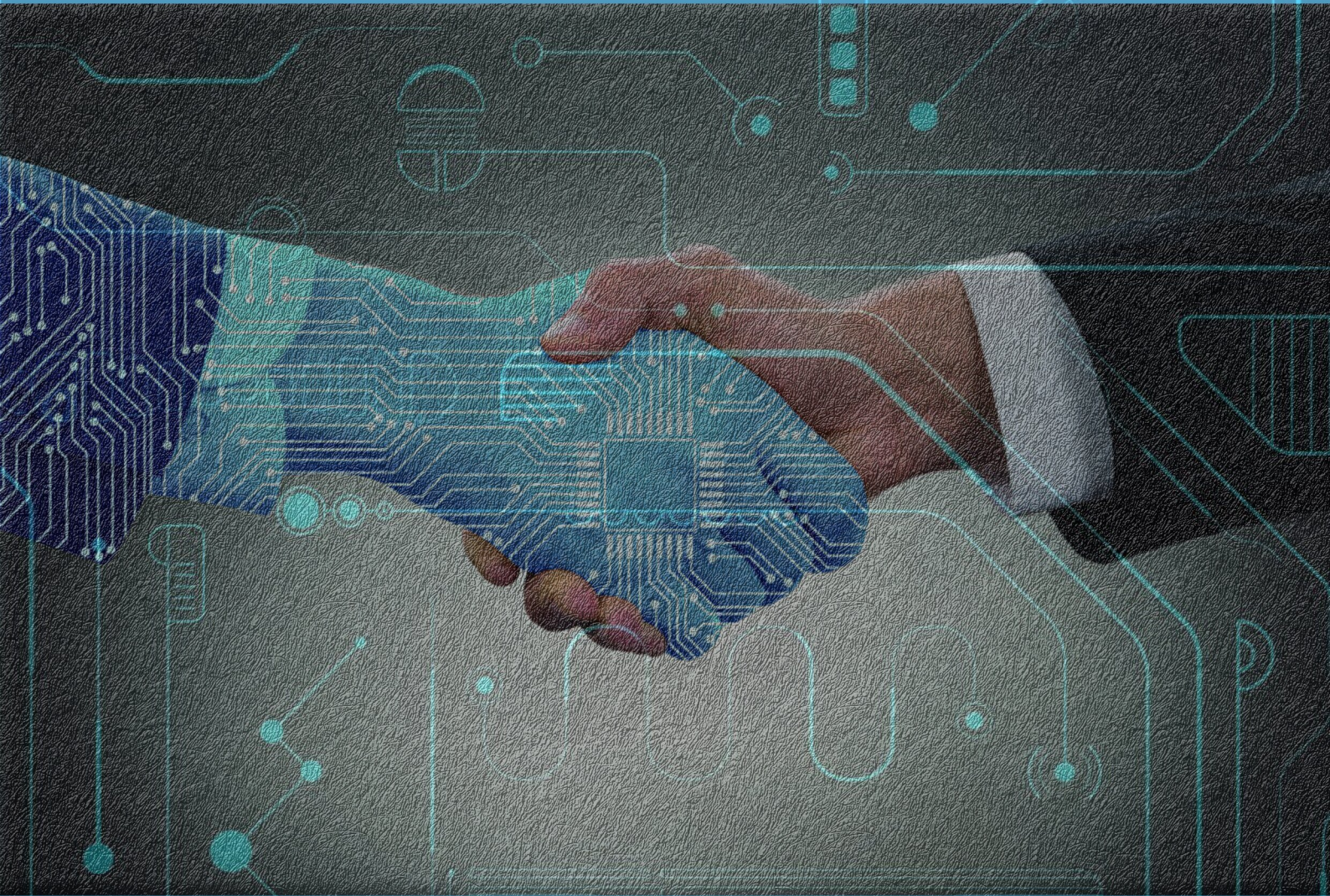




ISSUE 2  
MARCH 2022

# ACE NEWSLETTER



**ADITYA COLLEGE OF ENGINEERING & TECHNOLOGY**  
**ADB ROAD, SURAMPalem - 533437**  
**EAST GODAVARI, ANDHRA PRADESH**



# VISION

**To emerge as a center of excellence in education and research**

# MISSION

- **To establish skill and learning centric infrastructure in thrust areas**
- **To develop Robotics and IOT based infrastructure Laboratories**
- **To organize events through industry institute collaborations and promote innovation**
- **To disseminate knowledge through quality teaching learning process**



# ABOUT ECE

ECE department was established in the year 2004 with an intake of 60 students and now it has been expanded with an intake of 240 students. ECE plays a vital role in Technology Revolution. Our main aim is to generate new knowledge by engaging in cutting-in research to promote academic growth and to develop human potential to its fullest extent so that intellectually capable & imaginatively gifted leaders can emerge in a range of professions. We have Modern state of the art and well furnished labs like Microwave and Optical Communication Lab, Electronic Devices and Circuits lab, Modern Communication Lab, Research lab etc with excellent laboratory facilities and dedicated faculty.

