

**MESSAGE FROM THE HOD'S DESK**

*Hearty welcome and best wishes to all the individuals who receive this newsletter. It gives me great pleasure to present the first issue of "SPARKZ" for the academic year 2019-2020. I cheer the students to work hard and put in their best efforts towards their technical endeavors so that it may yield prolific results. I would like to thank all my colleagues for their diligent efforts to help the department progress at a very steady rate of knots. We as a team strive hard to take the department to the height of success, glory and to achieve our vision.*

**THE EDITORIAL TEAM**

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**YASHWANTH KUMAR -III B**

**R.SRI RAJA SUMAN - II B**

**COURSES OFFERED:**

- **BE- ELECTRICAL & ELECTRONICS ENGINEERING**
- **ME- EMBEDDED SYSTEM TECHNOLOGIES**
- **PH.D/M.S(RESEARCH)**

**The Department is Accredited by NBA**

**VISION OF THE DEPARTMENT**

To produce graduates with foundation in Electrical and Electronics Engineering who can cater to the dynamic needs of the industry and to provide a diverse and stimulating environment for quality research.

**MISSION OF THE DEPARTMENT**

- M1.** To align the teaching learning process and to provide basic foundation for the students to adapt to the changing industrial needs
- M2.** To enrich with the latest developments through seminars, guest lectures, workshop and paper presentations
- M3.** To awake young minds to acquire knowledge continuously and learn to apply it
- M4.** To attain multidisciplinary problem solving skills, social awareness and confidence required to excel in their chosen field
- M5.** To develop professional competency and technical expertise individually and through team effort thereby exhibit leadership in industry
- M6.** To create research oriented mindset and focus in fulfilling growing demands of society through mentoring and motivation

**PROGRAM EDUCATIONAL OBJECTIVES (PEOS)**

1. Graduates will have fundamental and broad knowledge in Electrical Sciences relating to industrial applications and research to design, analyze and synthesize information from various sources and think differently to provide solutions to their discipline
2. Graduates will become entrepreneurs, employees of reputed organizations, pursue higher studies and research for developing advanced skills in Electrical and Electronics Engineering
3. Graduates will exhibit technical and intellectual competency and will be amenable for life-long learning
4. Graduates will demonstrate technical knowledge and ethical values for professional development to meet the societal needs
5. Graduates will be able to work in multi-disciplinary environment by providing solutions to real time problems.

# INDUSTRY – INSTITUTE CONNECT

## Industrial Visits:

Third year students have undergone an Industrial visit to VEQUALIR T & C service, Chennai on 19/02/2020 & 20/02/2020.



III YEAR A SEC



III YEAR B SEC

## Guest Lecture:

For II year A sec Students, Er.P.Chandrasekaran, Assitant Executive Engineer, from “NCTPS-I”, Chennai gave core Teaching on “Synchronous generator and synchronous motor” on 11/2/2020.



For III year A sec Students, Er.Aravind Raj, R&D Engineer, ABB Global Industries and Services Limited, Chennai, gave core Teaching on “ Switch Gear and Relay in Transmission , Substation and Distribution system” on 05/03/2020.



For III year B sec Students, Er.BhanuTejaCirivelu, R&D Associate Engineer, ABB Global Industries and Services Limited, Chennai, gave core Teaching on “ Switch Gear and Relay in Transmission , Substation and Distribution system” on 05/03/2020.



## INDUSTRY – INSTITUTE CONNECT

## FACULTY ACHIEVEMENTS & ACTIVITIES

### Career Guidance Program :

### Journal & Conference Publications:

For III year EEE A and B sec students, R.Bharathwaj, Team lead, Accenture and also alumni (2007-2011) batch, gave Career guidance program on 11/3/2020.



For III year EEE A and B sec students Mr.Hemachander,consultant,BYJU's, gave seminar on “Technical Profile Building and Psychometric Test”on 27/2/2020.



