



# JPACE

## Chronicle

*"Reach for the Stars"*

Believe  
IN YOUR DREAMS

Newsletter  
JULY '19  
Volume VIII, Issue I

A SMOOTH SEA  
NEVER MADE A SKILLED SAILOR.

**JP COLLEGE OF ENGINEERING**

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# HOLY FATHER'S MESSAGE



**Dear Brothers and Sisters,**

“Let this be my greeting at the beginning of the New Year: “Peace is to this house!” In sending his disciples forth on mission, Jesus told them: “Whatever house you enter, first say, ‘Peace is to this house!’ And if a son of peace is there, your peace shall rest upon him; but if not, it shall return to you” (Lk 10:5-6)

Bringing peace is central to the mission of Christ’s disciples. That peace is offered to all those men and women who long for peace amid the tragedies and violence that mark human history. The “house” of which Jesus speaks is every family, community, country and continent, in all their diversity and history. It is first and foremost each individual person, without distinction or discrimination. But it is also our “common home”: the world in which God has placed us and which we are called to care for and cultivate “.

**+POPE FRANCIS**

## College Activities

1. As the herald of successful beginning of this academic year, Dr. I. Jegan, a “Young Abdul Kalam” awardee, Vijay TV fame and Founder of Win Your Weakness Academy, motivated the students of our college from **July 10 to 13, 2019**. He was inspirational through games, activities and awarding epithets to students as well as teachers.



*Motivation to first year students*



*Motivation to 2<sup>nd</sup>, 3<sup>rd</sup> and final year students*

2. Staff motivational session by Dr. I Jegan was held in the evening on **July 13, 2019** at conference hall.



3. Mr. Siva Venkatesh, Recruitment and Training Consultant from PYXIDA, Chennai addressed the final year students of all departments on Placement Opportunities on **July 24 & 25, 2019**.



*Civil Department*



*CSE Department*



*ECE Department*



*EEE Department*

4. Dr. M. Rajkumar, Principal of our college addressed and motivated the final year students of all departments on **July 05, 2019**. He elucidated the importance of high score in academics and getting ready for placement.



*At Civil Department*



*At CSE Department*



*At EEE Department*

# Department Activities

## Civil Engineering

1. The department conducted department assembly for academic year 2019-2020 on **July 02, 2019**. Mr. M. Palani, Head of the Department presented the academic report of 2018-2019. Selvan Sakthivel from final year and Selvan Felix Romeo from 2<sup>nd</sup> year presented on “Pervious Concrete” and “Self Curing Concrete” respectively.



*Department assembly – CIVIL*

2. The members of staff congratulated the toppers in the even semester of last academic year (2018-2019) on **July 04, 2019**.



*Mariselvi. L (7.54), Tamil Arasi. V (7.46), Mala. J (6.33)*

3. Selvan Vargeese and Selvi Indhira Lakshmi, second year students involved in various activity (Association hour) on all Fridays to update their knowledge and focus on their academic.



4. Mr.Palanikumar, Assistant Professor presented on “Importance of Planting Trees” as part of social awareness to third year students in Association Hour on **July 12, 2019**.



*Association Hour addressed by Mr.Palanikumar*

5. The 2<sup>nd</sup>, 3<sup>rd</sup> and final year students were involved in various sports on all Fridays afternoon to keep them fit and focus on their academic.



*Students playing games*

6. Civil second year students has participated extracurricular activities like singing, Story-telling and poem in their classroom on **July 15, 2019**.



*Extra curricular Activity – CIVIL*

7. Final year student Selvan Balachander took seminars on “National Water Policy” respectively on **July 17, 2019**.



*Final year students handle seminars*

8. The department inaugurated the Student Chapter - FACEAT&P (Federation of All Civil Engineers Association of Tamilnadu & Puduchery) on **July 24, 2019**. Er. M.K. Basheer Ahamed, M.E., Student Chapter Chairman (Region 8, 9 &10 FACEAT&P) is the Chief Guest and the Guests of Honor are Er R. Sivakumar B.E., M.Sc. (VAL), Chairman, Region 10 FACEAT&P, Er. M. Muthu Kumar, M.E., Structural Consultant, Er. Muthukumar, MD of Balaji Construction Ltd., Tenkasi Er. I. Kather Basha, M.Tech., President and Er. Balasubiramanian, Treasure of Tenkasi Engineers’ Association.



*Students Chapter Inauguration*

9. Mr. M. Palani, Head of the Department motivated the second year students on **July 25, 2019**.



*Motivation by HoD*

10. The final year student Selvi S. Aruna Indhumathi took seminar on the topic of “Vehicle Skid Resistance” on **July 25, 2019**.



