboration in Engineering, Kathir College of Engineering, Coimbatore, 2014.
17. S.Ramapriya, **R.Vani** and M.Sangeetha , Analysis of Optimization Algorithms, National conference on Emerging Electronics conducted by Department of Electronics and Communication Engineering in Chendu College of Engineering and Technology, 2013,Chennai.
18. **Vani Rajamanickam**, Sangeetha Marikkannan, Performance Evaluation of Motion Estimation in H.264/AVC Encoder' has been published in the proceedings of International Conference on Advances in Computing, Communication and Informatics at R.M.K Engineering College, Chennai and indexed in ACM Digital Library.
19. **R.Vani** and M.Sangeetha, 'Survey on H.264 standard" in Second International Conference on advances in Computer science and Information Technology" Bangalore,pp-397-410,2012.
20. S.Valarmathi, **R.Vani** and M.Sangeetha , Paper titled "Hardware Software Co-Simulation of Motion Estimation in H.264 Encoder' in First International conference on Information technology convergence and Services ,Bangalore, pp-263-272,2012.

7. Publications in National and International Journals:

1. Saranyadevi.G, **R.Vani**, V.N.Bhargavee, Waste disposal management system for smart city using LORA, Jour of Adv Research in Dynamical & Control Systems, Vol. 12, 03-Special Issue, 2020, pp.1360-1364.
2. D.Subitha, J.M.Mathana, J.S.Leena Jasmine, **R.Vani**, Modified Conjugate Gradient Algorithms for Gram Matrix Inversion of Massive MIMO Downlink Linear Precoding, 2019,Vol.8 , p.2834-2840.
3. **R. Vani**, N Thendral, J C Kavitha, N P G Bhavani , Intelligent Traffic Control System with Priority to Emergency Vehicles, IOP Conference Series: Materials Science and Engineering, 2018, Vol. 455, No.1, p. 012023. (**Scopus Index Journal).**
4. **Vani, R**, N. Ushabhanu, and M. Sangeetha, Fast Motion Estimation Algorithm using Hybrid Search Patterns for Video Streaming Application, International Journal of Computers, Communications & Control, pp. 715-727, vol. 12, no. 5 2017. (**Scopus and Analytics/Web of Science)**

5. N.Thendral, R.Vani, S.Kiruthika, S.M. Gomathi, S.Nilani, Design of Low power Dissipation of Pace maker based on duty cycle generation using boost convertor of fixed pulse width, International Journal of Innovative Research in Computer and Communication Engineering, Vol 5, Special Issue 3, April 2017, pp.38- 45.

6. **Vani Rajamanickam**, Sangeetha Marikkannan, Efficient Block-based Motion Estimation Architecture using Particle Swarm Optimization, International Arab Journal of Information Technology, Jordan Zarka Private University, pp. 732-739, Volume 13, No. 6A, 2016. **(Scopus)**

7. **R.Vani** and R.Harini, Predictive Hybrid Fast Motion Estimation Algorithm For High Efficient QFHD Video Coding, International Journal of Engineering and Technology, pp.27-30, vol.4, issue 14, 2016.

8. **R. Vani**, M. Sangeetha, A New hybrid search algorithm with novel Cross-Diagonal-Hexagon Search Video Coding Algorithm for Block Motion Estimation, Wireless Personal Communications, 2015, pp.1-12, Springer Netherlands. **(Scopus)**

9. **Vani Rajamanickam**, Sangeetha Marikkannan , T. Rajavelu, An Hybrid Motion Estimation Algorithm For Video Coding Standards, in International Journal of Applied Engineering Research , Volume 10, Number 2 (2015) pp. 4885-4894. (**Scopus and H-index 35**)

10. **Vani Rajamanickam**, Sangeetha Marikkannan and Sharmila Ganesan, An Improved Motion Estimation Search Algorithm For H.264/AVC Standard, Vol. 10, No. 6, 2015, ARPN Journal of Engineering and Applied Sciences , pp. 2536-2541 (**Scopus).**

11. **Vani Rajamanickam**, Sangeetha Marikkannan, An efficient Motion Estimation Algorithm for Search point reduction in Video Coding, International Journal of Applied Engineering Research, Vol. 10 No.33 (2015), pp.26773-26780. (**Scopus)**

12. D.Umamageswari, L.Sivasakthi, **R.Vani**, 'Quality Analysis and Image Enhancement Using Transformation Techniques', International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, pp. 298-303, Vol. 3, Special Issue 3, April 2014.

13. **R.Vani ,** M.Sangeetha , P.Davis , CHDS: A Fast Search Algorithm For Motion Estimation in Video Coding Standards", Journal of Theoretical and Applied Information Technology, Vol. 65 No.3 ,pp.606- 615, Pakistan Little Lion Scientific, 2014. (**Scopus)**

14. **R.Vani** , P.Davis , M.Sangeetha , "Modified Cross Hexagon Diamond Search Algorithm for Fast Block Matching Motion Estimation", International Journal of Engineering and Technology, Vol 6 No 4, Aug-Sep 2014 , pp . 1737- 1757, India, Engg Journals Publications. (**Scopus)**

15. **R.Vani**, M.Sangeetha, Study of Evaluation Metrics in Block-Based Algorithms based on H.264 Video Codec" European Journal of Scientific Research, Vol. 89 No. 2 October, 2012, pp.249-256. (**Scopus)**

8. Seminars and Workshops attended:

- Attended 5 days Faculty Development Program on Artificial Intelligence Dec 5-11, 2019, at Sri Sairam Engineering College, Chennai.

