POLARIS

The Right Spark

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NEWSLETTER

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

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KKR &KSR INSTITUTE OF TECHNOLOGY & SCIENCES
(Approved by AICTE, New Delhi, Affiliated to JNTUK, Kakinada)
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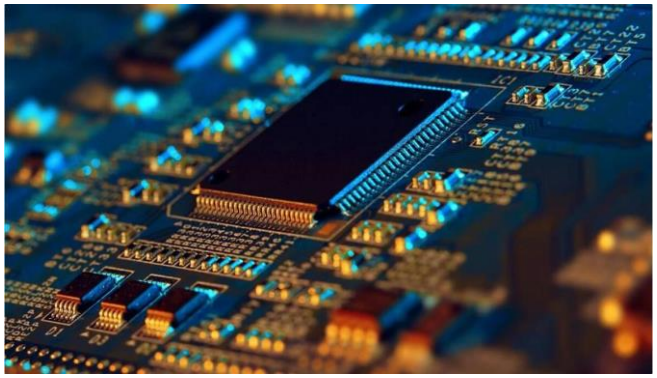
From Editor's Desk:

Semiconductor Trends :

Today, chip-making relies on sophisticated, expensive, and highly polluting processes. This necessitates critical changes from architectural design to sustainable materials and end-to-end fabrication to meet the growing demand for semiconductors. The industry adopts the latest technologies to increase efficiency and comply with environmental requirements. This report provides an overview of top semiconductor industry trends and innovations, including artificial intelligence (AI), the Internet of Things (IoT), 5G, advanced packaging, in-house production, and more. These advancements enable the industry to ensure more sustainable and efficient operations.

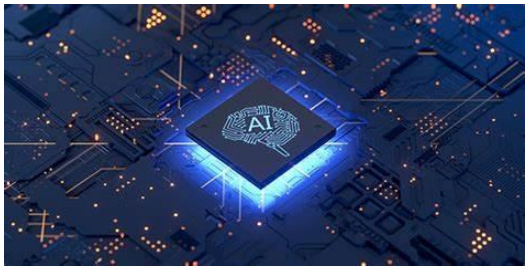


1. Internet of Things :

IoT devices press certain demands such as smaller sizes, diverse connectivity technologies, and lower power consumption. To address these requirements, semiconductor manufacturers focus on sensors and integrated circuit development. That is why startups are developing flexible multifunctional chipsets with increased circuits. They also combine microcontrollers and analytics into IoT to move computing to the source, making devices less vulnerable.Moreover, IoT financially benefits chip manufacturing by enabling continuous process and asset monitoring. It also improves visibility into production operations. For example, sensor data and previous usage patterns collected through IoT devices enable predictive maintenance.

2. Artificial Intelligence :

A rapid rise of AI solutions is forcing the chip industry to develop AI-ready hardware. Semiconductor companies also integrate AI into manufacturing workflows to optimize operations and improve product quality. That is why startups are offering hardware-based acceleration technologies that run neural networks. These advanced processors handle deep learning workloads and find applications across industries.



Additionally, startups build multi-dimensional matrices that calculate complex functions and train AI models. On the other hand, AI and predictive analytics optimize the time and costs of designing new chips. For instance, machine learning-driven solutions are able to identify design limitations and analyze the root causes of failures.

3. Advanced Materials :

Beyond reducing structure size, semiconductor startups are pursuing “more than Moore” innovations by leveraging novel materials. They include silicon carbide (SiC) and gallium nitride (GaN) which feature a wider bandgap. This brings several advantages such as high voltage resistance, higher operating temperatures, faster switching, and a smaller form factor. As a result, these alternatives deliver cost-effective and robust solutions within restricted constraints of the chip size.

4. Fabrication Technologies :

The continuous miniaturization of chip geometries requires precise and detail-oriented fabrication technologies. It also brings challenges such as forming fine patterns and placing them on the die on the nanoscale. Metals implemented to reduce wiring delays in circuits add additional complexity. That is why startups are providing fabrication innovations based on additive manufacturing and robotics automation. For example, robotic wafer handling improves fabrication precision.

