

# FACULTY PROFILE

Name of the Staff : **M.SIVAPALANIRAJAN**  
Official Address with E-mail Id : Assistant Professor (SG),  
EEE Department,  
National Engineering College  
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## 1. Personal Details

Age : 38  
Date of Birth : 01/01/1988  
Sex & Marital Status : Male / Married  
Citizenship : Indian  
Qualification : M.E,

Degree	Programme and Specialization	Class /CGPA	Month & Year of Passing	Institute/University
Ph.D	Electrical Engineering	-	Pursuing from Jan 2019	Anna University (PT)
M.E	Control and Instrumentation Engineering	I Class/8.27	May 2014	College of Engineering Guindy/Anna University
B.E	Electronics and Instrumentation Engineering	I Class with distinction/79%	April 2009	Kamaraj College of Engineering and Technology/Anna University

Date of joining : 02/06/2014  
Present status : Assistant Professor (SG)  
Professional Experience : 13 Years

Designation	Institution/ Organization	Period	Nature of Duties
Assistant Professor (SG)	National Engineering College, Kovilpatti.	01/04/2025 to present	Teaching & Research
Assistant Professor	National Engineering College, Kovilpatti.	02/06/2014 to 31.03.2025	Teaching & Research
Design & Development Engineer	Magnum Opus Products, Chennai.	09/09/2009 to 01/12/2011	Product Development.

### Courses taught:

Course Title	U.G. or P.G.
Robotics and Automation, Intelligent Sensors and Instrumentation, Logic and distributed control system, Control Systems, Measurements and instrumentation, Linear Integrated Circuits, MEMS and NEMS, Biomedical instrumentation, Basic Electrical and Electronics Engineering, Electrical Engineering.	UG

## 2. Academic Achievements

### 2.1 Funded Project Grant:

S.No	Agency	Amount	Duration	Status	Role
1.	ISRO – Respond Basket 2022 under title “Denoising Algorithm for Noise reduction in MEMS sensor	Rs. 18,90,960/-	2 Years	In progress	Co – PI
2.	NewGen IEDC for the title “Computer vision-based Meat quality checker”	Rs. 2,50,000/-	1 Year	Completed	Mentor

### 2.2 Short term Courses / Seminars / Conference/ Workshops organized:

S.No	Title	Period	No.of Participants	Venue
1.	Robotics workshop – NEC Techfest 2025	15 <sup>th</sup> Mar 2025	15	C&I laboratory, EEE,NEC, Kovilpatti
2.	Hands on training in the design of mobile robot using LEGO Mindstorm EV3 brick – Altanzia ‘24	22 <sup>nd</sup> Mar 2024	25	C&I laboratory, EEE,NEC, Kovilpatti
3.	Hands on training in the design of mobile robot using LEGO Mindstorm EV3 brick	21 <sup>st</sup> Jan.2023 to 11 <sup>th</sup> Mar 2023 (All Saturdays)	10	C&I laboratory, EEE,NEC, Kovilpatti
4.	Responsibilities of Engineers to have safe and ecofriendly industrial process erection and commissioning with HSE	25 <sup>th</sup> Jan 2022	54	Online webinar
5.	Role of Electrical, instrumentation and control engineer in tunnels and shipyards	29 <sup>th</sup> Aug 2020	68	Online webinar
6.	Real time interfacing of benchmark models with control perspective in LABVIEW and MATLAB	7 <sup>th</sup> Feb to 10 <sup>th</sup> Mar 2020	12	C&I laboratory, EEE,NEC, Kovilpatti
7.	Performance analysis of linear control system in LabVIEW using ELVIS II+	15 <sup>th</sup> Dec 2018 to 8 <sup>th</sup> Mar 2019 (Odd Saturdays)	15	C&I laboratory, EEE,NEC, Kovilpatti
8.	EEE association organized course on “Applications of control system using LabVIEW”	20 <sup>th</sup> -21 <sup>st</sup> Feb 2019	11	C&I laboratory, EEE,NEC, Kovilpatti
9.	Time Response Analysis Of Linear Time Invariant System In LabVIEW Using ELVIS II+	29 <sup>th</sup> July 2017 to 20 <sup>th</sup> Jan 2018 (Odd Saturdays)	12	C&I laboratory, EEE,NEC, Kovilpatti

