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| Name: | <div>  </div> Dr. E. Priya | | |
| Designation: | Professor | | |
| Qualification: | M.E., Ph.D | | |
| Area of specialization: | Biomedical Engineering | | |
| Experience : (As on May 2020) | Industrial | Research | Teaching Experience |
| | 3 Years | 4 Years | 20 Years |
| Number of workshop / FDP attended: | Number of Workshops | | Number of FDPs |
| | 27 | | 28 |
| Publications: | Conference | | Journal |
| | National | International | National |
| | 2 | 28 | 5 |
| Patents: | National | | International |
| | 3 | | - |
| Professional Body Membership: | <ul style="list-style-type: none"> Life member in THE INDIAN SOCIETY FOR TECHNICAL EDUCATION (ISTE) – LM 30496 Associate member in THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERS (IETE) – AM 150520 Annual member, Institute of Electrical and Electronics Engineers (IEEE)-Signal Processing Society (SPS), Engineering in Medicine and Biology Society (EMBS), 98060099 | | |
| Achievements: | <ul style="list-style-type: none"> Guiding 6 Ph.D (5 part time & 1 full time) scholars under Anna University. Nirmal Raja K L, Shyam Kumar M and K Varunapriyan (2019-2023 batch) won 2nd prize worth Rs 75,000 from FAER-McAfee Scholar Awards Program held on 22nd July 2022 for their project “Control of prosthetic arm via signals from residual limb – A boon for amputees”. Received AICTE Research Promotion Scheme (RPS) grant of Rs. 18,17,571 Lakh for the project title “An AI enabled portable public screening health care system” from 2021-22 for 3 years. Project titled “A prosthetic hand using myoelectric control” funded by DST–IEDC scheme of Rs.1,00,000/- for the academic year 2016-17. RMBS president award for the paper ‘Frailty analysis of sEMG signals for different hand movements based on temporal and spectral approach’ presented at 52nd Rocky Mountain Bioengineering Symposium held at Salt Lake City, Utah, USA, April 10-12, 2015. | | |

- DST-PURSE fellow (research fellowship awarded for meritorious candidates pursuing research in the areas of Science, Engineering and Technology).
- DST travel grant to visit University of Cape Town, South Africa to carry out the India-South African collaborative project during 20-30th September 2011.
- “Innovation potential of students” project award by Indian National Academy of Engineering (INAE) for the project “Versatile Sniffer Robot” developed by P. Rajan, A. Raja and E. Lavakumar in the year 2004.

Books:

Edited book:

Signal and Image Processing Techniques for the Development of Intelligent Healthcare Systems, Editors: Priya, E, Rajinikanth, V. (Eds.), Publisher: Springer Singapore, DOI: 10.1007/978-981-15-6141-2, 2020

Authored book:

Hybrid Image Processing Methods for Medical Image Examination (Intelligent Signal Processing and Data Analysis), Venkatesan Rajinikanth (Author), E Priya (Author), Hong Lin (Author), Fuhua Lin (Author), Publisher: CRC Press, 2021

Publication in Book Chapters:

1. Velvizhi V.A., Priya E. (2022) “A Preprocessing Techniques for Seismocardiogram Signals in Removing Artifacts”. In: Sivasubramanian A., Shastry P.N., Hong P.C. (eds) Futuristic Communication and Network Technologies. Lecture Notes in Electrical Engineering, vol 792. Springer, Singapore. https://doi.org/10.1007/978-981-16-4625-6_84. (Indexed in EI Compindex and Scopus) 12 October 2021 eBook ISBN: 978-981-16-4625-6
2. Chitra R., Priya E. (2022) “A Preliminary Step to Realize Digital Filter for Electrocardiogram Signal Denoising”. In: Sivasubramanian A., Shastry P.N., Hong P.C. (eds) Futuristic Communication and Network Technologies. Lecture Notes in Electrical Engineering, vol 792. Springer, Singapore. https://doi.org/10.1007/978-981-16-4625-6_83. (Indexed in EI Compindex and Scopus) 12 October 2021 eBook ISBN: 978-981-16-4625-6
3. Geetha R., Priya E. (2022) “Index for Assessment of EEG Signal in Ischemic Stroke Patients”. In: Sivasubramanian A., Shastry P.N., Hong P.C. (eds) Futuristic Communication and Network Technologies. Lecture Notes in Electrical Engineering, vol 792. Springer, Singapore. https://doi.org/10.1007/978-981-16-4625-6_82. (Indexed in EI Compindex and Scopus) 12 October 2021 eBook ISBN: 978-981-16-4625-6
4. Shanthakumari G., Priya E. (2022) “Interpretation of Lung Sounds Using Spectrogram-Based Statistical Features”. In: Sivasubramanian A., Shastry P.N., Hong P.C. (eds) Futuristic Communication and Network Technologies. Lecture Notes in Electrical Engineering, vol 792. Springer, Singapore. https://doi.org/10.1007/978-981-16-4625-6_81. (Indexed in EI Compindex and Scopus) 12 October 2021 eBook ISBN: 978-981-16-4625-6

