



**St. Joseph's Institute of Technology**  
**St. Joseph's Group of Institutions**  
 OMR, Chennai – 119



**Department of Electronics and Communication Engineering**  
**(Accredited by NBA)**

**FACULTY DETAILS**

<b>Staff Name:</b>	<b>Dr. C. T. KAVITHA</b>
<b>Designation:</b>	ASSOCIATE PROFESSOR
<b>Date of Birth:</b>	01-03-1976
<b>Educational Qualification:</b>	M.E., Ph.D.,
<b>Area of Interest:</b>	Image Processing
<b>Years of Experience:</b>	21 years
<b>Area of Research:</b>	Image Processing, Neural Networks, Artificial intelligence
<b>No. of Students Project Guided</b>	40
<b>Publications Details:</b>	<ol style="list-style-type: none"> <li>1. “A Robust Microcontroller Based Continuous Authentication System Using Touch Screen Patterns” <i>International Journal of pure and Applied Mathematics</i>, Vol.117(6), pp. 713-717, ISSN 1311-8080, <b>Academic Publications</b>.</li> <li>2. “Feature Based Fusion of Multimodal Medical Image Slices with Combined Transforms” <i>Current Medical Imaging Reviews</i>, Vol.12(3), pp. 213-219, ISSN 1573-4056, <b>Bentham Science Publishers Limited</b>. (<b>Impact Factor : 0.734</b>, Listed in <b>Annexure – I</b> journal list of Anna University).</li> <li>3. “System Design and Realization of Wireless ECG”, January 2016, pp. 274-279, ISSN 1991-8178, <i>Australian Journal for Basic and Applied Sciences</i>, ISSN 1991-1878. (Listed in <b>Annexure –II</b> journal list of Anna University).</li> <li>4. “Fusion of SPECT and MRI images using integer wavelet transform in combination with curvelet transform”, <i>The Imaging Science Journal</i>, Vol. 63(1), pp. 17-23, ISSN 1368-2199, <b>Maney Publisher</b> (<b>Impact Factor : 0.315</b>, Listed in <b>Annexure – I</b> journal list of Anna University).</li> <li>5. “Medical image fusion based on hybrid intelligence”, <i>Applied</i></li> </ol>

*Soft Computing*, vol. 20, pp. 83-94, ISSN 1568-4946, **Elsevier Publisher**, (Impact Factor : **2.810**, Listed in **Annexure – I** journal list of Anna University ).

6. "Fusion of PET and MRI images using adaptive neuro-fuzzy inference system," *Journal of Scientific and Industrial Research INDIA*, Vol. 71(10), pp. 651-656, ISSN 0975-1084(Online), ISSN 0022-4456(Print). (**IMPACT FACTOR – 0.587**, Listed in **Annexure – I** journal list of Anna University).
7. "Medical Image Fusion using Combined Discrete Wavelet and Ripplet Transforms", *Procedia Engineering*, Vol. 38, pp. 813-820, ISSN 1877-7058, 10.1016/j.proeng.2012.06.102. URL: <http://www.sciencedirect.com/science/article/pii/S1877705812020152>.
8. "Multimodal Medical Image Fusion Using Discrete Ripplet Transform and Intersecting Cortical Model, *Procedia Engineering*, Vol. 38, pp. 1409-1414, ISSN 1877-7058, 10.1016/j.proeng.2012.06.175. URL: <http://www.sciencedirect.com/science/article/pii/S1877705812020887>.
9. "Performance of Wavelet Based Feature Extraction for Palmprint Recognition", in *International Journal of Information and Communication Technologies, IJICT*, Vol.3, No.3-4, July – Dec 2010, pp. 239-242.

#### **INTERNATIONAL CONFERENCES:**

1. "A Discrete Tchebichef Transform for Image Coding", in proceedings of ICITET'16, 07 May 2016, pp. 927-932.
2. "Testing and detection of aged integrated circuits based on testing embedded ADDS", in proceedings of ICECS, Feb 26-27, 2015, pp.772-776.
3. "VLSI Implementation of Image Fusion Based on Lifting DWT", in proceedings of ICETEC'14, Mar 13-14, 2014, pp. 303-309.
4. "Medical Image Fusion Using Integer Wavelet Transform and Pulse-Coupled Neural Network" in *Proceedings of the 2011 IEEE International Conference on Computational Intelligence and Computing Research (ICCIC)*; *IEEE Xplore: CFB1120J-ART*; ISBN: 978-1-61284-694-1; Print Version: CFB1120J-PRT; ISBN:

978-1-61284-766-5, Dec 15-18, pp. 834-838.