5. 5G Technology:

The development of 5G networks demands high-performance semiconductors capable of handling extremely fast data transmission with low latency. 5G has ultra-low latency, which can be less than 5 milliseconds (ms). This is useful for applications that require real-time feedback, like online gaming, videoconferencing, and self-driving cars.

INSTITUTE VISION & MISSION

Vision

To produce eminent and ethical engineers and managers for society by imparting quality professional education with emphasis on human values and holistic excellence.

Mission

IM1	To incorporate benchmarked teaching and learning pedagogies in curriculum.
IM2	To ensure all round development of students through judicious blend of curricular, co-curricular and extracurricular activities.
IM3	To support cross-cultural exchange of knowledge between industry and academy
IM4	To provide higher/continued education and research opportunities to the employees of the institution.

DEPARTMENT VISION & MISSION

Vision

Excel in education, research and technological services in electrical engineering.

Mission

DM1	Impart quality education to produce globally competent engineers and successful entrepreneurs for meeting the current and future needs of power industry.
DM2	Engage in research and development in cutting edge and sustainable technologies.
DM3	Enhance industrial collaboration and professional ethics to serve the society.

Program specified Outcomes (PSO'S):

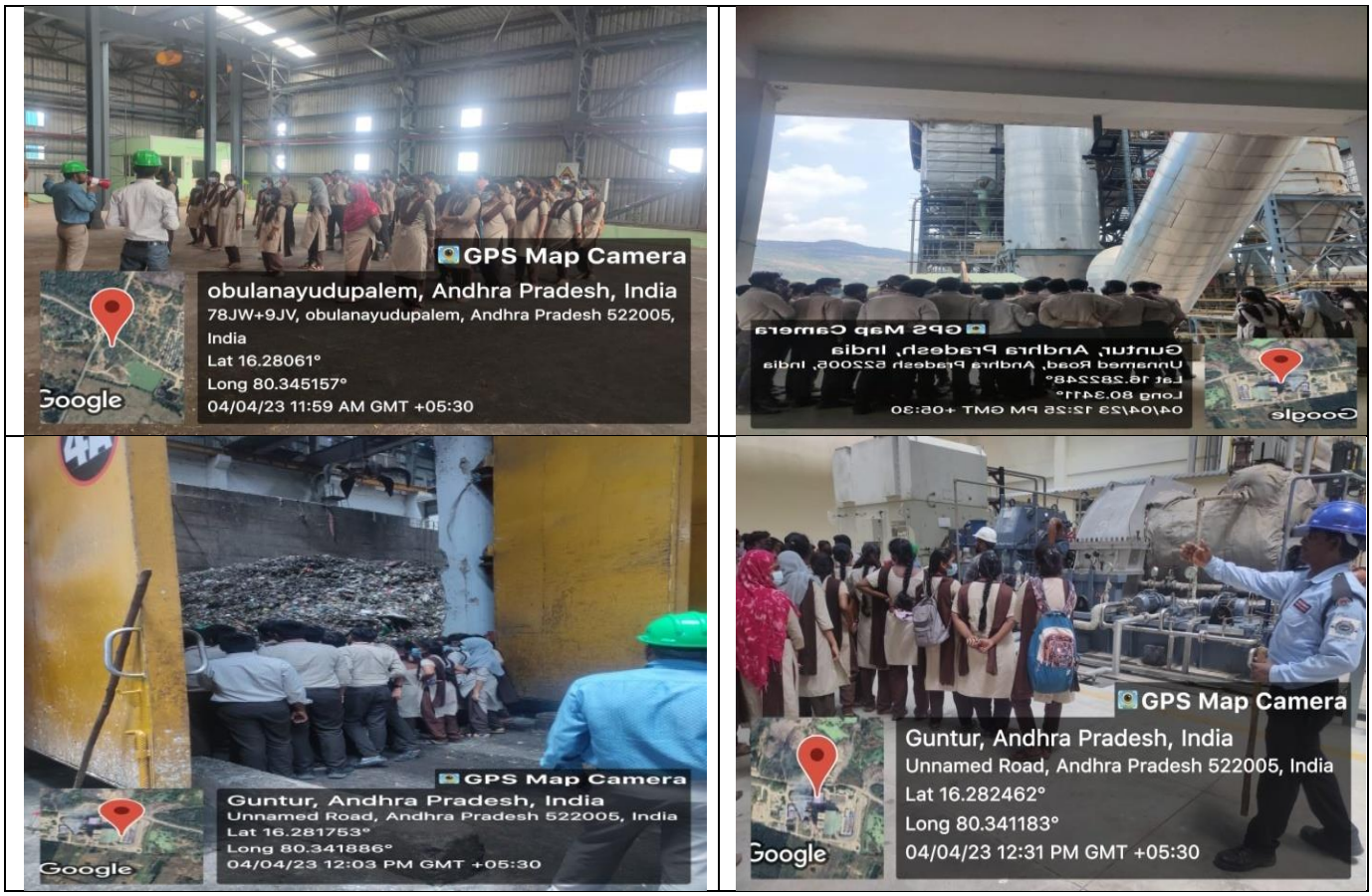
PSO1	Able to utilize the knowledge of Power Electronics in collaboration with Electrical Machines to provide an engineering solution in the areas related to Electrical Drives.
PSO2	To develop new cutting edge Technologies in Power Systems associated with efficient conversion and control of electrical power.
PSO3	Able to use software for design, simulation and analysis of electrical systems.

