

Name : Dr.S.Rajkumar  
 Designation : Associate Professor  
 Department : Computer Science and Engineering  
 College : Vellore Institute of Technology, Vellore, India.  
 Email id : rajkumars@vit.ac.in  
 Area of Specialization: Image Processing, Computer Vision, Machine Learning, Sensor Networks.

## JOURNALS PUBLISHED

1. Suganthi Kumar, S Rajkumar, "Robust approach of video steganography using combined keypoints detection algorithm against geometrical and signal processing attacks". Journal of Electronic Imaging, Vol. 12, pp. 1–19, 2020. <https://doi.org/10.3390/su12156119>. (Indexing:SCI Expanded, Scopus; Impact Factor:0.929) (SPIE).
2. Jinglei Su, Xue Chu, Seifedine Kadry, S Rajkumar, "InternetofThingsAssisted Smart System 4.0 Framework
3. Using Simulated Routing Procedures". Sustainability, Vol. 29, pp. 1–20, 2020. <https://doi.org/10.1117/1.JEI.29.4.043007>. (Indexing:SCI Expanded, Scopus; Impact Factor:2.576) (MDPI).
4. S Rajkumar, "An Approach for Infrared Image Pedestrian Classification based on Local Directional Pixel Structure Elements' Descriptor". Accepted in International Journal of Computer Aided Engineering and Technology , Vol. 13, pp. 271–291, 2020. (Indexing:Scopus) (Inderscience).
5. Adhiyaman Manickam,Rishin Haldar, Syed Muhammad Saqlain,Veerappan Sellam, S Rajkumar, "Fingerprint image classification using local diagonal and directional extrema patterns". Journal of Electronic Imaging, Vol. 28, pp. 1–15, 2019. <http://dx.doi.org/10.1117/1.JEI.28.3.033027>. (Indexing:SCI Expanded, Scopus; Impact Factor:0.929) (SPIE).
6. Ayush Dosaj, Suresh Chandra Satapathy, S Rajkumar, Mannat Kaur, Naeem Hannon, "An efficient cloud based face recognition system for e-health secured login using steerable pyramid transform and local directional pattern". Journal of Ambient Intelligence and Humanized Computing, DOI <https://doi.org/10.1007/s12652-018-1115-6>. (Indexing:SCI Expanded, Scopus; Impact Factor:1.423) (Springer).
7. S Rajkumar, P.V.S.S.R Chandra Mouli, "An approach to adaptive pedestrian detection and classification in infrared images based on human visual mechanism and support vector machine ", Arabian Journal for Science and Engineering, Vol. 43, pp. 3951–3963, 2018. DOI 10.1007/s13369-017-2642-8. (Indexing:SCI Expanded, Scopus; Impact Factor:0.78) (Springer).
8. Arvind Pillai, S Rajkumar, Swapnil Satapathy, Suresh Chandra Satapathy, Ki-Hyun Jung, K. Rajakumar, "Local Diagonal Extrema Number Pattern: A new Feature Descriptor for Face Recognition", Future Generation Computer Systems, Vol. 81, pp. 297–306, 2018. (Indexing:SCI Expanded, Scopus; Impact Factor: 3.997) (Elsevier).
9. Mannat Kaur, Swapnil Satapathy, S Rajkumar, Jivjot Singh, "Targeted Style Transfer using Cycle consistent Generative Adversarial Networks with Quantitative analysis of different loss functions". KES Journal, Vol. 22, pp. 239–247, 2018. (Indexing:Scopus).