5. Geetha R., Priya E. (2021) "Optimization-based multilevel threshold image segmentation for identifying ischemic stroke lesion in brain MR images". In: Handbook on Decision Support Systems for neurological disorders, Hemanth Jude (editor), Elsevier, Academic Press, ISBN: 9780128222713 (Scopus indexed) 9th April 2021 DOI: 10.1016/B978-0-12-822271-3.00005-0
6. Geetha R., Priya E. (2021) "Brain MR Image Lesion Identification Using Threshold-Based Segmentation Techniques". In: Komanapalli V.L.N., Sivakumaran N., Hampannavar S. (eds) Advances in Automation, Signal Processing, Instrumentation, and Control. Lecture Notes in Electrical Engineering, vol 700. Springer, Singapore. https://doi.org/10.1007/978-981-15-8221-9_264. (Indexed in EI Compendex and Scopus) ISBN-10: 9811582203
7. Chitra R., Priya E. (2021) "Digital Filter Implementation for Removal of Baseline Wander in ECG Signals". In: Komanapalli V.L.N., Sivakumaran N., Hampannavar S. (eds) Advances in Automation, Signal Processing, Instrumentation, and Control. Lecture Notes in Electrical Engineering, vol 700. Springer, Singapore. https://doi.org/10.1007/978-981-15-8221-9_254. (Indexed in EI Compendex and Scopus) ISBN-10: 9811582203
8. Savithri C.N., Priya E., Sudharsanan J. (2021) "Classification of sEMG Signal-Based Arm Action Using Convolutional Neural Network". In: Priya E., Rajinikanth V. (eds) Signal and Image Processing Techniques for the Development of Intelligent Healthcare Systems. Springer, Singapore. https://doi.org/10.1007/978-981-15-6141-2_13 (Indexed in WoS, Scopus, Google scholar) September 2020
9. Priya E. (2021) "An Automated Approach for the Identification of TB Images Enhanced by Non-uniform Illumination Correction". In: Priya E., Rajinikanth V. (eds) In book: Signal and Image Processing Techniques for the Development of Intelligent Healthcare Systems. Springer, Singapore. https://doi.org/10.1007/978-981-15-6141-2_14 (Indexed in WoS, Scopus, Google scholar) September 2020
10. J.Sudharsanan, K.Prithivirajan, A.Manikandan, C.N.Savithri and E.Priya (2020), "Identification of sEMG-based arm actions using feature extraction and machine learning techniques", 9th Project Innovation Contest, 16th International Conference on Distributed Computing and Internet Technology, 9th–12th January 2020 at Kalinga Institute of Industrial Technology, Deemed to be University, Bhubaneswar, Odisha, India, Published in book: Project Innovations in Distributed Computing and Internet Technology, Editors: J.Singh et al., pp. 52-56, ISBN: 978-93-5391-188-1.
11. C.N.Savithri, R.Kevin and E.Priya (2019), "A Preliminary Study on Kinematic Analysis of Human Hand". In book: Artificial Intelligence. SLAAI-ICAI 2018. Communications in Computer and Information Science, vol 890, pp. 3-14. Publisher: Springer, Singapore, Editors: Hemanth J., Silva T., Karunananda A. (Indexed in Scopus) ISBN 978-981-13-9128-6 DOI: 10.1007/978-981-13-9129-3_1
12. G.Shanthakumari and E.Priya (2019), "Performance Analysis: Preprocessing of Respiratory Lung Sounds". In book: Artificial Intelligence. SLAAI-ICAI 2018. Communications in Computer and Information Science, vol 890, pp. 289-300. Publisher: Springer, Singapore, Editors: Hemanth J., Silva T., Karunananda A. (Indexed in Scopus) ISBN 978-981-13-9128-6 10.1007/978-981-13-129-3_21

13. E.Priya, (2019) "A three tier pre-processing validation for image segmentation and analysis of RBCs in SEM images" In book: Advances in Nano Instrumentation Systems and Computational Techniques, Publisher: Nova Science Publishers Inc., USA. Editors: K. Kamalanand et al., pp. 83-116. ISBN: 978-1-53615-019-3.
14. C.N.Savithri and E.Priya (2019) "Statistical Analysis of EMG-Based Features for Different Hand Movements" In book: Smart Intelligent Computing and Applications, Publisher: Springer Nature Singapore Pte Ltd. Editors: S. C. Satapathy et al., pp. 71-79.
15. E.Priya (2019) "Digital image enhancement techniques for dental radiographs – A support to clinician" In book: Computational Techniques for Dental Image Analysis, Chapter: 1, Publisher: IGI Global, Editors: K. Kamalanand, B. Thayumanavan and P. Mannar Jawahar, pp. 1-39.
16. E.Priya and S.Srinivasan (2018) "Automated method of analysing sputum smear tuberculosis images using multifractal approach" In book: Biomedical Signal and Image Processing in Patient Care, Chapter: 10, Publisher: IGI Global, Editors: Maheshkumar H. Kolekar and Vinod Kumar, pp. 184-215.
17. E.Priya and S.Srinivasan (2017) "Analysis of Tuberculosis Images Using Differential Evolutionary Extreme Learning Machines (DE-ELM)" In book: Deep learning for image processing applications, In book series: Advances in parallel computing, Publisher: IOS Press, Editors: D. Jude Hemanth, Vania Vieira Estrela, pp. 111-136.
18. E.Priya, S.Srinivasan and S.Ramakrishnan (2012) "Classification of tuberculosis digital images using hybrid Evolutionary Extreme Learning Machines", In: Nguyen NT., Hoang K., Jedrzejowicz P. (eds) Computational Collective Intelligence. Technologies and Applications. ICCCI 2012. Lecture notes in Computer Science, Vol. 7653, pp. 268-277, Springer, Berlin, Heidelberg.

