

Name: RATHNAVEL P	Photo 			
Designation:	ASSOCIATE PROFESSOR			
Qualification:	M.E.,(Ph.D)			
Area of specialization:	Power Electronics, Renewable Energy			
Experience:	Industrial Experience		Teaching Experience	
	-		17.10	
Number of workshops / FDP attended:	Number of Workshops		Number of FDPs	
	13		16	
Publications:	Conference		Journal	
	National	International	National	International
	5	6	8	18
Books / Book Chapters	1			
Patents:	National		International	
	7		-	
Professional Body Membership	4			

Staff Achievements

- Received the **Swachh Bharat Award (2018–2019)** for exemplary service as a *Swachh Coordinator*.
- Achieved **100% admission** in the department during the academic year **2021–2022** as the *Admission Coordinator*.
- Served as **YRC (Youth Red Cross) Programme Officer** and received the **Best Programme Officer Award (twice)** along with the **Best Unit Award** from the Indian Red Cross Society, Chengalpattu District.

Educational Qualifications:

Category	Name of the Degree	Specialization	Year of Passing	Name of the College	Name of the University	% of Marks/ Grades obtained	Class obtained
UG	B.E	EEE	2006	Er.Perumal Manimekalan College of Engineering, Koneripalli, Hosur	Anna University	68	First
PG	M.E	PED	2008	A.C College of Engg. & Tech., Karaikudi	Anna University	73	First
PhD							

Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Sri Sairam Engineering College	Associate Professor	28.08.2025	Till	-	5	31
Sri Sai Ram Institute of Technology	Assistant Professor I	01.08.2013	27.08.2025	12	0	27
Sri Sai Ram Institute of Technology	Assistant Professor II	19.06.2012	31.07.2013	1	1	13
Dhanalakshmi College of Engineering, Chennai – April '08 – June'12	Assistant Professor	01.04.2008	15.06.2012	4	2	15
Total				17	10	26

List of Publications:-

Journals

Papers published in International Journals:

1. **P Rathnavel**, M Maheswari, V Nandhini, R Jeyakarhika, S Shamini, “AI Driven Battery Management System for Electric Charging Infrastructure in Electric Vehicle” 2025 11th International Conference on Electrical Energy Systems (ICEES), Pages 114-120, Publisher IEEE, DOI:10.1109/ICEES67011.2025.11213178, 2025.
2. T Muthamizhan, PPNS Raam, B Naveen, **P Rathnavel**, “Experimental Investigation and Performance Analysis of Cascaded Active Quasi Z-Source Inverter Fed Three Phase Induction Motor”, 2025 6th International Conference for Emerging Technology (INCET), 1-6, DOI: 10.1109/INCET64471.2025.11140217, 2025.
3. Karthik V. N, **Rathnavel P** , Sathish Kumar R, Jenith Joseph A, Palani Ganesh H, “Gesture Based Home Automation Simulation Using Machine Learning”, 2025 International Conference on Computing and Communication Technologies (ICCCT), DOI: 10.1109/ICCCT63501.2025.11019251, 2025.
4. **Rathnavel, P.**, Murukesh, C., Umamaheswari, R. “Fabrication of a novel rGO encapsulated nickel cobalt chalcogenide electrocatalyst as an efficient counter electrode to boost efficiency of dyesensitized solar cells” *Journal of Materials Science: Materials in Electronics*, 2023, 34(11), 1000.
5. Muthamizhan, T., Aijaz, M., Prakash, G., **Rathnavel, P.**, Sivakumar, A. “A Multi-Port Autonomous Reconfigurable Solar PV System for Renewable Energy Integration in Hybrid AC/DC System”, *Proceedings of the 9th International Conference on Electrical Energy Systems, ICEES 2023* Pages: 687 - 693, DOI: 10.1109/ICEES57979.2023.10110073
6. **Rathnavel, P.**, Muthamizhan, T., Prakash, G., Immanuel, T.B., Sivakumar, A “Wind Energy Conversion system for Industrial Adaptation Control using IoT” . *2022 1st International Conference on Computer, Power and Communications, ICCPC 2022 - Proceedings*, 2022, pp. 199–204.
7. Aijaz, M., Muthamizhan, T., Venkateswarlu, T., **Rathnavel, P.**, Sivakumar, A Performance Improvement in Fuzzy Logic Controller based Grid-connected Solar Photovoltaic System with Fractional Order Notch Filter. *2022 1st International Conference on Computer, Power and Communications, ICCPC 2022 - Proceedings*, 2022, pp. 306–312
8. Immanuel, T.B., **Rathnavel, P.**, Arikesh, A., ...Kavitha, S., Ezhilarasi, G “Performance Analysis of Single Stage Inverter Employing Fuzzy Controller”. *8th International Conference on Smart Structures and Systems, ICSSS 2022*, 2022
9. Prakash, G., Dhineshkumar, K., Muthamizhan, T., **Rathnavel, P** “A Review of Multilevel Inverter Topologies for Solarphotovoltaic System”. *2022 1st International Conference on Computer, Power and Communications, ICCPC 2022 - Proceedings*, 2022, pp. 632–639