*Seminar handled by Selvi Aruna Indhumathi*

11. Selvan M. Arunachalam, final year student and founder of **Aram Sei Trust** gave a speech on “Awareness on Blood Donations” at APA College of Arts & Science, Vagaikulam on **July 26, 2019**.



*Extra Curricular Activity*

12. Mr. R. Thirumalai Rajan, Assistant Professor of English, Department of Science & Humanities handled motivational session on Soft Skill and Communication Skill to 3<sup>rd</sup> and final year students on **July 27, 2019**.



*Training session for 3<sup>rd</sup> and final Year students*

13. In memory of Dr. A.P.J. Abdul Kalam on his death anniversary, the students planted saplings in the college campus on **July 27, 2019**.



*Students plant saplings*

### Computer Science Engineering

1. Science and Humanities department organized the motivation session for the first year students on **July 19, 2019**. Mr. Senthil Murugan, Head of the Department has handled motivation session for the first year 'A' section students.



*Motivation Session by Mr.Senthil Murugan, HOD/CSE*

2. Final Year students Ms. Roobini, Ms. Rabiyaathul Fahmitha, Ms. Mahalakshmi, Ms. Abirami had conducted motivation program for the first year students on **July 24, 2019**. The main aim of this program is to motivate, push and encourage the students to go an extra mile in putting up their efforts together to achieve greater heights.



*Motivation Program by Final year students*

3. The Management, Principal, HOD and Staff members congratulated the toppers of all 3 years in the April-May 2019 Anna University Examinations.



*Gomathisankari.S (7.63), Velammal.M (7.54) and Kowsalya. N (7.17) (2<sup>nd</sup> Year)*



*Esther.L (7.71), Ahamed Aafrin.J (7.46), Bhagiya.S (7.46), Shunmuga Lakshmi Priya. K (7.46), Fathima N.R (7.21) and Nicholas Jenifer. S (7.21) (3<sup>rd</sup> Year)*



*Swethaa Laxmi. K (7.36), Bhavani. V (7.04) and Rabiyaathur Fahmitha. M(6.92) (Final Year)*

4. The Project Hour session was handled by Mrs. A. Kavitha, Assistant Professor. The session was about how to plan and prepare for their Internships / projects and to handle the different phases of project life cycle.



*Project planning for the academic year 2019 - 2020*

5. The Head of the Department and the members of staff appreciated the students Selvan Mohamed Basheer, III CSE and Mr.Vijay, II CSE who have received the certificates from the government for blood donation.



*Blood donation appreciation*

6. The final year students went for Industrial Visit to Indian Institute of Astrophysics, Kodaikanal on **July 19, 2019**. They visited Astro Physics, India Ltd., and learned about SQL and Oracle database development systems.
7. Weekly once, student's counselor period was organized in the department. The faculty members counseled and motivated the students to improve their academic performance.
8. A programme was organized for students who have registered NPTEL course on **July 29, 2019**. Nearly 52 students and all the faculty members registered for the course. The session was handled by Mrs. A. Kavitha, Assistant Professor.



*NPTEL course guidance by Mrs. A. Kavitha*

## Electronics and Communication Engineering

1. Sports activities were conducted for the department students on every Tuesday. In the afternoon session, 2<sup>nd</sup>, 3<sup>rd</sup> and final year students were allowed to play various games in the playground on **July 09, 2019**.



*The students were enjoying the playground*

2. 3<sup>rd</sup> year student Selvan S. Mohamed Meeran Subair attended "Entrepreneurship Development and Innovation Programme" at Anna University Regional Campus, Tirunelveli on **July 02, 2019**.



*Certificate for the Programme*



*Student Attending the EDIP*

3. The Management, Principal, HOD and Staff members congratulated the toppers of all 3 years in the April-May 2019 Anna University Examinations



*Aboorva. K (7.84), Saranya .K (7.76),  
Lisha. A (7.72) (2<sup>nd</sup> Year)*



*Christy Methila. A (7.63), Sathiya. M (7.50),  
Mishma. J (7.42) (3<sup>rd</sup> Year)*



*Jebi Axal. Y (8.04), Muthumari. T (7.71), Jamjath Meeral. K (7.54)  
, Krishnaveni. M (7.54), Subha Bharathi. S (CGPA 7.54) (Final Year)*

4. The department organized Industrial Visits for final year and 3<sup>rd</sup> year students to Electronic Design Automation Machinery Center located in Kochin on **July 26, 2019**.



*Final Year Students*



*3<sup>rd</sup> Year Students*

5. The 2<sup>nd</sup> year students went for Industrial Visit to VSSC (ISRO) and Trivandrum and Science and Technology Museum, Trivandrum on **July 26, 2019**.



*2<sup>nd</sup> Year Students*

## Electronics and Electrical Engineering

1. The Management, Principal, HOD and Staff members congratulated the toppers of all 3 years in the April-May 2019 Anna University Examinations.