Publication in Journals:

1. E.Priya (2022), "Metaheuristic based Optimization Methods for the Segmentation of Tuberculosis Sputum Smear Images" International Journal of Swarm Intelligence Research, Vol. 13, No. 1, pp. 1-27. (Indexed in Web of Science Emerging Sources Citation Index (ESCI), Web of Science, Scopus, H index-3) <http://doi.org/10.4018/IJSIR.295549>. January 1, 2022
2. C.N.Savithri, E.Priya and K.Rajasekar (2022), "A Machine learning approach to identify hand actions from sEMG signals" Biomedical Engineering / Biomedizinische Technik, Vol. 67, No. 2, pp. 89-103. (Indexed in SCIE, Scopus, Ei Compindex) Publisher: Walter de Gruyter GmbH, Berlin/Boston. February 22, 2022 <https://doi.org/10.1515/bmt-2021-0072>. Impact Score: 1.51
3. E.Priya (2022), "Optimization-Based Tuberculosis Image Segmentation by Ant Colony Heuristic Method" International Journal of Swarm Intelligence Research, Vol. 13, No. 1, pp. 1-24. (Indexed in Web of Science Emerging Sources Citation Index (ESCI), Web of Science, Scopus, H index-6) doi.org/10.4018/IJSIR.2022010102 ISSN: 1947-9263 January 2022
4. Nisha Rexline R, Priya E and George Fernandez S (2022), "Design and Implementation of Portable ECG Recorder with Field Programmable Gate Arrays and Internet of Things Interface"

International Journal of Electrical and Computer Engineering (IJECE), Vol. 12, No. 5, pp.25p (Indexed in Scopus, H index-26) ISSN: 20888708 DOI: <http://doi.org/10.11591/ijece.v12i5.pp%25p> October 2022, Publisher: Institute of Advanced Engineering and Science (IAES) <http://ijece.iaescore.com/index.php/IJECE/article/view/25905>

5. E Priya, R Chitra, P Santhana Krishnan and N. Rakesh (2020), “Energy Efficient Vital Signal Analyzer” Journal of Green Engineering (JGE), Vol. 10, No. 10, pp. 9971-9980. Alpha Publisher Impact factor – 1.05 (Indexed in Scopus) ISSN: 22454586, 19044720 October 2020 Discontinued in Scopus as of 2021
6. R.Nisha Rexline and E.Priya (2019) “Denoising of ECG signals – A preliminary study”, Journal of Emerging Technologies and Innovative Research, Vol. 6, No.4, pp. 323-327. (ISSN: 2349-5162)
7. Venkata Nageswararao, S. Srinivasan and E. Priya (2018) “Inhomogeneity correction and hybrid based segmentation in cardiac MRI” International Journal of Biomedical Engineering and Technology, Vol. 28, No. 4, pp. 349-365.
8. Ebenezer Priya and Subramanian Srinivasan (2016) “Automated object and image level classification of TB images using support vector neural network classifier” Biocybernetics and Biomedical Engineering, Vol. 36, No. 4, pp. 670-678
9. T.Pooja and E.Priya (2016) “Design and Implementation of Speech Processing in Cochlear Implant”, International Journal of Innovative Research in Science, Engineering and Technology, Vol. 5, Special Issue 9, pp. 535-540. (ISSN: 2319-8753)
10. E.Priya and S.Srinivasan (2016) “Validation of Non-Uniform Illumination Correction Techniques in Microscopic Digital TB Images using Image Sharpness Measures”, International Journal of Infectious Diseases, Vol. 45, Supplement 1, pp. 406. Vidya K V and E.Priya (2015) “Frailty analysis of sEMG signals for different hand movements based on temporal and spectral approach”, Biomedical Sciences Instrumentation, Vol. 51, pp. 93-100.
11. Ebenezer Priya and Subramanian Srinivasan (2015) “Separation of overlapping bacilli in microscopic digital TB images” Biocybernetics and Biomedical Engineering, Vol. 35, pp. 87-99.
12. Ebenezer Priya and Subramanian Srinivasan (2015) “Automated Identification of Tuberculosis Objects in Digital Images Using Neural Network and Neuro Fuzzy Inference Systems” Journal of Medical Imaging and Health Informatics, Vol. 5, pp. 506-512.
13. E.Priya, S.Srinivasan and S.Ramakrishnan (2014) “Retrospective non-uniform illumination correction techniques in microscopic digital TB images” Microscopy and Microanalysis, Vol. 20, No.5, pp. 1382-1391.
14. E.Priya and S.Srinivasan (2013) “Automated decision support system for tuberculosis digital images using evolutionary learning machines”, European Journal of Biomedical Informatics, Vol. 9, No. 1, pp. 2-7.
15. E.Priya, S.Srinivasan and S.Ramakrishnan (2012) “Differentiation of digital TB images using

texture analysis and RBF classifier”, Biomedical Sciences Instrumentation, Vol. 48, pp. 516-523.

16. E.Priya, S.Srinivasan, S.Ramakrishnan, Sriram Krishnan and Tania S. Douglas (2010), “Segmentation of bacilli in sputum smear images using Ant Colony Optimization”, Journal of the Instrument Society of India: Proceedings of the National Symposium on Instrumentation, Vol. 40, No. 3, pp. 225-228. (ISSN: 0970-9983)
17. G.Anitha, E.Priya and J.Shanmugam (2009), “Vision based robust method of position and attitude determination for UAV autonomous landing”, International Journal of Emerging Technologies and Applications in Engineering Technology and Sciences, Vol. 2, No. 2, pp. 270-279.
18. E.Priya, G.Anitha and J.Shanmugam (2008), “State estimation using image processing of runway for UAV autonomous landing” SSEC Tech Journal, Vol. 7, pp. 75-79.

Publication in Conferences:

