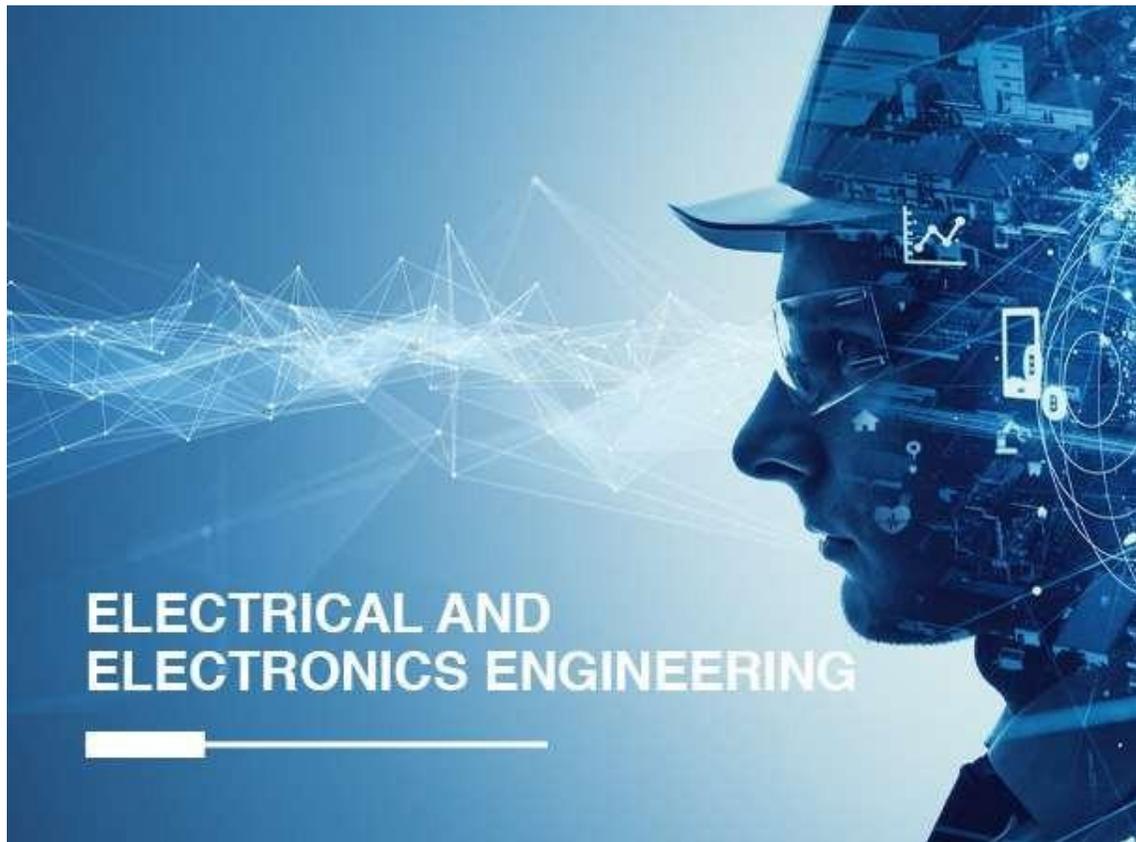




SANKAR POLYTECHNIC COLLEGE  
(AUTONOMOUS)



DEPARTMENT OF ELECTRICAL AND ELECTRONICS  
ENGINEERING



TECHNICAL MAGAZINE

2024-2025

### **Principal's Message:**

With great pleasure, I announce the publication of the annual departmental magazine from Sankar Polytechnic College's Department of Electrical and Electronics Engineering. "Learning is a continuous process from the minute we are born, until we die." With the use of magazines, Sankar Polytechnic College gives each student a platform to improve his learning abilities. The significant milestones our college has reached this year will become clear to you as you scroll through the contents. Also, the creative expression of our emerging talents' ideas, thoughts, feelings, aspirations, and convictions has been demonstrated. his publication ought to be a useful resource for instructors and upcoming students looking for advice on what to do to further their careers. I give the Computer Technology Department's head, both teaching and non-teaching staff, editorial board, and students credit for producing this version of the magazine, 2023–2024. Best wishes for you.

### **Administrative officer's Message:**

Our society is reflected in the mirror of our educational system. The technological world of today is growing at the speed of thought and has created a plethora of excellent possibilities. The ability to create new ideas and see past the apparent is enhanced by perfection and quality in the educational sector, which is essential for success in the technological age we live in today. The institute's main goal is to develop energetic, youthful students into professionally trained technocrats who are prepared to take on societal concerns. Our goal was to increase personnel in order to advance the nation. I hope that every student has an extremely bright future and a successful, energetic existence.

