



**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. G. S. UTHAYAKUMAR</b>
<b>Designation:</b>	Associate Professor
<b>Date of Birth:</b>	04.06.1969
<b>Educational Qualification:</b>	M.E, Ph.D.,M.B.A.,M.S.W(doing),H.D.I.N.C.C.,
<b>Area of Interest:</b>	Medical Electronics, Image Processing, Bio-Optics
<b>Years of Experience:</b>	18 Years 7 Months
<b>Area of Research:</b>	Biomedical Optical Engineering
<b>No. of Students Project Guided</b>	UG – 30 PG - 10
<b>Publications Details:</b>	<p><b>Paper Publications:</b></p> <ul style="list-style-type: none"><li>• Characterization and parameterization of Medicinal Drugs using Analytical techniques and Monitoring of human body tissues, Arabian Journal for Science and Engineering, Vol.39, pp.5861-5872, 2014.</li><li>• Nano-particle analysis for various medicinal drugs and human body saliva at macromolecular level, Journal of Applied Nano science, online, 2014.</li><li>• Cancer detection using human body Nails, International Journal of Biomedical Engineering and Technology, In press,2014.</li><li>• Biomedical optical analytical techniques to analyze the medicinal drugs and optical properties of tissues, International Journal of Biomedical Engineering and Technology, Vol.12,pp.36-59,2013.</li><li>• Biomedical Optical spectroscopy techniques for Diagnosis of Human saliva sample, Asian Journal of Biomedical and Pharmaceutical Sciences 3 (24), 12-21, 2013.</li><li>• WAN enabled super system for Nano-biomaterials packages for bio-products and bio-materials Scientists, International Journal of Biomedical and Advance Research 4 (9), 592-596, 2013.</li><li>• Novel Design of Low Voltage DC Source for Bio Nano Diagnostic Applications, International Journal of Advanced Biomedical Engineering Research (IJABER) 1 (1), 2013.</li></ul>

- Characterization and Quantization Of Medicinal Drugs Using Biomedical Optical Spectroscopy Methods, International Journal of Engineering Research & Technology 2 (2), pp.1-10, 2013.
- A novel technique to monitor human body vital signs, International Journal of Biomedical and Advance Research 4 (9),pp. 642-651, 2013.
- Fiber Optic Transillumination Imaging System and Human Body Relations, Open Access Scientific Reports 1 (7), 1-6.
- Characterization of Medicinal Drugs using biomedical optical techniques, International Journal of Biomedical Engineering and Consumer Health Informatics, ISSN: 0973-6727 (Vol.4 ,No.2 2012). Pages: 43-50.
- Mobile phone antennas and its radiation patterns, IEEE Transactions on Electromagnetic Interference & Compatibility, 2008. INCEMIC 2008, Page(s):355 – 360.
- Mobile phone usage and cancer” IEEE Transactions on Electromagnetic Interference & Compatibility, 2008. INCEMIC 2008, Page(s):627 – 632.
- A study on perceptions of entrepreneurial potential of PG Engineering students of Anna University, Published in SEDME publications, 2000.

**Conferences:**

- Reliability, specificity, sensitivity of caries detection using FOTI, at 2<sup>nd</sup> National conference on VLSI, Communication and Networks(VCAN2010) in Eswari Engineering College,Chennai-89.
- Fiber optic Transillumination Imaging of Human teeth, at National conference on Recent Trends in communication, in Annai Mathammal Sheela Engineering College, Namakkal-637013.
- FOTI imaging system for caries detection, at National conference on Embedded, Microwave & Integrated Technologies in Saveetha College of Engineering, Chennai Sponsored by DOE, Board of Research in Nuclear Sciences.
- Mobile phone antenna and its radiation pattern, at 10<sup>th</sup> International conference on Electromagnetic interference and compatibility (INCEMIC-using FOTI systems, Bangalore.,10th International conference on 26.11.2008,pp.355-360.
- Mobile usage and its cancer, at INCEMIC, NIMPHAN convention centre, Bangalore.,pp.627- 632.
- Early cancer detection using human body waste (Nails), Third International conference on Recycling and Reuse of