10.	IEEE Sponsored “Implementation of soft computing techniques using MATLAB”	4 <sup>th</sup> - 6 <sup>th</sup> Aug 2016	40	NEC (EEE dept), Kovilpatti
11	Implementation of control engineering using LabVIEW	6 <sup>th</sup> Aug to 14 <sup>th</sup> Sep 2016 (Odd Saturdays)	17	C&I laboratory, EEE,NEC, Kovilpatti
12	Hands on training in PLC programming & SCADA	3 <sup>rd</sup> -5 <sup>th</sup> Sep, 2015	40	NEC (EEE dept), Kovilpatti
13	Application of digital circuits and interfacing measuring instruments using LABVIEW	5 <sup>th</sup> Sep - 16 <sup>th</sup> Nov 2015 (Odd Saturdays)	34	C&I laboratory, EEE,NEC, Kovilpatti
14	Short term LABVIEW training programme on basic circuit applications	20 <sup>th</sup> Sep to 10 <sup>th</sup> Nov 2014 (Odd Saturdays)	16	C&I laboratory, EEE,NEC, Kovilpatti

### 2.3 Short term Courses / Workshops Attended:

S.No	Title	Period	Venue
1.	Speech Enabled Drone Technology: AI and IoT Perspectives	5 <sup>th</sup> – 9 <sup>th</sup> Jan 2026	JSS Science and Technology University, Mysuru.
2.	“The Scope and Challenges in Robotics – Bridging Academia and Industry”	2 <sup>nd</sup> – 7 <sup>th</sup> Dec 2024	Christ College of Engineering, Irinjalakuda, Kerala.
3.	VLSI to System design: Silicon-to-end application approach	31 <sup>st</sup> July – 4 <sup>th</sup> Aug 2023	AICTE, Arm Education and STMICROELECTRONICS (online)
4.	Trainer’s Training Program on Entrepreneurial activities	26 <sup>th</sup> – 30 <sup>th</sup> Sep 2023	EDII Ahmedabad (Online)
5.	ATAL FDP -Multidisciplinary design optimization in Engineering: Advanced	21 <sup>st</sup> – 25 <sup>th</sup> Feb 2022	IIT Kharagpur & IIT Bombay (online)
6.	FDP - Fundamentals of AI and ML	10 <sup>th</sup> - 14 <sup>th</sup> May 2021	ICT academy (online)
7.	Image processing using MATLAB	12 <sup>th</sup> -16 <sup>th</sup> Apr 2021	Pantech solutions (online)
8.	PALS-VLABS 2020-21 INITIATIVE	10 <sup>th</sup> -14 <sup>th</sup> Aug 2020	NITK Surathkal (online)
9.	Robotics & Control (RoboCon)-2020	15 <sup>th</sup> - 19 <sup>th</sup> July, 2020	NIT Silchar (online)
10.	LaTeX – IIT Bombay spoken tutorial	17 <sup>th</sup> to 30 <sup>th</sup> April 2020	Online FDP
11.	Fuzzy logic and Neural network approaches for Engineering Solutions	29 <sup>th</sup> and 30 <sup>th</sup> April 2020	Journal of advanced engineering research & hexacubeindia (Online)

12.	Robotics and Control (QIP course)	1 <sup>st</sup> to 5 <sup>th</sup> July 2019	IIT Roorkee
13.	AI and deep learning	2 days 28 <sup>th</sup> to 30 <sup>th</sup> Dec 2018	Leading India - AIR research initiative by Bennett
14.	Applied optimal control and state estimation	One week 2 <sup>nd</sup> - 6 <sup>th</sup> July 2018	Indian institute of science (IISc), Bengaluru.
15.	Recent Trends in SCADA, Smart Grid and Industrial Automation	Two week 2 <sup>nd</sup> – 15 <sup>th</sup> June 2017	Coimbatore Institute of Technology (CIT), Coimbatore.
16.	Technology enabled teaching learning process	2 days 27 <sup>th</sup> – 29 <sup>th</sup> May 2017	National institute of technical teachers training & Research (NITTTR)
17.	Instructional design and delivery systems	One week 22 <sup>nd</sup> – 27 <sup>th</sup> May 2017	National institute of technical teachers training & Research (NITTTR)
18.	Hardware in the loop simulation for power electronics and control	2 days 16 <sup>th</sup> - 17 <sup>th</sup> Dec 2016	Mepcoschlenk Engineering college, Sivakasi.
19.	PIC microcontroller and its applications	2 Days 4 <sup>th</sup> – 5 <sup>th</sup> Dec 2015	PSNA college of engineering and technology, Dindigul.
20.	Advanced Control System (IC6601)	One week May 2015	Madras Institute of Technology (MIT), Chennai.
21.	MEMS and Sensors by centre for NEMS & Nano Photonics.	1 Day December 2014	Indian Institute of Technology (IITM), Chennai.
22.	Emerging Technologies with hands on and live demo	One week November 2014	National Engineering College, Kovilpatti
23.	Empowering Indian Engineering education for global expectation	2 Days November 2014	National Engineering College, Kovilpatti
24.	Diplomacourse “Certificate in PLC programming”	6 Months (April-Sep 2009)	J-Tech institute, Madurai.
25.	Workshop on “Industrial Automation”.	1 Day February 2008	Kamaraj College of Engineering and Technology, Virudhunagar.
26.	National level technical symposium on the topic “Bio Chips”	1 Day September 2007	K.L.N. college of information technology, Madurai.
27.	Workshop on "Programming with PLC".	1 Day July 2007	Kamaraj College of Engineering and Technology, Virudhunagar

