

Dr.S.Gandhimathi @ Usha M.E.,Ph.D

Associate Ptofessor/ Department of ECE

Velammal College of Engineering and Technology, Madurai

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1. Educational Qualification:

Degree	Institution conferring the degree	Specialization	Year
Ph.D	Anna University, Chennai	Information and Communication Engineering	2019
M.E.	Alagappa Chettiar College of Engineering & Technology, Karaikudi	Optical Communication	2009
B.E.	Sethu Institute of Technology, Madurai	Electronics & Communication Engineering	2001

2. Experience in Years: 20 years 7 months**Employment History:**

- Working as an Associate professor in Dept of ECE, Velammal College of Engineering and Technology since April 2020.
- Worked as an Assistant Professor-II in Dept of ECE, Velammal College of Engineering and Technology from June 2014 to March 2020.
- Worked as an Assistant Professor-III in Dept of ECE, Velammal College of Engineering and Technology from June 2010 to May 2014.
- Worked as a Senior Lecturer in Dept of ECE , Sacs MAVMM Engineering College, Madurai from December 2009 to May 2010.
- Worked as a Senior Lecturer in Dept of ECE, PSRR College of Engineering for Women, Sivakasi from May 2009 to October 2009.
- Worked as a Lecturer in Dept of ECE, PSR Engineering College, Sivakasi from June 2001 to April 2009

3. Interested Research Areas:

- Digital Image Processing / Remote Sensing
- Optical Communication

4. Ph.D Guidance :

AU Supervisor recognition Ref.No: **4040024**
(Information and Communication Engineering)

5. International Journal Publication Details:

1. **S Gandhimathi @ Usha**, PT Kishore, S Varun Prasath, A Yuvaraj, Robust Feature Extraction and Classification Algorithm for Urban Area Change Detection in Multispectral Satellite Images, GIS SCIENCE JOURNAL, 9 (6), 2022, pp: 1813-1822. ISSN NO : 1869-9391.
2. **Dr.S.Gandhimathi @ Usha**, A.Gopikrishnan, S.Keerthivasan, R.Karpagamoorthy, GLCM And LBP Based Identification of Liver Cancer In Medical Images, GIS SCIENCE JOURNAL, 9 (6), 2022, pp: 1901-1906. ISSN NO : 1869-9391.
3. Suveetha Dhanaselvam P, **Gandhimathi @ Usha S** ,Thasneem S , Dhakshinya P , Subasri S, VLSI Implementation of Identification of Human Faces, International Journal of Innovative Research in Computer and Communication Engineering, Volume 10, Issue 5, May 2022.
4. **Dr.S.Gandhimathi @ Usha1**, G P S Aakash Pawan , P M Balaji, V Vanniarajan, Efficient Dehazing and Object Detection Algorithms for Autonomous Vehicles GIS SCIENCE JOURNAL, 9 (6), 2022, pp: 1778-1788. ISSN NO : 1869-9391.
5. Dr.S.Vasuki ,Dr.K.Kavitha, **Dr.S.Gandhimathi @ Usha** , K.Charulatha, CNN based Early Forest Fire Detection in Multispectral Images, GIS SCIENCE JOURNAL, 9 (6), 2022, pp: 1778-1788. ISSN NO : 1800-1812.
6. **S. Gandhimathi Alias Usha**, S. Vasuki, Significance of texture features in the segmentation of remotely sensed images, Optik (Elsevier)249 (2022), 6824. <https://doi.org/10.1016/j.ijleo.2021.168241>.
7. **S. Gandhimathi Alias Usha**, S. Vasuki, Time series analysis of multispectral satellite images using game theory classifier, Optik (Elsevier) 241 (2021), 167155, <https://doi.org/10.1016/j.ijleo.2021.167155>.
8. **Dr.S.Gandhimathi @ Usha**, L.D.Dinesh Kumar, M.Narendran, S.Surya, D.Prem Armstrong, DNN Based Smart Attendance Management System , International Journal of Innovative Research in Computer and Communication Engineering, Volume 9, Issue 5, May 2021.
9. **S.Gandhimathi Alias Usha**, S.Vasuki ,2019. A Novel method for segmentation and change detection of multi-spectral satellite imagery using proximal splitting algorithms and multiclass SVM. International Journal of Indian Society of Remote Sensing, pp.1-31. Springer. (ISSN: 0255-660X)