WORKSHOPS

1. **A Two days career Enhancement Programme was organized by Kalam Institute of Youth Excellence foundation on 06-01-2023 to 07-01-2023. The program equipped students with industry-relevant skills, knowledge of emerging technologies, and soft skills, resulting in improved employability by enhancing their technical proficiency, communication abilities, leadership potential, and awareness of current market trends, ultimately enabling them to secure better job opportunities and succeed in their chosen engineering careers**
2. **A Workshop on Human Values and it's impact on Engineers was conducted by Dr. K.V.S.G. MURALI KRISHNA Director, Acadamic Planning, JNTU, Kakinada on 09-02-2023. It was a training session designed to educate engineers on the importance of incorporating ethical and human values into their professional practice, aiming to improve the quality and societal impact of their engineering decisions by fostering a deeper understanding of how their actions can affect people and the environment, leading to more responsible and positive outcomes.**

INDUSTRIAL VISITS

1. **II year** students visited to **Jindal E-waste industrial visit in Association With Volta** on 04-04-2023. When visiting Jindal E Waste Pvt Ltd, students saw a facility that processes electronic waste (e-waste) by sorting, dismantling, extracting valuable materials like metals (copper, gold, silver), plastics, and other components for recycling, ultimately producing reusable raw materials that can be used in new electronic products, while also ensuring proper disposal of hazardous materials to minimize environmental impact.



2. The industrial visit to JOCIL Limited was organized on 12-04-2023. JOCIL, located in Andhra Pradesh, is a well-established company engaged in the manufacture of fatty acids, soap products, and glycerine, along with generating power from renewable sources like biomass and wind energy. The visit aimed to provide students with insights into the manufacturing processes, renewable energy production, and overall operational

management of a leading industrial unit. They provided insights to alongside gaining knowledge about their soap production, biomass power generation capabilities, and the company's commitment to sustainability practices within their operations. Students gained a thorough understanding of the manufacturing processes for fatty acids, soap products, and glycerine, including the raw materials which are used in various industries including cosmetics, pharmaceuticals, textiles, and plastics used and the various stages of production. The visit offered practical exposure to the operations and management practices of a large industrial unit, enhancing students' understanding of industrial processes.




