RESUME

Dr.R.MANIKANDAN

Assistant Professor
Department of ICT
School of Computing
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CAREER PROFILE

Over 23 years of experience in Teaching and IT Industry. Around 20 years of experience in teaching of various subjects including **Computer Science & Electronics domain.**

ACADEMIC QUALIFICATION

- **Ph.D in *VLSI Physical Design***, SASTRA University, 2014

- **Master of Technology** (***VLSI Design***),
  SASTRA University Thanjavur, India (2001 -2002)

- **Bachelor of Engineering** (***Computer Science***),
  Bharathidasan University, Trichirappalli, India (1992-1996).

Work Experience:

- Assistant Professor, *SASTRA Deemed University*, Thanjavur, India (June'09 – till date)
- Senior Lecturer, *SASTRA Deemed University*, Thanjavur, India (January'07 – May2009)
- Lecturer, **SRM University,** Kattankulathur, India (June'05 – Jan'2007)
- Design Engineer, Chun Wang Electrical Engineering Pte Ltd, Singapore(Jan'05- Dec'05)
- Lecturer, *VIT University,* Vellore, India (May'04- December '04)

- Lecturer, *SASTRA University*, Thanjavur, India (Dec'02 – May'04)
- Lecturer, *JJ College of Engg,* Trichy, India (Jun '99 – Aug '01)
- Worked as Sr. Programmer in *LML Ltd.*, Kanpur, India (Sep '97 - May '99).
- Worked as System Programmer *Mid-West Iron & Steel Company LTD.*, Chennai, India. (Jun '96 to Aug '97).

Microsoft certified trainer:

1. Imparting Active Directory Domain service (ADDS) Practical knowledge for Third year CSE/IT/ICT STUDENTS

Guidance:

- **B.Tech : 50 completed (2 on going)**
- **M.Tech : 20 completed (1 on going)**
- **Ph.D: 2 on going**

Ph.D Doctoral Committee Member:

DC member in SASTRA University, Anna University and VIT University

Publication in Journals:

1. M.Thiyagarajan and *R.Manikandan* Published a paper titled "Data Mining and Wavelet Tools for VLSI Cell placement in International Journal of Computing and Applications, Vol.4. No.1,June 2009,pp1-5

2 . M.Thiyagarajan and *R.Manikandan* Published a paper titled "A Novel Hybrid Stochastic VLSI Design Model" in Icfai University Journal of Computational Mathematics, Vol. II, No.4,December 2009, pp 46-55

3. M.Thiyagarajan and *R.Manikandan* Published a paper titled "Generalized Weber Problem" Journal of Physical Sciences, Vol. 13, 2009, pp 201-208.

4. M.Thiyagarajan and *R.Manikandan* Published a paper titled "A Novel Graph Theoretical Algorithms for Constrained Placement Problems" International journal of Computational Intelligence and Information Security, Vol.1, January 2010, pp 26-33

5. M.Thiyagarajan and *R.Manikandan* Published a paper titled "Application of hypergraph in VLSI Cell Partitioning" in Icfai University Journal of Computational Mathematics, Vol. III, No.2, June 2010, pp 59-67

6. M.Thiyagarajan and *R.Manikandan* Published a paper titled "Area-Time Optimal VLSI Integer Multiplier With Minimum Computational Time and Weber Problem" in Journal of Theoretical and Applied Information Technology , Vol 25. No. 1, March 2011,pp 58-62 (Scopus Indexed)

7. M.Thiyagarajan and *R.Manikandan* Published a paper titled "Hyper graph and Coprocessor Design for VLSI partitioning problems " in Journal of Theoretical and Applied Information Technology , Vol 26. No. 2, April 2011, pp 107-111 (Scopus Indexed)

8. G.Manikandan,*R.Manikandan*,G.Sundarganesh published a paper titled "A New Approach for Generating Strong Key in RC4 Algorithm " in Journal of Theoretical and applied information Technology Volume 24,Number 2, February 2011 ,pp 113-119. (Scopus Indexed)

9. G.Manikandan,*R.Manikandan*,P.Rajendran,G.Sundar Ganesh published a paper titled "An Integrated Block and Stream Cipher Approach for Key Enhancement " in Journal of Theoretical and applied information Technology Volume 28,Number 2 , June 2011, pp 83-87. (Scopus Indexed)

10. G.Manikandan M.Kamarasan P.Rajendran *R.Manikandan* published a paper titled " A Hybrid Approach for Security Enhancement by modified Crypto-Stegno Scheme" , in European Journal of Scientific Research, Volume 60,Number 2 , September 2011, pp. 224-230. (Scopus Indexed)

11. *R.Manikandan* Published a paper titled "Mini TCP/IP for 8-bit Controllers" in Journal of Theoretical and Applied Information Technology , Vol 31.No.2 ,September 2011, pp 109-112. (Scopus Indexed)

12. *R.Manikandan* Published a paper titled "Improving Efficiency of Textual static Web Content Mining Using Clustering Techniques " in Journal of Theoretical and Applied Information Technology , Vol 33. No. 2, November, 2011, pp 193-196 (Scopus Indexed)

13. *R.Manikandan*, M.Thiyagarajan and P.Swaminathan published a paper titled " Deterministic and Probabilistic models on VLSI Cell Placement-A Survey" in in Journal of Theoretical and Applied Information Technology , Vol 37. No.1 March , 2012, pp 39-45. (Scopus Indexed)

14. *R.Manikandan*, M.Thiyagarajan and P.Swaminathan published a paper titled " Review of Efficient and Innovative mathematical on VLSI Circuit Partitioning" in Research Journal of Applied Sciences, Engineering and Technology , Vol 4 No.8 ,April , 2012, pp 978-980. (Scopus Indexed)

15. *R.Manikandan*, Jaladhanki Sindura, M.D.L. SriRavali and P.Swaminathan published a paper titled " Efficient mathematical Model on VLSI Circuit Partitioning" in Research Journal of Applied Sciences, Engineering and Technology , Vol 4 No.13 ,July, 2012, pp1978-1979. (Scopus Indexed)

16 *R.Manikandan*, S. Sathvi, C. Thenmozhi, R. Sujitha, Published a paper titled " Efficient Markov clustering model for VLSI Circuit Partitioning" in Australian journal of basic and applied science, Vol 6, Issue 10,2012,pp 31-35. (Scopus Indexed)