10. Jagadeesh Kumar, M., Muthamizhan, T., **Rathnavel, P.**, Ezhilarasan, G., Eswaran, T. “Performance and Analysis of Voltage Compensation in Transmission Line Using SMES-Based IDVR”, *Lecture Notes in Electrical Engineering* 2022, 795, pp. 613–623
11. T. Muthamizhan; M.Jagadeesh Kumar; **P. Rathnavel**; Md. Aijaz “ A Photovoltaic fed High Gain Bidirectional DC/DC Converter on EV Charging stations Applications” 2021 2nd Global Conference for Advancement in Technology (GCAT),2021, DOI: 10.1109/GCAT52182.2021.9587699.
12. Baldwin Immanuel T, **Rathnavel P**, “PV Powered Standardised Irrigation System Using Soil Moisture Sensor”, 2020 6th International Conference on Advanced Computing & Communication Systems (ICACCS) 978-1-7281-5197-7/20/\$31.00 ©2020 IEEE.
13. **Rathnavel P**, Baldwin Immanuel T, Rayavel P, “Energy saving light monitoring and control architecture using Arduino”, *International Journal of Innovative Technology and Exploring Engineering*, 2019.
14. **Rathnavel P**, Baldwin Immanuel T, Rayavel P, “Energy efficient light monitoring and control architecture using embedded system *International Journal of Recent Technology and Engineering*, 2019.
15. Rayavel P, **Rathnavel P**, Bharathi M, Siva Kumar T, “Dynamic Traffic Control System Using Edge Detection Algorithm”, *ICSNS 2018 - Proceedings of IEEE International Conference on Soft-Computing and Network Security*, 2018
16. Rayavel P, Surenderanath S, **Rathnavel P**, Prakash G, “Emergency automatic signalling system using time scheduling”, *Journal of Physics: Conference Series* , Vol.1000 pp.1-7 (SJR Rating: 0.24, SCOPUS-H Index-59),2018
17. Surenderanath S, **Rathnavel P**, Prakash G, “ Simultaneous DC and three phase output using hybrid converter”, *Journal of Physics: Conference Series* , Vol.1000 pp.1-7 (SJR Rating: 0.24, SCOPUS-H Index-59),2018
18. **P. Rathnavel**, S. Surenderanath, S. Saravanan, ”An Interleaved High-Power Flyback Inverter for Standalone Application Using MPPT Algorithm”, *Journal of Advance Research in Dynamical & Control Systems*, 11-Special Issue, November 2017, pp 628 – 637.

