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## **Publication: (Last 5 years)**

- 1. A Bakiya, K Kamalanand, V Rajinikanth, RS Nayak, S Kadry, "Deep neural network assisted diagnosis of time-frequency transformed electromyograms", Multimedia Tools and Applications, 1-17(2020)
- 2. V Rajinikanth, N Dey, SC Satapathy, K Kamalanand, "Inspection of crop-weed image database using kapur's entropy and spider monkey optimization Soft Computing for Problem Solving", 405-414(2020)
- 3. B Ambikapathy, K Krishnamurthy, "Mathematical Modelling to Assess the Impact of Lockdown on COVID-19 Transmission in India: Model Development and Validation". JMIR Public Health and Surveillance 6 (2), e19368(2020)
- 4. V Rajinikanth, N Dey, SC Satapathy, K Kamalanand , "Inspection of crop-weed image database using kapur's entropy and spider monkey optimization Soft Computing for Problem Solving" , 405-414(2020)
- 5. V Rajinikanth, S Kadry, KP Thanaraj, K Kamalanand, S Seo, "Firefly-Algorithm Supported Scheme to Detect COVID-19 Lesion in Lung CT Scan Images using Shannon Entropy and Markov-Random-Field" arXiv preprint arXiv:2004.09239(2020)
- 6. A Rajagopal, P Alagumariappan, K Krishnamurthy, "Development of an automated decision support system for diagnosis of digestive disorders using electrogastrograms: an approach based on empirical mode decomposition and K-means..." Disruptive Technology: Concepts, Methodologies, Tools, and pplications, 661-678(2020)
- 7. KP Thanaraj, B Parvathavarthini, UJ Tanik, V Rajinikanth, S Kadry, "Implementation of Deep Neural Networks to Classify EEG Signals using Gramian Angular Summation Field for Epilepsy Diagnosis ..." arXiv preprint arXiv:2003.04534(2020)
- 8. P Alagumariappan, K Krishnamurthy, PM Jawahar, "Selection of surface electrodes for electrogastrography and analysis of normal and abnormal electrogastrograms using Hjorth information", International Journal of Biomedical Engineering and Technology 32 (4), 317-330(2020)
- 9. S Arockia Sukanya, Krishnamurthy Kamalanand, B Thayumanavan, C Emmanuel, V Rajnikanth, "Time domain analysis on myoelectric activity of masseter muscles in resting and chewing conditions "Network Modeling Analysis in Health Informatics and Bioinformatics 9 (1), 1-8(2020)