The department's footprint is made visible by our distinguished alumni settled in major MNC's like Intel, Capgemini, CGI, TCS, CTS, Accenture, public sector companies and so on. The department strives to excel in focusing on the needs of the industry and society. In addition, the department enables training on advanced technologies through Texas Instruments Innovation lab, Robotics Lab etc and organizing workshops on IoT and Robotics. These laboratories provide platform for learning not only theory but also practical aspects. As we look into future, robots and embedded systems will be part of our lives very soon.



**Dr RVV KRISHNA**  
**Head of Department - ECE**



# INSPIRATIONAL SHORTS

## THE ELEPHANT ROPE (BELIEF)

**A gentleman was walking through an elephant camp, and he spotted that the elephants weren't being kept in cages or held by the use of chains.**

**All that was holding them back from escaping the camp, was a small piece of rope tied to one of their legs.**

**As the man gazed upon the elephants, he was completely confused as to why the elephants didn't just use their strength to break the rope and escape the camp. They could easily have done so, but instead, they didn't try to at all.**

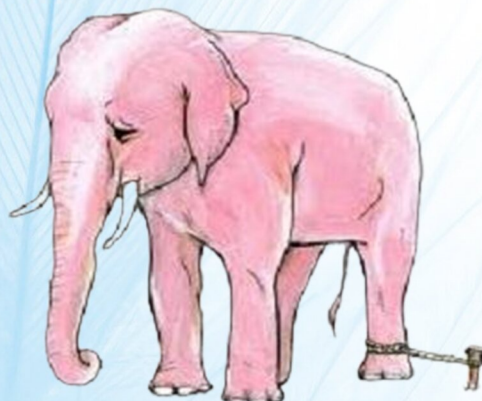
**Curious and wanting to know the answer, he asked a trainer nearby why the elephants were just standing there and never tried to escape.**

**The trainer replied;**

**“when they are very young and much smaller we use the same size rope to tie them and, at that age, it's enough to hold them. As they grow up, they are conditioned to believe they cannot break away. They believe the rope can still hold them, so they never try to break free.”**

**Moral of the story:**

**No matter how much the world tries to hold you back, always continue with the belief that what you want to achieve is possible. Believing you can become successful is the most important step in actually achieving it.**







**Jawaharlal Nehru Technological University Kakinada**  
Kakinada – 533003, Andhra Pradesh

Recognizes

Department of Electronics and Communication Engineering  
**Aditya College of Engineering & Technology, Surampalem**

As  
**RESEARCH CENTRE**

For the  
Academic Years 2021-22 & 2022-23

Kakinada  
19<sup>th</sup> March, 2022



  
**REGISTRAR**  
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Kakinada-533003





# DIGITAL VEDA 2K21

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Aditya Nagar, ADB Road, Surampalem, E.G Dist, A.P - 533437

## INTERNATIONAL CONFERENCE 2021

22<sup>nd</sup> & 23<sup>rd</sup> October, 2021

the address of your event goes here

 <http://icacet.in>

Email : [icacet2021@acet.ac.in](mailto:icacet2021@acet.ac.in)

## ADITYA

COLLEGE OF ENGINEERING & TECHNOLOGY  
Surampalem, Andhra Pradesh, INDIA

## ADVANCES IN COMPUTER ENGINEERING & COMMUNICATION TECHNOLOGY

The International Conference on Advances In Computer Engineering & Communication Technology (ICACET-2021) aims to bring together academicians, industrialists, researchers and research scholars to exchange and share their experiences and hard-earned technological advancements and applications in Computer Science and Communication Technologies. The theme of ICACET-2021 focuses on the domains of Data Science, Internet of Things (IoT), Wireless Communication, Sensor Networks and other emerging technologies.

Sponsored by AICTE



## ICACET 2021





# Technology Trends







Electric vehicles come with a tough sales pitch; they're relatively expensive, and you can drive them only a few hundred miles before they need to recharge—which takes far longer than stopping for gas. All these drawbacks have to do with the limitations of lithium-ion batteries. A well-funded Silicon Valley startup now says it has a battery that will make electric vehicles far more palatable for the mass consumer.