1. G. Shanthakumari and E. Priya (2022), “Spectrogram-based detection of crackles from lung sounds”, 2022 International Conference on Communication, Computing and Internet of Things (IC3IoT), Department of Electronics and Communication Engineering, Sri Sairam Engineering College, March 10-11th, 2022. (Indexed in Scopus, DBLP and Google Scholar) DOI: 10.1109/IC3IOT53935.2022.9768007 12th May 2022
2. E. Priya, N. Dhanavarsha, S.V. Gayathri, and N. Pavithra (2022), “A statistical approach to identify diseased leaf from healthy”, 2022 International Conference on Communication, Computing and Internet of Things (IC3IoT), Department of Electronics and Communication Engineering, Sri Sairam Engineering College, March 10-11th, 2022. (Indexed in Scopus, DBLP and Google Scholar) DOI: 10.1109/IC3IOT53935.2022.9767995 12th May 2022
3. E. Priya, Janani Priyadharshini S, Padam Satya Reshma and Sashaank S (2022), “Temporal and spectral features based gender recognition from audio signals”, 2022 International Conference on Communication, Computing and Internet of Things (IC3IoT), Department of Electronics and Communication Engineering, Sri Sairam Engineering College, pp. , March 10-11th, 2022. (Indexed in Scopus, DBLP and Google Scholar) DOI: 10.1109/IC3IOT53935.2022.9767929 12th May 2022
4. E.Priya and R.Chitra (2021), “Smartphone based portable ECG monitoring system”, 4th IEEE International Conference on Computing and Communications Technologies, ICCCT-21, Department of Information Technology, Sri Sairam Engineering College, pp. , December 16-17th, 2021. (Indexed in Scopus, DBLP and Google Scholar) ISBN: DOI: 10.1109/ICCCT53315.2021.9711891 16th December 2021
5. G.Shanthakumari and E.Priya (2020), “Interpretation of lung sounds using spectrogram-based statistical features”, Virtual International Conference on Futuristic Communication and Network Technologies (VICFCNT 2020) held on 6th and 7th November 2020 at Vellore Institute of Technology, Chennai. 7th November 2020
6. R.Chitra and E.Priya (2020), “A Preliminary Step to Realise Digital Filter for

Electrocardiogram Signal Denoising”, Virtual International Conference on Futuristic Communication and Network Technologies (VICFCNT 2020) held on 6th and 7th November 2020 at Vellore Institute of Technology, Chennai. 7th November 2020

7. V.A.Velvizhi and E.Priya (2020), “A Preprocessing Techniques for Seismocardiogram Signals in Removing Artifacts”, Virtual International Conference on Futuristic Communication and Network Technologies (VICFCNT 2020) held on 6th and 7th November 2020 at Vellore Institute of Technology, Chennai. 7th November 2020
8. R.Geetha and E.Priya (2020), “Index for assessment of EEG signal in ischemic stroke patients”, Virtual International Conference on Futuristic Communication and Network Technologies (VICFCNT 2020) held on 6th and 7th November 2020 at Vellore Institute of Technology, Chennai. 7th November 2020
9. R.Geetha and E.Priya (2020), “Brain MR Image Lesion Identification using Threshold-based Segmentation Techniques”, International Conference on Automation, Signal Processing, Instrumentation and Control (iCASIC 2020) held on 27th, 28th February at Vellore Institute of Technology, Vellore.
10. R.Chitra and E.Priya (2020), “Digital Filter Implementation for Removal of Baseline Wander in ECG signals”, International Conference on Automation, Signal Processing, Instrumentation and Control (iCASIC 2020) held on 27th, 28th February at Vellore Institute of Technology, Vellore.
11. P.Santhana Krishnan, N.Rakesh, R.Chitra and E.Priya (2020), “Vital Signal Analyzer”, 2nd International Conference on Communication, Computing and Internet of Things (IC3IoT 2020) held in the Department of ECE, Sri Sairam Engineering College, 20th to 22nd February 2020.
12. R.Kausalya and E.Priya (2019) “Implementation and validation of a non-contact measurement of cardiac activity”, Third IEEE International Conference on Computing and Communications Technologies, ICCCT-19, Department of Information Technology, Sri Sairam Engineering College, pp. 154-158, February 21-22nd, 2019.
13. C.N.Savithri and E.Priya (2018) “Statistical Analysis of EMG based Features for Different Hand Movements”, 2nd International Conference on Smart Computing & Informatics (SCI-2018), Department of Computer Science & Engineering and Information Technology, Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada, Andhra Pradesh, India, 27-28 January, 2018.
14. Veena Saraswathy, A.A.Swathy and E.Priya (2017) “Detection of crackles in human lungs based on spectrogram analysis”, National Conference on Eco-friendly Technological Innovations for sustainable Development, NCETISD-17, Sree Buddha College of Engineering, Pattoor, Alappuzha, Kerala, April 17th.
15. P.PonPriya and E.Priya (2017) “Design and control of prosthetic hand using myoelectric signal”, Second IEEE International Conference on Computing and Communications Technologies, ICCCT-17, Department of Information Technology, Sri Sairam Engineering College, February 23-24th, pp. 383-387.

16. C.N.Savithri and E.Priya (2017) "Correlation coefficient based feature selection for actuating myoelectric prosthetic arm", 9th International Conference on Trends in Industrial Measurements and Automation, TIMA 2017, Department of Instrumentation Engineering, MIT Campus, Anna University, January 6-8th.
17. R.Kausalya and E.Priya (2016) "Implementation and Validation of a Non-contact Measurement of Cardiac Activity", International Conference on Broadband and Wireless Technologies, Department of ECE, Sri Sairam Engineering College, Chennai, June 23rd-24th.
18. T.Pooja and E Priya (2016) "Implementation and Analysis of Cochlear Implant for Speech Processing – A Bionic Ear", International Conference on Broadband and Wireless Technologies, Department of ECE, Sri Sairam Engineering College, Chennai, June 23rd-24th.
19. V.Nageswararao, S.Srinivasan, S.Babu peter, E.Priya (2016) "Multifractal analysis based segmentation of short axis CMRI images", 2nd International Conference on Biomedical Systems, Signals and Images, Department of Applied Mechanics, IIT Madras, Chennai, January 24-26th.
20. Vidya K V and E.Priya (2015) "Discrimination of sEMG signals based on temporal and spectral approach for frailty analysis", 2nd International Conference on Biosignals, Imaging and Instrumentation, SSN College of Engineering, Chennai, March 19-20th.
21. Vidya K V and E.Priya (2015) "Empirical mode decomposition based denoising of surface EMG signals", 2nd National Conference on Recent trends in Instrumentation and Control, MIT Campus, Anna University Chennai, March 13-14th.
22. E.Priya and A.Kumaran (2015) "Automatic detection of toxicity in the blood samples of dye factory workers", IEEE International Conference on computing and communications technologies, Sri Sai Ram Engineering College, Chennai, February 26-27th, pp. 334-337.
23. E.Priya, S.Srinivasan and Tania S. Douglas (2012) "Comparison of retrospective non-uniform illumination correction techniques in microscopic digital TB images", Proceedings of International Conference on Biomedical Systems, Signals and Images, IIT Madras, Chennai, November 28th-December 1st.
24. E.Priya, S.Srinivasan and S.Ramakrishnan (2011) "Differentiation of digital TB images using multi-fractal analysis", 24th Canadian Conference on Electrical and Computer Engineering, Niagara Falls, Canada, pp. 1431-1434, May 8-11th.
25. E.Priya, S.Srinivasan, S.Ramakrishnan, D.Manamalli and Tania S. Douglas (2011) "Texture based identification and classification of TB objects in digital images", 7th International Conference on Trends in Industrial Measurements and Automation, CSIR complex, Taramani, Chennai, January 6-8th.