10. Sayantani Basu, K Marimuthu, S Rajkumar, Niranchana R, "Modification of AES using Genetic Algorithms for High-Definition Image Encryption", *International Journal of Intelligent Systems Technologies and Applications*, Vol. 17, No. 4, pp. 452–466, 2018. (Indexing:Scopus) ( Inderscience).
11. Akshat Pradhan, Marimuthu Karuppiyah, Niranchana R, Asha Jerlin M, S Rajkumar, "Design and Analysis of Smart Card based Authentication Scheme for Secure Transactions", *International Journal of Internet Technology and Secured Transactions*, Vol. 8, No. 4, pp. 494-515, 2018. (Indexing:Scopus) ( Inderscience).
12. S Rajkumar, Marimuthu Karuppiyah, Saru Kumari, Sanjay Kumar Tyagi, Fan Wu, Ki-Hyun Jung, "An Efficient DWT and Intuitionistic Fuzzy based Multimodality Medical Image Fusion", *International Journal of Imaging Systems and Technology*, Vol. 27, pp. 118–132, 2017. (Indexing:SCI Expanded, Scopus; Impact Factor:0.571) ( Wiley).
13. S Rajkumar, Ezhilmaran D, Adhiyaman M, "A new local diagonal pixel structure elements descriptor for fingerprint image classification", *International Journal of Pure and Applied Mathematics*, Vol. 117, No. 11, pp. 253–261, 2017. (Indexing:Scopus).
14. S Rajkumar, P.V.S.S.R Chandra Mouli "Robust Pedestrian Detection in Infrared Images using Rotation and Scale Invariant based Structure Elements Descriptor", *International Journal of Signal and Imaging Systems Engineering*, Vol. 10, No. 3, pp. 157–167, 2017. (Indexing:Emerging Sources Citation Index(ESCI)-Thomson Reuters, Scopus) (Inderscience).
15. Agarwal Ruchi Sanjay, S Rajkumar, K. Marimuthu, G. Rajasekaran, "CT and MRI image fusion based on discrete wavelet transform and type-2 fuzzy logic", *International Journal of Intelligent Engineering and Systems*, Vol. 10, No. 3, pp. 355–362, 2017. (Indexing:Scopus).
16. Niketan Janakraj Jivane, S Rajkumar, "Enhancement of an Algorithm for Oil Tank Detection in Satellite Images", *International Journal of Intelligent Engineering and Systems*, Vol. 10, No. 3, pp. 218–225, 2017. (Indexing:Scopus).
17. S Rajkumar, P.V.S.S.R Chandra Mouli, "Adaptive Pedestrian Detection in Infrared Images using Fuzzy Enhancement and Top-hat transform", *International Journal of Computational Vision and Robotics*, Vol. 7, No. 1/2, pp. 4–67, 2017. (Indexing:Scopus) ( Inderscience).
18. P Thanapal, K Marimuthu, S Rajkumar, R Niranchana, "Smarter Way to Access Multiple Mobile Cloud Applications without Interoperability Issues", *International Journal of Wireless and Microwave Technologies*, DOI 10.5815/ijwmt.2017.05.04.
19. S Rajkumar, P.V.S.S.R Chandra Mouli, "A Novel and Robust Rotation and Scale Invariant Structuring Elements based Descriptor for Pedestrian Classification in Infrared images", *Infrared Physics & Technology*, Vol. 78, pp. 13–23, 2016. (Indexing:SCI, Scopus; Impact Factor:1.588) ( Elsevier).
20. S Rajkumar, J Prakash, "Automated attendance using Raspberry pi", *International Journal Of Pharmacy & Technology*, Vol. 8, No. 3, pp. 16214–16221, 2016. (Indexing:Scopus).
21. S Rajkumar, Ramani S, Boominathan P, "Medical Image Fusion using Contourlet Transform and Fusion Tool Techniques", *International Journal Of Pharmacy & Technology*, Vol. 8, No. 2, pp. 13553–13563, 2016. (Indexing:Scopus).