It's called a lithium-metal battery and is being developed by QuantumScape. According to early test results, the battery could boost the range of an EV by 80% and can be rapidly recharged. The startup has a deal with VW, which says it will be selling EVs with the new type of battery by 2025.

Hydrogen has always been an intriguing possible replacement for fossil fuels. It burns cleanly, emitting no carbon dioxide; it's energy dense, so it's a good way to store power from on-and-off renewable sources; and you can make liquid synthetic fuels that are drop-in replacements for gasoline or diesel. But most hydrogen up to now has been made from natural gas; the process is dirty and energy intensive.

The rapidly dropping cost of solar and wind power means green hydrogen is now cheap enough to be practical. Simply zap water with electricity, and presto, you've got hydrogen. Europe is leading the way, beginning to build the needed infrastructure





# GQD & its Applications

The extensive properties of carbon based QDs can be used for many utilizations in diverse areas, among which drug/gene delivery, biological imaging, antibacterial and antioxidant activity and sensing applications including PL sensors, electrochemiluminescence sensors and electrochemical sensors can be mentioned. It can be stated that these applications would influence the human's life quality and has the potential to attract significant commercial interests. Many studies have been conducted in order to understand the unique features of carbon based QDs and alteration of the respective features with the use of the diverse procedures like controlling the shape and dimension, devising the composite materials, doping, and others.

**Drug/gene delivery** Carbon dot based nanocarriers are highly interesting due to their biomedical applications, biocompatibility, biodegradability, greater efficiency, surface functionality, and physicochemical properties. Therefore, carbon based QDs are capable of bright new paths for drug and gene delivery applications.

**Bioimaging** The optical features of QDs with carbon basis are key factors of practical application of these compounds, because they release heavy fluorescence and have lower cytotoxicity and high biocompatibility that could be used in bioimaging as well as biology.

**PL sensors** The usage of different methods for production of carbon based QDs caused distinct colors in photo-luminescence, from deep UV to the green, blue, red, and yellow among which the green and blue have been the commonest ones. Moreover, the photoluminescence of carbon based QDs is usually affected by diverse parameters like the shape, dimension, the excitation wave length, surface oxidation degree, concentration, surface functionalization as well as the N/S doping. Experts in the field used the special PL features of C-dots/GQDs which are established on either PL turn-off or turn-on mechanism for detecting the ions, and proteins in the solution or within the cell.