UGC JOURNALS : 08

1. **P. Rathnavel**, K. Vanitha , S. Reshma ,S. Sai Isha , Baldwin Immanuel, “PV Based Multilevel Inverter using Flyback Converter”, *International Journal of Advanced Trends in Engineering and Management (IJATEM)*, 2024, pp. 70- 79, ISSN (Online): 2583-7052.(impact factor:1.45)

2. Rayavel P, Sivakumar A, Gopirajan P V , Surenderanath S, **Rathnavel P**, “Real time Machine Learning Approach for a Smart Door Unlocking Using Face recognition System” , IOP Conf. Series: Materials Science and Engineering, 2021, 1130 (2021) 012080. (impact factor:0.5)
3. T.Baldwin Immanuel , **P.Rathnavel** , B. Lalitha, “Electric Propulsion by Combination of Photovoltaic System with Induction Motor Drive”, Journal of Next Generation Technology (JNxtGenTech) Vol. 1, Issue 1, June 2021 (impact factor:1.5411)
4. T.Baldwin Immanuel, **P.Rathnavel**, A.Suresh , K.Manikandan, “Inter Combining Quazi Z Source Network With Matrix Converter For Wind Powered Distribution System”, International Journal of Aquatic Science ISSN: 2008-8019 Vol 12, Issue 03, 2021 (impact factor:7.86)
5. **P.Rathnavel**, Baldwin Immanuel, G.Prakash," *Road Tyre Friction Electrical Potential Utilization in Electrical Potential* ", International Journal of Engineering Management and Research , Vol.5(5) pp.246-251, 2015
6. T.Baldwin Immanuel, **P.Rathnavel**, M.Rajavelan, PV Fed Seven-Level Inverter using Fuzzy Control Technique, International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249-8958 (Online), December, 2019
7. G.Prakash, K.Dhineshkumar, **P.Rathnavel** ," *Design and Simulation of Synchronous Buck Converter for Permanent Magnet Generator in Low Power Applications* ", International Journal of Engineering Management and Research , Vol.5(5) pp.280-285, 2015.
8. C.Banusri, **P.Rathnavel**, G. Ezhilarasi, “Simultaneous DC And Three Phase AC Output Using Hybrid Converter” International Journal of Applied Engineering Research Vol 10, AUG 2015, Page No. 300 – 303.

Workshops/Seminars attended:

1. Attended three days online **workshop** on “ Design of Experiments: An Engineering Perspective” organized by Journal of advanced engineering research & Powered by hexacube India, on 25th , 26th and 27th April 2020.
2. Attended a one day **workshop** on “Short Circuit and Arcflash Safety and Reliability for Ship Power System” in AMET UNIVERSITY on 01st November 2019.
3. Attended one day **seminar** for YRC program officer in Jeppiaar Institute of Technology on 24th January 2019.
4. Attended Audit **Training** on " Internal Auditor ISO 9001:2015 " in Sri Sai Ram Institute of Technology On 23rd April 2018.
5. Attended One Days **Training** on "Disaster Management" conducted by YRC in Sri Sai Ram Institute of Technology on 14th July 2017.
6. Attended Two Days **Workshop** on "Integrated Electrical & Electronics Circuits Training using LabVIEW" in VIT UNIVERSITY on 28th & 29th April 2017
7. Attended National **Workshop** on "Effective Writing Of Engineering Journal Paper And Thesis" in SRM University on 16th & 17th March 2017
8. Attended Three Days **Workshop** on "TRAINING ON SOLAR PV SYSTEM DESIGN" in

HINDUSTAN UNIVERSITY on 22nd to 24th June 2015

9. Attended National Level **Seminar** on " Energy Storage Techniques for Renewable Energy System" in Sona College of Technology, Salam, on 16th September 2015.
10. Attended National Level **Seminar** on "Research Challenges In Micro Grid" In VIT, Chennai 9th May 2015.
11. Attended One Day **Workshop** on "Recent Trends In Renewable Enrgy" in Sri Sai Ram Institute of Technology 31st March 2015
12. Attended National Level **Seminar** on " Power Quality Issues Problems & Solutions" in Shree Motilal Kanhaiyalal Fomra Institute Of Technology On 21st December 2012.
13. Attended Audit **Training** on " Internal Auditor ISO 9001:2008 " in Sri Sai Ram Institute of Technology On 11th December 2012.