S.No.	Paper
1.	<b>Dr.E.Kaliappan</b> , “An Analysis of Quality of Image compression with Disturbances”, WAFFEN-UND KOSTUMKUNDE JOURNAL, ISSN: 0042-9945, pp.52-59,Vol. XI, No. IV (2020).
2.	<b>K.A.Indu Sailaja, P.Marish Kumar, Mrs.N.Priya, Mrs.C.Priya</b> " Automatic Smart City Power Consumption Control Unit " Test Engineering and management,Vol.No;82, Page No: 11245-11250, Feb 2020.
3.	<b>J.Lydia</b> , “Optical Wireless Communication: A Survey of Recent Advances, Applications and Challenges”, COMET - International Conference on Emerging Current Trends in Computing and Expert Technology, P:No 790-794, March 2020.
4.	<b>J.Lydia</b> , “Probability Detection for Heterogeneous Networks using FODPSO and ACO Optimisation Tunnel Based High Speed Trains” COMET -International Conference on Emerging Current Trends in Computing and Expert Technology, P:No 795-797, March 2020.
5.	<b>Dr.J.Gowri Shankar</b> , “ Performance evaluation of multi dc source and single dc source on cascaded multilevel inverter”, International conference on automation, signal processing , instrumentation and control ICASIC 2020 , SPRINGER, feb 27-28, 2020.

### FDP Attended:

Date	Name of the seminar/workshop	Name of the faculty
27/1/2020 To 1/2/2020	AICTE- MARGDARSHAN SCHEME-NBA ACCREDITATION PROCESS SHARE AND MENTOR INSTITUTIONS	Dr.K.Mala Dr.J.Gowri Shankar Mr.P.Marish Kumar Mr.K.V.Thilagar Mrs.K.A.Indu sailaja Mr.M.Venkatachalam Mr.G.V.Chidambarathanu

### Student Achievements:

**GATE QUALIFIED STUDENTS-2020**

		
<b>SWETHA K.K.</b> GATE SCORE-519 RANK-2662 BATCH 2015-2019	<b>HITESH SANKARARAMAN M</b> GATE SCORE-4333 RANK-6276 BATCH 2015-2019	<b>SIBI GAWTHAM K</b> GATE SCORE-4033 RANK-8182 BATCH 2016-2020

Sukumaran.M of Final year EEE has won Mr. Techofes at Anna University Culturals. Out of 10 contestants in the final round, he was the only one from other college. All the 9 were from CEG.



# STUDENTS ACADEMIC EXCELLENCE & INTERNSHIP

## Star of the semester- Odd 2019-2020 :



**Akash.R -I A**  
CGPA-9.45



**Harish.V-I A**  
CGPA-9.04



**Koushika Preethi A-III A**  
CGPA-8.892



**Ghokul.S.L -III A**  
CGPA-8.87



**Kavipriayn.J -I B**  
CGPA-9.875



**Preethi.S-I B**  
CGPA-9.44



**Sreeram.M -III B**  
CGPA-8.948



**Shivani.A**  
CGPA-8.89



**Sanjana.S-III B**  
CGPA-8.89



**Jaissri.S-II A**  
CGPA-9



**Kavitha.R-IIA**  
CGPA-8.76



**Anirudh.S-IV A**  
CGPA-8.58



**Harini.B.R-IV A**  
CGPA-8.38



**Sugant.B-II B**  
CGPA-8.5



**Sanjeev kumar.R-II B**  
CGPA-8.18



**Sibi Gowtham.K -IV B**  
CGPA-8.32



**Roshini.B.V IV B**  
CGPA-8.12

## Student Internship-2020 :



APARNA R.



RAMAKRISHNAN G



SUKUMARAN M



Stipend: Rs.18,000/



SUDARSHAN M



Stipend: Rs.30,000/



BENEDICT ELJGIUS J



THABASSUM ASHIFEA I



Stipend: Rs.15,000/

# ISRO SPACE ON WHEELS EXPO

EEE Sudents Visited the ISRO Space on Wheels @ our college campus on 24/2/2020:



# PLACEMENT RECORD

## Placement Summary as on 30/04/2020:

S.No	Name of the Company	No of students placed
1	ACCENTURE	20
2	AMAZON	1
3	BOSCH	2
4	BYJUS	2
5.	CSS CORPARTION	2
6.	ECON SYSTEMS	1
7.	EMBERUR SYSTEMS	1
8.	ETHNUS	1
9.	FLDEC SYSTEMS	1
10.	FULL CREATIVE	1
11.	HCL TSS	2
12.	HEXAWARE TECHNOLOGIES	4
13.	IBM	1
14.	INFOSYS	1
15.	L&T INFOTECH	2
16.	MPHASIS	2
17.	SUTHERLAND GLOBAL SERVICES	11
18.	TATA ELXSI	1
19.	TCS NINJA	12
20.	THINKSYNQ SOLUTIONS PVT. LTD.	1
21.	TVS SUNDARAM FASTENERS	1
22.	VALUED EPISTEMICS PVT LTD	1
23.	WHIRLDATA SCIENCE	1
24.	WIPRO	1
25.	ZOHO CORPORATION	2
<b>Total No of Students Placed</b>		<b>76*</b>

### UG Students:

S.No	Name of the students	Name of the company
1.	BARATH SRINIVAS B	ACCENTURE
2.	DINAKARAN A	ACCENTURE
3.	EUNICE A	ACCENTURE
4.	GANAPATHI S	ACCENTURE
5.	GOWTHAM E	ACCENTURE
6.	KOUSALYA M	ACCENTURE
7.	MANIBHARATHI R	ACCENTURE
8.	MUTHU MEERA S	ACCENTURE
9.	NANDHINI G	ACCENTURE
10.	NISHANTH R	ACCENTURE
11.	PAVITHRA R K	ACCENTURE

S.No	Name of the Company	No of students placed
12.	RINI JOHN	ACCENTURE
13.	RITHU PRIYANGA M	ACCENTURE
14.	SATHIYENDRAN M	ACCENTURE
15.	SHANMUGA PRIYA V	ACCENTURE
16.	SHRUTHI T	ACCENTURE
17.	SUBHASHINI S	ACCENTURE
18.	SUSHMITA M S	ACCENTURE
19.	SWETHA LAKSHMI A B	ACCENTURE
20.	TINO ISAAC I	ACCENTURE
21.	M.R.ABINESH	AMAZON
22.	ANAND VIGNESH R	BYJUS
23.	ARVIND VISHWANATH S	BYJUS
24.	VAISHNAVI S	CSS CORPARTION
25.	ROSHINI.B.V	CSS CORPARTION
26.	ADHITHIYA VENKATESH K	ECON SYSTEMS
27.	MADHEVAN P R	EMBEDUR SYSTEMS
28.	VENKATESH R	ETHNUS
29.	NIVEDHITHA M	FULL CREATIVE
30.	SHIVANI P	FLDEC SYSTEMS
31.	HAMSA PRIYA S	HCL TSS
32.	VAISHNAVI S	HCL TSS
33.	APARNA R	HEXAWARE TECHNOLOGIES
34.	RAMAKRISHNAN G	HEXAWARE TECHNOLOGIES
35.	SUKUMARAN M	HEXAWARE TECHNOLOGIES
36.	MONISH V	HEXAWARE TECHNOLOGIES
37.	SWATIKA R	IBM
38.	KAVIN R M	INFOSYS
39.	SUDARSHAN M	L&T INFOTECH
40.	THANIGAIVELAN R	L&T INFOTECH
41.	AKSHAYA S B	MPHASIS
42.	GOVARTHANAN M	MPHASIS
43.	MADHUVANTHI	SUTHERLAND GLOBAL SERVICES
44.	DEEPAK VENKATESH	SUTHERLAND GLOBAL SERVICES
45.	MOHAN. M	SUTHERLAND GLOBAL SERVICES