17. P.Gitanjali,*R.Manikandan* published a paper titled " A Novel Approach for Parallel Encoder by Pixel Bit Manipulation " in International Journal of Engineering and Technology, Volume 5 Issue 1 February 2013, pp 70-73. (Scopus Indexed)

18. M.Shobana, *R.Manikandan* published a paper titled " Efficient Method for Hiding data by Pixel Intensity " in International Journal of Engineering and Technology, Volume 5 Issue 1 February 2013, pp 74-80. (Scopus Indexed)

19. V.Leela, K.Sakthipriya, *R.Manikandan* published a paper titled " A comparative analysis between K-mean and Y-means algorithms in Fisher's IRIS data sets " in International Journal of Engineering and Technology, Volume 5 Issue 1 February 2013, pp 245-249. (Scopus Indexed)

20. M.Rajesh, *R.Manikandan* published a paper titled " Efficient Implementation of Carry Free Select Adder" in ARPN Journal of Science and Technology, Volume 3 Number 2 February 2013, pp 208-210.

21. M.Rajesh, *R.Manikandan* published a paper titled "Efficient FM Algorithm for VLSI Circuit Partitioning " in International journal of Engineering and Technology, Volume 5 Issue 2 April 2013,pp 968-972. (Scopus Indexed)

22. K.Gunasekaran, *R.Manikandan* published a paper titled "Sign Language to Speech Translation System Using PIC Microcontroller " in International journal of Engineering and Technology , Volume 5 Issue 2 April 2013,pp 1024-1028. (Scopus Indexed)

23. M. Shobana, P. Gitanjali, M. Rajesh, *R. Manikandan* published a paper titled "A Novel Approach for Hiding Image Using Pixel Intensity " in International Review on Computers and Software , Volume 8 Issue 4 April 2013,pp 904-908. (Scopus Indexed)

24. *R.Manikandan*, P.Swaminathan,R.Sujitha published a paper titled " A study on VLSI Physical design specific issues " in Journal of Applied sciences Research, Vol.9,Issue 1,2013, pp 100-103. (Scopus Indexed)

25. *R.Manikandan*, P.Swaminathan published a paper titled " Analysis Markov Renewal Reward process on VLSI Cell partitioning" in Applied Mathematical Sciences, Vol.7, Number 66,2013,pp 3281-3189. (Scopus Indexed)

26. *R.Manikandan,* P.Swaminathan R.Sujitha published a paper titled " Unimodular Hypergraph based clustering approaches for VLSI Circuit Partitioning", in International Journal of Engineering and Technology, Vol.5,Number 5,2013,pp 2755-2758. (Scopus Indexed)

27. *R.Manikandan*, P.Swaminathan ,V.Vaithiyanathan published a paper titled " Study on Markov alternative renewal reward process for VLSI cell partitioning", in International journal of Mathematical Analysis, Vol.7,Number 40,2013,pp 1949-1960. (Scopus Indexed)

28. *R.Manikandan,* G.S. Monolisa and K. Saranya published a paper titled "A Cluster Based Segmentation of Magnetic Resonance Images for Brain Tumor Detection" , in Middle-East Journal of Scientific Research, Vol.14,Number 5,2013,pp 669-672. (Scopus Indexed)

29. **R. Manikandan**, P. Swaminathan, R. Sujitha, published a paper titled "A Study on VLSI Physical Design Specific Issues " in journal of Applied Sciences Research, Vol.9, issue 1, 2013 ,pp 100-103

30. **R.Manikandan,** P.Swaminathan, Vaithyanathan, published a paper titled " Analysis of utility theory in VLSI cell Placement" in **Applied Mathematics and Information Science**, Vol.8, Number 4, 2014, pp 1611-1616. *(SCI Indexed, Impact Factor :* **1.232** *).*

31. Hariharan, K., Parameshwaran, R., Sriram, A.L., **R**.**Manikandan,** , Sathiyapriya, R. published a paper titled "An efficient method of enhancing memory to memory communication in scalable parallel and distributed environment (SPADE) for high speed parallel networks" in International Journal of Applied Engineering Research, Volume 9, issue 3, 2014, pp 329-338. (Scopus Indexed

32. Sakthi Priya, K., *Manikandan* published a paper titled" Improved Particle swarm optimization algorithm for circuit partitioning problems", in Contemporary Engineering Sciences, Vol.7, issue 8, 2014, pp 369-374 . (Scopus Indexed

33. Leela, V., *Manikandan, R* published a paper titled "Analysis of clustering techniques in VLSI cell partitioning" in Contemporary Engineering Sciences,Vol.7, Issue 7, 2014, Issue 8 , pp 315-322. (Scopus Indexed

34. Sujitha, R., **Manikandan, R** published a paper titled "A study on various data mining algorithms pertaining to VLSI cell partitioning" in Contemporary Engineering Sciences Vol.7, issue 8, 2014, pp 363-368 (Scopus Indexed

35. **R.Manikandan**, S. Niranjani published a paper titled "Implementation on Real Time Public Transportation Information Using GSM Query Response System" in Contemporary Engineering Sciences, Vol.7, Number 11, 2014, pp 509 - 514. (Scopus Indexed)

36. Abinaya Rajasekar, *R.Manikandan* published a paper titled " Design of pipelined based DCT architecture for image processing application" in International journal of Applied Engineering Research, Vol.10, Number 9,2015, pp 22677-22684. (Scopus Indexed)

37. K.Mangala Gowri, *R.Manikandan* published a paper titled "Efficient Singular value decomposition using cordic for signal processing applications" in International journal of Applied Engineering Research, Vol.10,Number 9,2015, pp 23199-23206. (Scopus Indexed)

38. M.A.Pradeepa, *R.Manikandan* published a paper titled " Design of pipelined AES algorithm with area optimization for cryptographic applications" in International journal of Applied Engineering Research, Vol.10, Number 9,2015, pp 23191-23198. (Scopus Indexed)

39. R.Saraswathi, *R.Manikandan* published a paper titled" A study on various issues in VLSI Low power testing" in International journal of pharmacy and Technology, Vol.8, Number 3,2016, pp 16653- 16663. (Scopus Indexed)

40. Sekar, K.R., Ravichandran, K.S., Sethuraman, J., *Manikandan, R.* published a paper titled "An investigation of software component for web application integration based on hybrid filtering" in International Journal of Pharmacy and TechnologyVolume 8, Issue 3,September 2016, pp 18621-18639. *(Scopus Indexed)l*