26. E.Priya, S.Srinivasan, S.Ramakrishnan, S.Krishnan and Tania S. Douglas (2010) "Characteristics and classification of TB images using optimization method based feature extraction", International Conference on Power, Control and Embedded Systems, College of Engineering Guindy Campus, Anna University Chennai, December 8-9th.
27. E.Priya, G.Anitha and J.Shanmugam (2008) "Vision based state estimation for UAV autonomous landing", etc2008, 28th European Telemetry Conference, April 2008, New Munich Trade Fair Centre, Germany, April 15-17th.

Patent details:

1. Title of the Patent: A POWER GENERATING KITE SYSTEM-PRODUCTION OF ELECTRICITY FROM THE WIND

Application Number: 202041004990 A

Filing Country: India

Subject Category: Physical Science

Filing Date: 2020-02-05

Publication Date: 2020-02-14

Status: Published

2. Title of the Patent: ARTIFICIAL NEURAL NETWORK BASED DETECTION OF COVID-19 FROM CHEST X-RAY

Application Number: 202121012313 A

Filing Country: India

Subject Category: Computer Science

Filing Date: 2021-03-22

Publication Date: 2021-03-26

Status: Published

3. Title of the Patent: A CAR ROOF SPOILER FIN WITH SOLAR LIGHT

Application Number: 352851-001

Filing Country: India

Subject Category: Design patent

Filing Date: 2021-11-10

Publication Date: -

Status: Acceptance for Grant

Paper presentation at National and International level:

1. Attended and co-authored research paper titled "sEMG-based arm action classification using time domain features and machine learning techniques" in 8th International Conference on Biomedical Engineering and Biotechnology (ICBEB 2019) held at Seoul, Republic of Korea from 22nd to 25th October.

2. Attended and co-authored research paper titled "A preliminary study on kinematic analysis of human hand" and "Performance analysis: preprocessing of respiratory lung sounds" in a one day "International Conference on Artificial Intelligence-ICAI 2018" at University of Moratuwa, Sri Lanka on 20th December 2018.
3. Presented research paper titled "Validation of non-uniform illumination correction techniques in microscopic digital TB images using image sharpness measures" at 17th International Congress on Infectious Diseases, International Conventional Centre, Hyderabad during March 2-5, 2016.
4. Presented research paper titled "Differentiation of digital TB images using texture analysis and RBF classifier" at 49th Annual Rocky Mountain Bioengineering Symposium, Virginia Tech, Blacksburg, USA, March 23-24, 2012.
5. Presented the paper titled "Characteristics and classification of TB images using optimization method based feature extraction" in Department of Human Biology, University of Cape Town on 27th September 2011.

Seminar/Workshop/Short course Organized:

1. In association with IEEE EMBS and MTT-Society organized seminar on "Peer assist for better tomorrow" on 18th November 2022. Speakers: K L Nirmal Raja and Janani Priyadarshini S, 2019-2023 batch ECE students, Sri Sairam Engineering College.
2. In association with IEEE EMB-Society organized webinar on "Post COVID awareness" on 13th May 2022. Guest speaker: Dr Vanathi Sabtharishi, Dch, MD, Senior Assistant Professor, KAPV Government Medical College, Trichy, India
3. In association with IEEE EMB-Society organized seminar on "Future of Biomedical Engineering" on 25th April 2022. Guest speaker: Dr.V. Saphagirivasan, Senior Manager, Medical Devices, Engineering R&D, Capgemini, Bangalore, India.
4. In association with IEEE EMB-Society organized webinar on "Trends in Biomedical Engineering – Past, Present and Future" on 18th December 2021. Guest speaker: Mr Ajit N, Vice President (Marketing), HLL Lifecare Limited, Chennai.
5. Organized 2 days' content related Industry expert webinar titled Pacemakers on 12th October and Implantable Cardioverter Defibrillator on 14th October, 2020 for 3rd year ECE students. Mr. Chetan Kwatra, Territory Manager of Boston Scientific India Pvt. Ltd. delivered the talk.
6. Coordinator for Online Refresher Course on "Recent Trends in Information, Computing, Communication and Teaching Methodology Competency" conducted under IQAC & HRD centre of Sri Sairam Engineering College in association with Departments of CSE, ECE and IT from 4th May – 17th May 2020.
7. Organized a short course "Signal Processing, Image Processing and Deep Learning

Techniques for the Development of Intelligent Healthcare Systems” in the International Conference on Communication, Computing and Internet of Things, IC3IoT 2018 on 16th & 17th February at Sri Sairam Engineering College and delivered lecture titled “Retrospective pre-processing techniques for medical images”.

8. Organized 2 days IEEE sponsored workshop on “Emerging trends and future perspective in image processing and computer vision” in the Department of ECE, Sri Sairam Engineering College, Chennai on 16th and 17th September 2015.