## PLACEMENT RECORD

S.No	Name of the students	Name of the company
46.	ROSHAN	SUTHERLAND GLOBAL SERVICES
47.	BALAJI N	SUTHERLAND GLOBAL SERVICES
48.	GOWTHAM R	SUTHERLAND GLOBAL SERVICES
49.	ISVARIYA G	SUTHERLAND GLOBAL SERVICES
50.	KAVIN R M	SUTHERLAND GLOBAL SERVICES
51.	KISHORE KUMAR R	SUTHERLAND GLOBAL SERVICES
52.	MONISH V	SUTHERLAND GLOBAL SERVICES
53.	VIJAYAVIGNESH A	SUTHERLAND GLOBAL SERVICES
54.	ANIRUDH S	TATA ELXSI
55.	ASWATH RAM A S	TCS NINJA
56.	EUNICE A	TCS NINJA
57.	MOHAMED SAFAAITH HUSSAIN A	TCS NINJA
58.	PAVITHRA R K	TCS NINJA
59.	PRASHANTH M	TCS NINJA
60.	RINI JOHN	TCS NINJA
61.	SATHIYENDRAN M	TCS NINJA

S.No	Name of the students	Name of the company
62.	SEETHARAMAN J R	TCS NINJA
63.	SUSHMITA M S	TCS NINJA
64.	SWETHA VILASHINI B	TCS NINJA
65.	VARUN SEKAR V G	TCS NINJA
66.	HARINI.B.R	TCS NINJA
67.	BOSE KANNAN M	THINKSYNQ SOLUTIONS PVT. LTD.
68.	BOSE KANNAN M	TVS SUNDARAM FASTENERS
69.	VINOTH S	VALUED EPISTEMICS PVT LTD
70.	HEMANTH KUMAR M	WHIRLDATA SCIENCE
71.	NIVEDHITHA M	WIPRO
72.	KAVIN R M	WIPRO
73.	BENEDICT ELIGIUS J	ZOHO CORPORATION
74.	THABASSUM ASHIFFA I	ZOHO CORPORATION

### PG Students

S.No	Name of the students	Name of the company
1	V R HEMASRI RAMYA	ROBERT BOSCH
2	SUDHARNA VINAYAGAM	ROBERT BOSCH

Congratulations to all the placed students.

## CLUBS & ACTIVITIES

### Energy Club:



**EVENT NAME :** RAMP WALK OF BRAINS  
**Date :** 04.02.2020

The ultimate aim of the event is to support innovation and fresh ideas from young engineering minds. Six teams were selected from the online rounds for on-stage presentation. Topics on various instances of renewable resources of energy and versatile grounds of research were presented. Cash prizes were awarded to the winners.

## CLUBS & ACTIVITIES

### FOSS Club:

On 06/02/2020, Multi sim software was presented by Thirumaran of II EEE B to club members.



On 13/02/2020, Multi sim software was presented by Srikumresh of II EEE B to club members.



### Electronics Hobby Club:

**Event : Project Demonstration - Simple Line Follower Bot**  
**Date : 06-03-2020**

A Project on simple line follower robot was demonstrated to the club members on 6<sup>th</sup> March 2020. The robot was made by two teams of EEE I year students in IIT Madras Tech Park, as a result of the workshop they attended. The Project used simple electronics to develop an robot without any coding of microcontrollers.



A Project display event was conducted on 14/03/2020 by the students of electronic hobby club. Six batches from EEE dept evinced interest and displayed their project to the club members. This created an interest among student members of the club to involve themselves in few electronic hobby projects. Prizes & Certificates were presented at the end of the program.





INVENTIONS IN THE FIELD OF ELECTRICAL AND ELECTRONICS:**Flexible Generators:**

Solid-state devices that directly convert heat to electricity without moving parts, TEGs are typically made from inorganic semiconductors. Yet polymers are attractive materials due to their flexibility and low thermal conductivity. These qualities enable clever designs for high-performance devices that can operate without active cooling, which would dramatically reduce production costs.

The researchers have developed P- and N-type semiconducting polymers with high performing ZT values (an efficiency metric for thermoelectric materials).