41. U.Sivaranjani, *R.Manikandan* published a paper titled " A survey on Reed Solomon code in data transmission application" in International journal of pharmacy and Technology, Vol.8, Number 3,2016, pp 18498-18504. (Scopus Indexed)

42. Sethuraman J, *Manikandan R,* Sekar KR published a paper titled " A computational model to analyze medical web pages for optimized search" in Biomedical Research India Vol.29, pp 374-376 , 2018. *(SCI Indexed, Impact Factor : 0.219)*

43. K.Hariharan,N.R.Rajan, **R.Manikandan,** R.Venkatesan, published a paper titled "An ultra low power 12T CAM cell based on voltage techniques." in International journal of mechanical and production Engineering Research and Development, Vol.7, Issue 5, October 2017, pp 337-342. (Scopus Indexed)

44. R.Saraswathi, *R.Manikandan*, "Published a paper titled Design of LFSR (LINEAR FEEDBACK SHIFT REGISTER) for Low Power test pattern generator" in IEEE Xplore Digital Library ,2017, pp 317-322. (Scopus Indexed)

45. K.R.Sekar, J.Sethuraman, Manav Srinivasan, K.S. Ravichandran,*R.Manikandan,* published a paper titled "Concurrent classifier based analysis for climate prediction using service oriented Architecture" in IEEE Xplore Digital Library, 2017, pp 370-375 . (Scopus Indexed)

46. P.Rajendiran, K.R.Sekar, B.Srinivasan and *R.Manikandan*, published a paper titled " Customer Relationship Management in the Manufacturing industry, using data mining techniques" in International journal of mechanical and production Engineering Research and Development, Vol.7, Issue 6, December 2017, pp 63-70. (Scopus Indexed)

47. P.Rajendiran, K.R.Sekar,B.Srinivasan and *R.Manikandan* published a paper titled " Raw Material Captcha Security, Applied through Zopfia Technique" in International Journal of Mechanical and Production Engineering Research and Development Vol. 7, Issue 6, Dec 2017, pp 99-104. (Scopus Indexed)

48. Hariharan.K, Raajan.N, *R.Manikandan* and K.R.Sekar published a paper titled " Design of Low power and area efficient full adder for ALU using 90NM Process for industrial based CAD/CAM Manufacturing Units" in International Journal of Mechanical and Production Engineering Research and Development Vol. 7, Issue 6,Dec 2017, pp 71-78. (Scopus Indexed)

49. K.Rajesh, K.R.Sekar, V.Ramaswamy ,K.Kannan and *R.Manikandan* Published a paper titled "Demand and Supply Analysis on Manufacturing of Cement for Monsoon period using Dvorak Technique" in International Journal of Mechanical and Production Engineering Research and Development Vol. 7, Issue 6,Dec 2017, pp 187-194. (Scopus Indexed)

50. *R.Manikandan*, Harharan.K and R.Venkatesan published a paper titled "A Power Efficient multiplier architecture for FIR Filters used for Acoustic models in mechanical diagnostics" in International Journal of Mechanical and Production Engineering Research and Development Vol. 7, Issue 6,Dec 2017, pp 313-320. (Scopus Indexed)

51. *R.Manikandan* published a paper titled "A study on specific computation methods in VLSI physical design" in International Journal of Innovations in Scientific and Engineering Research, Vol. 4,Issue 12, Dec 2017, pp 218-220.

52. PR Pavithra, KS Ravichandran, KR Sekar, *R.Manikandan* published a paper titled " The Effect of Thermography on Breast Cancer Detection" in Systematic Reviews in Pharmacy, Vol.9, Issue 1, Jan 2018, pp 10-16. (Scopus Indexed)

53. M Veronica Arokia Mary,K R Sekar, *R.Manikandan* and K S Ravichandran published a paper titled "Improvement of Immune System Analyzed through Various Cluster Techniques – A Survey in Pharmacognosy Journal, Vol.10, Issue 2, Jan 2018, pp 257-259. (Scopus Indexed)

54. A. Srilakshmi, Jeyasheela Rakkini,K. R. Sekar and *R. Manikandan* published a paper titled "A Comparative study on Internet Of Things (IoT) and its applications in Smart Agriculture" in Pharmacognosy Journal, Vol.10, Issue 2, Jan 2018, pp 260-264. (Scopus Indexed)

55. *R.Manikandan*, K.R.Sekar and Harharan.K published a paper titled "A broad review on various VLSI CAD algorithms for circuit partitioning problems in International Journal of   Mechanical and Production Engineering Research and Development ,Vol. 8, Issue 1,Feb 2018, pp 945 - 956. (Scopus Indexed)

56. R.S.Rajakumari. Hariharan.K, *R.Manikandan*, K.R.Sekar published a paper titled "A Survey on various method used in Hardware and Software Partitioning" in International Journal of Pure and Applied Mathematics Vol. 118 , Issue No. 18, 2018, pp 2365-238.(Scopus Indexed)

57. J.Amudhasurabi, K.R.Sekar, *R.Manikandan*, K.S.Ravichandran published a paper titled "Chronic Kidney Disease Analyzed And Estimated Through Specific Classifiers – A Survey" in International Journal of Pure and Applied Mathematics Vol.119 ,Issue No.7, 2018, pp 623-632. (Scopus Indexed)

58. M.J.Jeyasheela Rakkini, A.Srilakshmi, K.R.Sekar and *R.Manikandan* published a paper titled "Peripheral Neuropathy Disease Analysis Through Optimization Of Scientific Workflows - A Survey" in International Journal of Pure and Applied Mathematics Vol.119 , Issue No.7, 2018, pp 633-641. (Scopus Indexed)

59. P. Yogu Nachiya , K.R.Sekar, *R.Manikandan* and K.S.Ravichandran published a paper titled "Investigation Of Obsessive Compulsive Disorder Through Domain Ontology Construction- Survey" in International Journal of Pure and Applied Mathematics Vol.119 Issue No.7, 2018, pp 643-651. (Scopus Indexed)

60. M.Muhilan, S.Hariprasath, K.R.Sekar and *R.Manikandan* published a paper titled "Personalized   Recommendation Of Food Products Using Rule- Based Techniques In Hadoop Environment" in International Journal of Pure and Applied Mathematics Vol.119, Issue No.10, 2018, pp 1409-1415. (Scopus Indexed)