### **HOD's Message**

I'm happy to hear that the Electrical and Electronics Engineering department is publishing its technical journal for the current academic year. This technical information is beneficial for students as it develops their secondary skills. Co-curricular and extracurricular activities, in addition to academic brilliance, round out the educational process. I hope the Electrical and Electronics Engineering Association has great success in all of its endeavours. I admire the efforts and collaboration as well. I consistently offer the EEE Department my best wishes and blessings.

God grant me the fortitude to see this department and the college prosper!

### **Vision:**

- To create competent technocrats from diverse backgrounds through world-class holistic technical education in electrical engineering, for the development of students character and skill and promoting the success of our nation.

### **Mission:**

- To nurture the student's creativity, hidden skills and personality development by providing expedient education and enabling them to make positive impact on the society.
- To create the students to work effectively in diverse conditions by maintaining high level academic standards through our core values of honesty, dedication and excellence.
- To explore various engineering techniques to enhance quality of education for students through innovative teaching learning methodology.
- To create successful industry ready electrical engineers through cutting edge technology.

### **Statement of PSOs**

- **PSO 1:** Diploma Electrical Engineers have the ability to provide technical solutions for problems in electrical machines, power system and industrial automation systems using appropriate tools and technique.
- **PSO 2:** Diploma Electrical Engineers have the ability to effectively operate, maintain and test equipment, while adhering to safety protocols and promoting sustainable practices.

### **Statement of PEOs**

- Diploma Electrical Engineers will have adequate knowledge to troubleshoot and fix technical issues easily in the relevant field.
- Diploma Electrical Engineers will have the ability to work with multi-disciplinary environment.
- Diploma Electrical Engineers will have technical skill to be a life-long learner and to become professionals.

### **Editorial Board:**

**Chief Editor** : I. Saravanan HOD/EEE

**Faculty Editors** : V. Vimala Lecturer/EEE

: A. Banumathi lecturer /chemistry

**Student Editors** : N.Sudalaikannu, II Year/EEE

: S.Srinivasan, II Year/EEE

**Content :**

- ❖ Conference proceedings
- ❖ Faculty activities
- ❖ Guest Lecture
- ❖ Industrial Visit
- ❖ Workshop and Projects
- ❖ Extracurricular activity & NCC /NSS Activities
- ❖ Toppers
- ❖ Placement
- ❖ Articles and Drawings



**CONFERENCE PROCEEDINGS**

**A Novel Approach for the Management of Hybrid renewable energy**

*1.Vimala V., 2.Banumathi A(2 LECTURER). And 3.Saravanan I(HOD)*

This paper presents a simplified hybrid renewable energy system combining solar and wind power for smart grid use. The system is modeled in MATLAB/Simulink and includes basic control strategies for efficient energy management. Results show improved reliability and reduced dependence on traditional energy sources, highlighting the system's potential in sustainable power solutions. The findings indicate a promising approach toward sustainable energy solutions in rural and urban smart grid environments.

