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

Staff Name	Dr. M. Senthil Murugan
Designation	Associate Professor
Date of Birth	20/07/1982
Educational Qualification	M.E., Ph.D.
Area of Interest	Network Security, VLSI Design
Years of Experience	18 Years
Area of Research	VLSI Design
No. of Students Project Guided	25
Patent	➢ Published a Patent in the title of **"Scheduling of millimeter wave (mmwave) and terahertz (thz) communications in cellular-connected uav networks with integrated sensing, communication, and control"** on November 2022 ➢ Published a Patent in the title of "**Separation of Glass / Plastic Products using FPGA" on** February 2022
Publications Details	➢ Published a paper "**Prevention and Detection of Spoofing Attack in Wireless Sensor Network**" in the Journal on Wireless Communication Networks, DOI: **10.26634/jwcn.9.1.18224** by April 2021 ➢ Published a paper "**Smart Irrigation Control with Disease Detection Using Machine Learning and Arduino Controller**" in the International Journal of Advanced Research in Science, Communication and Technology, ISSN (Online) 2581-9429 by April 2021 ➢ Published a paper "**Colour Detection Based Robotic Cart Using Raspberry Pi**" in the International Journal of Advanced Research in Science, Communication and Technology, ISSN (Online) 2581-9429 by April 2021 ➢ Published a paper "**Hardware Implementation of Hybrid Model Encryption Algorithm for Secure Transmission of Medical**

	Images" in the International Journal of Engineering and Advanced Technology **(Scopus)**, ISSN No 2249-8958 by October 2019 ➢ Published a paper "**Area-Efficient and High-Speed Hardware Structure of Hybrid Cryptosystem (AES-RC4) For Maximizing Key Lifetime Using Parallel Sub Pipeline Architecture**" in the Journal of Concurrency and Computation": Practice and Experience **(Web of Science)**, ISSN No 1532-0634 by April 2019. ➢ Published a paper "**Implementation of Advanced Encryption Standard Algorithm on Steganography**" in the International Journal of Recent Technology and Engineering **(Scopus)**, ISSN No 2277-3878 by January 2019. ➢ Published a paper "**Design of Hybrid Model Cryptographic Algorithm for Wireless Sensor Network**" in the International Journal of Pure and Applied Mathematics **(Scopus)**, ISSN No 1314-3395 by November 2017. ➢ Published a paper "**A Hybrid Cryptographic algorithm design using Block and Stream cipher-based Confidentiality and Integrity in Wireless Sensors Networks**" in the Australian Journal of Basic and Applied Sciences **(Scopus)**, ISSN No 1991-8178 by January 2016. ➢ Published a paper "**An Energy Efficient Key Management scheme for Mobile Wireless Sensor Networks**" in the International Journal of Advanced Technology in Engineering and Science, ISSN No 2348-7550 by July 2014. ➢ Presented the paper **"Evaluation of Support Vector Machine and Kernel Neural Network Classification for Fast Food Nutrition Data"** in 2nd International Conference on Augmented Intelligence and Sustainable Systems (ICAISS-2023) at CARE College of Engineering, Trichy held on August2023. **(Scopus Indexed). – IEEE Conference** ➢ Presented the paper **"Detection and Categorization of Sorghum crop using MCRNN Architecture"** in International Conference Contemporary in Science and its Engineering Applications (IC3SEA 2023) at Study World College of Engineering held on May 2023. **(Scopus Indexed). – IEEE Conference** ➢ Presented the paper **"RFID based Smart Ticketing and Destination Announcement System"** in National Conference on Recent Advancements in Science, Engineering and Technologies (RASET 2023) at Bannari Amman Institute of Technology held on May 2023. ➢ Presented the paper **"Performance Improvement of 16 Bus system using Hybrid power flow controller"** in International

	Conference on Automation, Computing and Renewable Systems (ICACRS 2022) at Mount Nion College of Engineering and Technology held on December 2022. **(Scopus Indexed). – IEEE Conference** ➢ Presented the paper **"Medical Data Chip for Global Medical Record Access using Block chain"** in Virtual International Conference on technological advancement in computers and communication (ICTACC 2022) at Adhiparasakthi Engineering college held on June 2022 ➢ Presented the paper **"A prediction of phishing websites by optical feature extraction using Recurrent Neural Network"** 6th International Conference on Trends in Electronics and Informatics (ICOEI 2022) at SCAD College of Engineering and Technology held on April 2022 **(Scopus Indexed). – IEEE Conference** ➢ Presented the paper **"Space Vector control for high level clamped inverters"** in the ICAIS 2022, at JCT College of Engineering and Technology held on Feb 2022 **(Scopus Indexed). – IEEE Conference** ➢ Presented the paper **"Lossless Image Compression for Secure Transmission using Hybrid Model Encryption Algorithm"** in the International Conference on Advanced Scientific Innovation in Science, Engineering and Technology at Bharath University held on April 2019. ➢ Presented the paper **"Bone Mineral density using Neural Network"** in the International Conference on Recent trends in science, Engineering and Management at Karpaga Vinayaga College of Engineering and Technology held on March 2019. ➢ Presented the paper **"Lossless Image Compression using Modified SPIHT Algorithm"** in the International Conference on Recent Developments in Engineering Management Sciences and Technology at Dhaanish Ahmed College of Engineering and Technology held on March 2019. ➢ Presented the paper **"Implementation of Advanced Encryption Algorithm on Steganography"** in the International Conference on Innovations and Research in Marine Electrical and Electronics Engineering at AMET University held on September 2018. ➢ Presented the paper **"Cloud Based Home Sheltering using Raspberry Pi"** in the National Conference on Emerging trends in Electrical, Electronics and Computer Engineering held on April 2018