### 2.3 Online Certification Completed:

S.No	Certification	Period	Organizers	Remarks
1.	Completed a course titled “Control Engineering for Robotics”	Jan – Apr 2026	NPTEL – IIT Guwahati	Completed with 70% Elite certification

2.	Completed a course “Advanced Robotics Applications”	Feb – Apr 2025	NPTEL – IIT Kanpur	Secured 1% Topper with 90% and Elite Gold
3.	Completed NPTEL course on “Intelligent feedback and control”	Aug – Sep 2024	NPTEL – IIT Bombay	Secured 82% Elite with Silver medal
4.	Completed NPTEL course on “Design Thinking – Primer ”	Jul - Aug 2023	NPTEL – IITM	Secured 75% Elite with Silver medal
5.	Completed NPTEL course on “Control Systems”	Jul – Oct 2022	NPTEL – IIT Madras	Secured 82% Elite with Silver medal
6.	Coursera certification in Data Processing and Feature Engineering using MATLAB	May - June 2022 5 Weeks	MATHWORKS	Completed the course with 85.39%
7.	Completed NPTEL course on “Foundations of Cognitive Robotics”	Jul – Aug 2021 4 weeks	NPTEL – IIT Kanpur	Secured Silver medal and 5% Topper
8.	Coursera certification “Exploratory data analysis using MATLAB”	Jun-Jul 2021 5 Weeks	MATHWORKS	Completed the course with 92.75%
9.	Completed NPTEL Online Certification on “Automatic control” in Dec 2020	Jan-Mar 2020 8 weeks	NPTEL – IIT Roorkee	Secured Silver medal with 87% in 2021
10.	Coursera certification “Neural Networks and deep learning”	May-June 2020	Deeplearning.ai	Completed the course with 92.8%
11.	Coursera certification “Computer vision basics”	Apr– June 2020	University of Buffalo	Completed the course with 100%
12.	Journal citation reports (JCR) certification	12 <sup>th</sup> and 15 <sup>th</sup> May 2020	Web of Science group-Clarivate	Completed on 3 <sup>rd</sup> June 2020
13.	Steps into Robotics Process Automation	Self paced course	GUVI	Completed on 2 <sup>nd</sup> June 2020
14.	MATLAB onramp	Self paced course	MATLAB	Completed on 4 <sup>th</sup> April 2020
15.	Simulink onramp	Self paced course	MATLAB	Completed on 23 <sup>rd</sup> Dec 2019
16.	COURSERA online certification on “Control of Mobile Robots”	Feb - Mar 2019 (7 weeks)	Georgia institute of technology, Georgia	Completed the course with 94.2%
17.	COURSERA online certification on “Modern Robotics – Foundations of robot motion”	Oct - Nov 2018 (4 weeks)	Northwestern University.	Completed the course with 95.4%
18.	NPTEL Online Certification on “Modeling and simulation of dynamic system”	Jan – March 2017 (8 Weeks)	Indian Institute of Technology (IIT), Madras	Scored 80% with Elite Certificate.
19.	NPTEL Online Certification on “Introduction to Research”	January-February 2016 (10	Indian Institute of Technology (IIT), Madras	5% Topper with 82% Elite

		Hours)		
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## 2.4 Industrial training Undergone:

S.No	Title	Period	Venue
1.	Two day visit to Avalon tech, Electroavast, WelMech engineering and Data Patterns	29.08.2025 & 30.08.2025	Ambathur, Tambaram and Siruseri, Chennai.
2.	Data Patterns India private limited	1 Week 25 <sup>th</sup> - 29 <sup>th</sup> March 2024	Siruseri, Chennai.
3.	L&T Edutech - Advanced Industry Powered Faculty Immersion Program	1 Week 29 <sup>th</sup> May – 3 <sup>rd</sup> June 2023	L&T Head quarters, Chennai.
4.	PLC panel manufacturing – Industrial Knowhow	1 Week 17 <sup>th</sup> to 22 <sup>th</sup> Feb 2023	Kasa Anlagen Pvt. Ltd, Chennai.
5.	Matlab Master Class – 30 days challenge	1 Month 1 <sup>st</sup> – 30 <sup>th</sup> Sep 2020	Pantech solutions Pvt. Ltd, Chennai.
6.	SPIC – Industrial Knowhow	1 Week 20 <sup>th</sup> to 24 <sup>th</sup> Jan 2020	Greenstar Fertilizer Limited, Tuticorin
7.	Ramco Cements Limited - Industrial Knowhow	1 week 5 <sup>th</sup> – 9 <sup>th</sup> March 2018	Ramco Cements Limited, R.R.Nagar.
8.	National Institute of Wind Energy (NIWE) – Industrial Knowhow	1 week 22 <sup>nd</sup> – 27 <sup>th</sup> May 2017	Wind Turbine Research Station, Kaythar
9.	Advanced learning platform & solutions (Industrial knowhow)	1 week May 2016	iWave systems technologies Pvt.Ltd. Bangalore.
10.	Training in cement manufacturing industry	1 week June 2007	Madras Cements Ltd., Sattur.
11.	Training in power generating station	1 Week December 2007	Tuticorin thermal power station

## 3. Research Achievements

### 3.1 International Journal Publications

S.No	Author list	Title of the Paper	Journal title	Volume & Year	Index & Impact factor
1.	M.Sivapalanirajan;M. Willjuice Iruthayarajan; B.Vigneshwaran	Improved Robot Localization and Mapping using Adaptive Tuna Schooling Optimization with Sensor Fusion technology.	Journal of Field Robotics.	Vol. 42, Issue 7, PP: 3795-3811, Oct 2025	SCI 5.1
2.	M. Vavuniya, R. Santhiya, A.M. Kirthika, T.S. Paulin, M. Sivapalanirajan, M. Willjuice Iruthayarajan	Trajectory Tracking Of Wheeled Mobile Robot: Model-Based Test And Validation Using QBOT	International Journal of Scientific Technology and Research	Vol. 9 issue 5, Apr 2020	Scopus
3.	R.Muniraj; M.Sivapalanirajan; T.Jarin and S.R. Boselin Prabhu	Evaluation of various benchmark processes with appropriate controller design in LabVIEW platform	Journal of Instrumentation	Vol. 14 issue 5 May 2019	SCI 1.263

### 3.2 International Conference Publications

S.No	Title of the Paper	Name of the Conference	Organizer	Month & Year	Publication
1.	Smart IoT-Based Terrace Gardening System	International Conference on AI-Driven Solutions for Sustainable Smart Cities: Challenges and Opportunities	Sahrdaya College of Engineering and Technology Thrissur, Kerala	Apr 2026	Accepted for Publication
2.	IoT-Based Intelligent Child Tracking System with Cloud Integration and Geofencing	6 <sup>th</sup> International Conference on Trends in Material Science and Inventive Materials (ICTMIM)	Rohini Engineering College, Kanyakumari	Apr 2026	Published in IEEE Xplore Digital Library. DOI: 10.1109/I4C62240.2024.10748452
3.	Low-cost Design and modelling of Mobile manipulator with RRT* based path planning	International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET2025)	Sri Sivasubramaniya Nadar College of Engineering, Chennai.	Mar 2025	Published in IEEE Xplore Digital Library. DOI: 10.1109/WiSPNET64060.2025.11005057
4.	Improved BiRRT* with Artificial Potential Field-Based Sampling Point and Catmull Roll Interpolation in Robot Path Planning	5th International Conference on Circuits, Control, Communication and Computing (I4C)	Ramaiah Institute of Technology, Bengaluru.	Oct 2024	Published in IEEE Xplore Digital Library. DOI: 10.1109/I4C62240.2024.10748452
5.	Gyroscopic Control of Tankbot with Obstacle avoidance and Performance Comparison in Different Terrains	International Conference on Advanced Computing and Communication Systems (ICACCS)	Sri Eshwar College of Engineering, Coimbatore.	Mar 2024	Published in IEEE Xplore Digital Library. DOI: 10.1109/ICACCS60874.2024.10717202
6.	Convolution Neural Network-Based Meat Quality Checker Using Different Optimizers	International Conference on Intelligent Technologies for Sustainable Electric and Communications Systems (iTech SECOM)	PSG institute of technology for applied research, Coimbatore.	Feb 2024	Published in IEEE Xplore Digital Library. DOI: 10.1109/iTechSECOM59882.2023.10435101
7.	Deep Learning-Based Condition Monitoring of Insulator in	International Conference on Artificial Intelligence:	Poornima College of Engineering, Jaipur.	Sep 2023	Published in Springer - Algorithms for Intelligent

