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Areas of Specialization

- Computational Intelligence
- Biomedical image processing
- Optimization techniques

RESEARCH ACTIVITIES

A. PAPER PUBLICATIONS

INTERNATIONAL JOURNALS

- D. Jude Hemanth, J. Anitha, Antoanela Naaji, Oana Geman, Daniela Elena Popescu and Le Hoang Son, “A Modified Deep Convolutional Neural Network for abnormal brain image classification”, IEEE Access, vol. 7, pp: 4275-4283, 2018. **(Impact Factor = 3.745).**
- Octavian Postolache, Ricardo Alexandre, Oana Geman, D Jude Hemanth, Deepak Gupta and Ashish Khanna, “Remote Monitoring of Physical Rehabilitation of Stroke Patients using IoT and Virtual Reality”, IEEE Journal on Selected Areas in Communications, **(Accepted)**, 2020. **(Impact Factor = 11.420).**
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- Rachna Jain, Preeti Nagrath, Gaurav Kataria, V. Sirish Kaushik and D. Jude Hemanth, “Pneumonia detection in chest x-ray images using convolutional neural networks and transfer learning”, Measurement, **(Accepted)**, 2020. **(Impact Factor = 3.364).**
- Mamta Mittal, Lalit Mohan Goyal, Amit Verma, Iqbaldeep Kaur, Sumit Kaur and D. Jude Hemanth, “Deep learning based enhanced tumor segmentation approach for MR brain images”, Applied Soft Computing, vol. 78, pp: 346-354, 2019. **(Impact Factor = 5.472).**

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- D. Jude Hemanth and J. Anitha, “Modified Genetic Algorithm approaches for classification of abnormal Magnetic Resonance brain tumor images”, Applied Soft Computing, vol. 75, pp: 21-28, 2019. **(Impact Factor = 5.472).**
- D.Jude Hemanth, Omer Deperlioglu and Utku Kose, “An enhanced diabetic retinopathy detection and classification approach using deep convolutional neural network”, Neural Computing and Applications, (**Accepted**), 2018. **(Impact Factor = 4.774).**
- Mamta Mittal, Lait Mohan Goyal, D Jude Hemanth and Jasleen Kaur Sethi, “Clustering approaches for high dimensional databases: A review”, WIREs Data Mining and Knowledge Discovery, vol. 9, no.3, 2019. **(Impact Factor = 4.476).**
- Rachna Jain, Nikita Jain, Akshay Agarwal and D. Jude Hemanth, “Convolutional neural network-based Alzheimer’s disease classification from magnetic resonance brain images”, Cognitive Systems Research, vol. 57, pp: 147-159, 2019. **(Impact Factor = 1.902).**
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- K. Martin Sagayam and D. Jude Hemanth, “Hand posture and gesture recognition techniques for virtual reality applications: A survey”, Virtual Reality, DOI: 10.1007/s10055-016-0301-0, 2016. (**Impact Factor = 3.634**).
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- D.Jude Hemanth, C.Kezi Selva Vijila, A.Immanuel Selvakumar & J.Anitha “Distance Metrics based Time Efficient Fuzzy Algorithm for Abnormal MR Brain Image Segmentation”, Neural Computing & Applications (Springer), Vol.22, No.5, pp. 1013-1022, 2013. **(Impact Factor = 4.774).**
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- J.Anitha, C.K.S.Vijila, A.I.Selvakumar, A.Indumathy & D.Jude Hemanth, “Automated multi-level pathology identification techniques for abnormal retinal images using Artificial Neural Networks”, British Journal of Ophthalmology, Vol.96, no.2, pp: 220-223, 2012. **(Impact Factor = 3.611).**
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- K T Dilna and D. Jude Hemanth, “Detection of uterus fibroids in ultrasound images: a survey”, International Journal of Pure and Applied Mathematics, vol. 18, no.6, 2018, **(Scopus)**
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- S. Uma Maheswari & D. Jude Hemanth “Discrete Ripplet transform based steganography system for imaging applications”, International Journal of Reasoning based intelligent systems, vol.7, no.1/2, pp:130-135, 2015. **(Scopus).**
- L Godson Asirvatham, D Jude Hemanth, J Jayakumar and Somchai Wongwises, “Performance prediction of hybrid thermoelectric generator with high accuracy using artificial neural networks”, Sustainable energy technologies and assessments, vol. 33, pp: 53-60, 2019. **(Scopus)**