RESULTS

I YEAR I SEM TOPPERS:

Sno	Regd.No.	Name of the Student	CGPA
1	22JR1A0208	MODEPALLI KAVYA	9.08
2	22JR1A0223	MOGADAS SIVA KARTHIK	8.92
3	22JR1A0209	NUSUMULA BHARGAVI	8.92

II YEAR I SEM TOPPERS:

Sno	Regd.No.	Name of the Student	CGPA
1	21JR1A0206	GUNTAKA PAVANI	8.86
2	21JR1A0210	PATHAN SUMAYYA	8.86
3	21JR1A0219	GOVATHOTI RATNA BABU	8.81

III YEAR I SEM TOPPERS:

Sno	Regd.No.	Name of the Student	CGPA
1	21JR5A0211	PREM KUMAR GUNTOTI	8.72
2	20JR1A0202	ANGIREKULA LAVANYA	8.72
3	21JR5A0209	KADAPA UDAYRAJU	8.63

IV YEAR I SEM TOPPERS:

Sno	Regd.No.	Name of the Student	CGPA
1	20JR5A0214	KAPPAGANTULA S KAMESWARI SANKARA PRASAD	6.04

STUDENT PARTICIPATION OUTSIDE THE COLLEGE

1. **G.Naga Divya (21JR1A0205), V.Harshini (21JR1A0207)** participated in **Smart India Hackthon** held at **SIH** .

PLACEMENTS

S.NO	ROLL NO	NAME OF THE STUDENT	ON / OFF CAMPUS PLACEMENT	NAME OF THE EMPLOYER	CTC(LPA)
1.	19JR1A0233	VENKATA KARTHIKEYA KALLAGANTI	ON	INFOR	7LPA
2.	19JR1A0214	SHAIK JASMINE	ON	CGI	4LPA
3.	19JR1A0211	NISSANKARARAO RUPAKALYANI	ON	TAP ACADEMY	4LPA
4.	20JR5A0203	K. SANDHYA	ON	CGI	4LPA
5.	19JR1A0210	NARNE HEMA CHOWDARY	ON	HCL	3.6LPA

6.	19JR1A0219	VANAPALLI SATYA PRAMILA	ON	HCL	3.6LPA
7.	19JR1A0222	BODEPUDI SRI CHAITANYA	ON	HCL	3.6LPA
8.	19KP1A0201	KURAKULAMAMATHA	ON	CGI	3.6LLPA
9.	20JR5A0201	CHINTHALAHARIKA	ON	MPHASIS	3.6LPA
10.	20JR5A0207	CHAVALI MURAHARI	ON	HCL-TECH	3.6LPA
11.	20JR5A0214	KAPPAGANTULA S KAMESWARI SANKARA P RASAD	OFF	HCL-TECH	3.6LPA
12.	20JR5A0209	SWAROOP DASARI	ON	PIVOX LABS	3LPA
13.	19JR1A0212	PATHAN SHANNISHA	ON	CADASYS	3LPA
14.	18JR1A0252	VENKATA VENU MADHAV PABBISETTY	ON	SAVANTIS	1.8LPA
15.	19JR1A0205	JALIREDDYGARI VARALAKSHMI	ON	SAVANTIS	1.8LPA
16.	19JR1A0208	LINGINENI NAVYA SRI	ON	SAVANTIS	1.8LPA
17.	19JR1A0213	VENNELA PEDAMALLU	ON	SAVANTIS	1.8LPA
18.	19JR1A0215	ANUSHA SIDDAVATAM	ON	SAVANTIS	1.8LPA
19.	19JR1A0216	DIVYA SRI HARSHITASRIRAM	ON	SAVANTIS	1.8LPA
20.	19JR1A0217	THIRUMALAGAYATHRI DEEPIKA	ON	SAVANTIS	1.8LPA

