



Dr. S P Manikandan M.E.,Ph.D

Assistant Professor /ECE

HIGHLIGHTS:

- Number of Journal Publications:23
- H-Index:4
- Project Funding Received:Nil
- Patents Published:5
- Patents Granted:1

PROFESSIONAL LINKS:

Scopus ID: 57194222656

Scopus Link: <https://tinyurl.com/5pdm2bxu>

Google Scholar ID: <https://tinyurl.com/3abnfuzk>

Anna University Faculty ID: 2618061985

AICTE Faculty ID: 1-7519603327

Anna University Supervisor ID: Nil

LinkedIn: <https://www.linkedin.com/in/dr-s-p-mani-kandan-294b8b201/>

PROFESSIONAL BACKGROUND:

- Teaching Experience till date: 16 years
- Industrial Experience: Nil

AREA OF SPECIALIZATION:

- Digital Logic Circuits Design.
- Integrated Circuits.
- Digital Image Processing
- Wireless Communication Networks
- Microelectronics

COURSES CERTIFIED:

S.No	Title	Month/Year	Venue
1.	NPTEL Workshop	July 2010	IIT Madras
2.	MEMS & RTOS	March 2011	GKM College of Engg & Tech
3.	Persuasive Research Promotion Strategies	Nov 2017	Kings Engineering College
4.	Programming Embedded System	March 2018	MIT
5.	Recent Trends in Microwave Engineering	Dec 2018	Prathyusha Institute of Technology & Management
6.	High frequency Design of 5G Using ADS	April 2023	MIT

SPECIAL SESSIONS DELIVERED:

- Delivered lecturer in the topic “Digital logic Design” in Kings Engineering College
- Delivered lecturer in the topic “Embedded systems and its Application” as a part of FDP in Sree Sastha Engineering college

PROFESSIONAL MEMBERSHIPS:

- Indian Society for Technical Education (ISTE)
- Institution of Electronics and Telecommunication Engineers (IETE)

PUBLICATIONS**Journal Papers: (Science Citation Index/ Scopus Indexed)**

Sankarakutti Palanichamy Manikandan, Karthikeyan Vedanandam, Nalinashini Ganesamoorthy.” **DermICNet: Efficient Dermoscopic Image Classification Network for Automated Skin Cancer Diagnosis**” Revue d'Intelligence Artificielle; Edmonton Vol. 36, Iss. 5, (Oct 2022): 801-807.

Sankarakutti Palanichamy Manikandan, Karthikeyan Vedanandam, Nalinashini Ganesamoorthy.”**Design of inception architecture for skin melanoma classification**” Indonesian journal of Electrical Engineering and computer science Vol. 31,Iss.3, (Sep 2023): 801-807.

Ramesh K,Duraivel A N,Lekashri S.**Manikandan S P**,Ashokkumar M,"**Computational Framework for Prediction of cardiac Disorders by analyzing ECG Signals using Machine Learning Technique**" International journal for Multiscale Computational Engineering- Vol.22, Iss.5, (2024):47-60

Santhakumar D,Sudhan MB,Prasanna R,**Manikandan S P**,Banupriya Prathaban, Rajesh kanna R ,"**Smart Driving Licensing System and Authorization of Autonomous Vehicle Integrating Wireless Sensor Networks and IOT**" Telecommunications and Radio Engineering- Vol.83, Iss.9, (2024):69-85

Lokesh S, **Manikandan S P**, Kannan Ramakrishnan,Santosh Kumar Sahoo,B. Venkataramanaiah, Sudha Rajesh,"**Advanced Consumption and Diabetes Prediction Using Machine learning and Deep learning**" Second International Conference on Intelligent Cyber Physical Systems and Internet of Things (ICOICI 2024)- IEEE XPLORE ISBN: 979-8-3315-4065-4

Manikandan S P, K Ashok Kumar, T Sai Harsha Vardhan, G. Thanigaivel, B. Venkataramanaiah Vijaya Vardan Reddy S P,"**Detecting Insider Threats in Cybersecurity Using Machine Learning**" 2024 International Conference on IoT Based Control Networks and Intelligent Systems (ICICNIS)-IEEE XPLORE ISBN: 979-8-3315-1809-7.