22. Boominathan P, Rishin Haldar, S Rajkumar, "Bin Packing Problems: Comparative Analysis of Heuristic Techniques for Different Dimension", International Journal Of Pharmacy & Technology, Vol. 8, No. 2, pp. 13305–13319, 2016. (Indexing:Scopus).
23. Ramani S, Boominathan P, Swathi J.N, S Rajkumar, "Improving Optimization Sequence of Compilers by using Sequence Selection Approach", International Journal Of Pharmacy & Technology, Vol. 8, No. 2, pp. 13471–13480, 2016. (Indexing:Scopus).
24. S Rajkumar, Rishin Haldar, Swarnalatha P, Arvind Pillai, "Multimodality medical image fusion using block based intuitionistic fuzzy sets", IIOAB journal, Vol. 7, No. 5, pp. 85–94, 2016. (Indexing:Scopus).
25. B Balamurugan, K Marimuthu, S Rajkumar, Mamdouh Alenezi and R Niranchana, "Is Cloud Secure?",
26. International Journal of Computer Sciences and Engineering, Vol. 4, No. 10, pp. 126–129, 2016.
27. Niketan Jivane, Supriya Jivane, S Rajkumar, K Marimuthu, "Enhancement of an Algorithm to Extract Text-lines from Images for Blind and Visually Impaired Persons Through Parallel Approach", International Journal of Computer Sciences and Engineering, Vol. 4, No. 09, pp. 25–32, 2016.
28. R Nandhakumari, S Rajkumar, K R Lakshmi, "Human Identification using Vein and Texture Images",
29. International Journal for Scientific Research & Development, Vol. 3, No. 2, pp. 1880–1884, 2015.
30. Amrita Mohanty, S Rajkumar, Zameer Muzaffar Mir, Puja Bardhan, "Analysis of color images using Cluster based Segmentation Techniques", International Journal of Computer Applications, Vol. 79, No. 2, pp. 42–47, 2013.
31. S Rajkumar, Shrey Gupta, V Vijayarajan, Anil kumar, "Analysis of Non-Linear Filtering Techniques based on Quantitative Metrics using Different Images", International Journal of Computer Applications, Vol. 52, No. 6, pp. 13–20, 2012.
32. S Rajkumar, S Kavitha, "Quantitative Analysis for the Identification of Brain Tumor in CT and MRI Medical Images", International Journal of Advanced Research in Computer Science, Vol. 2, No. 3, pp. 159–165, 2011.

#### **International Journal Publications(In peer-reviewing)**

1. Himanshu Naidu, S Rajkumar, Marimuthu Karuppiah, SK Hafizul Islam, "A COVID-19 Detection Method From X-ray Images using Local Directional Pattern-based Convolutional Neural Network". under review in Information Fusion (Indexing:SCI Expanded, Scopus; Impact Factor:11.320) ( Elsevier).
2. S Rajkumar, Gunasekaran, Suresh Chandra Satapathy, "Local directional extrema number pattern: A new feature descriptor for CT image retrieval ". under review in Multimedia Tools and Applications (Indexing: SCI Expanded, Scopus; Impact Factor:1.990) ( Springer).
3. S Rajkumar, Chandra Mouli P.V.S.S.R, Suresh Chandra Satapathy, "A Survey on Infrared Image Enhance- ment Techniques". Under review in Arabian Journal for Science and Engineering (Indexing:SCI Expanded, Scopus; Impact Factor:1.092) ( Springer).

#### **Book Chapters:**

1. S Rajkumar, Ramani S, "A Proficient Hybrid Framework for Image Retrieval", Applications of Artificial Intelligence for Smart Technology, IGI Global publication, DOI: 10.4018/978-1-7998-3335-2.ch014. (Indexing: (Indexing:Scopus))
2. Ramanathan Lakshmanan, Swarnalatha Purushotham, Ramani S, Prabakaran N, Prateek Singh Phogat, S Rajkumar, "Secured Smart Hospital Cabin Door Knockers using Internet of Things", Smart Healthcare Analytics in IOT Enabled Environment, Springer, Cham publication, pp. 77–88, February 2020. (Indexing: (Indexing:Scopus))
3. Ricky Parmar, Ramanathan Lakshmanan, Swarnalatha Purushotham, S Rajkumar, "Detecting Diabetic Retinopathy from Retinal Images Using CUDA Deep Neural Network", Accepted in IPCS-2017. (Indexing: (Indexing:Scopus))
4. S Rajkumar, P.V.S.S.R Chandra Mouli, "Target detection in infrared images using block-based approach", International Conference on Informatics and Communication Technologies for societal Development (The ICICTS '14), Springer Verlag publication, pp. 9–16, March 2014. (Indexing: (Indexing:Scopus))
5. S Rajkumar, P.V.S.S.R Chandra Mouli, "Perceptual Visualization Enhancement of Infrared Images Using Fuzzy Sets", Transactions on Computational Science XXV, Springer Berlin Heidelberg, pp 3–19, 2015. (Indexing:Scopus)