21.	19JR1A0218	PRAVALLIKA TIPPAREDDY	ON	SAVANTIS	1.8LPA
22.	19JR1A0203	E MOUNIKA	ON	SLAP	1.8LPA
23.	19JR1A0204	GADE CHANDANA PRIYA	ON	SLAP	1.8LPA
24.	19JR1A0206	DEEPIKAJALLEDA	ON	PILOG	1.8LPA
25.	19JR1A0207	JORIGE HANUMATHI DEVI	ON	PILOG	1.8LPA
26.	19JR1A0220	YENNA SAHITHI	ON	SAVANTIS	1.8LPA
27.	19JR1A0221	BANDLA OMSAI	ON	GESTAMP	1.8LPA
28.	19JR1A0223	BOYAPATI VENKATA RAGHAVALOKESH	ON	SAVANTIS	1.8LPA
29.	19JR1A0224	GOBBURI NARAYANA SAI GANESH	ON	SAVANTIS	1.8LPA
30.	19JR1A0225	N AJAY KUMAR	ON	SLAP	1.8LPA
31.	19JR1A0230	SHAIK TOUSIFRIYAZ	ON	SAVANTIS	1.8LPA
32.	19JR1A0232	VEMULA BHARGAV	ON	PILOG	1.8LPA
33.	20JR5A0204	NAGA TEJASWINI KUKATLA	ON	SAVANTIS	1.8LPA
34.	20JR5A0205	BETHAPUDI SUNIL KUMAR	ON	GESTAMP	1.8LPA
35.	20JR5A0206	BEZAWADA PURNA CHAND	ON	SAVANTIS	1.8LPA
36.	20JR5A0208	DASARI MANIKYARAO	ON	GESTAMP	1.8LPA
37.	20JR5A0211	GUNTI SIVA SHANKAR	ON	PILOG	1.8LPA
38.	20JR5A0213	K SAI MANIKANTA	ON	SLAP	1.8LPA

39.	20JR5A0215	VAMSI KRISHNA KASIMALLA	ON	SLAP	1.8LPA
40.	20JR5A0216	KOLAGANINIKHIL	ON	SAVANTIS	1.8LPA
41.	20JR5A0217	RAJESH KURRA	ON	SLAP	1.8LPA
42.	20JR5A0218	MADUPUVAMSY	ON	SAVANTIS	1.8LPA
43.	20JR5A0219	MUNIPALLI ASHOK KUMAR	ON	SAVANTIS	1.8LPA
44.	20JR5A0220	LOKESH REDDY NALABOLU	ON	PILOG	1.8LPA
45.	20JR5A0221	PULUSUSAIGOPI	ON	SAVANTIS	1.8LPA
46.	20JR5A0222	SK AKHIL REHMATH ZANI	ON	SLAP	1.8LPA
47.	20JR5A0223	KHAJA PEER MOINUDDIN SHAIK	ON	SAVANTIS	1.8LPA
48.	20JR5A0224	T NAVEEN	ON	SLAP	1.8LPA
49.	20JR5A0225	P SWARPO CHAKRAVARTHY	ON	SLAP	1.8LPA
50.	20JR5A0226	V SRIKANTH	ON	SLAP	1.8LPA

FDPS/WORKSHOPS/STTPS/WEBINARS ATTENDED

S.NO	Name of the Faculty	Title of the FDP	No. of Days	Organization address	Date of the FDP / Work Shop / STTP / Webinar	Category
1	M. Raja Nayak	Design, Implementation and Control of Electrical Systems Using MATLAB	7	Bapatla Engineering College, Bapatla	3-7 January, 2023	STTP
2	T.Nagaraju	Design, Implementation	7	Bapatla Engineering	3-7	STTP

		and Control of Electrical Systems Using MATLAB		College, Bapatla	January, 2023	
3	Y.Rajesh Babu	Electric Vehicles-Technological Advancements and Trends	7	Vasireddy Venkatadri Institute of Technology, Namburu, Guntur	20th february 2023 to 25th february 2023	FDP
4	M. Raja Nayak	Electric Vehicles-Technological Advancements and Trends	7	Vasireddy Venkatadri Institute of Technology, Namburu, Guntur	20th february 2023 to 25th february 2023	FDP
5	M.Naveen Kumar	Electric Vehicles-Technological Advancements and Trends	7	Vasireddy Venkatadri Institute of Technology, Namburu, Guntur	20th february 2023 to 25th february 2023	FDP
6	J.Santhi Kanaka durga	Electric Vehicles-Technological Advancements and Trends	7	Vasireddy Venkatadri Institute of Technology, Namburu, Guntur	20th february 2023 to 25th february 2023	FDP
7	K.Vasanthi	Electric Vehicles-Technological Advancements and Trends	7	Vasireddy Venkatadri Institute of Technology, Namburu, Guntur	20th february 2023 to 25th february 2023	FDP
8	T.Nagaraju	Electric Vehicles-Technological Advancements and Trends	7	Vasireddy Venkatadri Institute of Technology, Namburu, Guntur	20th february 2023 to 25th february 2023	FDP

