CURRICULUM VITAE

1. Name : Dr. P.SHANMUGAVADIVU

2. Designation : Professor

3. Address :

Dept. of Computer Science & Applications
Gandhigram Rural Institute – Deemed University,
Gandhigram - 624 302,
Dindigul District, Tamil Nadu, India.

psvadivu67@gmail.com
psvadivu@yahoo.com

Mobile: 9443736780

4. Educational Qualifications : M.C.A., MBA, Ph.D.,

- Ph.D., *Adaptive Median Based Filters for Restoration of Still Images Corrupted by Impulsive Noise*, Gandhigram Rural Institute – Deemed, University, 2008.
- M.C.A., Regional Engineering College, Trichy, 1990.

Additional Qualifications :

- Qualified NET conducted by UGC for Lectureship in Computer Applications held in December 1996 (E 496379)
- Qualified SLET conducted by Govt. of Tamil Nadu for Lectureship in Computer Science / Applications held in March 1997 (4060871)

5. Areas of Specialization : Medical Image Analysis
Healthcare Analytics
Digital Image Processing
Content-Based Image Retrieval
Software Engineering (Agile)

6. Experience : **Teaching: 27 Years; Research: 17 Years**

7. No. of Ph.D.s: Guided: 06; Guiding: 07

8. No. of M. Phil.: Guided: 17'; Guiding: 03

9. Sponsored Research Projects:

i. DST-SERB, Automated Diagnostic Tool for Segmentation and Classification of Renal Calculi in Ultrasound Images, 2016 -2018. (Rs. 11.00 Lakhs).

ii. DHR – ICMR, Computer Assisted Breast Cancer Diagnosis by Automated Detection of Abnormalities in Digital Mammograms using Fractal Techniques, 2016-2019. (Rs. 5.99 Lakhs)

iii. Indo-US 21st Century Knowledge Initiative, Augmenting the Curriculum of Higher Educational Institutions with an On-Line Integrated Cognitive-Based Employability Skills Assessment System using Signal and Video Analytics, 2015 - 2018 (Rs.1.25 Crores).

iv. UGC - MRP, Development of Adaptive Noise Filters for Restoration of Digital Images Corrupted by Impulse and Gaussian Noise, February 2010 (Rs.8,63,000).

v. An Interactive Aid for Resource Mapping using GIS for a Rural Block (TNSCST sponsored Project, 2004).

10. Research Publications:

A. International Journals	**:**	**26**
B. International Conferences	**:**	**30**
C. National Conferences	**:**	**48**
D. Book Chapters	**:**	**10**

E. International Journals (Select Publications)

I. Performance Improvement of Basic Medical Image Processing Operations on Multicore Architecture using Open MP, Vol. 8, No.5, pp. 1072 – 1077, May 2017.

II. Features Extraction for Masses in Digital Mammograms using Statistical and Textural Measures, International Journal of Advanced Research in Computer Science, Vol. 7, No.5, pp. 7 – 11, October 2016.

III. Convolution Based Composite Edge Detector for Gray-Scale and Colour Images, International Journal of Scientific and Engineering Research, Vol. 7, No. 4, April 2016.

IV. A Generic Permutational Edge Detection Approach for Corrupted Images, *International Journal of Computing Academic Research (IJCAR)*, Volume 5, Number 1, pp.39-45, February 2016.

V. FOSIR: Fuzzy-Object-Shape for Image Retrieval applications, *Neurocomputing* Vol. 171, No.1, pp. 719-735, 2016

VI. GLCM inertia Based Ultrasound image Enhancement, *International Journal of Applied Engineering Research*, Vol. 10, No.82, pp. 613-617, 2015

VII. Segmentation of Masses in Digital Mammograms using Fractal-Bound Computing Technique for Breast Cancer Prognosis, *International Journal of Applied Engineering Research*, Vol. 10 No.31, pp. 23187 – 23192, 2015.