*Hamitha Banu.M (7.84), Fathima Reenu.S (7.44),  
Selvapriya.T (7.44), Keerthana.B (7.4)*



*Sakthi Selvam (8.28), Karthika Deepa (7.76),  
Jenitta Rani (7.64)*



*Sherlon Renitta. A (7.54), Melsiya.J (7.50) and Pon Prabha. K (7.38)*

2. Our college management has recognized Mr. P. Rajvel Nagarajan Assistant Professor as best staff motivator for the students.



*Motivational Speech by Mr.P.Rajvel Nagarajan AP/EEE in Assembly Prayer*

- Vinston Vilkins of second year Electrical and Electronics Department was awarded with smiley batch by Mr.Thirumalai Rajan AP/English for his performance on a mock GD titled,"Waste Management"on 29.07.2019.



*Mr.Thirumalai Rajan presents smiley batch*

- Placement Training Programme was conducted by Mr. P. Rajvel Nagarajan Assistant Professor for the final year students Simulation Laboratory on **July 31, 2019**.



*Placement training programme by Mr.P.Rajvel Nagarajan*

### Mechanical Engineering

- Mr. R. Sidharthan. Head of the Department attended NPTEL workshop in Manonmiamm Sundaranar University on July 19, 2019.



- The Management, Principal, HOD and staff members congratulated the toppers of all 3 years in the April-May 2019 Anna University Examinations.



*S. Ganesan, P. Arivanatha Pandian and Abdul Rahuman form 2<sup>nd</sup> year*



*Surthin Kumar, Nandhni form 3<sup>rd</sup> year*



*Muthuraman, C. Alagumari Murugan and M. Mahendran from final year*

- On behalf of YRC, 3<sup>rd</sup> year and 2<sup>nd</sup> year students from Mechanical engineering department have gone to serve Zion Bethel Ophanage Home, VK Puthur on **July 28, 2019**.



*3<sup>rd</sup> year student's visit*

### Science and Humanities

- All five sections of first year students were taken to Amar Seva Sangam, Ayikudi from July 21 to 23, 2019. It is a not-for profit organisation and functions as rehabilitation centre for physically and mentally challenged people particularly children. The students interacted with PRO, teachers and physiotherapists and witnessed various training centres.



*Students from section A and B visiting ASS*



*Students watch a visual about ASS and its growth*



*PRO explains about ASS students' achievements*



*PRO explains the tailoring unit run by physically challenged seamster and seamstress*



*PRO explains the educational opportunities inside ASS*

# Teachers' Column

## SECURITY TIPS WHILE USING PUBLIC WI-FI

Free Wi-Fi facilities were available at various local and overseas public areas such as shopping malls, coffee shops, hotels, airports or government premises. The hackers, however, always set up cyber traps by compromising these facilities. Users should pay attention on the security risks when employing Wi-Fi services.

### Potential Security Risks

- Messages transmitted via Wi-Fi communications may be intercepted.
- The mobile device may connect to the Wi-Fi network setting up by the hackers. This may lead to leakage of account or personal information.
- The Wi-Fi facilities have been already compromised and deceive the users to click the links to fraudulent or malicious websites.

### Safety Tips

- Logout all systems at your mobile device before using Wi-Fi connection.
- All software, in particular the security application and browsers, should always be kept updated.
- Verify the selected network service set identifier (SSID). Do not use unknown or dubious Wi-Fi network.
- Employ encryption on the Wi-Fi communications, such as WPA2-PSK and AES. Avoid using the WEP and WPA encryption standard which were reported to be vulnerable.
- Avoid clicking any links from suspicious web page.
- Avoid logging in any web applications such as email or social networking sites. Do not conduct any online transactions or online banking services.
- Avoid handling personal or sensitive information when using public Wi-Fi
- Disable the auto-connected function at the mobile devices. Turn off the Wi-Fi at your mobile devices when not in use.
- Change your username or/and the password you have used on the public Wi-Fi when you return home or from another safe computer.

By,

Mr. N. Senthil Murugan, HOD/CSE

## CHARACTER EDUCATION

Bonjour to all the readers!

Good thoughts, Good motives, Good Aspiration and Good values always make up the whole day beautiful. Nevertheless being on the other side of the coin, it's the duty of us to always move with good benevolence of the life.

Been into lot of blogging of study materials in my core work, it is always the thirst that never stops into writing. And it is the sense of gratitude that I am giving back to those who taught me the language and the skills. A good teacher will be always remembered and I remember them in every work of mine. Being into the field of teaching, the passion to teach others always curves me in all aspects. And one such curve I feel that every teacher should have is "GIVING CHARACTER EDUCATION TO THE STUDENTS".