61. M. Kamaladevi , K.R.Sekar, V.Venkataraman and *R.Manikandan* published a paper titled "Hybrid classifiers for Predicting Early Stage Diabetic Retinopathy" in International Journal of Pure and Applied Mathematics Vol.118, Issue No. 21, 2018, pp 457-466. (Scopus Indexed)

62. J .Sai Teja, G.Kiran Sai, M. DruvaKumar and **R.Manikandan** published a paper titled "Sentiment Analysis of Movie Reviews Using Machine Learning Algorithms - A Survey" in International Journal of Pure and Applied Mathematics, Vol.118, Issue No. 21, 2018, pp 3277-3284. (Scopus Indexed)

63. K.R.Sekar, G.Janakiraman, **R.Manikandan**, M.Farida Begam and R.Krishankumar published a paper titled "An Ensemble Approach for Data Privacy and Preservation Using Discrete Cosine and Wavelet Transforms" in International Journal of   Pure and Applied Mathematics Vol.118, Issue No. 21, 2018, pp 505-519.   (Scopus Indexed)

64. P.Tejaswini,T.Divyavani and **R.Manikandan** published a paper titled "Efficient routing approach in software defined networking" in International Journal of Pure and Applied Mathematics Vol. 119, Issue No. 12 ,2018, pp14155-14163.   (Scopus Indexed)

65. V.M.Ramachandiran, P.N.Kailash Babu and **R.Manikandan** published a paper titled " Prediction of road accidents severity using various algorithms" in International Journal of Pure and Applied Mathematics,   Vol. 119, Issue No. 12 ,2018,pp 16663-16669. (Scopus Indexed)

66. C.Saikrishna, **R.Manikandan** and M.Rajesh published a paper titled "An novel approach to reduce the error in wind power forecasting ", in International Journal of Pure and Applied Mathematics Vol. 119 Issue No. 12, 2018, pp 16671-16677.   (Scopus Indexed)

67. C.Anandhan, C.Thaventhiran, **R.Manikandan** and M.Rajesh published a paper titled "An Efficient Microcontroller based Bore well Rescue Robot ", in International Journal of Pure and Applied Mathematics Vol. 119 Issue No. 15, 2018, pp 127-134. (Scopus Indexed)

68. K. R. Sekar,J. Sethuraman, **R. Manikandan** "A Novel Software Component Selection Through Statistical Models" in IEEE Xplore Digital Library ,2018, pp 1391-1396. (Scopus Indexed)

69. K.R. Sekar, V. Gayathri, Gollapudi Anisha, K.S. Ravichandran, **R. Manikandan**   "Dynamic Honeypot Configuration for Intrusion Detection" in IEEE Xplore Digital Library ,2018, pp 1397-1401. (Scopus Indexed)

70. Jayaraman Sethuraman, Jafar Alzubi, **R. Manikandan** , Mehdi Gheisari and Ambeshwar Kumar Published a paper titled, "An eccentric methodology with optimization to unearth the hidden facts of search engine result pages" in Recent Patents on Computer Science vol. 12 issue number 2,pp 110-119 (Benthamscience), 2019 (Scopus Indexed)

71.Selvakumar Jayakumar, Prithiviraj Rajalingam, Rizwan Patan, **Manikandan Ramachandran**. Published a paper titled, "Vedic Arithmetic Based High Speed & Less Area MAC Unit for Computing Devices " in Recent Patents on Computer Science(Benthamscience), 2019 (Scopus Indexed)

72. G.Palai, Anand Nayyar, **R. Manikandan**, Bhopendra Singh, Published a paper titled, "Metamaterial based photonic structure: An alternate high performance antireflection coating for solar cell" in Optik - International Journal for Light and Electron Optics (Elsevier)

Vol.179, 2019, pp 740-743.   (**SCI Indexed, Impact Factor: 1.914**)

73. K.R.Sekar, M.Easwar, *R.Manikandan*, K.S. Ravichandran, published a paper titled " Predictive Analysis on Behavioural Risk Factor Surveillance System through Ensemble Classifiers and Clusters" in Journal of the National Medical Association (Elsevier) Vol.111, Issue number 1, 2019 ,pp 103-117.   *(SCI Indexed, Impact Factor : 0.831*)

74. M. Rajasekhar Reddy, K. S. Ravichandran, B.Venkatraman, K. R. Sekar and *R.Manikandan* published a paper titled "Improved pharma education system in the field of medical images using compression techniques" in Cluster computing Journal(Springer) Vol.22, pp 15049-15057, 2019. *(SCI Indexed, Impact Factor : 2.040*)

75. Jafar A.ALzubi,Balasubramaniyan Bharathikannan, SudeepTanwar, *Ramachandran Manikandan*, AshishKhanna,ChandrasekarThaventhiran, published a paper titled **"**Boosted neural network ensemble classification for lung cancer disease diagnosis**"** in Applied Soft computing (Elsevier), Vol.80,2019, pp 579-591**.** (**SCI Indexed, Impact Factor: 4.873**)

76. Sheeba Rani S, Jafar A. Alzubi, Lakshmanaprabu S.K., Deepak Gupta, *Ramachandran Manikandan,* published a paper titled "Optimal Users Based Secure Data Transmission on the Internet of Healthcare Things (IoHT) With Lightweight Block Ciphers" in Multimedia Tools and Applications, 2019. **.** (**SCI Indexed, Impact Factor: 2.101**)

77. Ambeshwar Kumar, *R Manikandan*, Amir H. Gandomi, Rizwan Patan, Szymon Łukasik, Kattur S Ravichandran, published a paper titled "A Deep Neural Network based Classifier for Brain Tumor Diagnosis applied soft computing" in Applied Soft computing (Elsevier) Vol.82,2019. (**SCI Indexed, Impact Factor: 4.873**)

78. Jafar A. Alzubi, *R. Manikandan*, Omar. A. Alzubi, N. Gayathri and Rizwan Patan published a paper titled "A Survey of Specific IoT Applications" in International Journal on Emerging Technologies **10**(1): 64-67(2019) (Scopus Indexed)

79. G. Manikandan, R. Bala Krishnan, E. Preethivi, K.R. Sekar**,** *R. Manikandan* and J. Prassanna Published a paper titled " An Approach with Steganography and Scrambling Mechanism for Hiding Image over Images" in International Journal on Emerging Technologies 10(1): 64-67(2019) (Scopus Indexed)