10. **S.Gandhimathi Alias Usha**, S.Vasuki ,2017. Improved segmentation and change detection of multi-spectral satellite imagery using graph cut based clustering and multiclass SVM. Multimedia Tools and Applications, pp.1-31. Springer.
11. **S.Gandhimathi Alias Usha**, S.Vasuki and S.Suganya ,2016, Contourlet Transform based Feature Extraction and classification of Multispectral Images, Middle-East Journal of Scientific Research.
12. **S.Gandhimathi Alias Usha**, Dr.S.Vasuki, G.Priyadharshini, M.Priyanka, M.Ragavi, 2015, Channel migration analysis of river and feature extraction from remotely sensed multispectral images, International Journal of Applied Engineering Research. Vol. 10. No, 21.
13. **S.Gandhimathi Alias Usha**, S.Vasuki , 2017, Unsupervised Change Detection of Multispectral Imagery using Multilevel Fuzzy Based Deep Representation. Journal of Asian Scientific Research, Vol. 7,No. 6, 206-213.
14. **S.Gandhimathi Alias Usha**, S.Vasuki ,2017, Unsupervised Change Detection Of Multispectral Images Using Genetic Based Particle Swarm Optimization, International Journal of Engineering Research & Technology, Vol. 4,No. 2, 422-431.
15. **S.Gandhimathi Alias Usha**, S.Vasuki , 2014, Feature Extraction Based Retrieval of Geographic Images, International Journal of Computational Science and Information Technology, Volume No.2, Issue 2, May 2014.
16. **S.Gandhimathi Alias Usha**, S.Vasuki ,2012, Comparative Analysis of Wavelets for Fusion Applications, International Journal of Computer Applications, Volume No.2,Issue 2.
17. **S.Gandhimathi Alias Usha**, S.Vasuki, 2013, Feature Extraction and Classification of High Resolution Multispectral Satellite images using GLCM and Back Propagation Techniques, International Journal of Engineering and Computer Science, Volume No.2, Issue 2.
18. **S.Gandhimathi Alias Usha**, S.Vasuki, 2012, PCA based Fusion Algorithm for Medical Diagnosis, International Journal of Communications and Engineering, Volume No.4,Issue 1.