5. "Multimodal Medical Image Fusion Based on Integer Wavelet Transform and Neuro – fuzzy" in *proceedings of ICSIP 2010, Print* ISBN: 978-1-4244-8595-6, **INSPEC Accession Number: 11763499, Digital Object Identifier : 10.1109/ICSIP.2010.5697486**, Dec 15-17, pp. 296-300.
6. "An Investigative Study of Image Fusion Using Different Wavelet Transforms", in *ICEBT 2010*, Sep 2-4, Coimbatore, Tamilnadu, India.

#### **NATIONAL CONFERENCES**

1. "Performance Analysis of Discrete Tchebichef Transform in Image Coding", in proceedings of ETVCE'16, 19 Feb 2016.
2. "Testing and detection of aged integrated circuits based on threshold voltage degradation", in proceedings of NCACTA'15, 24 Apr 2015.
3. "Matlab Implementation of Fusion and K-Means Clustering for Detecting Tumour", in proceedings of RTWCN, Mar 7-8, pp. 122-126.
4. "Softcore Design of Image Fusion and K-means Clustering Algorithm for Detecting Tumour", in proceedings of TEQIP (Phase II) sponsored National Conference on Electronics, Signal Processing, Communication & Embedded Systems, Feb 27-28.
5. "Localization and Recognition of Vehicle Number Plate", National Level Conference on Advances in Computing and Technology, 21 Feb 2014, pp. 40-46
6. "Multimodal Image Fusion Using Curvelet Transform" in *proceedings of Embedded Microwave and Integrated Technologies – EMIT-11*, March 24-25, pp.311-314.
7. "Automatic Segmentation of Cardiac Medical Images" in proceedings of VCaN-2011, pp. 75-77.
8. "A Comparative Analysis Using Different Wavelets for Palmprint Recognition", in *proceedings of NCET 2010*, Mar 5, pp. 107-110.
9. "Identification of Palmprint Using Various Wavelet Energies", in *proceedings of NCAET'10*, Feb 5, pp. 33- 35.

	<p><b>10.</b> “Wavelet Packet Image Coding Using Modified SPHIT algorithm”, <i>in proceedings of RTIEE’07</i>, Mar 13, pp. 296-300.</p> <p><b>11.</b> “A Structure Adaptive Hybrid Vector Filter for Colour Image Restoration”, <i>in proceedings of RTIEE’07</i>, Mar 13, 2007, pp. 220-225.</p> <p><b>12.</b> “DSP Based Approach for the Implementation of Face Recognition Algorithm, <i>in proceedings of NCAME’06</i>, Mar 17, pp. 81-88.</p> <p><b>Patent:</b> Floating Vacuum Cleaner that Wipes the Dust Accumulation in the Edges of the House Rapidly Official Journal Of The Patent Office (Application No. 202141006765 A)</p>
<p><b>FDP &amp; Workshop Attended Details:</b></p>	<ol style="list-style-type: none"> <li>1. Attended Two Days Faculty Development Training Programme on “<i>Image Analysis in Spatial Domain</i>” at Rajalakshmi Engineering College on 23-24 Nov 2018.</li> <li>2. Attended Six Days Faculty Development Training Programme on “Emerging Trends in Embedded Systems and Its Real Time Applications” at St.Joseph’s College of Engineering from 02-07-18 to 07-07-18.</li> <li>3. Attended a One week Faculty Development Training Programme on “<i>Basic Electrical, Electronics and Measurement Engineering</i>” at St. Joseph’s Institute of Technology from 1<sup>st</sup> to 8<sup>th</sup> Dec 2017.</li> <li>4. Attended One day workshop on “<i>Make in India – Transforming Research to Reality</i>” at Anna University on 5<sup>th</sup> Sep 2017.</li> <li>5. Attended a One day workshop on “<i>Methodologies on Writing Thesis, Proposals and Journals</i>” at Sree Sastha Institute of Engineering and Technology on 11<sup>th</sup> Nov 2017.</li> <li>6. Attended a FDP on “<i>The Internet of Things (Using Raspberry Pi)</i>” at Sree Sastha Institute of Engineering and Technology from 3 to 4 Nov 2016.</li> <li>7. Attended a one day seminar on “<i>Engineering Education and Research</i>” by National Instruments on 22 Mar 2016.</li> <li>8. Attended a FDP on “<i>Embedded and Real Time System</i>” at Sree Sastha Institute of Engineering and Technology from 15 to 17 June 2015.</li> </ol>