80. B. Monica, K. Rajkumar, K.R. Sekar, *R. Manikandan* and K. Bagyalakshmi Published a paper titled   " Cognitive Knowledge of Routing Protocol Configuration in Smart City" in International Journal on Emerging Technologies 10(1): 59-63 (2019) (Scopus Indexed)

81.Gopi Kasinathan,Selvakumar Jayakumar,Amir H. Gandomi, *Manikandan Ramachandran,* Simon James Fong,Rizwan Patan Published a paper titled "Automated 3-D Lung Tumor Detection and Classification by an Active Contour Model and CNN Classifier" in Expert systems with applications, Vol 134, pp 112-119,2019. (**SCI Indexed, Impact Factor: 4.292**)

82. J.Selva Kumar, Rohit Konathala , *R.Manikandan*, C.Ramesh and Robbi Rahim Published a paper titled " Design and UVM Verification of High Speed ALU" " in International Journal on Emerging Technologies 10(1): 93-96 (2019) (Scopus Indexed)

83. M. Gomathi, P. Sivanesan, K.R. Sekar, *R. Manikandan*, Rajasoundaran Soundararajan published a paper titled "An Optimized Energy Efficient Clustering and Load Balancing Approach for MultiHop Wireless Sensor Network" in International Journal on Emerging Technologies 10(1): 121-127 (2019) (Scopus Indexed)

84. K. Rajkumar, B. Monica, K.R. Sekar**, *R. Manikandan* and Robbi Rahim Published a paper titled "The Virtual Personal Assistant (VPA) - Learning Process" in International Journal on Emerging Technologies 10(1): 139-142 (2019) (Scopus Indexed)

85. Syed Muzamil Basha, K. Bagyalakshmi, C. Ramesh, Robbi Rahim, *R. Manikandan*, Ambeshwar Kumar published a paper titled "Comparative Study on Performance of Document Classification Using Supervised Machine Learning Algorithms: KNIME " in International Journal on Emerging Technologies 10(1): 148-153 (2019) (Scopus Indexed)

86. Syed Muzamil Basha, Dharmendra Singh Rajput, S. Bharath Bhushan, Ravi Kumar Poluru, Rizwan Patan, *R. Manikandan* and Ambeshwar Kumar published a paper titled "Recent Trends in Sustainable Big Data Predictive Analytics: Past Contributions and Future Roadmap" in International Journal on Emerging Technologies 10(2): 50-59 (2019) (Scopus Indexed)

87**. *R. Manikandan*, R. Parameshwaran, J. Prassanna and K.R. Sekar published a paper titled "A Study on Specific Computational Algorithms for VLSI Cell Partitioning problem Problems " in International Journal on Emerging Technologies 10(2): 67-70 (2019) (Scopus Indexed)

88. J.Sethuraman, *R. Manikandan*, K.R. Sekar, J. Prassanna and Ambeshwar Kumar published a paper titled "A Classic Search for Dominant Factors in Web Pages using Search Engines and Validation through Data Analytics using R" in International Journal on Emerging Technologies 10(2):117-121 (2019) (Scopus Indexed)

89. P. Rajendiran, K.R. Sekar, C. Ramesh and *R. Manikandan* published a paper titled, "Novel Steganography Methodology Applied in Transposition Cipher for Hiding Text message" in International Journal on Emerging Technologies 10(2): 156-158 (2019) (Scopus Indexed)

90. Krishankumar Raghunathan, Ravichandran Kattur Soundarapandian, Amir H. Gandomi, *Manikandan Ramachandran*, Rizwan Patan, and Rajasekhara Babu Madda published a paper titled "Duo-Stage Decision: A Framework for Filling Missing Values, Consistency Check, and Repair of Decision Matrices in Multicriteria Group Decision" in **IEEE TRANSACTIONS ON ENGINEERING MANAGEMENT**,2019. (SCI Indexed, Impact factor: 2.05)

91. RajKumar Kulandaivel, Monica Balasubramaniam, Fadi Al-Turjman,Leonardo Mostarda, *Manikandan Ramachandran*, Rizwan Patan published a paper titled "Intelligent Data Delivery Approach for Smart Cities Using Road Side Units" , in **IEEE Access,**Vol.7, pp139462 - 139474 ,2019. (SCI Indexed, Impact factor: 4.098).

92. Priya Govindarajan,Ravichandran Kattur Soundarapandian,Amir H. Gandomi, Rizwan Patan, Premaladha Jayaraman, *Ramachandran Manikandan*, published a paper titled "Classification of stroke disease using machine learning algorithms", in Neural Computing and Applications,32(3):817–828, 2020. (SCI Indexed, Impact Factor: 4.774)

93. R. Krishankumar, J. Premaladha, K. S. Ravichandran, K. R. Sekar, **R. Manikandan**, X. Z. Gao, published a paper titled, "A novel extension to VIKOR method under intuitionistic fuzzy context for solving personnel selection problem", in Soft Computing (Springer),Vol.24,pp 1063–1081,2020 (**SCI Indexed, Impact Factor: 3.050**)

94**. Ramachandran Manikandan**, Rizwan Patan, Amir H. Gandomi, Perumal Sivanesan, Hariharan Kalyanaraman published a paper titled "Hash Polynomial Two Factor Decision Tree using IoT for Smart HealthCare Scheduling" in Expert systems with applications, **Vol 141,** 2020. **(SCI Indexed, Impact Factor: 5.452)**

95. Jafar A.Alzubi, **Ramachandran Manikandan** ,Omar A.Alzubi,Issa H.Qiqieh,RobbiRahim DeepakGupta ,AshishKhanna published a paper titled "Hashed Needham Schroeder Industrial IoT Based Cost Optimized Deep Secured Data Transmission in Cloud" in Measurement journal , Vol.150,2020.**(SCI Indexed, Impact factor: 3.364**).