FDP/STTP Attended:

1. Attended Six days **FDP** on "Control Engineering in Electric Vehicles" at SRM TRP Engineering College, Tiruchirappalli, on 7th & 12th February 2022.
2. Attended 10 days **FDP** on "APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN DIGITAL MANUFACTURING" at Sri Sai Ram Engineering College, Chennai, Tamilnadu, India association with NIT-Warangal from 21.02.2022 to 03.03.2022.
3. Attended One Week **FDP** on "Integration of Renewable Energy with Smart Grid for Electric Vehicle" in AMET Universty, from 06th December to 11th December 2021.
4. Attended **ATAL FDP** on "Edge computing technologies for Smart Factory Automation and Industry 4.0" from 16/08/2021 to 20/08/2021 at Kongu Engineering College.
5. Attended **ATAL FDP** on "Electric Vehicles" from 08/02/2021 to 12/02/2021 at KPR Institute of Engineering and Technology.
6. Attended **ATAL FDP** on "Artificial Intelligence" from 31/08/2020 to 04/09/2020 at Sri Krishna College of Engineering and Technology.
7. Attended **ATAL FDP** on "Internet of Things (IoT)" from 05/10/2020 to 09/10/2020 at Government College of Engineering and Research Awasari.
8. Attended AICTE Six days **FDP** on "Recent Advancements in High Voltage Engineering" from 03/03/2021 to 09/03/2021 at SRM Valliammai Engineering College.
9. Two days **FDP** on "MATLAB & SIMULINK APPLICATIONS" at HINDUSTAN INSTITUTE OF TECHNOLOGY AND SCIENCE , on 4th & 5th July 2019.
10. Two weeks **FDTP** on,"EE8402-Transmission and Distribution" in Sri Sai Ram Engineering College, on 3rd to 15th December 2018.
11. Two days **FDP** on "RECENT TRENDS ON RENEWABLE ENERGY & POWER ELECTRONICS USING MATLAB" in association with Pantech ProEd Pvt .Ltd at AMET University, on 15th & 16th September 2017.
12. Seven Days **FDTP** on " PROTECTION AND SWITCHGEAR" in G.K.M College of Engineering and Technology, on 22nd to 29th May 2017.
13. Seven Days **FDTP** on "HIGH VOLTAGE ENGINEERING" in St.Joseph's Institute of Technology, on 1st June to 8th June 2016.

14. Two Days **FDP** on "Electromagnetic Field Theory & Transmission Lines" in Sri Sai Ram Institute of Technology, on 25th & 26th June 2015.
15. One Week **FDP** on "Challenges And Opportunities In Indian Power Scenario" in GCE, Bargur, on 26th May to 1st June 2014.
16. Seven Days **FDTP** on "Power System Analysis" in Valliammai Engineering College on 9th To 16th Dec 2013.

Papers published in International Conferences:

1. Presented a Paper Titled "AI Driven Battery Management System for Electric Charging Infrastructure in Electric Vehicle" 2025 11th International Conference on Electrical Energy Systems (ICEES), AUGUST 21-23, 2025.
2. Presented a Paper Titled "Gesture Based Home Automation Simulation Using Machine Learning" 5th IEEE International Conference on Computing and Communication Technologies (ICCCCT'25), 16th and 17th April 2025.
3. Presented a Paper Titled "Performance Analysis of Single Stage Inverter Employing Fuzzy Controller" **International Conference** on Sustainable Innovation in Science & Technology in G H Raisonni University, Saikheda, MP on 26th & 27th February 2021.
4. Presented a Paper Titled "Charging / Discharging in Dual Battery Bank Using Renewable Energy" **International Conference** on Innovation and Research in Marine Electrical and Electronics Engineering, AMET University on 17th & 18th June 2021.
5. Presented a Paper Titled "An Interleaved High Power Flyback Inverter for Standalone Application Using MMPT Algorithm" **International Conference** on Innovation and Research in Marine Electrical and Electronics Engineering ICIRMEEE 2017 in AMET University, Chennai on 6th October 2017.
6. Presented a Paper Titled "Simultaneous DC and three phase AC output using hybrid converter" **International Conference** on Computing and Information Technology in Sri Sai Ram Institute of Technology on 13th & 14th August 2015.

Conference Attended:

1. Presented a Paper Titled, "SMART SOLAR-WIND ENERGY SYSTEM IN FARMING WITH OFF-GRID MODE BY IOT CONTROL", 3rd **National Conference** on Innovative Solutions in Electrical Engineering Science (NCISEES'21), 21st April 2021.
2. Presented a Paper Titled "Automatic Detection of Potholes In Roads" **National conference** on Recent Advances In On-Board Ship Automation (RAOBSA-2019) in AMET University on 26th and 27th September 2019.
3. Presented a Paper Titled " Cascaded Invertor Based Multilevel STATCOM" in the **National**

conference on Innovative Strategies in Green & Soft Computing for Renewable Energies- ISGSCRE'17 Sona college of technology, on 31st March 2017.

4. Presented a Paper Titled "ANFIS Based SEPIC converter for Renewable Energy System with MPPT Algorithm" **National Conference** on Innovative Techniques in Power Engineering and Drives ITPED'16 on 20th April 2016 at Velammal Engineering College.
5. AUTOMATED CHARGING/DISCHARGING IN DUAL BATTERY BANK USING RENEWABLE ENERGY RESOURCE

Conference / Symposium (National)

- Organizing Secretary, one day National level technical symposium "WARROS'13", in Sri Sai Ram Institute of Technology, Chennai 600 044, on 17th August, 2013.
- Organizing Secretary, 1st National Conference on "Innovative Solutions in Electrical Engineering Science (NCISEES'16)" in Sri Sai Ram Institute of Technology, Chennai 600 044, on 4th April 2016.
- Organizing Coordinator, one day National Level Techfest "WARROS'21", in Sri Sai Ram Institute of Technology, Chennai 600 044, on 2nd November, 2021.

Seminar/Guest Lecture/Workshop

1. Organized **Guest Lecture** on "Core Concepts of Electrical Technology" in Sri Sai Ram Institute of Technology, Chennai 600 044, on 28th December 2023, in Sri Sai Ram Institute of Technology, Chennai 600 044.
2. Organized **Guest Lecture** on "Industry Institute Knowledge Transfer Series (Electro Plates and G H Induction Pvt. Ltd, Thirumudivakkam ", in Sri Sai Ram Institute of Technology, Chennai 600 044, on 25th March 2022.
3. Organized **Guest Lecture** on "International Higher Education", in Sri Sai Ram Institute of Technology, Chennai 600 044, on 12th January 2022.
4. Organized **Workshop** on "Recent Trends in Power Electronics Applications" in Sri Sai Ram Institute of Technology, Chennai 600 044, on 16th December 2021.
5. Organized one days **Guest Lecture** on "REAL-TIME APPLICATIONS IN EMBEDDED SYSTEM" in Sri Sai Ram Institute of Technology, Chennai 600 044, on 11th December 2020.
6. Organized five days **Workshop** on "ORCAD-PSPICE AND EMBEDDED SYSTEM-PLC" in Sri Sai Ram Institute of Technology, Chennai 600 044, on 19.02.18 to 23.02.18.