Guest Lectures and Seminar Presentations:

1. Delivered an expert talk on “A Multidisciplinary Paradigm of Medical Imaging & Application” on 20th August 2022 (7 to 8 pm) in association with IEEE organized by Department of Artificial Intelligence and Data Science, Sri Sairam Engineering College, Chennai (online mode).
2. Acted as a resource person and delivered talk titled “Medical Image Analysis” on 23rd March (6.30 to 7.30 pm) organized by Department of Medical Electronics, SRM Valliammai Engineering College, Kattankulathur (online mode).
3. Acted as a resource person and delivered talk titled “Probable muddles & feasible solution in photomicrography” on 23rd December (10 to 12 pm) in ISTE sponsored five days FDP on Bio-inspired learning from 20th to 24th December 2021 held in the Department of EIE, Sri Sairam Engineering College, Chennai (online mode).
4. Acted as a resource person and delivered talk titled “Getting started with ML - A healthcare perspective” on 20th December (10 to 12 pm) in ISTE sponsored one week FDP on Research opportunities in Artificial Intelligence and Machine Learning from 16th to 22nd December 2021 held in the Department of ECE, Sri Sairam Institute of Technology, Chennai (online mode).
5. Delivered a talk “Filter-A signal processing perspective” for Sri Sairam Engineering College and Sri Sairam Institute of Technology of ECE, CSE, IT, EIE, ICE & AI-DS students including 2nd and 3rd year at Beta Hall on 17th December 2021 (2 to 4 pm) in student training program on Signal Processing in collaboration with IEEE SEC Student Branch Chapter Signal Processing Society (offline mode).
6. Delivered guest lecture on 10th February in the topic “Research issues and possible solutions in microscope image processing” on 13th February in AICTE sponsored 2 weeks online FDP on “Computer Vision and Image Processing: Research Issue, Innovation and Application” 10th February to 23rd February 2021 conducted by the Department of ECE, PSNA College of Engineering & Technology, Dindigul.
7. As a resource person presented the topic “Logic behind ML and its application in healthcare” on 3rd February in AICTE 2 week sponsored FDP on “Machine Learning Techniques for Imaging and Healthcare with Python” 28th January to 10th February 2021 held in the Department of ICE, Sri Sairam Engineering College (online mode)
8. As a resource person presented the topic “Deep Learning for Healthcare Perspective” on

9th December in AICTE Training and Learning Academy (ATAL) sponsored FDP on “Artificial Intelligence for Robotics” 07th December 2020 to 11th December 2020 held at Sri Sairam Engineering College.

9. As a speaker delivered a talk titled “Best solution with Machine Learning & some Applications” in Online Refresher Course on “Recent Trends in Information, Computing, Communication and Teaching Methodology Competency” conducted by IQAC & HRD centre of Sri Sairam Engineering College in association with Departments of CSE, ECE and IT from 4th May – 17th May 2020.
10. As an invited speaker delivered a talk titled “An Automated Approach for the Identification and Classification of Sputum Smear Tuberculosis Images” in 8th International Conference on Biomedical Engineering and Biotechnology (ICBEB 2019) held at Seoul, Republic of Korea from 22nd to 25th October.
11. Delivered guest lectures on “FIR filter design using windowing techniques” and “Realization structure of IIR filter” in Anna University sponsored Faculty Development Program (FDTP) on “EE8591 Digital Signal Processing” by Department of EIE, SRM Valliammai Engineering College on 14th June 2019.
12. Delivered a guest lecture on “Application of Artificial Intelligence in Healthcare” in TNSCST sponsored two-day National workshop on Recent Trends in Artificial Intelligence and Robotics, Department of ECE, Sri Sairam Engineering College on 10th June 2019.
13. Delivered one day seminar on “Future Trends in Artificial Intelligence” for III & IV year B.Tech ECE students, DNR College of Engineering and Technology, Bhimavaram, Andhra Pradesh on 3rd October 2018.
14. Delivered a guest lecture on “Digital filters and adaptive digital filters” for II year EIE students, Valliammai Engineering College on 11th January 2018.
15. Delivered a special lecture on “SEM/TEM/AFM Image Segmentation and Analysis” in Department of Electronics and Instrumentation Engineering, B.S.Abdur Rahman Crescent University, Vandalur, Chennai, 11th November 2017.
16. Delivered a guest lecture on “Adaptive Filters” for III year ECE students, Sri Sairam Engineering College on 21st September 2017.
17. Delivered a guest lecture on “Smart Wearable Sensors” in Department of Computer Science, CYBER ROCKERZ’17, CSI Ewart Women’s Christian College, Melrosapuram, 31st August 2017.
18. Delivered a talk at the 3rd IMSc Workshop and Conference on Modeling Infectious Diseases, Taramani on 1st December 2015, titled “Evaluation of segmentation in microscopic digital TB images using error measures”.

Workshop Details:

1. Attended Three Day’s International Online Workshop on "Multivariate Analysis through R-

Commander" organized by Institute for Statistics and Analytical Research (ISAR) from 27th to 29th August 2021.