	<p>Materials-ICRM-2014, 11-13 April 2014.</p> <ul style="list-style-type: none"> <li>• Monitoring of drugs at molecular level using FTIR, 3<sup>rd</sup> World congress Biotechnology, 13-15 Sep.2012 Hyderabad International convention centre.</li> <li>• Monitoring of human body tissues at molecular level using FOTI systems, 8<sup>th</sup> International symposium on Bioinformatics Research and applications,21-23 May 2012, University of Texas at Dallas, Texas,pp.133-147.</li> <li>• Invisible sensors in atmosphere, International conference on Computer Science &amp; Information Technology held at Chennai on 10<sup>th</sup> May 2014.</li> <li>• Early detection of cancer using human bodywaste(Nails), at 3<sup>rd</sup> International conference on Recycling and Reuse(ICRM-2014), M.G.University, Kottayam, Kerala.</li> <li>• IoT for monitoring Chiropractors, at 7<sup>th</sup> Euro-India International conference on Holistic Medicine 2017,14-17 September 2017 at Institute of Holistic Medical Sciences, Kottayam, Kerala.</li> <li>• Natural Plants as Modulators of Apoptosis in International Conference on Experimental and Clinical Medicine at Mahatma Gandhi University, Kottayam, Kerala, India.</li> <li>• Smart Sensors Based Human Emotion Recognition” in VI INSTITUTE OF TECHNOLOGY and <b>Won First Prize.</b></li> <li>• Real Time Human Emotion Recognition by Smart Sensors in Thanthaiperiyar Government Institute of technology and <b>Won First Prize.</b></li> <li>• Automatic Human Emotion Recognition using smart sensors, in Sri Lakshmi Ammal Engineering College and Chendu college of engineering and technology.</li> <li>• Automatic Recognition of Human Emotions using ECG signals in International conference Organization of science and innovative engineering and Technology” conducted by OSIET &amp; SRI RAMANUJAR ENGINEERING COLLEGE, Chennai.</li> <li>• Implementation of Home Monitoring System Using IoT in International conference at Jeppiaar Engineering College, ICONSTEM 2017, 23-24th March 2017,Chennai.</li> </ul> <p><b>Patent:</b></p> <ul style="list-style-type: none"> <li>• Human Body Signal Biosensor</li> <li>• Fiber Optic Trans illuminator</li> <li>• Skin Film ECG Electrode</li> <li>• Spectra soft</li> <li>• Algal based Thin film sheet for vitiligo treatment</li> </ul>
<p><b>FDP &amp; Workshop Attended Details:</b></p>	<ul style="list-style-type: none"> <li>• FDP on “Semiconductor Devices &amp; Analog Circuits” at IIT, Madras 2.MHRD/AICTE sponsored summer school on</li> </ul>

	<p>“Biomedical Electronics” at NITTR, Chennai.</p> <ul style="list-style-type: none"> <li>• FDP on Graph theory and its applications in St. Joseph’s College of Engineering, Chennai</li> <li>• FDP on Artificial Intelligence in St. Joseph’s College of Engineering, Chennai 5.FDP on Design and Analysis of Algorithm in College of Engineering, Anna university</li> <li>• FDP on “Graph Theory and its Applications” at St.Joseph’s College of Engineering, Chennai</li> <li>• FDP on “Pursuing Emerging Technologies” at CTS,Chennai</li> <li>• FDP on “Pattern Recognition and Artificial Intelligence” at Rajalakshmi Engineering College, Chennai</li> <li>• FDP on “Computer Networks” at Jeppiaar Engineering College, Chennai</li> <li>• FDP on Advancements in Materials Science at Jeppiaar Institute of Technology, Chennai</li> <li>• FDP on Role of Technology in a post Covid-19 World on 12<sup>th</sup> June 2020. 12.FDP on Medical signal and Image analysis held from 15.07.2020 to 17.07.2020.</li> <li>• FDP organized by IETE and SRM Institute of Science and Technology on the topic “Preparing students for 21<sup>st</sup> century skills &amp; competencies new normal education-NI way” on 10.07.2020</li> <li>• National level online 2-days FDP on Advancement in Materials Science from 05.06.2020 to 06.06.2020 at Jeppiaar institute of Technology, Chennai</li> <li>• <b>Attended the webinar Series during Covid-19 lockdown duration</b> 15.Redefining the leadership in virtual environment - innovation to Transformation by Elets techno media on 4<sup>th</sup> may 2020 between 5:30 to 6:30pm.</li> <li>• Attended national webinar on covid-19 yesterday, today and tomorrow presented by <b>Padmashree. Dr.T.V.Devarajan</b> organized by RMK college of engineering, Chennai</li> <li>• A webinar on “NP completeness” at VIT, Chennai on 17<sup>th</sup> June 2020</li> <li>• Attended a webinar on “Marine Robotics-Its design and Applications at SRM Institute of Science and Technology on 13<sup>th</sup> June 2020.</li> <li>• Attended a webinar “FRONTIERS IN NANOTECHNOLOGY AND APPLICATIONS (FINA 2020)” organized by the Department of Physics, St.Xavier’s College (Autonomous), Palayamkottai on 15.07.2020.</li> <li>• Participated in the International Yoga Day organized by</li> </ul>
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	<p>Eudoxia Research Centre on 21<sup>st</sup> August 2020</p> <ul style="list-style-type: none"> <li>• Participated in the webinar organized by IEEE Product and Safety Society, N.I.T, Silchar, Assam on the title “Electronics Wastes- Emerging treat to Environment” on 26.06.2020</li> <li>• Participated in the Virtual International Seminar on “Cognitive computing and ADHD, My child has ADHD, How to discover symptoms and treatment for them” on 26.06.2020 sponsored by IEEE-CIS Chapter.</li> <li>• Attended “Industry Boot Camp” from 21<sup>st</sup> June 2020 at St.Joseph’s College of Engineering, Chennai</li> <li>• Attended a webinar organized by Jeppiaar Institute of Technology on the topic “What is business and How to do it?” on 27.07.2020.</li> <li>• Attended a webinar on “Post Covid-19 Role of science nd technology towards a self-reliant India “ on 19<sup>th</sup> May 2020.</li> <li>• Attended “Industry Boot Camp” from 27th and 28th June 2020 organized by St.Joseph’s College of Engineering, Chennai.</li> <li>• 27.Attended Higher &amp; Technical education virtual conclave, West India 2020 on 19.07.2020 organized by ELETS Technomedia.</li> </ul>
<p><b>Professional Membership:</b></p>	<p><b>IEEE</b></p>