## Faculty activities

### **Faculty activities in International Journal**

1. Saravanan Indirangatha Pandian, Ponmani Chelladurai & Vimala Velarumugam, 2024, 'Novel GSA-tuned PI Controllers for Grid Integration Scheme of Solar DSTATCOM', Studies in Informatics and Control, ISSN 1220-1766, vol. 33, no. 3, pp.73-82, Impact Factor : 1.2.
2. Vimala, V, Ponmani, C & Saravanan, I 2024, 'A novel dual hysteresis controller for the management of a three phase dynamic voltage restorer', Heliyon, vol. 10, pp. 20, Impact Factor: 3.4.
3. Sudha ponnarasi S & Rajaram M, 'Estimating the Impact of Minutiae Extraction Algorithms in Fingerprint Recognition', International Journal of Research and Reviews in Computer Science (IJRRCS), Vol. 2, No. 6, December 2011, PP 1268 – 1272, ISSN: 2079-2557.
4. Sudha ponnarasi S & Rajaram M, 'Gender Classification System Derived from Fingerprint Minutiae Extraction', International Journal of Computer Applications (IJCA), ICON3C(2), pp 1 - 6 , ISBN 973-93-80867-32-0, April 2012.
5. Sudha ponnarasi S & Rajaram, 'Age Classification System Anchored in Fingerprint Minutiae Extraction', European Journal of Scientific Research.(EJSR), Vol. 73, No. 2, PP 183 – 192, 2012. ISSN 1450-216X.
6. Sudha ponnarasi S & Rajaram, 'Impact of Algorithms for the Extraction of Minutiae Points in Fingerprint Biometrics', Journal of Computer Science. (JCS), Vol. 8, No. 9, PP 1467-1472, 2012. ISSN 1549-3636.
7. Sudha ponnarasi S, 'Design of intelligent Controller based facts devices used for improving power quality', European Journal of Business & Social Sciences (EJBSS), Vol 7, Issue 4, April 2019, PP 1873 - 1878, 2019. ISSN: 2235-767X
8. P.Nagalakshmi Kanna<sup>1</sup>, Dr.B.Meenakshi<sup>2</sup> M.E, Ph.D 2014, 'Design and Implementation of DC- DC/AC Non- Inverting Cuk Converter using Sliding Mode Control', International Journal of Scientific & Engineering Research, Volume 5, Issue 12, ISSN 2229-5518.
9. S.Priyadharsini, P.Subha Karuvelam, 'High gain integrated converter for renewable energy based EV applications', Journal of interdisciplinary Cycle Research Volume XVI issue 1 January 2024, Volume XVI, Issue I, Page No: 309-320 Jan 2024, ISSN NO: 0022-1945, DOI:18.002. JICR.2024. V16I1.008301. 317123734530 270.
10. S.Priyadharsini, P.Subha Karuvelam, 'Energy Efficient Photovoltaic based motor drive with interleaved boost converter for Electric vehicle', International journal of advanced trends in engineering and management IJATEM JOURNAL Volume III, ISSUE 10 OCTOBER 2024, ISSN NO:2583- 7052 <https://doi.org/10.59544/pldb2263/ijatmv03i10p3>.

### **Faculty activities in International Conference**

1. Vimala, V, Nagalakshmi Kanna, P. and Saravanan, I. ' presented a paper on 'A Novel Approach for the Management of DSTATCOM' in the International Conference on Interdisciplinary Collaboration and Opportunities: Social Science, STEM and Information Science [IOC-ICO], Organized by Sankar Polytechnic College, Sankar Nagar, India, SJSU University, USA, Society for the Advancement of Library and Information Science(SALIS), India, 28-29th February 2024.
2. Vimala, V, Nagalakshmi Kanna, P. and Saravanan, I, Submitted a paper on 'REVIEW OF EFFECTIVE ICT TOOLS FOR TECHNOLOGY BASED TEACHING, LEARNING AND EVALUATION OF STUDENTS ASSESSMENTS', Sankar Polytechnic College Magazine, on July 2024.

3. Abilash.X<sup>1</sup>, Arumuga Perumal.B<sup>2</sup>, Mrs.Vimala V<sup>3</sup>, presented a paper on AI in Academic Libraries and its Impact on Library Services in the International Conference on AI-Driven Innovations in Academic and Research Librarianship Organized by Chevalier T Thomas Elizabeth College for Women, Chennai on February 6, 2025.
4. P.Rajathi<sup>1</sup>, P.Subhasini<sup>2</sup>, Vimala V<sup>3</sup> Submitted a Paper on 'Sustainable Development Using Nuclear Energy', International Seminar on ATOM XNERGI 2K24, Sankar Polytechnic College Magazine, September 4, 2024
5. Abilash X<sup>1</sup>, Arumuga Perumal B<sup>2</sup>, Vimala V<sup>3</sup> Submitted a paper on 'Safety Evaluation Of Fire Extinguisher', International Seminar on ATOM XNERGI 2K24, Sankar Polytechnic College Magazine, September 4, 2024
6. Kavin.K.S, Dr.P.Subha Karuvelam, R.Tharwin Kumar S.Priyadharsini, presented a paper on 'GWO optimized PI controller fed PV based interleaved LUO converter for EV applications', 14 th IEEE international conference on computing communication and networking Technologies (ICCNT), 13-15 July 2023 Number : 3061  
DOI:10.1109/Iccnt569982023 .10307340
7. A T Sankara Subramanian, S Priyadharsini, S Palaniyappan & Dr A Nazar Ali. Presented a paper on 'A novel IOT based domestic automation system for load monitoring' IOP Conf. Series: Materials Science and Engineering RESGEVT 2020 4-9 Oct 2020, 937 (2020) 012028, DOI:10.1088 /1757- 899X/937/1/ 012028.
8. V. SrirengaNachiyar ; R. Chandralekha ; R. Kasi Raman ; V. Krishnameera ; A. Guna ; S. Harini Shriram. Presented a paper on 'Smart Bin System Based on IoT for Effective Food Waste Management' 2025 4th International Conference on Sentiment Analysis and Deep Learning (ICSADL) 18-20th February 2025.
9. Guna A, presented a paper on 'Smart Automated Surveillance System', Paper id:98 in First International Conference on Microstructure, VLSI, Robotics, Communication, Electrical & Emerging Technologies using AI-ML Algorithms (ICMVCET-2025), in association with Taylor & Francis. 21-22 March 2025.
10. M. Balasubramanian<sup>1</sup>, S. Hariharan<sup>2</sup>, Mr. Guna A<sup>3</sup>, presented a paper on Enhancing Library Extension Activities with Artificial Intelligence in the International Conference on AI-Driven Innovations in Academic and Research Librarianship Organized by Chevalier T Thomas Elizabeth College for Women, Chennai on February 6, 2025.
11. P. Rajathi<sup>1</sup>, P. Subashini<sup>2</sup>, Mrs.Banumathy A<sup>3</sup>, presented a paper on Impact of AI on Knowledge Discovery and Organization in the International Conference on AI-Driven Innovations in Academic and Research Librarianship Organized by Chevalier T Thomas Elizabeth College for Women, Chennai on February 6, 2025.
12. Sudalaikannu N<sup>1</sup>, Arun Thanish M<sup>2</sup>, Mrs.Selvi U<sup>3</sup>, presented a paper on AI-Based Digital Tools for Library Operations: Transforming Access and Efficiency in the International Conference on AI-Driven Innovations in Academic and Research Librarianship Organized by Chevalier T Thomas Elizabeth College for Women, Chennai on February 6, 2025.