96. Sethuraman Jayaraman, **Manikandan Ramachandran**, Rizwan Patan, Mahmoud Daneshmand published a paper titled "Fuzzy Deep Neural Learning Based on Goodman and Kruskal's Gamma for Search Engine Optimization" in **IEEE Transaction on Big Data**,2020. **(SCI Indexed, Impact factor: 5.670)**

97. Omar A. Alzubi, Jafar A. Alzubi, Mohammed Alweshah, Issa Qiqieh, Sara Al-Shami, **Manikandan Ramachandran** published a paper titled "An optimal pruning algorithm of classifier ensembles: dynamic programming approach" in Neural Computing and Applications,2020. **(SCI Indexed, Impact factor: 4.774)**

98. Deepak Kumar Jain, Aniket Mahanti, Pourya Shamsolmoali, **Ramachandran Manikandan** published a paper titled "Deep neural learning techniques with long short-term memory for gesture recognition" in neural computing and Applications, 2020. **(SCI Indexed, Impact factor: 4.774)**

99. C.Thaventhiran, K. R. Sekar, **R. Manikandan**, Robbi Rahim, Ambeshwar Kumar published a paper titled "Study on Service Oriented Architecture for Clinical Evaluation Using Computational Model" in Journal of Computational and Theoretical Nanoscience 17(4): 1933–1938 (2020) (Scopus indexed)

100. Ambeshwar Kumar**, R. Manikandan**, Robbi Rahim published a paper titled "A Study on Brain Tumor Detection and Segmentation Using Deep Learning Techniques" in Journal of Computational and Theoretical Nanoscience 17(4): 1927–1932 (2020) (Scopus indexed)

101. RizwanPatan, G S Pradeep Ghantasala, Ramesh Sekaran, DeepakGupta, **Manikandan Ramachandran** published a paper titled "Smart healthcare and quality of service in IoT using grey filter convolutional based cyber physical system" Sustainable Cities and Society Vol.59, 2020. (**SCI Indexed, Impact factor: 5.268)**

102. R.Umamaheswaran, S.R.Santhosh kumaran, R.Parameshwaran, G. Lakshminarayanan, S.Thiruppathirajan, **R. Manikandann** published a paper titled "An Optimized VLSI Based High Performance Architecture for Lossless Data Compression" International Journal of Advanced Science and Technology 29(5): 9503-9510 (2020)

103. L Jani Anbarasi, J.Prassanna, Abdul Quadir Md, Christy Jackson J, *R.Manikandan*, Robbi Rahim, G.Suseendran published a paper titled "Visual Secret Sharing: A Review" Journal of Critical Reviews 7(9): 1212-1216 (2020)   (Scopus indexed)

104.   S Murugan, S Jeyalaksshmi, B Mahalakshmi, G Suseendran, T Nusrat Jabeen, *R Manikandan*   published a paper titled "Comparison of ACO and PCO algorithm using energy consumption and load balancing in emerging MANET and VANET infrastructure" J Journal of Critical Reviews 7(9): 1197-1204 (2020)   (Scopus indexed)

105. P.Manikandan, Ramesh Sekaran, G.Suseendran, T.Nusrat Jabeen, Arun Prasath Raveendran, *R.Manikandan* published a paper titled " An efficient detection and segmentation of brain tumor using robust active shape model" Journal of Critical Reviews 7(9): 1205-1211 (2020) (Scopus indexed)

106. Durga PrasadKavadi, Rizwan Patan, *Manikandan Ramachandran*, Amir H.Gandomi published a paper titled "Partial Derivative Nonlinear Global Pandemic Machine Learning Prediction Of Covid 19" Chaos, Solitons & Fractals ,Vol.139,2020 (**SCI Indexed, Impact factor: 3.764)**

107. Ramesh Sekaran, Rizwan Patan, ArunPrasath Raveendran, Fadi Al-Turjman, *Manikandan Ramachandran,* Leonardo Mostarda published a paper titled "Survival Study on Blockchain based 6G-Enabled Mobile Edge Computation for IoT Automation" IEEE Access, Vol.8, pp 43453 – 143463,2020 . (**SCI Indexed, Impact factor: 4.640)**

108. Revathi Jothiramalingam, Anitha Jude, Rizwan Patan, *Manikandan Ramachandran*, Jude Hemanth Duraisamy, Amir H. Gandomi published a paper titled "Machine Learning-based Left Ventricular Hypertrophy Detection using Multi-lead ECG Signal" ", in Neural Computing and Applications, 2020. (**SCI Indexed, Impact Factor: 4.774)**

109. Robbi Rahim, S.Murugan, S.Priya, S.Magesh, *R.Manikandan* published a paper titled "Taylor Based Grey Wolf Optimization Algorithm (TGWOA) For Energy Aware Secure Routing Protocol" in International Journal of Computer Networks and Applications 7(4): 93 – 102 (2020). (Scopus indexed)

110. Deepak Kumar Jain, Xiangyuan Lan, *Ramachandran Manikandan* published a paper titled "Fusion of iris and sclera using phase intensive rubbersheet mutual exclusion for periocular recognition" in Image and Vision Computing, Vol.103,2020. (**SCI Indexed, Impact Factor: 3.103)**

111.M. Vasim Babu, Jafar A.Alzubi, Ramesh Sekaran, Rizwan Patan, *Manikandan Ramachandran,* Deepak Gupta, published a paper titled "An Improved IDAF-FIT Clustering Based ASLPP- RR Routing with Secure Data Aggregation in Wireless Sensor Network" in Mobile Networks and Applications, 2020. (**SCI Indexed, Impact Factor: 2.602)**

112.   Ramesh Sekaran,Surya Narayana Goddumarri,Suresh Kallam,Manikandan Ramachandran, Rizwan Patan, Deepak Gupta published a paper titled "5G Integrated Spectrum Selection and Spectrum Access Using AI-Based Framework for IoT Based Sensor Networks" in Computer Networks, 2020. **(SCI Indexed, Impact Factor: 3.111)**

113. Anbarasi LJ, Prassanna J, Sarobin VRM, Rajarajeswari S, Prabhakaran R, Manikandan R. published a paper titled "Autistic Disorder Analysis Among Children and Adult" in International Journal of Current Research and Review. Vol 12(21):48-51, 2020. (Scopus indexed)

Book Chapter publication:

1. ***R. Manikandan***, Ambeshwar Kumar, Deepak Gupta. "Hybrid Computational Intelligence for HealthCare diseases diagnosis", Chapter -14 of Hybrid Computational Intelligence: Challenges and Utilities, Elsevier pp 97-122,2020

2. V. Sangeetha, J. Preethi, R. Krishankumar, K. S. Ravichandran , ***R. Manikandan*** "Soft Computing Application and Techniques in Healthcare", Chapter -14 of Soft Computing Applications and Techniques in Healthcare, CRC Press, Taylor & Francis Group, 2020.