#### **Book:**

1. Rajasekar V R, Rajkumar S, "IPv4 Addressing, Subnetting & VLSM Workbook: CCNA 200-301", Kindle Edition, Amazon Asia-Pacific Holdings Private Limited, 2020.
2. Rajkumar S, Rajasekar V R, "IPv6 Workbook: IPv6 Basics, Addressing & Subnetting: (For A+, Network+, Security+, CCNA, HCNA Certifications)", Kindle Edition, Amazon Asia-Pacific Holdings Private Limited, 2020.
3. Rajasekar V R, Rajkumar S, "IPv4 Addressing and subnetting workbook (For A+, Network+, Security+, CCNA, HCNA Certifications)", Kindle Edition, Amazon Asia-Pacific Holdings Private Limited, 2018.

#### **CONFERENCES**

1. S Rajkumar, K.C. Santosh, and P.V.S.S.R. Chandra Mouli, "Infrared Image Pedestrian Detection Techniques with Quantitative Analysis", Accepted in International Conference on Recent Trends in Image Processing & Pattern Recognition. (Indexing:Scopus) (Springer).
2. Swapnil Satapathy, Khushi Jalan, S Rajkumar, "Discrete Wavelet Transform based Invisible Watermarking Scheme for Digital Images", 2nd International Conference on Smart Computing and Informatics, India, pp. 207–215, 2019. (Indexing:Scopus) (Springer).
3. Swathi J.N., S Rajkumar, Boominathan P., Cyril Joe Baby, "Emphysema Medical Image Classification using Fuzzy Decision Tree with Fuzzy Particle Swarm Optimization Clustering", 2nd International Conference on Smart Computing and Informatics, India, pp. 305–313, 2019. (Indexing:Scopus) (Springer).
4. Mohan Sai.S, Naresh K, S Rajkumar, Mohan Sai Ganesh, LokSai, Abhinav, "An Infrared Image detecting System model to monitor human with weapon for controlling smuggling of Sandalwood Trees", 2nd International Conference on Inventive Communication and