	➢ Presented the paper **"Tracking and Alert system for College Transport Services"** in the National Conference on Trends in Instrumentation and Automation at Velammal Engineering College held on March 2018. ➢ Presented the paper **"Design of Hybrid Model Cryptography algorithm for Wireless Sensor Network"** in the International Conference on Innovations and Research in Marine Electrical and Electronics Engineering at AMET University held on October 2017. ➢ Presented the paper **"A Hybrid Cryptographic algorithm design using Block and Stream Cipher Based Confidentiality and Integrity in Wireless Sensor Network"** in National Conference on Emerging Trends in VLIS & Communication Engineering at Sree Sastha Institute of Engineering and Technology held on February 2016. ➢ Presented the paper **"Sub Block Matching Based Conditional Motion Estimation for Video Compression"** in National Conference on Recent trends in science and Technology in Dr. M.G.R. Educational and Research Institute held on May 2005.
FDP & Workshop Attended Details	➢ Participated Five Days Faculty Development Program on "**Co Po Mapping and Co Po Attainment**" in **Greater Kolkata College of Engineering & Management** **West Bengal** from 10-07-23 to 14-07-23 ➢ Participated Five Days Online Faculty Development Program on **"VLIS and Chip Design"** Mohamed Sathak A.J. College of Engineering from 10-07-23 to 14-07-23 ➢ Participated Five Days Faculty Development Program on "**Innovative VLSI Physical Design using Innovus**" SIMATS School of Engineering from 09-01-23 to 13-01-23 ➢ Participated Five Days Online Faculty Development Program on "**Recent Trends in 5G Communication, Design and Technologies**" at Rajalakshmi Engineering College from 05-07-22 to 09-07-22 ➢ Participated Six Days Online Faculty Development Program on "**Emerging Technologies**" at Jeppiaar Institute of Technology from 28-02-22 to 05-03-22 ➢ Participated Five Days Online Faculty Development Program on

	"Embedded **System Design using Intel SoC FPGAs**" at SSN College of Engineering from 01-02-22 to 05-02-22 ➢ Participated Five Days Online Faculty Development Training Program on "**Machine Learning Techniques**" at Sri Sairam Engineering College from 07-06-21 to 12-06-21 ➢ Participated Six Days Faculty Development Program on **"Research and Development in Wireless Communication Application using NetSim and MATLAB"** at Pondicherry Engineering College from 02-11-20 to 07-11-20 ➢ Participated Five Days Online Faculty Development Program on "**Research Trends in Green Energy**" at GMR Institute of Technology, Kakinada from 12-10-20 to 16-10-20 ➢ Participated AICTE sponsored Faculty Development Training Programme on "**Research Areas in Smart Antenna Design for CUBESAT Applications**" at Sri Sairam Institute of Technology Chennai from 31-10-19 to 6-11-19 ➢ Participated in the short-term Training Programme on **"Fuzzy Sets and Applications"** at SRM University held on November 2018 ➢ Participated in the Training Programme on **"Industry 4.0"** by MSME – Technology Development Centre, Government of India at St. Joseph's Institute of Technology held on November 2018 ➢ Participated in the short-term course on **"Embedded Technology system Design and Analysis of Wireless Embedded Technology"** in Velammal Engineering College held on December 2007. ➢ Participated in two week national level workshop on "**Advanced Research Methodology**" at SRM Institute of Science and Technology from 3rd July 2023 to 18th July 2023 ➢ Participated in the National Level workshop on **"Glimpses on Effective Research and Proposal writing"** at St. Joseph's Institute of Technology held on October 2016. ➢ Participated in the National Level workshop on **"Real Time Signal and Image Processing Using Xilinx Vivado system Generator and Simulation of Physical layer in Communications"** at St. Joseph's Institute of Technology held on September 2016. ➢ Participated in the National Level workshop on **"Cyber Security – Threats and Vulnerability Assessment"** at PSG College of Technology held on January 2016.

	➢ Participated in the National Level workshop on **"Simulation and Emulation of Self Organized Networks"** at Kongu Engineering College held on September 2014. ➢ Participated in the National Level workshop on **"Mathematical Modeling in Wireless Sensor Networks and Hands on Training in OMNet++ V1.0"** at Sathyabama University held on December 2013. ➢ Participated in two days' workshop **on "Practical aspects & Implementations of Networking Protocols"** in Velammal engineering College held on September 2006. ➢ Attended a National Level workshop **in "Advanced VSLI Design"** in St. Joseph's College of Engineering held on August 2005.