3. ***Manikandan Ramachandran***, Rizwan Patan, M. Rajasekhara Babu, Ambeshwar Kumar, C. Thaventhiran "Big Data System based IoT Enabling Technologies: Ubiquitous Wireless Communication, Real-Time Analytics, Machine Learning, Deep Learning, Commodity Sensors". Chapter-4 of The Internet of Things and Big Data Analytics: Integrated Platforms and Industry Use Cases, CRC press, pp 69-91,2020.

4. Ambeshwar Kumar***, R. Manikandan*** and C. Thaventhiran "Pattern Recognition Concepts", Chapter 6 of Machine Learning and Big Data: Concepts, Algorithms, Tools and Applications, Scrivener Publishing LLC, pp 131–152,2020.

5. Robbi Rahim, Rizwan Patan, ***R. Manikandan***, Rakesh kumar," Introduction to Blockchain and Bigdata" Chapter1 of Blockchain, Big Data and Machine Learning Trends and Applications, CRC press, pp 1-23,2020

6. Basetty Mallikarjuna, T. V. Ramana, Suresh Kallam, Rizwan Patan, **Manikandan Ramachandran,** "Visualizing Bitcoin using BigData: Mempool Visualization, visualization, peer visualization, Attack visual analysis, High-Resolution Visualization of Bitcoin systems, Effectiveness", Chapter7 of Blockchain, Big Data and Machine Learning Trends and Applications, pp155-176 ,2020, CRC press

7. Prassanna J., Rahim R., Bagyalakshmi K., **Manikandan R**., Patan R. Effective Use of Deep Learning and Image Processing for Cancer Diagnosis", Chapter 9 of Deep Learning for Cancer Diagnosis. Studies in Computational Intelligence, Springer, Singapore ,vol 908, pp 147-168 ,2021

8. Sekar K.R., Parameshwaran R., Patan R***., Manikandan R***., Kumar A. (2021) Improved Deep Learning Techniques for Better Cancer Diagnosis". Chapter 7 of   Deep Learning for Cancer

Diagnosis. Studies in Computational Intelligence, Springer, Singapore ,vol 908. pp 111-133, 2021.

Papers presented in National/International Conference:

1. M.Thiyagarjan and *R.Manikandan* Published a paper titled " Use of Genetic Algorithm in VLSI Cell Placement " in the proceedings of the AICTE Sponsored National Conference on Discrete Mathematics and its Applications, Thiyagarajar college of Engineering , Madurai, September 27-29, 2007.

2. Prof.M.Thiyagarajan and *R.Manikandan* Published a paper titled "Use of Hopfield Neural Network Algorithm in VLSI Cell placement " in the proceedings of the National Conference on Advanced in Applied Technologies, Kalasalingam University, KrishnanKoil, March 14th to 15th   2008.

3. *R.Manikandan* and P.Swaminathan published a paper titled "Comparative study of Clustering methods in VLSI Circuit partitioning" in the proceedings of the International conference on Recent trends in Electrical, Electronics and Information Technology,IRNet,Trivandrum . 11th November 2012.

4. Ambeshwar Kumar and *R Manikandan* published a paper titled " Recognition of Brain tumor using Fully Convolutional neural network based classifier" . In: Gupta D., Khanna A., Bhattacharyya S., Hassanien A., Anand S., Jaiswal A. (eds) International Conference on Innovative Computing and Communications. Advances in Intelligent Systems and Computing, 1165: 587-597(2021) Springer. (Scopus indexed)

Patent Filing:

Patent Number 1:

Application Number: 201941032507
Application type: Ordinary Application
Date of Filing: 10/08/2019
Applicant Name: 1 . Mr. S. Rakesh Kumar
                              2 **. Dr. Manikandan Ramachandran**
                              3 . Dr. Ramesh Chandran
                              4 . Ms. N. Gayathri
                              5 . Dr. Rizwan Patan
Title of Invention: SMART HELMET SYSTEM FOR THE RIDER OF TWO-WHEELER VEHICLE TO AVOID AND REPORT ACCIDENT
Field of Invention: Physics
Publication Date: 16/08/2019

Patent Number 2:

Application Number: 202041006390

Application type: Ordinary Application
Date of Filing: 14/02/2020
Applicant Name: 1. **Dr. Manikandan Ramchandran**
                 2 Dr. Prassanna Jayachandran
                 3 Mr. Gunasekaran Madhu
                 4 Mr. Hariharan Kalyanaraman
                 5 Dr. Rizwan Patan
Title of Invention: Method for scheduling of health care facility and health care resources using IoT technology.
Field of Invention: Computer Science
Publication Date: 21/02/2020

Patent Number 3:

Application Number: 202041008238
Application type: Ordinary Application
Date of Filing: 27/02/2020
Applicant Name: 1. Dr.Rajkumar Kulandaivel
                 2 Dr. Rizwan Patan
                 3. Dr. Prassanna Jayachandran
                 4 Mr. Hariharan Kalyanaraman
                 5 **Dr. Manikandan Ramachandran**
Title of Invention: Vehicular Network system of Road Side Unit (RSU) for monitoring traffic information using multi-path recognition.
Field of Invention: Communication
Publication Date: 06/03/2020

Researcher Award:

1.Received the Best researcher award for the year 2020 from World Research Council.
2. Receive the Best researcher award for the year 2020 from Science Father.

Research Proposal Evaluator for Funding agency

1. Research Proposal Evaluator in **Science and Engineering Research Board -**
   Department of Science and Technology, Government of India

Member in Editorial/Reviewer Board in Research journals:

1. IEEE Internet of Things Journal (Science Citation Indexed Journal)
2.IEEE Access.(Science Citation Indexed Journal)
3. Recent Patents on Computer Science Journal. (Scopus Indexed Journal)
4. International Journal of Computing and Optimization, Hikari Ltd.
5. IEEE Transaction on Fuzzy Systems (Science Citation   Indexed Journal)

6. International Arab Journal of Information Technology (Science Citation
    Indexed Journal)
7. Applied Soft computing journal-Elsevier (Science Citation Indexed Journal)
8. Computers and Electrical Engineering –Elsevier (Science Citation Indexed Journal)
9. Internet of Things - Elsevier (Science Citation Indexed Journal)
10. International Journal on Emerging Technologies (Scopus Indexed Journal)
11. Turkish journal of Electrical Engineering & Computer sciences (Science Citation Indexed
    Journal)
12. Journal of Computer Science (Scopus Indexed Journal)

ATTENDED SHORT TERM COURSES/SEMINARS/CONFERENCES:

1. Attended winter School on **Networking through Windows NT** at Crescent Engineering College, Chennai from 24/11/1999 to 08/12/1999.