- Computational Technologies, India, pp. 962–968, 2018. (Indexing:Scopus) ( IEEE Xplore).
5. S Rajkumar, Praneet Dutta, Advait Trivedi, “Adaptive Infrared Images Enhancement using Fuzzy Based Concepts”, 50th csi-2015 conference, Singapore, pp. 119–128, 2018. (Indexing:Scopus) ( Springer).
  6. Arvind Pillai, S Rajkumar, K Marimuthu, G Rajasekaran, “Adaptive new top-hat transform and multi-scale sequential toggle operator based infrared image enhancement”, International Conference on Innovations in Power and Advanced Computing Technologies, Vellore, pp. 1–5, 2017. (Indexing:Scopus) ( IEEE Xplore).
  7. Adhiyaman M, D Ezhilmaran, S Rajkumar, “Local adjacent extrema pattern for fingerprint image clas- sification”, 14th International Conference on Science, Engineering and Technology, Vol. 263, No. 4, 2017. (Indexing:Scopus) ( IOP).
  8. Marimuthu Karuppiah, Akshat Pradhan, Saru Kumari, Ruhul Amin, S Rajkumar, and Rahul Kumar, “Security on “Secure Remote Login Scheme with Password and Smart Card Update Facilities”, International Conference on Mathematics and Computing, Singapore, pp. 26-33, January 2017. (Indexing:Scopus) (Springer).
  9. S Rajkumar, P.V.S.S.R Chandra Mouli, “Adaptive Pedestrian Detection in Infrared Images using Back- ground Subtraction and Local Thresholding”, Second International Symposium on Computer Vision and the Internet (VisionNet’15), Cochin, pp. 706–713, August 2015. (Indexing:Scopus) ( Elsevier).
  10. S Rajkumar, P.V.S.S.R Chandra Mouli, “Pedestrian detection in Infrared Images using local thresholding”, 2nd International Conference on Electronics and Communication Systems (ICECS 2015), Coimbatore, pp. 259–263, February 2015. (Indexing:Scopus) ( IEEE Xplore).
  11. S Rajkumar, M Suresh, T Amith kumar, Ashish Rajak, Pawan Sharma, “Quantitative Analysis of Fused Infrared and Visible Images using Spatial and Transform Domain Techniques”, International Conference on Electronics and Communication Systems (ICECS 2014), Coimbatore, pp. 1–5, February 2014. (Indexing: Scopus) (IEEE Xplore).
  12. S Rajkumar, Puja Bardhan, Satya kumar Akkireddy, Chirag Munshi, “CT and MRI Image Fusion based on Wavelet Transform and Neuro-Fuzzy concepts with quantitative analysis”, International Conference on Electronics and Communication Systems (ICECS 2014), Coimbatore, pp. 1–6, February 2014. (Indexing: Scopus) (IEEE Xplore).
  13. S Rajkumar, P.V.S.S.R Chandra Mouli, “Infrared and Visible Image Fusion using Entropy and Neuro-Fuzzy Concepts”, AISC series of Springer, Visakhapatnam, pp. 93–100, December 2013. (Indexing:Scopus) (Springer).
  14. K Sharmila, S Rajkumar, V Vijayarajan, “Hybrid method for Multimodality Medical image fusion Using Discrete Wavelet Transform and Entropy concepts with Quantitative Analysis”, International Conference on Communication and Signal Processing (ICCSP 2013), Chennai, pp. 489–493, April 2013. (Indexing:Scopus) (IEEE Xplore).
  15. K Sharmila, S Rajkumar, “CT AND MRI MEDICAL IMAGE FUSION TECHNIQUES WITH QUAN- TITATIVE ANALYSIS”, National Conference on Computing, Communication and Information Systems (NCCCIS 2013), SKCET, Coimbatore, pp: 231–237, February 2013.
  16. Chandra Prakash, S Rajkumar, P.V.S.S.R Chandra Mouli, “Medical Image Fusion based on Redundancy DWT and Mamdani type min sum mean-of-max techniques with Quantitative Analysis”, International Conference on Recent Advances in Computing and

Software Systems (RACSS 2011), Chennai, pp: 54–59, April 2012. (Indexing:Scopus) ( IEEE Xplore).

17. S Rajkumar, S Kavitha, “Redundancy Discrete Wavelet Transform and Contourlet Transform for Multi- modality Medical Image Fusion with Quantitative Analysis”, Third International Conference on Emerging Trends in Engineering and Technology (ICETET 2010), BITS Pilani, Goa, pp. 134-139, December 2010. (Indexing:Scopus) ( IEEE Xplore).
18. S Rajkumar, S Kavitha, “Multimodality Medical Image Fusion Techniques with Quantitative Analysis”, National Conference on Image Processing (NCIMP 2010), Gandhigram Rural Institute, Dindigul, pp. 152–157, February 2010.
19. S Rajkumar, Rishin Haldar, Arvind Pillai, Praneet Duta, “A sugeno fuzzy logic based CT and MRI image fusion technique with quantitative analysis”, International Journal Of Pharmacy & Technology, Vol. 8, No. 1, pp. 11286–11296, 2016. (Indexing:Scopus).
20. Shrey Gupta, S Rajkumar, V Vijayarajan, k Marimuthu, “Quantitative Analysis of various Image Fusion techniques based on various metrics using different Multimodality Medical Images”, International Journal on Engineering and Technology, Vol. 5, No.1, pp. 133–141, 2013. (Indexing:Scopus).