

**Dr.M.Karthigai Pandian., M.E., Ph.D.**

Designation : Associate Professor

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Teaching Experience : 13 years

Qualification : Ph.D

Special Areas of Interest : VLSI Device Modelling, Nano Technology, Antenna Design and Ultrasonic Welding Techniques

**Workshops / Seminars / Conferences organized**

Title	Funded By
Communication Skill Development Program for ICE students	ICE Association, SKCT, Coimbatore
National Conference “Einsteinium 2017” at Einstein College of Engineering, Tirunelveli	ECE Association, Einstein College of Engineering, Tirunelveli
Workshop on “Arm Processor and its Applications” at Einstein College of Engineering, Tirunelveli	ECE Association, Einstein College of Engineering, Tirunelveli
Workshop on “Image Processing using MATLAB” at Einstein College of Engineering, Tirunelveli	ECE Association, Einstein College of Engineering, Tirunelveli
Workshop on “Android Applications Development” at Einstein College of Engineering, Tirunelveli	ECE Association, Einstein College of Engineering, Tirunelveli
Workshop on “In Vehicle Embedded Systems” at Kongu Engineering College, Perundurai	CSIR

**Continuing Education Programmes**

Programme	Venue
Five days short course on “Modeling and Simulation of Nano-Transistors”	IIT, Kanpur
Five days AICTE Recognized Short Term Course on “Cyber Crime and Forensic Tools”	SKCET, Coimbatore
Five days INUP Hands-on Training Workshop on “Nanofabrication Technologies”	IIT, Bombay
Five Days Short Term Training Program on “Medical Electronics”	SKCT, Coimbatore
Two days Workshop on “Intelligent Systems Engineering”	NIT, Trichy
Three days Faculty Development Program on “Intelligent Control”	SKCT, Coimbatore
One day workshop on “Embedded System using ATmega 16 Microcontroller”	Karunya University, Coimbatore.
Two days workshop on “Introduction to TCAD and its Applications”	SSN College of Engineering, Chennai
Three days workshop on “Future of Nano Electronics – Research and Challenges Ahead”	SKP Engineering College, Thiruvannamalai
Two days workshop on “3-D System design and Device Modeling”	Thiagarajar College of Engineering, Madurai

One day Workshop on “Research Issues in Electrical Engineering”	Velammal College of Engineering and Technology, Madurai
One day workshop on “IPR in Agriculture and Engineering Research”	Kongu Engineering College, Perundurai
Two days seminar on “In Vehicle Embedded Systems”	Kongu Engineering College, Perundurai
Two weeks FDP on “Entrepreneurship”	PSG College of Technology, Coimbatore
One week Industrial Training at Chettinad Cement Corporation Limited	CCCL, Dindigul
One day workshop on “Advances in Process Control and Instrumentation”	St. Joseph’s College of Engineering, Chennai
One day seminar on “Environment Science and Engineering”	RVS College of Engineering and Technology, Dindigul
Two weeks FDP on “Adaptive Signal Processing and their applications to Speech Processing”	RVS College of Engineering and Technology, Dindigul

<b>Course materials prepared</b>	
Electronic Circuits – I	
Medical Electronics	
Measurements and Instrumentation	
Communication Theory	
Embedded system Design	
Microprocessors and Microcontrollers	

<b>Membership of Professional Bodies</b>	
<b>PROFESSIONAL BODIES</b>	<b>TYPE OF MEMBERSHIP</b>
Institution of Engineers (I)	Life Member
IEEE Electron Devices society	Annual Member

<b>Paper Publications (Conferences)</b>	
<b>Title</b>	<b>Conference</b>
ANN Based Battery Management System for Electrical Vehicles	International Conference on Smart Cities Model (ICSCM 2019), IIT Madras, 2019
Weld Strength Analysis of Ultrasonic Polymer Welding using Adaptive Neuro-Fuzzy Inference System	1st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME), Amity University, Uttar Pradesh, 2018
Analyzing the weld strength of ultrasonic polymer welding using Artificial Neural Network	International Conference on Composite Materials: Manufacturing, Experimental Techniques, Modeling and Simulation (ICMMEMS), Lovely Professional University, 2018
Differential Scanning calorimetry Analysis of Ultrasonically Welded polypropylene with different heating ranges	International Conference on Nanotechnology: Ideas, Innovations & Initiatives, IIT Roorkee, 2017.