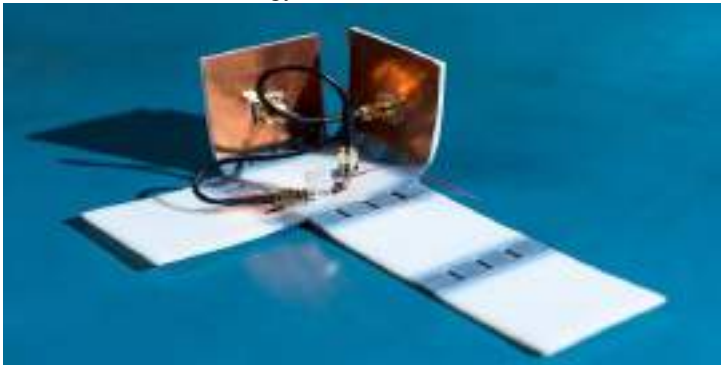


In one project funded by the Air Force Office of Scientific Research, the team has developed a radial TEG that can be wrapped around any hot water pipe to generate electricity from waste heat. Such generators could be used to power light sources or wireless sensor networks that monitor environmental or physical conditions, including temperature and air quality.

This opens opportunities in wearable devices, including clothing or jewelry that could act as a personal thermostat and send a hot or cold pulse to your body. Granted, this can be done now with inorganic thermoelectrics, but this technology results in bulky ceramic shapes, Although not suitable for grid-scale application, such devices could provide significant savings.

**Recycling Radio Waves:**

Researchers led by Manos Tentzeris have developed an electromagnetic energy harvester that can collect enough ambient energy from the radio frequency (RF) spectrum to operate devices for the Internet of Things (IoT), smart skin and smart city sensors, and wearable electronics. Harvesting radio waves is not brand new, but previous efforts have been limited to short-range systems located within meters of the energy source.



The researchers unveiled their technology in 2012, harvesting tens of microwatts from a single UHF television channel. Since then, they've dramatically increased capabilities to collect energy from multiple TV channels, Wi-Fi, cellular, and handheld electronic devices, enabling the system to harvest power in the order of milliwatts. Hallmarks of the technology include:

- Ultra-wideband antennas that can receive a variety of signals in different frequency ranges.
- Unique charge pumps that optimize charging for arbitrary loads and ambient RF power levels.
- Antennas and circuitry, 3-D inkjet-printed on paper, plastic, fabric, or organic materials, that are flexible enough to wrap around any surface. (The technology uses principles from origami paper-folding to create "smart" shape-changing complex structures that reconfigure themselves in response to incoming electromagnetic signals.)

The researchers have recently adapted the harvester to work with other energy-harvesting devices, creating an intelligent system that probes the environment and chooses the best source of ambient energy to collect. What's more, it combines different forms of energy, such as kinetic and solar, or electromagnetic and vibration.

**Edible Electronics:**

The 'Electronic Pill technology' bridges the gap between Engineering and Medicine. It is a tiny capsule-sized electronic device embedded in a pill which uses different components such as drug reservoir, delivery pump, electronic micro controller (MCU), wireless communication and sensors. It has a multichannel sensors which is used in detailed investigation of diseases. After the pill is consumed, it directly reaches the targeted parts of the body. It collects the data and sends it to the computer with 1 meter distance or more. The pill is powered by an edible battery of two SR48 silver oxide (Ag<sub>2</sub>O) battery with 35 hours working capacity and equipped with four different sensors. The sensors are pH Ion Sensitive Field Effect Transistor (ISFET), temperature sensor, dual electrode conductivity sensor, 3-electrode electro-chemical oxygen sensor. These sensors are controlled by Application Specific Integrated Circuit (ASIC). It delivers the real time information to the monitor. Though it has more advantages, it is very expensive and is incapable of detecting radiation abnormalities.

**S.SADHANA- II B**

# GALLERY

## ART:



**JAI SHREE.S- III A**



**INDUJA.U- III A**



**ASWATH RAM A.S- IV A**



**PAVITHRA.R.K-IV B**



**SHYAMSUNDAR.A- III B**



**PRAVEEN KUMAR R-III B**



**PREETHI.S- I B**



**KOWSALYA.G-I B**



**AMUDHA.M- IIA**



**SHREENITHI.V- II B**



**JEYANTHI YEGAMMAI S-I A**



**R.VISHALI-I B**



**DIVYADHARSHINI V- I A**



**GUNASHREE M N- I A**



**SUKUMARAN.M-IV B**



**LOGESHWARAN M-I B**