2. Attended one-week National Initiative for Technical Teacher Training (NITTT) Mentor workshop during July 26 - 30, 2021.
3. Attended workshop (online) on "Awareness on Google Tools for Teaching-Learning and Data Management" organized by Department of Electronics and Communication Engineering, Sri Sairam Engineering College on 23rd January 2021.
4. Attended two-day workshop (online) on "System Verilog Design and Verification for Beginners using EDA Tools" organized by Smart Systems Group of ECE Department, Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology, Avadi on 20th & 21st January 2021.
5. Attended two-day workshop (online) on "Autonomous and Unmanned Systems" organized by Department of Electronics and Communication Engineering, SSN College of Engineering on 22nd & 23rd January 2021.
6. Attended one-day workshop (online) on "Technical writing: Tips, Tricks & Tools" organized by JIS University in association with Institution's Innovation Council on 10th October 2020.
7. Attended online 3 days' workshop (online) on "Internet of Things using Raspberry Pi" organized by VIT Chennai in association with Pantech e Learning from 2nd to 4th October, 2020.
8. Attended workshop on "Intellectual Property Rights & Innovations" organized by Sri Sairam Engineering College in association with Centre for Intellectual Property Rights (CIPR), Anna University on 20th July 2019.
9. Attended 2 days' workshop on "Machine Learning and Deep Learning" on 8th & 9th February 2019 organized by the Department of Computer Science and Engineering, College of Engineering Guindy, Anna University, Chennai.
10. Attended 2 days' workshop on "Recent advancement in Artificial Intelligence and Machine Learning techniques – A special focus on oncology" at S.A. Engineering College, Chennai on 14th & 15th November 2018.
11. Attended a workshop "Scope for R&D projects and proposal preparation" at CTDT, Anna University, Chennai on 12th May 2017.
12. Attended a workshop "An overview of medical device regulations" at IIT Madras on 6th April 2017.

13. Attended a workshop “Finite Element Analysis & its Applications” at SSN College of Engineering on 23rd February 2012.
14. Attended a workshop “Biomedical Signal Processing” at MSRIT, Bangalore on 5th September 2009.
15. Attended a workshop “Content Based Image Retrieval and Fusion” at MIT Campus, Anna University from 7th to 9th August 2009.
16. Attended a workshop “Intellectual property rights awareness and related issues” at TCS and Patent office, Government of India on 30th April 2008.
17. Attended a workshop “Getting started with MATLAB” at Sri Sairam Engineering College from 30th June to 3rd July 2008.
18. Attended a workshop “Creative Teaching” at GKM College of Engineering on 22nd February 2008.
19. Attended a workshop “Recent trends in wireless information networks and systems” at Sri Sairam Engineering College on 1st February 2008.
20. Attended a workshop “MATLAB and its Applications” at Sri Sairam Engineering College from 26th to 29th June 2007.
21. Attended a workshop “Networks and Security” at Sri Sairam Engineering College on 22nd September 2006.
22. Attended a workshop “Fiber Optic Communication” at Sri Sairam Engineering College on 27th & 28th November 2003.
23. Attended a workshop “VLSI Design and Embedded System Technologies” at Sri Sairam Engineering College from 26th to 28th July 2002.
24. Attended a workshop “VLSI Technology” at Sri Muthukumaran Institute of Technology on 25th January 2002.
25. Attended a workshop “Technical education in the Context of New Economy” at Velammal Engineering College on 15th September 2001.
26. Attended a workshop “Teaching Technology and Counseling Skill” at Abirami Academy on 24th February 2001.
27. Attended a workshop “Computer Aided Design of Electronic Circuits” at Crescent Engineering College on 23rd December 1998.

STTP Details:

1. Attended AICTE online orientation training programme for mentors organized from 26th to 30th July 2021 under national initiative for technical teachers training.

2. Participated in the AICTE sponsored six days Short Term Training Program (online) on “Artificial Intelligence and Deep Learning Techniques” organized by the Department of Information Technology, B. S. Abdur Rahman Crescent Institute of Science and Technology from 1st to 6th February 2021.
3. Attended AICTE sponsored online Short Term Training Program on “Research Aspects on Deep Learning in Image and Video Processing - I” organized by the Department of Electronics and Communication Engineering, Velammal Institute of Technology from 14th to 19th December 2020.
4. Attended online Short Term Training Program on “Medical Image Analysis” organized by the Department of Electronics and Communication Engineering, VSB Engineering College from 2nd to 7th November 2020. Attended Internal Faculty Training Programme “Python Programming” at Sri Sairam Engineering College from 30th October to 6th November 2017.
5. Attended in-house training “Artificial Neural Network (ANN), Fuzzy Logic and Evolutionary Computing using MATLAB” at SCS-India, Corporate Training Facility, T.Nagar, Chennai on 13th & 14th May 2016.

FDP Details:

1. Attended "AI/ML for Computer Vision and Medical Image Analysis Applications" FDP from 03rd– 12th December 2022 organized by Electronics and Communication Engineering Department, BVRIT Hyderabad, College of Engineering for Women, Hyderabad-Telangana in association with Electronics & ICT Academy, NIT, Warangal.
2. Attended SERB sponsored two-day online Faculty Development Programme on Recent Trends in Bio-signal Acquisition and Research Perspectives in Signal Analysis from March 25-26, 2022 by N.S.S. College of Engineering, Palakkad.
3. Attended Five Days Faculty Development Program (FDP) on “Artificial Intelligence in Healthcare” organized by the Department of Information Technology (in association with ISTE), Sri Sairam Engineering College from 21st to 25th February 2022 in virtual platform.
4. Attended DST-SERB Sponsored Six Days Faculty Development Programme (FDP) on “Data Analytics in Healthcare” organized by the Department of Computer Science and Engineering, SSN College of Engineering during 17- 22 January, 2022 in virtual platform.
5. FDP for ½ week in successfully completing 4 week NPTEL online certification course “Biomedical Nanotechnology” (AUG-DEC’21).
6. Attended IEEE sponsored virtual hands on training on “Data Science using R Programming” organized by IEEE Control Systems Society Student Branch Chapter, Department of Electronics and Instrumentation Engineering, Sri Sairam Engineering College held on 24.8.2021.