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|  | <p>9. Attended a FDP on “<i>LabVIEW and its Application to Engineering Systems</i>” at SKR Engineering College from 18 to 20 Dec 2014.</p> <p>10. Attended a FDP on “<i>Microprocessor and Microcontroller</i>” at Sree Sastha Institute of Engineering and Technology from 16 to 18 June 2014.</p> <p>11. Attended a Workshop on “<i>Challenges on R&amp;D Project Proposals and Funding Opportunities</i>” at Sree Sastha Institute of Engineering and Technology on 24 Aug 2013.</p> <p>12. Organised two day workshop on “<i>Machine Vision in Image processing</i>” at Jerusalem College of Engineering on 1-2 Mar 2012.</p> <p>13. Attended a workshop on “<i>Research Methodologies</i>” at Jerusalem College of Engineering on 12<sup>th</sup> Jan 2012.</p> <p>14. Attended a 2 day workshop on “<i>Mathematical Transforms Explore and Innovate</i>” at VIT University, Chennai Campus on 16-17 Sep 2011.</p> <p>15. Attended a 2 day workshop on “<i>VLSI Design Methodology and Tools</i>” at Sri Sai Ram Engineering College on 7-8 Oct 2010.</p> <p>16. Attended “<i>Mission 10X</i>” FDP at Jerusalem College of Engineering conducted by WIPRO on 28<sup>th</sup> June to 2<sup>nd</sup> July 2010.</p> <p>17. Attended a two day workshop on “<i>Recent Trends in Mobile Communication</i>” at Jerusalem College of Engineering, on 19-20 Nov 2009.</p> <p>18. Attended a 3 day International Workshop on “<i>Content Based Image Retrieval and Fusion (CBIRF)</i>” at M.I.T, Anna University on 7-9 Aug 2009.</p> <p>19. Attended a two day workshop on “<i>Embedded Systems with RTOs</i>” at Jerusalem College of Engineering, on 1-2 Dec 2008.</p> <p>20. Attended a workshop on “<i>Lab VIEW</i>” at Jerusalem College of Engineering, on 26<sup>th</sup> Nov 2008.</p> <p>21. Attended a workshop on “<i>Neural Networks and Fuzzy Systems</i>” at Jerusalem College of Engineering, on 4<sup>th</sup> Nov 2008.</p> |
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	<p>22. Attended a FDP on “<i>Wireless Technology</i>” at Jerusalem College of Engineering, on 3<sup>rd</sup> Nov 2008.</p> <p>23. Attended a 5 day workshop on “<i>MATLAB and its applications</i>” at Jerusalem College of Engineering, from 05-09 May 2008.</p> <p>24. Attended a workshop on “<i>Grid Computing and Networking</i>” at Jerusalem College of Engineering, on 18<sup>th</sup> Mar 2008.</p> <p>25. Attended a two day workshop on “<i>Advanced Digital Signal Processing</i>” at Sri Venkateswara College of Engineering, on 12-13 Oct 2006.</p> <p>26. Attended a workshop on “<i>Image Processing Techniques</i>” at St.Joseph’s College of Engineering, on 19<sup>th</sup> Aug 2006.</p> <p>27. Organised and attended 2 day workshop on “<i>RTOS ( VxWorks)</i>” conducted by Jerusalem College of Engineering, on 17-18 Dec 2004.</p>
<b>Professional Membership:</b>	IAENG and ISTE