S Lokesh, **Manikandan S P**, Kannan Ramakrishnan, Santosh Kumar Sahoo, B Venkataramanaiah, Sudha Rajesh "**Alcoholic Consumption and Diabetes Prediction Using Machine Learning and Deep Learning**" 2024 Second International Conference on Intelligent Cyber Physical Systems and Internet of Things (ICoICI) - IEEE XPLORE ISBN:979-8-3315-4066-1.

Sankarakutti Palanichamy Manikandan, Sandeep Reddy Narani,S.Karthikeyan,N.Mohankumar "**Deep Learning for skin melanoma classification Using Dermoscopic images in Different Colour Spaces**" International Journal of Electrical and Computer Engineering (IJECE) Vol. 15, No. 1, February 2025, pp. 319~327 ISSN: 2088-8708

Alaudeen K.M,Prasanna R,Ganesh Kumar N,Ashokkumar M,**Manikandan S P**, Rajesh kanna R."**Performance Analysis of EUV Holographic Beamforming in vehicular communication Network**" Telecommunicaions and Radio Engineering Journal, DOI:10.1615/TelecomRadEng.2025058559

Vijay M; Chitturi Santosh; N Sundareswaran; Vinoth Raj R; **Manikandan SP** "**Storage-Efficient CCTV Surveillance: YOLO-Based Object Detection for Video Compression**" 2025 second International Conference on New Frontiers in Communication, Automation, Management and Security (ICCAMS)-IEEE XPLORE DOI: 10.1109/ICCAMS65118.2025.11234500.

Jegadeeswari G; **Manikandan, S.P**; Kalpana, S; Bharani, J.S.S.L; Bharathi, A; Kirubadurai, B; Gayathri, S.” **Fabrication and performance evaluation of TiO₂nanotube–based films for dye-sensitized solar cells Network**” International Review of Applied Sciences and Engineering, DOI:10.1556/1848.2026.01131

G. Jegadeeswari, R. Sundar, **S. P. Manikandan**, E. Poovannan, C. Rajarajachozhan, M. Batumalay, Sukumar Kalpana” **THD and spectral performance analysis of two-triangle RPWM for inverter applications**” International Journal of Power Electronics and Drive System (IJPEDS), DOI: 10.11591/ijpeds.v17.i1.pp370-382

Manikandan Sankarakutti Palanichamy, P. Deepak Franklin, A. Rajiv, D.S. Jayalakshmi “**Enhanced brain tumor detection through spectral domain reconstruction graph neural network with privacy- preserving secure smart healthcare framework**” Biomedical Signal Processing and Control, DOI:10.1016/j.bspc.2026.110982

S P Manikandan ,Radhika Baskar ” Optimizing Segmented Bimorph Piezoelectric Harvesters Using Advanced Bidirectional Long Short Term Memory Network” Journal of Vibration Engineering & Technologies, DOI: 10.1007/s42417-026-02423-w

Kamaraja Pandian P, Usha Rani B., V. Priya, **S. P. Manikandan**, Sivaram Murugan,V.Porkodi & Mohammed Ali Shaik” **Real-Time Climate Data Transmission and Processing Using CNN-LSTM in Terahertz Communication for Disaster Management and Early Warning Systems**” Journal of Infrared, Millimeter, and Terahertz Waves, DOI: 10.1007/s10762-026-01145-0

Veerasamy B, Vinoth Raj R,**Manikandan S. P.** & Poovannan E. “**Modeling and analysis of photonic logical processing unit using configurable photonic switch**” , Journal of Computational Electronics, DOI: 10.1007/s10825-026-02575-8

Prabu pachiannan, Monica Ravishankar, Kannan Nithin K. V. **S. P. Manikandan**, V. Priya, Sivaram Murugan & S. S. Sivaraju “**Smart Energy Grid Optimization for Climate Modeling Using Terahertz Communication and Quantum-Inspired Multi-objective Dragonfly Algorithm**”,Journal of Infrared, Millimeter, and Terahertz Waves, DOI: 10.1007/s10762-026-01150-3

S. Sudha, S. Srithar, Monica Ravishankar, V. K. Padmapriya, K. Saritha, A. Kodieswari & **S. P. Manikandan**” **The New Aspect of Neutrosophic Differential Equations and its Applications**”,Journal of SN Computer Science, DOI: 10.1007/s42979-026-05148-5