9	A.Gamyaveni	Electric Vehicles-Technological Advancements and Trends	7	Vasireddy Venkatadri Institute of Technology, Namburu, Guntur	20th february 2023 to 25th february 2023	FDP
10	S.Venkatesh	Electric Vehicles-Technological Advancements and Trends	7	Vasireddy Venkatadri Institute of Technology, Namburu, Guntur	20th february 2023 to 25th february 2023	FDP

COLLEGE CENTRAL EVENTS

1. As part of Sankranti Sambarallu, Several Activities like Rangoli, Mehandi, were conducted in the college on 11th January 2023. Our Chairman Sri Koyi Subha Rao garu, Secretary Sri Koyi Sekhar garu, Principal Sri P. Babu garu, Director sir, Hari Babu garu, All the Staff and Students are actively participated in all the events.1.NSS unit of the institute with Association of E Cell has conducted Indian Constitution Day on 26-11-2022.

ఈనాడు
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మంగళగిరి : మున్సిపల్ పాఠశాల విద్యార్థుల సంక్రాంతి సంబరాలు

వింజమంపాడు కేట్స్ కూశాలలో విద్యార్థినుల కోలాటం

ఉత్సాహంగా సంక్రాంతి సంబరాలు

మంగళగిరిటౌన్, ప్రత్తిపాడు, దుగ్గిరాల, వట్టిచెరుకూరు, పెదనందిపాడు, న్యూస్‌టుడే: వివిధ సంస్థలు, పాఠశాలల విద్యార్థులు బుధవారం వేడుకగా సంక్రాంతి సంబరాలను నిర్వహించారు. రోటరీ క్లబ్ ఆఫ్ మంగళగిరి అధ్యక్షులు త్రివురుమల్లు సతీష్ బాబు ఆధ్వర్యాన టిడ్కో గృహసముదాయ ఆవరణలో ముగ్గుల పోటీలు నిర్వహించారు. యువతులు సంప్రదాయ వస్త్రధారణ పోటీల్లో పాల్గొన్నారు. విజేతలకు ఎమ్మెల్యే ఆళ్ల రామకృష్ణారెడ్డి బహుమతి ప్రదానం చేశారు. మార్కెట్ యార్డు అధ్యక్షురాలు ముసగాల భాగ్యలక్ష్మి, మిస్ ఇండియా టైటిల్ విజేత - 2022 వెన్నం

పెదనందిపాడు: నంది పాఠశాలలో ముగ్గులు వేస్తున్న బాలికలు

యనమదల: ఎద్దు బండితో సంప్రదాయ వస్త్రాలతో కళాశాల ఛైర్మన్ కోయి సుబ్బారావు, ప్రిన్సిపల్ డాక్టరు ఎం.రవీంద్ర కృష్ణ, విద్యార్థులు

దుగ్గిరాల: భోగిమంట వెలిగిస్తున్న చింతలపూడి ప్రియదర్శిని ఇంజనీరింగ్ కళాశాల ఛైర్మన్ రామారావు, కార్యదర్శి విజయలక్ష్మి

Date : 12/01/2023 EditionName : ANDHRA PRADESH(AMARAVATI GUNTUR) PageNo : 03

2. As part of Republic day celebrations Principal Sri P. Babu garu has unfurl the Flag along with Chairman Sri Koyi Subha Rao garu, Secretary Sri Koyi Sekhar garu, , Director sir, Hari Babu garu on 26th January 2023 in the campus.