- 10. A Sukanya, K Krishnamurthy, T Balakrishnan , "Comparison of Preprocessing Techniques for Dental Image Analysis Current Medical Imaging" 16 (7), 776-780(2020)
- 11. K Krishnamurthy, SC Manoharan, R Swaminathan, "A Jacobian approach for calculating the Lyapunov exponents of short time series using support vector regression" Journal of Ambient Intelligence and Humanized Computing 11 (8), 3329-3335(2020)
- 12. K Krishnamurthy, B Ambikapathy, A Kumar, L Britto, "Prediction of the transition from sub-exponential to the exponential transmission of SARS-CoV-2 and epidemic nowcasting for metro-zones: Experiences from Chennai-Metro-Merge ..." JMIR Public Health and Surveillance(2020)
- 13. K Palani Thanaraj, B Parvathavarthini, UJ Tanik, V Rajinikanth, S Kadry, "Implementation of Deep Neural Networks to Classify EEG Signals using Gramian Angular Summation Field for Epilepsy Diagnosis", arXiv, arXiv: 2003.04534(2020)
- 14. P Alagumariappan, K Krishnamurthy, S Kandiah, E Cyril, V Rajinikanth, "Diagnosis of Type 2 Diabetes Using Electrogastrograms: Extraction and Genetic Algorithm—Based Selection of Informative Features", JMIR Biomedical Engineering 5 (1), e20932(2020)
- 15. K Krishnamurthy, B Ambikapathy, A Kumar, L De Britto, "Prediction of the Transition From Subexponential to the Exponential Transmission of SARS-CoV-2 in Chennai, India: Epidemic Nowcasting JMIR public health and surveillance 6 (3), e21152(2020)
- 16. K Krishnamurthy, MJ Ponnuswamy, "Entropy Measures for Medical Image Analysis", Current Bioinformatics 14 (4), 280-281(2019)
- 17. A Sukanya, K Krishnamurthy, "Thresholding Techniques for Dental Radiographic Images: A Comparative Study", Computational Techniques for Dental Image Analysis, 40-61(2019)
- 18. A Rajagopal, P Alagumariappan, K Krishnamurthy, "Development of an automated decision support system for diagnosis of digestive disorders using electrogastrograms: an approach based on empirical mode decomposition and K-means Algorithm", Disruptive Technology: Concepts, Methodologies, Tools, and Applications, 661-678(2018)
- 19. B Ambikapathy, K Kirshnamurthy, R Venkatesan, "Assessment of electromyograms using genetic algorithm and artificial neural networks", Evolutionary Intelligence, 1-11(2018)
- 20. B Ambikapathy, K Krishnamurthy, "Analysis of electromyograms recorded using invasive and noninvasive electrodes: a study based on entropy and Lyapunov exponents estimated using artificial neural networks", Journal of Ambient Intelligence and Humanized Computing, 1-9(2018)
- 21. S Apparsamy, K Krishnamurthy, "Design and Development of Capacitance Sensor Array for Analyzing the Non-Homogeneity in Biological Materials: A Smart Sensing Approach", Expert System Techniques in Biomedical Science Practice, 70-96(2018)
- 22. V Rajinikanth, NSM Raja, K Kamalanand, "Firefly algorithm assisted segmentation of tumor from brain MRI using Tsallis function and Markov random field", Journal of Control Engineering and Applied Informatics 19 (3), 97-106(2017)
- 23. P Alagumariappan, K Krishnamurthy, S Kandiah, MJ Ponnuswamy, "Effect of electrode contact area on the information content of the recorded electrogastrograms: An analysis based on Rényi entropy and Teager-Kaiser Energy", Polish Journal of Medical Physics and Engineering 23 (2), 37-42(2017)
- 24. Nilanjan Dey, V Rajinikanth, Fuqian Shi, João Manuel RS Tavares, Luminita Moraru, K Arvind Karthik, Hong Lin, K Kamalanand, C Emmanuel , "Social-Group-Optimization

- based tumor evaluation tool for clinical brain MRI of Flair/diffusion-weighted modality", Biocybernetics and Biomedical Engineering 39 (3), 843-856(2017)
- 25. VSS Kumar, UJ Anantharaj, M Sakthioli, R Vinnakota, K Krishnamurthy, "Mathematical modelling of the effects of prebiotic concentration on lactobacillus case growth", International Journal of Infectious Diseases 45, 205(2016)
- 26. K Kamalanand, P Mannar Jawahar, "Comparison of particle swarm and bacterial foraging optimization algorithms for therapy planning in HIV/AIDS patients", International Journal of Biomathematics 9 (02), 1650024(2016)
- 27. K Kamalanand, PM Jawahar, "Prediction of human immunodeficiency virus-1 viral load from CD4 cell count using artificial neural networks", Journal of Medical Imaging and Health Informatics 5 (3), 641-646(2015)
- 28. K Kamalanand, P Mannar Jawahar, "Comparison of swarm intelligence techniques for estimation of HIV-1 viral load", IETE Technical Review 32 (3), 188-195(2015)
- 29. K Kamalanand, S Ramakrishnan, "Effect of gadolinium concentration on segmentation of vasculature in cardiopulmonary magnetic resonance angiograms", Journal of Medical Imaging and Health Informatics 5 (1), 147-151(2015)