	Overhead Power Distribution Lines Using Enhanced Cat Swarm Optimization	Advances and Applications: ICAIAA 2022			Systems book series (AIS) PP:537-546 doi:10.1007/978-981-19-7041-2_45
8.	Performance Analysis of LEGO Mindstorm EV3 robot with PID controller for trajectory tracking application	International Conference on Intelligent Computing and Control Systems [ICICCS 2023]	Vaigai College of Engineering, Madurai	Jun 2023	Published in IEEE Xplore Digital Library. DOI: 10.1109/ICICCS56967.2023.10142757
9.	Accelerometer Based Hand Gesture Recognition and Control of Motor Powered Trolley	International Conference on Emerging Trends in Engineering and Technology - Signal and Information Processing(ICETET-SIP-22)	Raisoni college of engineering, Nagpur.	Jun 2022	Published in IEEE Xplore Digital Library. ICETET-SIP-22 pp. 1-5 doi: 10.1109/ICETET-SIP-2254415.2022.9791565
10.	Dynamic target tracking of wheeled mobile robots and analysis of controller with various orientation	International Conference on Artificial Intelligence and Smart Systems (ICAIS 2022)	JCT institute of technology, Coimbatore	Feb 2022	Published in IEEE Xplore Digital Library. ICAIS 2022 pp. 1525-1530. <b>DOI:</b> <a href="https://doi.org/10.1109/ICAIS53314.2022.9743103">10.1109/ICAIS53314.2022.9743103</a>
11.	Design of Smart Cane with integrated camera module for visually impaired people	International Conference on Artificial Intelligence and Smart Systems (ICAIS 2021)	JCT institute of technology, Coimbatore	Mar 2021	Published in IEEE Xplore Digital Library. ICAIS 2021 pp. 999-1004.
12.	Microcontroller Based Low Cost Robotic Arm For Rehabilitation Of Patients with Set Back In Arm Movement	2 <sup>nd</sup> Springer International conference on computer networks and inventive communication technologies	R.V.S technical campus, Coimbatore	May 2019	Springer book series LNDECT Vol 44, pp: 651-659. Jan 2020
13.	Performance Comparison of MPC and PID Controller for Single Input Single Output Process	IEEE International conference on Recent Advances in Energy-efficient Computing and Communication	St. Xavier's Catholic College of Engineering, Nagercoil	Mar 2019	Published in IEEE Xplore Digital Library. Conference Proceeding of ICRAECC 2019 pp.1-6, 2019.
14.	Mathematical Modeling and Control of QNET Rotary Inverted Pendulum in MATLAB and Real	2 <sup>nd</sup> IEEE International Conference on Inventive Communication and Computational	Ranganathan Engineering College, Coimbatore	Apr 2018	Published in IEEE Xplore Digital Library. Conference Proceeding of ICICCT 2018

	Time Implementation in Lab View Using ELVIS	Technologies			pp.1452-1457, 2018.
15.	Time response analysis of SISO system with a choice of controller configuration in LABVIEW platform	2 <sup>nd</sup> IEEE International Conference on Inventive Systems and Control	JCT institute of technology, Coimbatore	Jan 2018	Published in IEEE Xplore Digital Library. Conference Proceeding of ICISC 2018 pp. 374-377, 2018.
16.	Power system design and parameter monitoring of 2U CUBESAT	IEEE sponsored International conference on Science, Engineering&Management Research (ICSEMR 2014)	VeltechMulti tech, Chennai.	Nov 2014	Published in IEEE Xplore Digital Library. Conference Proceeding of ICSEMR 2014 pp. 1-7, 2014.

### 3.3 National Conference Publications

S.No	Title of the Paper	Organizer	Year
1	Design and monitoring of 2U CUBESAT power system	Turbo machinery institute of technology and science, Hyderabad.	2014

### 3. Additional Responsibilities held

- Internship/Inplant trainingcoordinator (Incharge-EEE)
- Control and Instrumentation Lab (Incharge)
- Industrial Automation Lab (Incharge)
- IV year EEE – Class Incharge.s