- Attended One day Workshop on eSim, a First Course in the IoT Series for Teachers' held at Vellore Institute of Technology, Kancheepuram on 21 September 2019.
- Attended 1 day National Workshop on e-learning and MOOCs in higher education jointly organized by MHRD SGTB Khalsa College, University of Delhi and Anna University, Chennai held on 14th September 2019.
- Attended 2 day workshop on IOT in Electrical and Electronics Applications held in EEE Department, SRM IST, Ramapuram on August 8th and 9th, 2019.
- Attended one day workshop on Intellutual property rights in Saveetha Engineering College on 27.12.2018.
- Attended 2 day Faculty Development Program on Stress Management, organized by IET academy, Saveetha School of Engineering on 10.12.2018 & 11.12.2018
- Participated in the FDP program on EE-6502 Microprocessor and Microcontroller at Sri Venkateswara College of Engineering, Sriperambudur from 7th to 14th June 2018.
- Participated in 5 days FDP on Data Analytics using Python organized by CSE department from 4th Dec to 8th Dec 2018 at RMK college of Engineering and Technology, Chennai.
- Participated two day workshop on Image processing framework using OpenCV on 22nd and 23rd September 2017 at Department of Electronics and Communication Engineering, SRM University, Ramapuram, Chennai.
- Attended two day workshop on 'System Modeling, Simulation and Implementation using MATLAB and OrCAD' on March 13th and 49th, 2017 at Department of Electronics and Communication Engineering Sri Venkateswara College of Engineering, Chennai.
- Participated in two day workshop on Research Methodology on 21st and 22nd December 2016, Meenakshi College of Engineering, Chennai.
- Participated NAAC awareness Seminar on Quality System in Higher Education organized by Internal Quality assurance Cell (IQAC), Anna University, Chennai during 29th and 30th September 2016.
- Participated in faculty development program on 'Outcome based education system and Values of NBA' on 20th and 21st June 2016, Meenakshi College of Engineering, Chennai.
- Participated in the faculty development program on "VLSI Design' from 8th to 14th December 2014 at Karpaga Vinayaga College of Engineering and Technology, Maduranthagam.
- Attended one day workshop on "How to get external funds" organized by Sri Muthukumaran Institute of Technology, on 29th November 2014, Chennai.
- Attended one day workshop on Research Methodologies on 17/12/2013, organized by the Department of Information Technology, Sri Muthukumaran Institute of Technology, Chennai.
- Participated in the faculty development program on "Trends in Embedded Systems" on February 18th and 19th, 2013 at Department of Electronics and Communication Engineering, Meenakshi College of Engineering, Chennai.
- Attended an workshop on "Image Processing Framework using FPGA" on December 6th and 7th, 2012 at Department of Electronics and Communication Engineering, Easwari Engineering College, Chennai.

9. Workshop/ Conference organized:

- Organized workshop on 'Hands on training for students in Image processing using MATLAB' for students on March 5, 2020 in association with Mr. Purushothaman, CEO, EPR Labs, Chennai.
- As a resource person for the Topic " Multiple Access techniques" in Faculty Development Program on Wireless Communication organized by Sri Venkateshwara College of Engineering, Chennai on Dec 3, 2019.
- Organizing committee member of International Conference on Recent Trends in Electronics, Computing and Communication Engineering, Saveetha School of Engineering, Chennai, April 2019.
- Organizing committee member for one day National Conference on Innovative and Emerging trends in Engineering and Technology on 18 July 2018 in Meenakshi College of Engineering, Chennai.
- Coordinated and presented NBA work for the accreditation of ECE department on July 2018 in Meenakshi College of Engineering, Chennai.
- Convenor for one day workshop on 'Innovations in Electronics System design' on 6th September 2017 organized by Department of Electronics and Communication Engineering, Meenakshi College of Engineering, Chennai.
- Committee member for "Indian Engineering Students Innovative Project Competition" 25 and 26 March 2017 held in Meenakshi College of Engineering, Chennai
- Committee for Two Day National Level Workshop on "Research Methodology" organized by Meenakshi college of Engineering on December 12 and 13, 2016.

10. Books published/ Chapters:

- ➢ Chapter titled 'Lifetime Improvement of Wireless Sensor Networks Using Tree-Based Routing Protocol', Pages 51-61, Sushaptha Rajagopal,, R.Vani, JC. Kavitha, Saravanan, EAI/Springer Innovations in Communication and Computing, 2020.
- ➢ **Author for the text book "**Circuit Analysis" (ISBN number: 13-978-93-86532-50-3) and "Circuit Theory" (ISBN number: 2.13-978-93-86532-58-9) by Charulatha Publications, 2018.
- ➢ **R.Vani**, N.Thendral, book Chapter titled 'Detection of Lung Cancer Using Principle Pattern Analysis Algorithm' pp. 56-68, in Innovative Applications in Engineering and Technology, Edition 1, Jupiter Publications, Chennai, 2017.
- ➢ **R.Vani** and M.Sangeetha, Chapter titled 'Survey on H.264 standard" in Second International Conference on advances in Computer science and Information Technology" Bangalore,pp-397-410,2012, Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering book series (LNICST, volume 86, Springer series).

11. Patent:

Published Patent titled "Automation of Water management and efficient distribution" (CBR number: 25362), March 2020.