## GUEST LECTURE IN ELECTRICAL AND ELECTRONICS ENGINEERING

The field of Electrical and Electronics Engineering is rapidly evolving with transformative innovations in areas such as electric vehicles, IoT-based automation, renewable energy integration, and advanced power electronics. This guest lecture aims to provide students with a comprehensive overview of current industry practices, emerging technologies, and their practical applications. The session will also explore the role of interdisciplinary skills and innovation in shaping the future of EEE, offering valuable insights to help students align their academic path with future career prospects.

## INDUSTRIAL VISIT



Department of Electrical and Electronics Engineering has arranged an Industrial visit on 20.05.2025 to 09.06.2025 for the students of 2ND& 4TH sem to LEAFSOL SOLAR. Students get trained to how to install solar panels, solar heaters, Maintenance and repair works etc...This would be helpful to start a company or to join to related work companies. They also got certificates from leafsol solar company.

Name	Organized by	Duration
K.Sadha sivan	LEAFSOL SOLAR	20.5.2025 TO 03.06.2025
N.Sudalai kannu		
M.Mohamed Suhail		
R.Anushiya		
M.Arunthanish		
S.Danushq		
K.Mohamed Irfan		
S.Mohamed sulaiman		
E.Esakki		
M.Manikandan		
G.Inbarasan		
E.Muthu Lakshmi		

## WORKSHOP AND PROJECTS

Name	Program Attended	Organized By	Achievement
N.Sudalaikannu	Project submission	FX Engineering College,vannarpettai	Participation Certificate
K.Sadha sivan		<u>Sankar Polytechnic College</u>	Participation Certificate
S.Srinivasan			Participation Certificate
S.Ashwin Balajee			Participation Certificate
I.EsakkiMuthuRaja	Project submission	FX Engineering College,vannarpettai	Participation Certificate
M.Suresh Gobi		<u>Sankar Polytechnic College</u>	Participation Certificate
N.Arul ganesh			Participation Certificate

## EXTRACURRICULAR ACTIVITY & EVENTS

### FRESHERS DAY CELEBRATION



# INAGURATED CENTRE OF EXCELLENCE-FUEL INJECTION TECHNOLOGY LAB



# APJ.ABDUL KALAM SCIENCE EXPO CUM COMPETETION



## NCC /NSS ACTIVITIES



## TOPPERS

### FIRST YEAR

#### FIRST SEMESTER

- 1.N.SUDALAIKANNU
- 2.MOHAMED IRFAN

#### SECOND SEMESTER

- 1.N.SUDALAIKANNU
- 2.R.ANUSHIYA

### SECOND YEAR

#### THIRD SEMESTER

- 1.RAJATHI

#### FOURTH SEMESTER

- 1.RAJATHI

### THIRD YEAR

#### FIFTH SEMESTER

- 1.M.KANISHKAR
- 2.S.HARIHARAN

#### SIXTH SEMESTER

- 1.A.S.SYED MOHAMED INJAAZ
- 2.M.KANISHKAR

## PLACEMENT

43 students of our department have placed in a reputed companies

NAME OF THE EMPLOYERS	NO. OF STUDENTS
KYB MOTORCYCLE SUSPENSION INDIA PVT LTD	7
TVS TRAINING AND SERVICES	10
SAINT GOBAIN INDIA PVT LTD	1
DELPHI TVS TECHNOLOGIES LTD	4
WHEELS INDIA LIMITED	1
IP RINGS LTD	11
MRF TYRE LTD	3
TVS SUNDARAM CLAYTON LTD	2
DS CONNECTORS AND CABLES PVT LTD	4
TOTAL	43