2. Attended winter School on **Component Based Object Technology** at PSG College Technology Coimbatore from 20/11/2000 to 02/12/2000

3. Attended winter School on **Recent Trends in Computer Graphics & Vision Methodology** at Pondicherry Engineering College, Pondicherry from 14/05/2001 to 24/05/2001

4. Attended Summer School on **Pedagogy and Communication Skills** at SASTRA University, Thanjavur from 17/03/2003 to 28/03/2003.

5. Attended **International Conference on ATM** at Hyatt Regency Hotel, New Delhi, during August'01

6. Attended **National seminar on Intellectual Property Rights** at SASTRA University, Thanjavur from 18/10/2003 to 19/10/2003

7. Attended **Seminar on Advanced VLSI Design Course** at M.S.RAMAIAH Advanced Studies, Bangalore from 14/06/2003 to 19/06/2003

8. Attended Workshop on **System Level Design & Modeling** at Indian Institute of Technology, New Delhi from 16/12/2003 to 24/12/2003.

9. Co-ordinated NETCOM'01 A national level technical Symposium on Information Technology at JJ College of Engineering & Technology, Trichy-620009.

10. Participated at national level **symposium on MULTIMEDIA ON THE MOVE** at SASTRA UNIVERSITY- Thanjavur during October 1999.

11. Attended Mentor Graphics Product training at Sandeepani-School of VLSI Design, CG-CoreEl Programmable Solution Pvt. Ltd. Bangalore from 26/07/04 to 30/07/04.

12. Attended UGC Refresher Course on **Modern MOS Technology Tools & Design** at Sathyabama University, Chennai from 28/11/2005 to 17/12/2005.

13. Attended one day Seminar on **"SAP-HR Module"** at VIT University , Vellore on 17/10/2006.

14. Attended one day workshop on **"What every Engineer Should know about Telecommunication and Networking"** at National Institute of technology, Tiruchirappalli on 03/02/2007

15. Attended **Dot Net Software Training Programme** Organized by ICT Academy, SASTRA University Campus, Thanjavur from 19/06/2010 to 26/10/2010.

16. Attended **Mission 10x Workshop** Organized by Wipro, SASRA University Campus,Thanjavur from 17/01/2012 to 21/01/2012.

17. Attended **Faculty development Programme** organized by Microsoft, IGTSC Microsoft, Bangalore from 22/09/14 to 27/09/14.

18 Attended on Faculty Development Programme (FDP) on "**Internet of Things for Intelligent Systems"** Organized by Department of Computer Science and Engineering, NIT Warangal from 20-07-2020 to 24-07-2020

19. Attended in the international webinar titled " **Research Challenges, Issues and Counter measures in IoT security"** organized by kings college of Engineering , Punalkulam Pudukkottai on 25/07/2020.

20. Attended AICTE Sponsored a One week online Short Term Training Program(STTP) on "**Privacy and security in IoT**" organized by Department of Computer Science and Engineering, Anil Neerukonda Institute of Technology & Sciences, Visakhapatnam, from 27/7/2020 to 1/8/2020.

21. Attended one day international webinar on "**Entrepreneurship in Technical Start-Ups (ETS-2020)** " organized by Maharaja Agrasen Institute of Technology, New Delhi on 7/8/2020.

22. Attended Two-Day Webinar on "**Future Generation Computing and Applications**" organized by Government College of Engineering and Ceramic Technology, Kolkata ,from 8/8/2020 to 9/8/2020

23. Attended Two day webinar on IoT Security organized by C-DAC, Hyderabad and SETS Chennai from 28/8/2020 to 29/8/2020.

PROFESSIONAL MEMBERSHIP

Member in Institution of Engineering and Technology *(IET)*
Life member in International Association of Computer Science and Information Technology
Life member in International Association of Engineers
Life member in Indian Society for Technical Education (*ISTE*)
Life member in Computer Society of India(*CSI*)
Life member in Systems Society of India
Fulltime member in Indian Association of Research in Computing Science.
Associate member in Universal Association Computer and Electronics Engineers
Senior Member of International Engineering and Technology Institute.
Life member in Indian Society of Systems for Science and Engineering (ISSE)

OTHER PROFESSIONAL ACTIVITIES:

Member in **M.Tech (VLSI Design)** Programme syllabus committee
Member in **B.Tech(ICT)** programme syllabus committee
Member in Doctoral committee for Ph.D programme
Board of studies member for the Department of Robotics and Automation , Dhanalakshmi Srinivasan Engineering College(Autonomous), Perambalur, Tamil Nadu.

PAPERS HANDLED

1. Embedded Systems Design
2. Embedded Systems Programming
3. Real Time Operating Systems
4. Embedded Communication
5. Hardware Software Co-Design
6. Distributed Embedded Systems
7. Microcontroller And Its Applications
8. Mobile Computing
9. Data Structures
10. Software Engineering

11. Operating Systems
12. Computer Networks
13. CAD For VLSI
14. VLSI Technology
15. Computer Architecture & Organization.
16. Neural Network and Fuzzy Logic
17. E-Commerce
18. Artificial Neural Networks
19. Management Information Systems
20. Broadband Communication
21. Java programming
22. Protocol and Network Management
23. C Programming
24. Principles of Programming Design
25. Software Testing
26. Active Directory Domain Services
27. Big Data Analytics
28. Internet of Things(IoT)
29. Machine Learning algorithms
30. Software Project Management
31. Wireless sensor network
32. Network Tools and Techniques
33. Protocols and Standards for IoT

PERSONAL DETAILS

Father's Name : S.Ramachandran

Date of Birth **:** 25-05-1975

Sex **:** Male

Nationality **:** Indian

Marital Status **:** Married

Language Known **:** English, Hindi, Tamil

Passport No **:** N8262411 (Expiry Date: 16/05/2026)

Professional References:

1. Dr.P.Swaminathan
   Vice Chancellor
   Vel's University, Chennai, 2012-2013
   Pallavaram, Chennai, Tamil Nadu – 600117
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2. Dr.Gunavathi
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3. Dr. Amit Acharyya,
   Associate Professor
   Department of Electrical Engineering,
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4. K.S.Ravichandran
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