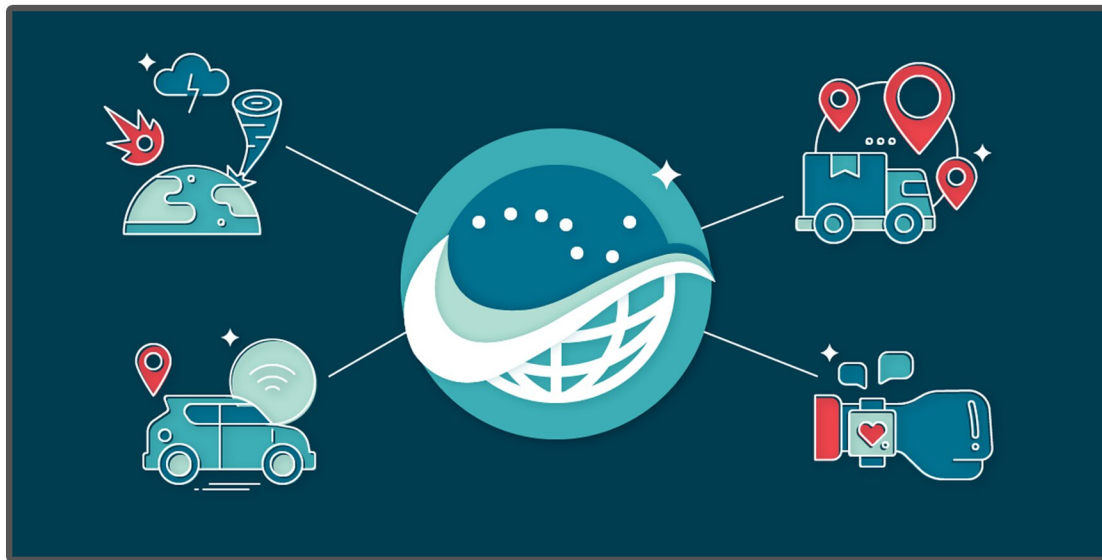


**Dr. Abu Bakar Siddique**  
**Dept of ECE**



# Hyper-accurate positioning

The Global Positioning System is an invention, first utilized just for military purposes, but it was eventually made available to everyone as a public good. GPS is made up of 24 satellites that are positioned in Earth's orbit and broadcast a radio signal to the Earth's surface. GPS receivers based on these radio waves can identify their exact position - altitude, latitude, and longitude - anywhere on the earth at any time of day or night, in all weather. GPS is broadly applied as a global service for commercial and scientific reasons such as navigation at sea, land, and air, land mapping, mapping, identifying the precise time, earthquake detection, and so on. While widespread use of this service has already drastically altered the landscape of our world, and as everything improves with time, this service has also undergone various changes that have resulted in improved accuracy.



Unlike GPS, which has an accuracy of 5 to 10 meters, hyper-accurate positioning technology may achieve levels of accuracy of a few centimeters or millimeters. It opens up possibilities for a wide range of applications, including the development of autonomous cars, automated distribution, wearable devices, disaster monitoring, and the creation of new positioning models.

## ► [Autonomous cars](#)

In order for autonomous features in vehicles to operate, the vehicle must be informed of its specific location in a lane, rather than simply being located on a map. It enables vehicles to operate precisely and securely within their immediate surroundings. Sub-meter lane accuracy allows correct positioning of the automobile for autonomous navigation, as well as maintaining its position within centimeters.



### Automated distribution

With such pinpoint accuracy, we can see little robots delivering packages we've ordered online right to our front door. Because existing positioning systems are unable to perfectly identify every location, the human aspect in this industry is quite vital at the moment. We shall be able to rely on these little electronic assistants to carry mail as well as online delivery without fear of making a mistake once this hyper-accurate positioning technology is applied to the mainstream market.

### Wearable devices

In order to deliver more thorough and meaningful data to its users, wearables must have incredibly precise location positioning. Professional athletes have benefited greatly from the usage of a traditional GPS system, and the adoption of this new system, which is significantly more precise, will undoubtedly affect sports outcomes around the world. This technology provides a new level of precision even to regular fitness users, and those who want to track their health through their smart devices.

### Disaster monitoring

With this innovation in positioning systems, early warnings of natural disasters are now a prospect, and their application contributes to the saving of both lives and property. We believe this breakthrough has the potential to be one of the most life-saving technologies since these devices can deliver more accurate readings than ever before.



**K SURESH**  
**STUDENT**



# ROBOTIC PROCESS AUTOMATION

Robotic Process Automation (RPA) is software technology that's easy for anyone to use to automate digital tasks. With RPA, software users create software robots, or "bots", that can learn, mimic, and then execute rules-based business processes. RPA automation enables users to create bots by observing human digital actions. Show your bots what to do, then let them do the work. Robotic Process Automation software bots can interact with any application or system the same way people do—except that RPA bots can operate around the clock, nonstop, much faster and with 100% reliability and precision.

## What can RPA do

Robotic Process Automation bots have the same digital skillset as people—and then some. Think of RPA bots as a Digital Workforce that can interact with any system or application. For example, bots are able to copy-paste, scrape web data, make calculations, open and move files, parse emails, log into programs, connect to APIs, and extract unstructured data. And because bots can adapt to any interface or workflow, there's no need to change business systems, applications, or existing processes in order to automate.

RPA bots are easy to set up, use, and share. If you know how to record video on your phone, you'll be able to configure RPA bots. It's as intuitive as hitting record, play, and stop buttons and using drag-and-drop to move files around at work. RPA bots can be scheduled, cloned, customized, and shared to execute business processes throughout the organization.

RPA bots create step-change in employee productivity by accelerating workflows and enabling more work to get done by executing processes independently. In document-intensive industries like financial services, insurance and in the public sector, RPA bots can handle form filling and claims processing all hands-free. With 100% accuracy there is no rework and near-perfect compliance. Automating with RPA is enabling industries such as finance, healthcare and life sciences to leverage the reliability of bots to achieve strict compliance standards. Robotic Process Automation in accounting is enabling new levels of speed and precision in order-to-cash and procure-to-pay processes.