## ARTICLES AND DRAWINGS

### தொழில் நுட்ப வளர்ச்சியில் சங்கர் பாலிடெக்னிக் கல்லூரியின் பங்கு

தொழில் நுட்ப வளர்ச்சி என்பது நாடு முற்றிலும் முன்னேறும் மிக முக்கியமான துறையாகும். இவ்வளர்ச்சிக்கு வித்திட்டுக் கொடுக்கும் முக்கிய அமைப்புகளில் ஒன்றாக கல்வி நிறுவனங்கள், குறிப்பாக பாலிடெக்னிக் கல்லூரிகள் திகழ்கின்றன. சங்கர் பாலிடெக்னிக் கல்லூரி இதுபோன்ற தொழில் நுட்ப கல்வியில் முன்னணியில் உள்ளது.

இந்தக் கல்வி நிலையம், மாணவர்களுக்கு பரந்த தொழில்நுட்பத் தளங்களை அறிமுகப்படுத்தி, தொழில்சார் திறன்களை வளர்த்துத் தரும் துறையில் முன்னோடியாக இருக்கிறது. இங்கு Electrical, Mechanical, Civil, ECE, மற்றும் Computer Engineering போன்ற பிரிவுகளில் தரமான கல்வி வழங்கப்படுகிறது.

மாணவர்கள் கற்பதேயன்றி, செய்முறையில் கற்று தேர்ச்சி பெறும் வகையில் தொழில்நுட்ப ஆய்வகங்கள், தொழில் தொடர்பான களப்பயிற்சிகள், மற்றும் இடையறாத தொழில்முனைவு பயிற்சிகள் அளிக்கப்படுகின்றன. இதனால் மாணவர்கள் கல்லூரி முடித்தவுடன் தொழிலில் ஈடுபடக்கூடிய நிலைக்கு விரைவில் வருகிறார்கள்.

மேலும், சங்கர் பாலிடெக்னிக் கல்லூரி சமூக வளர்ச்சி, சுயதொழில் தொடக்கங்கள் மற்றும் தொழில்முனைவோர் வளர்ச்சிக்காகவும் பல்வேறு நடவடிக்கைகள் எடுத்து வருகிறது. அரசு மற்றும் தனியார் துறைகளுடன் இணைந்து வேலைவாய்ப்புகளை வழங்கும் முயற்சிகளும் இங்கு நடைபெறுகின்றன.

தொழில் நுட்ப கல்வி மூலம் மாணவர்கள் தங்கள் எதிர்காலத்தைக் கட்டியெழுப்ப சங்கர் பாலிடெக்னிக் கல்லூரி ஒரு உறுதுணையாக இருந்து வருகிறது. இவ்வகையில் இக்கல்லூரியின் பங்கு பாராட்டத்தக்கது.

**R.ANUSHIYA**  
**FIRST YEAR EEE**

### IMPORTANCE OF COLLEGE

1. College provides in-depth knowledge in a chosen field or subject.
2. A college degree increases job opportunities and earning potential.
3. Enhances communication, leadership, and problem-solving skills.
4. Helps build confidence, independence, and decision-making ability.

**I. ESAKKIMUTHU RAJA,**  
**II. N.ARUL GANESH**  
**FIRST YEAR EEE**

### QUOTES

"Education gives you a voice, college gives it power and choice."

**S.ASHWIN BALAJEE**  
**FIRST YEAR EEE**

### MOTIVATIONAL QUOTES

"IT DOESN'T MATTERS HOW MANY TIMES YOU FAILED, IT MATTERS HOW MANY TIME YOU OVER COME IT BY YOUR CONSISTANCY & HARD WORK."

"FAILURES ARE NOT THE END, IT IS THE BEGINNING OF YOUR SKILL DEVELOPMENT PROCESS IN WHICH YOU ARE IN LACK"

**K.SADHA SIVAN,**  
**N.SUDALAIKANNU**  
**FIRST YEAR EEE**



**P.VEERA SUBASH,  
FIRST YEAR EEE**



**M.SURESH GOBI  
FIRST YEAR EEE**