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- D.Jude Hemanth, Valentina Emilia Balas & J. Anitha, “Performance improved hybrid intelligent system for medical image classification” 7th Balkan Conference on Informatics, DOI: 10.1145/2801081.2801095, Publisher: **ACM**, Place: Romania, 2015. (**scopus**)
- D. Jude Hemanth, S. Uma Maheswari, Daniela Elena Popescu and Antoanela Naaji, “The Boon of Bandelet Transform and Discrete Curvelet Transform: Application to Image Steganography”, World Congress on Information Technology, Computational and Experimental Physics, pp:27-30, Place: Poland, 2015. (**scopus**)
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- K. Martin Sagayam and D. Jude Hemanth, “Comparative Analysis of 1-D HMM and 2-D HMM for hand motion recognition applications”, 4th International Conference on Advanced Computing, Networking and Informatics, pp: 227-234, Publisher: **Springer**, Place: NIT Rourkela, Odisha, 2016. (**scopus**)
- J Jenkin Winston and D Jude Hemanth, “Pyramid-based multi scale enhancement method for iris images”, 2nd International Symposium on Signal and Image Processing, pp: 13-21, Publisher: **Springer**, Place: RCC Institute of Information Technology, Kolkata, 2019. (**scopus**)
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- D. Jude Hemanth, Daniela Elena Popescu, Mamta Mittal and S Uma Maheswari, “ Analysis of Wavelet, Ridgelet, Curvelet and Bandelet transforms for QR code based Image Steganography”, International Conference on Engineering of Modern Electric Systems, pp: 121-126, Publisher : [IEEE](#), Place: Romania, 2017. ([scopus](#))
- Daniela Elena Popescu, Marcela Florina Prada, Anca Dodescu, D. Jude Hemanth and Constantin Bungau, “A secure confident cloud computing architecture solution for a smart campus”, Proceedings of 7th International Conference on Computers, Communications and Control, pp: 240-245, Publisher : [IEEE](#), Place: Romania, 2018 ([Scopus](#))
- Jemimah Priyadharshini S and D Jude Hemanth, “Effect of SAR impact on a tissue cube with Graphene-dipole for 900 MHz”, Proceedings of 4th IEEE International Conference on Advances in Electrical, Electronics, Information, Communication and Bio-informatics, pp: 350-353, Publisher: IEEE, Place: Chennai, India, 2018 ([Scopus](#))
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B.

BOOKS/ EDITED BOOKS/ BOOK CHAPTERS/ EDITORIALS

- D.Jude Hemanth, J.Anitha and D.Selvathi, “Artificial Intelligence Techniques for Medical Image Analysis” VDM-Verlag (Germany), ISBN: 978-3639248258, 2010.
- D.Jude Hemanth and Valentina Emilia Balas (eds), “Biologically Rationalized Computing Techniques for Image Processing Applications” in the Springer series Lecture Notes on Computational Vision and Biomechanics (Springer), 2017. ([Scopus](#))
- D. Jude Hemanth and Vania Viera Estrela (eds), “Deep Learning for Image Processing Applications” in the Advances in Parallel Computing Series (IOS Press), 2018. ([Scopus](#))
- Mamta Mittal, D. Jude Hemanth, Valentina Emilia Balas and Ragavendra Kumar (eds), “ Big Data for Parallel Computing” in the Advances in Parallel Computing Series (IOS Press), 2018. ([Scopus](#))
- D. Jude Hemanth (eds), “Artificial Intelligence Techniques for Satellite Image Analysis” in the Remote sensing and Digital Image Processing Series (Springer), 2019. ([Scopus](#))
- D. Jude Hemanth and Valentina Emilia Balas (eds), “Nature Inspired Optimization techniques for image processing applications” in the Intelligent Systems Reference Library series (Springer), 2018. ([Scopus](#))
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- D. Jude Hemanth, B. Vinoth Kumar and G R Karpagam (eds), “Recent advances on memetic algorithms and its applications in image processing” in the Studies in Computational Intelligence (Springer), 2019.
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