6. Patent Details:

Title : Device for monitoring the color & texture of samples

Application No: 358553-001

Patent No : 213351

Filled on : 08.02.2022

7. International Conference Presentation Details:

S.No	Title of the Paper	Name of the Institution	Year of publication
1	Texture Based Classification of Liver Cancer Using Ultrasound Images	Prince Shri Venkateshwara Padmavathy Engineering College (ICCET – 2022) , Chennai	21.05.2022 & 22.05.2022
2	Morphological Descriptors Based Urban Change Detection using Remote Sensing Images	Prince Shri Venkateshwara Padmavathy Engineering College (ICCET – 2022), Chennai	21.05.2022 & 22.05.2022
3	Enhancing Object Detection In Autonomous Driving using Yolo-V4 And Dehazing Algorithms	Prince Shri Venkateshwara Padmavathy Engineering College (ICCET – 2022), Chennai	21.05.2022 & 22.05.2022
4	Blood Vessel Segmentation and Classification In Fundus Images	Prince Shri Venkateshwara Padmavathy Engineering College (ICCET – 2022), Chennai	21.05.2022 & 22.05.2022
5	Iot Based Monitoring And Conservation of Natural Resources In Day-To-Day Life	Prince Shri Venkateshwara Padmavathy Engineering College (ICCET – 2022), Chennai	21.05.2022 & 22.05.2022
6	Forgery Image Detection using Artificial Neural Network	Pandian SaraswathiYadav engineering College (ICETET'20),Madurai	14.03.2020
7	Segmentation of Glacial Lakes in Gangotri Glacier using K-means and Active contour algorithm	Karpagam Institute of Technology (ICLTSET-2018) ,Coimbatore	23.03.2018-24.03.2018
8	Change Detection of Forest Area in Satellite Images Using Hilbert Huang Transform	Karpagam Institute of Technology(ICLTSET-2018) ,Coimbatore	23.03.2018-24.03.2018
9	Analysis Of Multispectral Imagery Using Multi Level Fuzzy Based Deep Representation	Velammal College of Engineering & Technology, Madurai (NCIECC`17)	March 2017
10	Unsupervised Change Detection Of Multispectral Images Using Genetic Based Particle Swarm Optimization	Velammal College of Engineering & Technology, Madurai (NCIECC`17)	March 2017
11	Contourlet Transform Based Feature Extraction and Classification of Multispectral Images	Karpagam College of Engineering, Coimbatore (ICIIECS-2016)	March 2016
12	Channel Migration Analysis of River and Feature Extraction from Remotely Sensed Multispectral Images	Vivekanandha Institute of Engineering and Technology For Women, Tiruchengode.(ICCET - 2015)	March 2015
13	Feature Extraction Based Retrieval	Velammal College of	April 2014

	of Geographic Images	Engineering & Technology, Madurai (ICIECC '14)	
14	Analysis of Panchromatic and Multispectral Satellite Images using Ehler's Fusion	Velammal College of Engineering & Technology, Madurai (ICIECC '14)	April 2014
15	Improved Classification Accuracy of Multispectral Satellite Images Using Non Subsampled Contourlet Transform	Velammal College of Engineering & Technology, Madurai (ICIECC '14)	April 2014
16	Atmospheric Correction of Remotely Sensed Multispectral Satellite Images in Transform Domain	MIT, Anna University, Chennai (ICoAC 2012)	December 2012
17	Comparative Analysis of Wavelets for Fusion Applications	Baselios Mathews II College of Engineering, Kollam, Kerala (ICETT 2012)	February 2012
18	PCA Based Fusion Algorithm For Medical Diagnosis	JKKN College Of Engineering & Technology (ICACT 2012)	March 2012

7. National Conference Presentation Details:

S.No	Title of the Paper	Name of the Institution	Year of publication
1	Novel Attendance Monitoring System using Deep Neural Networks	Velammal College of Engineering & Technology, Madurai (NCDMA'22)	15 th & 16 th July 2022
2	An ultra lightweight hardware efficient algorithm for Wireless Sensor Networks	Velammal College of Engineering & Technology, Madurai (NCDMA'22)	15 th & 16 th July 2022
3	VLSI Implementation of identification of Human Faces	PSG Institute of Technology and Applied Research, Coimbatore 3 rd National Conference on Communication & System Design (NC2SD 2022)	11 th June 2022
4	Evaluation of Optimum Thresholding techniques for Atmospheric Correction in Remotely Sensed Images	VELS University, Chennai (NCMSO 2012)	November 2012
5	VLSI Implementation of Digital Base Band Channel Emulation System For OFDM Communications	A.C.College of Engineering & Technology, Karaikudi (NCMOC 09)	April 2009

8. NPTEL Certification:

- Microprocessors and Interfacing (**Secured 5% Topper Rank**) - Jan – Apr 2022.
- Remote Sensing : Principles & Applications - Jan – Apr 2021

- Analog Communication - Jul-Oct 2017
- Effective Engineering Teaching in Practice - Jan-Feb 2019

9. Google Scholar report:

Gandhimathi Alias Usha - Google Scholar

	All	Since 2017
Citations	42	35
h-index	4	4
i10-index	1	1