A Two-dimensional analytical threshold voltage model for short channel junction based cylindrical surrounding gate (JBCSG) nanowire MOSFETs	International Conference on Nanotechnology: Ideas, Innovations & Initiatives, IIT Roorkee, 2017.
2D Compact Model of a Surrounding Gate Silicon Nanowire Transistor	International conference ICETET '14 held at Pandian Saraswathi Yadav Engineering College, Sivagangai
An Overview of Various Threshold Voltage Modeling Approaches in Surrounding Gate Silicon Nanowire Transistors	National conference NCETET '13 held at Pandian Saraswathi Yadav Engineering College, Sivagangai
A Review on Modeling of Double Gate Silicon Nanowire Transistors	National conference NCETET '13 held at Pandian Saraswathi Yadav Engineering College, Sivagangai
High Performance Double Gate Silicon Nanowire Transistors	International Conference ICEVENT '13 held at SKP Engineering College, Thiruvannamalai
Performance Analysis and Threshold Voltage Modeling of Surrounding Gate Silicon Nanowire Transistors	International Conference ICEVENT '13 held at SKP Engineering College, Thiruvannamalai
Synthesis, Fabrication Techniques and Applications of High Performance Silicon Nanowire Transistors	International Conference ICMAT '11 held at NUS, Singapore
2D Analytical Surface Potential Model of Multi-gate Silicon Nanowire Transistors for Biosensor Applications	International Conference ICMAT '11 held at NUS, Singapore
Technology Assessments of Hybrid Approaches to the Fabrication of High Performance Silicon Nanowire Transistors	National Conference ETWT '10 held at Thiagarajar College of Engineering, Madurai
Color Image Compression using SOFM	National Conference Exotech '06 held at Sri Subramanya College of Engineering and Technology, Palani.

<b>Paper Publications (Journals)</b>	
<b>Title</b>	<b>Journal</b>
Design and Optimization of Rectangular Patch antenna based on FR4, Teflon and Ceramic Substrates	Recent Advances in Electrical and Electronic Engineering.
Analyzing the weld strength of ultrasonic polymer welding using Artificial Neural Networks	Materials Today: Proceedings
Ultrasonically Welded and Non-Welded Polypropylene and PC/ABS Blend Thermal Analysis	Journal of Thermal Analysis and Calorimetry.
Comparative Performance Analysis of Multi Gate Tunnel Field Effect Transistors	International Journal of Nano Research
Analytical I-V Modeling of Accumulation Mode Cylindrical Surrounding Gate Silicon Nanowire MOSFETs	International Journal of Applied Engineering Research

Analytical Modeling of Junctionless Surrounding Gate Silicon Nanowire Transistors	International Journal of Nanoelectronics and Optoelectronics
Analytical Threshold voltage Modeling of Silicon Nanowire MOSFETs with different geometries	International Journal of Electrical Engineering and Technology
Potential and Quantum Threshold Voltage Modeling of GAA Nanowire MOSFETs	International Journal of Active and Passive Electronic Components

<b>Accolades</b>
Recognized by Anna University as Research Supervisor in the Department of Information and Communication Engineering (ICE)
Awarded as the BEST STAFF in the EIE department at Kongu Engineering College, Perundurai for the academic year 2007-08
Acted as Co-Chair in International Conference on Nanotechnology: Ideas, Innovations & Initiatives – IIT Roorkee, 2017
Acting as Reviewer for IEEE Transactions on Electron Devices