VIII. Feature variance based filter for speckle noise removal, IOSR- JCE, Vol. 16, No. 5, pp. 15-19, 2014

IX. Adaptive Iterated Function Systems Filter for Images Highly Corrupted with Fixed-Value Impulse Noise, *European Physical Journal on Special Topics,* 2014.

X. Wavelet Transformation-Based Detection of Masses in Digital Mammograms, *International Journal of Research in Engineering and Technology*, *Vol.3, Issue 2,* 2014.

XI. Ranking images in Web Documents based on HTML TAGs for image retrieval from WWW, International Journal of Computational Intelligence Studies, Inderscience, Vol.3, No.2/3, pp.176 – 195, 2014.

XII. Bi-Level Weighted Histogram Equalization for Scalable Brightness Preservation and Contrast Enhancement for Images, *International Arab Journal of Information Technology,* Vol. 10, No. 6, 2013.

XIII. Particle Swarm Optimized Multi-Objective Histogram Equalization for Image Enhancement, *Optics & Laser Technology*, Vol. 57, pp. 243-251, 2013.

XIV. Thresholded and Optimized Histogram Equalization for Contrast Enhancement of Images, *Journal of Computers & Electrical Engineering*, Vol. 40, No. 3, pp.757-768, 2013.

XV. High-Level Semantics of Images in Web Documents Using Weighted Tags and Strength Matrix, International Journal of Computer Science, Engineering and Applications, Vol.1, No.5, pp. 155-165, 2011.

XVI. Adaptive PDE-Based Median Filter for the Restoration of High-Density Impulse Noise Corrupted Image, *International Journal of Advanced Information Technology, Vol. 1, No. 6, pp. 43-51*, 2011.

XVII. Modified Histogram Equalization for Image Contrast Enhancement using Particle Swarm Optimization, *International Journal of Computer Science, Engineering and Information Technology, Vol.1 No. 5, pp.13-27*, 2011.

XVIII. Impulsive Noise Detection by Second Order Differential Image and Noise Removal using Adaptive Nearest Neighbourhood Filters*, International Journal of Electronics and Communications (AEU), Elsevier, Vol.62, pp. 472-477*, 2007.

F. Chapters

I. Fractal Dimension-Bound Spatio-Temporal Analysis of Digital Mammograms, *The European Physical Journal Special Topics*, Vol. 225, No.1, pp. 137-146, 2016.

II. Capturing High-Level Semantics of Images in Web Documents using Strength Matrix, *CCSEIT – 2011, Springer-Verlag CCIS, pp.287-296*, September 2011.

III. Image Edge and Contrast Enhancement using Unsharp Masking and Constrained Histogram Equation*, ICCCIS, Springer-Verlag CCIS, pp 129-136*, February 2011.

IV. Median Adjusted Constrained PDF Based Histogram Equalization for Image Contrast Enhancement, CCSEIT - 2011, Springer-Verlag CCIS, pp.244-253, September 2011.

V. Intensity-Based Detection of Microcalcification Clusters in Digital Mammograms using Fractal Dimension, Advances in Intelligent Systems and Computing, Springer, Volume 236, pp 1293-1299, January, 2014.

VI. A Robust Fuzzy-Based Modified Median Filter for Fixed- Value Impulse Noise, Chapter 27, Lecture Notes in Electrical Engineering, Vol. 291, pp. 229-236, ROVISP-2013, November 2013.

VII. Boundary Detection of Objects in Digital Images using Bit-Plane and Threshold Modified Canny Method, MIKE-2013, December 2013.

VIII. Weighted Matrix for Associating High-Level Features with Images in Web Documents for Image Retrieval, Control, Computation and Information Systems Communications in Computer and Information Science, Vol. 140, pp 318-325, 2011.

IX. Particle Swarm Optimized Bi-Histogram Equalization for Contrast Enhancement and Brightness Preservation of Images, Volume 30, Issue 4, pp 387–399, The Visual Computer, 2013.

X. A Novel Technique for Mammogram Mass Segmentation using Fractal Adaptive Thresholding, Chapter 25, Lecture Notes in Electrical Engineering, Vol. 291, pp. 213-220, ROVISP-2013, November 2013.

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