Special Lectures Delivered

1. A Lecture on the topic "Industry Institute Knowledge Transfer Series (G H Induction Pvt. Ltd, Thirumudivakkam)", in Sri Sai Ram Institute of Technology, Chennai 600 044, on 25th March 2022.

2. Presented the Expert Lecture in the FDP on "EE8005 Modern Power Converter" in SRM Valliammai Engineering College, Chennai 603 203, on 25th November 2020.

NITTT/NPTEL

1. Course Completed in NITTT Module 4 for the subject of Instructional Planning and Delivery.
2. Successfully completed the NPTEL course *Basic Environmental Engineering and Pollution Abatement* with Elite certification (Jul–Oct 2025).
3. Successfully completed the NPTEL course *Technologies for Clean and Renewable Energy Production* with Elite certification (Jul–Sep 2025).
4. Successfully completed the NPTEL course *United Nations Sustainable Development Goals (UN SDGs)* with Elite certification (Jan–Apr 2025).
5. Successfully completed the NPTEL course *Renewable Energy Engineering: Solar, Wind and Biomass Energy Systems* with Elite certification (Jan–Apr 2025)
6. Successfully completed the NPTEL course *Transducers for Instrumentation* with Elite + Silver certification (Jan–Apr 2025).
7. Successfully completed the NPTEL course *Environmental Quality Monitoring & Analysis* (Jan–Apr 2025).
8. Successfully completed the NPTEL course *Electrochemical Technology in Pollution Control* (Jan–Mar 2025).
9. Successfully completed the NPTEL course *Basic Electrical Circuits* (Jul–Oct 2024).
10. Successfully completed the NPTEL course *Physics of Renewable Energy Systems* with Elite + Silver certification (Jul–Oct 2024)
11. Successfully completed the NPTEL course on *Non-Conventional Energy Resources* with Elite certification during Jan–Apr 2024.
12. Successfully completed the NPTEL course *Patent Drafting for Beginners* with Elite certification (Jan–Feb 2024).
13. Successfully completed the NPTEL course *Design Thinking – A Primer* with Elite certification (Jul–Aug 2023).
14. Successfully completed the NPTEL course *Stress Management* (Jul–Aug 2019).
15. Successfully completed the NPTEL course *Advanced Power Electronics and Control* (Jan–Mar 2019).

Patent:

1. Smart AR Vision Glass Usage in Educational, Medical and Navigational Fields, Application No. 202541097997, Published on 14.11.2025.
2. Integrated Li-Fi Technology for Smart Robotic Control, Application No. 202441007605, Published on 16.02.2024.
3. Performance of Three Layer PLC-SCADA Architecture for Micro Grid in Process of Automation and Data, Application No. 202441007602, Published on 16.02.2024.
4. AI and IoT Based Predictive Maintenance System to Identify Human Activity of Mentally Challenged People to Ensure the Security and Stages of Activity Using Sensors, Application No. 202341061394, Published on 06.10.2023.
5. An IoT Based Environmental Monitoring System for Smart Cities, Application No. 202341007801, Published on 17.02.2023.
6. A Wearable Pregnancy Monitoring Apparatus to Collect Physiological Parameters, Application No. 202241060149, Published on 28.10.2022.
7. Intelligent Connectivity Driving Using Vehicular Ad Hoc Networks for Future Transportation, Application No. 202111004715, Published on 12.02.2021.

Books / Book Chapters:

- The book *Sustainable Logistics and Green Supply Chain Management* was successfully published in January 2026, focusing on eco-friendly logistics practices and sustainable supply chain strategies.”

Any Other Information

- Department Admission Coordinator
- Renewable Energy Systems lab Incharge
- Internship and Industrial Visit Coordinator
- College Level YRC Program officer
- UBA – Thirumudivakkam Village Scope member
- Class Committee Chairman, Class Coordinator, etc.

Professional Membership

- IEEE – 93507356
- ISTE – LM18069
- IAENG - 190458
- AICTSD - 50694