A. Uthiramoorthy, Anila Sathishkumar,Kalamani,Ajit Kumar Singh Yadav,Pradeep Kamboj & **S. P. Manikandan** “**Design of Reversible Quantum Processors for Safe Data Processing in Wireless Sensor Systems**”, Journal of SN Computer Science, DOI: 10.1007/s42979-026-05110-5

G.Jegadeeswari, M. Vaigundamoorthi, R. Sundar, J. S. S. L. Bharani, C. Rajarajachozhan, M. Batumalay, **S. P. Manikandan**, “**Design and analysis of a C4S DC-DC converter for sustainable solar energy systems**”, International Journal of Power Electronics and Drive Systems (IJPEDS) DOI: 10.11591/ijpeds.v17.i2.pp1152-1164

Jegadeeswari.G, **S. P. Manikandan**, Dr. Kirubadurai. B. Sripriya Ranganathan Sukumar Kalpana, M. Tamilarasi, Malathy Batumalay” **Fatigue, Resonance and Cavitation Mitigation Strategies for Carbon Fibber Wrapped Polytetrafluoroethylene (PTFE) Coated Aluminium Hydrogen Storage Cylinders**”, U.Porto Journal of Engineering, DOI: 10.24840/2183-6493_0012-001_002844

Tanisha S, Vaigundamoorthi M, **Manikandan SP**, Poovannan E, Vijayakumar M and Vinoth raj R” **Lightweight Cryptography for Medical Image privacy on Resource constraint hardware**, Journal of Physics: Conference Series, DOI: 10.1088/1742-6596/3191/1/012032

G. Jegadeeswari, R. Sundar, **S. P. Manikandan**, E. Poovannan, C. Rajarajachozhan, M. Batumalay, Sukumar Kalpana” **THD and spectral performance analysis of two-triangle RPWM for inverter applications**”, International Journal of Power Electronics and Drive Systems (IJPEDS) DOI: 10.11591/ijpeds.v17.i1.pp370-382

M. Vaigundamoorthi , G. Jegadeeswari , S. Asha , Savitha Venkatesan , R. Sundar , **S P. Manikandan** , P. Veera Manikandan , M. Batumalay ” **Integrated PV-driven DC–DC converter with hybrid energy storage system for electric vehicle applications**”, International Journal of Power Electronics and Drive Systems (IJPEDS) DOI: 10.11591/ijpeds.v17.i4.ppab-cd

CONFERENCE / FDP ATTENDED:

Participated in National Conference on Computing and Control Engineering at Anna University of Technology, Coimbatore on 7-8 April 2011.

Participated in National Conference on Recent Trends & Advances in Information & Communication System at Sri Venkateswara college of Technology, Chennai on 28 March 2015.

Attended FDP on VLSI Design in SSN College of Engg, from Jan 04 – 08, 2016

Attended FDP on Advancements in Real Time monitoring and Analysis of Biomedical and wireless sensor Data in Sri Venkateswara College of Engineering, from Dec 16 -18, 2024

Attended FDP on Deep learning, GenAI, and their application in Agriculture” in Tezpur university in association with Pantech learning, from 11 Aug -18, 2025

Attended FDP on Advanced AI and Virtual Reality Application in Electronics & Communication “in SRM Institute of Science and Technology, from 06 Oct -10, 2025

BOOK CHAPTER:

GAN-Based Synthetic Data Generation for Real-Time Medical Image Augmentation in Healthcare Diagnostics published by Scrivener Publishing associated with Wiley in Oct 2026

Reinforcement Learning-Driven Synthetic Data for Real-Time Traffic Flow Optimization in Smart Cities published by Scrivener Publishing associated with Wiley in Oct 2026

BOOKS PUBLICATION:

Medical image processing: Trends & Techniques, ISBN: 9781685232436, Notionpress Published Jun 2021

Embedded Systems Recent trends techniques, ISBN: 9798889094395, Notionpress Published Dec 2022

COMPLETED NPTEL CERTIFICATES

S.No	Name of the Course
1	Introduction To Internet Of Things
2	Accreditation and Outcome Based Learning
3	Operating System Fundamentals
4	Compiler Design