7. Attended AICTE training & learning (ATAL) Academy online elementary FDP on “Research Confront and Document Preparation Using Latex” from 2.08.21 to 6.08.21 at National Institute of Technology Kurukshetra
8. Attended online 5-day workshop on “Inculcating Universal Human Values (UHV) in Technical Education” (An AICTE initiative) FDP from 12.07.21 to 16.07.21.
9. Attended AICTE training & learning (ATAL) Academy online FDP on “Medical Image Processing and 3D Applications” from 5.07.21 to 9.07.21 at University College of Engineering, Telangana.
10. Attended online FDP on “DSP builder, AI, FPGA accelerator using Intel FPGA” organized by School of Electronics Engineering (SENSE) & Centre for Nanoelectronics and VLSI Design at VIT - Chennai during June 25 - 26, 2021.
11. Attended AICTE training & learning (ATAL) Academy online FDP on “Telemedicine and Digital Healthcare: Opportunities & Threats” from 17.05.21 to 21.05.21 at Rabindranath Tagore University, Bhopal.
12. FDP for 1 week in successfully completing the 8 weeks NPTEL online certification course “Introduction to Soft Computing” (JAN-MAR’21).
13. Attended AICTE training & learning (ATAL) Academy online FDP on “Wearable Devices” from 15.02.21 to 19.02.21 at Anna University, Chennai.
14. Attended AICTE training & learning (ATAL) Academy online FDP on “Computer Science and Biology” from 15.12.20 to 19.12.20 at Lakshmi Narain College of Technology, Bhopal.
15. Attended AICTE training & learning (ATAL) Academy online FDP on “Electrical and Computer Engineering” from 04.11.20 to 08.11.20 at Indian Institute of Information Technology Kottayam.
16. Attended three days online FDP on “Get ready for AI with MATLAB and SIMULINK” from 18.06.20 to 20.06.20 organized by Department of Electronics and Communication Engineering, Sri Sairam Engineering College.
17. Attended two-week online Refresher course/FDP on “Recent trends in Information, Computing, Communication and Teaching Methodology Competency” from 04.05.20 to 17.05.20 organized by Department of CSE, ECE & IT, Sri Sairam Engineering College.
18. Attended three days online FDP on “Augmented Reality and Virtual Reality” from 27.05.20 to 29.05.20 organized by Department of Information Technology, Sri Sairam Engineering College.
19. Attended TEQIP-III sponsored FDP on “Deep Learning and Machine Learning Approaches and its Applications” organized by Dept. of Electrical Engineering, NIT Calicut from 9th to

13th December 2019.

20. Attended FDP on “Data Acquisition & Signal Processing Using LabVIEW” organized by Dept. of ECE, SRM IST on 25th & 26th November 2019.
21. Attended FDP “Machine Learning and Data Manipulation using R and SQL” from 30th October to 6th November 2019 in Dept. of ECE, Sri Sairam Engineering College.
22. Attended one day FDP “Methodologies & Practices for Profitable Research through Patents & IPR” by Allinnov Research and Development Private Limited, India on 4th January 2019 at Sri Sairam Engineering College.
23. Attended FDP “Industrial Instrumentation II” at MIT Campus, Anna University from 28th May to 3rd June 2012.
24. Attended FDP “Advanced Topics in Wavelet Transforms: Theory and Applications” at IIT Madras, Chennai from 6th to 11th July 2009.
25. Attended FDP “Real time implementation of signal/image processing algorithms” at Easwari Engineering College from 24th November to 5th December 2008.
26. Attended FDP “Signal and Systems” at Sri Venkateshwara College of Engineering from 31st May to 5th June 2004.
27. Attended FDP “Digital Signal Processing” at Center for Faculty Development, Anna University from 18th to 22nd November 2003.
28. Attended FDP “Computer Communication & Networking” at TTTI Taramani from 3rd to 7th September 2001.

Responsibilities:

1. Institute Moderator for “Combined metric for Publications (PU)” parameter in NIRF from October 2021.
2. Institute Coordinator for conducting courses by Indian Institute of Remote Sensing (IIRS), Government of India.
3. Department Research Coordinator.
4. Anti-ragging committee member (from 2016 to 2019).
5. NAAC criteria 5 Head for the Institute (2012 to 2021), NBA criteria 2 Head for the Department.
6. Department test file in-charge (from 2013 to 2019).
7. Applied for Department research centre recognition by Anna University in November 2014

& renewal in May 2018 & May 2021.

8. In-charge for submission of remuneration forms and distribution of the same during Anna University practical examination (from 2013 to 2019).
9. Mentor for 14 students of 2019-23 batch, mentor for 17 students and Class Coordinator of 2013-17 batch, mentor for 13 students of 2016-2020 batch, mentor for PG students (2013-15 batch), Class coordinator for 2003-07 & 2006-10 batch
10. Project coordinator for 2013-17 & 2005-09 batch.
11. Department Symposium coordinator - Virtuoso 2004.

Additional Details:

1. Anna University recognized supervisor (Ref. No. 2540033) under the faculty of Information & Communication Engineering.
2. Reviewer for International Journal of Information Security and Privacy (IJISP), IGI Global.
3. Reviewer for International Journal of Swarm Intelligence Research (IJSIR), IGI Global.
4. Reviewer for Journal of X-Ray Science and Technology, IOS Press, Impact Factor: 2.442.
5. Ad hoc reviewer for Journal Computer Methods and Programs in Biomedicine, Elsevier, Impact Factor: 5.428.
6. Technical Program Committee member of The 10th International Conference on Biomedical Engineering and Biotechnology (ICBEB 2021) held from November 15-18, 2021 Suzhou, China.
7. Technical Program Committee member of The 11th International Conference on Biomedical Engineering and Biotechnology (ICBEB 2022) to be held from November 15-18, 2022, Shenzhen, China.
8. Technical Program Committee member of 2022 International Conference on Intelligent Computing and Machine Learning (2ICML) to be held from December 16-18, 2022, Qingdao, China.
9. Publication chair for the 2-day 4th International Conference on Communication, Computing and Internet of Things (IC3IoT 2022) hosted by Department of ECE, Sri Sairam Engineering College, Chennai on March 10th & 11th 2022.