**G KANCHANA**  
**STUDENT**





# CHAPTERS

## BOOK CHAPTERS PUBLICATION



**Dr. A B SIDDIQUE**

**Book Chapter : "Nano-inks in security and defense applications"**

**PUBLISHER : ELSEVEIR**

**Author : MAIN**

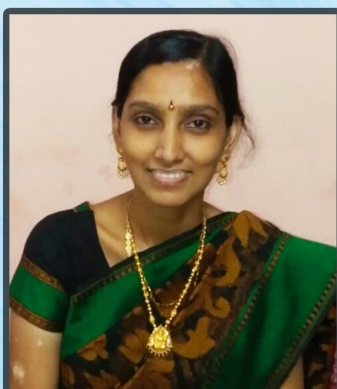


**Dr. T S KARTHIK**

**Book Chapter : "The internet of Things - Case study and its Applications"**

**PUBLISHER : SIPH**

**Author : SECOND**



**Dr. N V LALITHA**

**Book Chapter : "Layered Architecture and Issues in 6G"**

**PUBLISHER : CRC PRESS**

**Author : SECOND**



Winner



₹19  
LAKHS

Khaythi Sri



Devi Bhavani



Rajesh



Sai Kiran



12<sup>th</sup> Place

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COLLEGES

SQL Query  
Competition



Prasad

ECE,

Aditya College of Engineering & Technology



# BLOOD DOATION CAMP @ ACET



# POSH AWARENESS PROGRAM

## చట్టాలపై అవగాహన కలిగి వుండాలి

- అడపా శ్రీదేవి



జగ్గంపేట, మేజర్ న్యూస్ : సూరంపాలెంలో గల ఆదిత్య కాలేజీ ఆఫ్ ఇంజనీరింగ్ అండ్ టెక్నాలజీ కళాశాల నందు లైంగిక వేధింపులపై శుక్రవారం అవగాహనా సదస్సు జరిగినది. ఈ సదస్సు నందు కళాశాలలో గల ఉపాధ్యాయులు మరియు ఇతర సిబ్బంది పాల్గొన్నారు. ఈ కార్యక్రమమునకు ముఖ్య అతిథిగా కాకినాడ జిల్లా కోర్ట్ న్యాయ వాది శ్రీమతి అడపా శ్రీదేవి విచ్చేశారు. ఈ సందర్భముగా ఆమె మాట్లాడుతూ పని చేసే కార్యాలయము నందు మహిళలందరూ తగు జాగ్రత్తలు తీసుకొంటూ అప్రమత్తముగా ఉండాలని తెలియజేశారు. అలాగే లైంగిక వేధింపులకు సంబంధించిన వివిధ చట్టాలను గురించి కూడా విపులంగా అవగాహన కలిగి ఉండాలి అని చట్టాలను గురించి వివరించారు. కళాశాల డీన్ డా.ఎ.రామ కృష్ణ, ప్రోగ్రాం కోఆర్డినేటర్ ఏ.రామావసంత, అసిస్టెంట్ ప్రొఫెసర్ స్నేహ జోసెఫ్, లలిత మంగతాయారు మొదలగు సిబ్బంది పాల్గొన్నారు.

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Sat, 02 July 2022  
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ఆంధ్రప్రభ

## చట్టాలపై అవగాహన కలిగి ఉండాలి

గండ్లపల్లి, ప్రభన్యూస్ : సూరంపాలెం ఆదిత్య కాలేజీ ఆఫ్ ఇంజనీరింగ్ అండ్ టెక్నాలజీ కళాశాల నందు లైంగిక వేధింపులపై ఒక రోజు అవగాహనా సదస్సు జరిగినది. ఈ సదస్సు నందు కళాశాలలో గల ఉపాధ్యాయులు మరియు ఇతర సిబ్బంది పాల్గొన్నారు. ఈ కార్యక్రమమునకు ముఖ్య అతిథిగా కాకినాడ జిల్లా కోర్ట్ న్యాయవాది అడపా శ్రీదేవి విచ్చేసినారు. ఈ సందర్భముగా ఆమె మాట్లాడుతూ పని చేసే కార్యాలయము నందు మహిళలందరూ తగు జాగ్రత్తలు తీసుకొంటూ అప్రమత్తముగా ఉండాలని తెలియజేశినారు. అలాగే లైంగిక వేధింపులకు సంబంధించిన వివిధ చట్టాలను గురించి కూడా విపులంగా అవగాహన కలిగి ఉండాలని చట్టాలను గురించి వివరించారు. కళాశాల డీన్ రామకృష్ణ, ప్రోగ్రాం కోఆర్డినేటర్ ఏ రామావసంత, అసిస్టెంట్ ప్రొఫెసర్ స్నేహ జోసెఫ్, లలిత మంగతాయారు సిబ్బంది పాల్గొన్నారు.

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**A SYNONYM FOR PLACEMENTS**