Character education is the learning process that enables the students to react back to the social emotional community bonding properly. It revolves around various aspects such as respect, justice, civic virtue, responsibility for self and others. Being into different departments of engineering, the core value is to behave human in the first place and carry the virtue of happiness in the second place. And this ensures always our education mode should have this as a vital part.

- Your Character is defined by what you do, not what you say or believe.
- Every choice you make helps to define the kind of person you are choosing to be.
- Good character requires doing the right thing, even when it is costly or risky.
- You don't have to take the worst behavior of others as a standard of comparison for yourself. You can choose the better than that.
- What you do matters, and one person can make a big difference. The payoff for having good character is that it makes you a better person and it makes the world a better place. Finally, "The Depth of your character is revealed in the way you respond to the situations you dislike."

By,

Mrs. A. Kavitha, AP/CSE

## SOME USEFUL WEBSITE FOR ENGINEERING STUDENTS

1. edx.org: free courses from top universities
2. quizlet.com: generates study tools
3. xmind.net: mind mapping tool
4. studyblue.com: generates learning tools
5. audible.com: audio version of books
6. instagrok.com: interactive concept maps
7. getpocket.com: stores articles for later viewing
8. ratemyprofessors.com: reviews of professors
9. ureddit.com: free courses on tons of subjects
10. unigo.com: college and scholarship matcher
11. koofers.com: reviews of courses and professors
12. stackexchange.com : collection of questions and answers
13. keepmeout.com: blocks distracting websites
14. sleepyti.me: uses the sciences of REM cycles to calculate the optimal time you should go to bed based on when you plan to wake up
15. lynda.com: a huge library of video courses mainly centered around computing and media production
16. instructables.com: how-to guides
17. studentrate.com: student deals and discounts
18. tomato-timer.com: productivity timer
19. hundredzeros.com: the site lets you download free kindle books
20. pdfescape.com: you can quickly edit PDFs in the browser itself

By,

Mrs. H. Pushpakalavalli, AP/CSE

## HOW CAN CONFIGURE WIRELESS BROADBAND ROUTER SECURELY?

### ➤ **User name and Password**

Change the default user name and password because they are often easily cracked by attackers. Some manufacturers might not allow you to change the username, but at least the password should be changed.

### ➤ **Broadcast Network Name (SSID)**

Disable SSID broadcasting or increase the "Beacon Interval" to the maximum.

### ➤ **Wireless Network Name or SSID**

Change the default SSID. The new SSID should not be named to reflect your name or other personal information, otherwise the information could aid an attacker in collecting reconnaissance data about you.

### ➤ **Encryption (WEP/WPA/WPA2)**

Whenever possible, WEP should be avoided. Instead, use WPA2/AES or WPA/AES if it is supported on the device.

### ➤ **Authentication Type (Open Authentication or Shared Key Authentication)**

The shared key mechanism should never be used. Instead, a stronger mutual authentication as defined in the 802.11i standard should be considered.

### ➤ **MAC Address Filtering**

Enabling MAC address filtering is recommended as another layer of protection.

### ➤ **Dynamic Host Configuration Protocol (DHCP)**

Disabling the DHCP feature, if possible, is recommended, as DHCP makes it easier for malicious attackers to access a wireless network.

By,

Mr. Nawin, AP/CSE

## ANIMATION JOURNEY : FROM 2D DRAWING TO PHOTOREALISTIC COMPUTER-ANIMATION

### *The Walt Disney Pictures production "The Lion King (2019 film)"*

The biggest and most obvious difference between the two versions of The Lion King is quite simply how the film looks. Whereas the original utilized the same 2D hand-drawn animation that Disney were known and loved for, The Lion King 2019 continues to push forward the same technology that Favreau used so well in 2016's The Jungle Book.



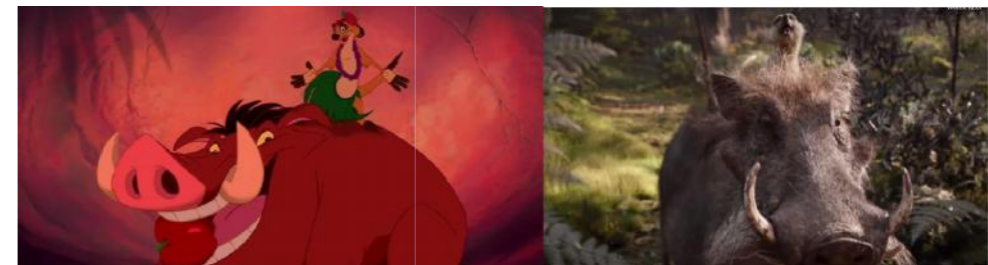
It's incredibly photorealistic, which changes the entire look of the film. In the original The Lion King, there's no getting away from the fact that you are watching a cartoon.

But in the so-called live-action remake of The Lion King, it all looks extremely real - at least, until the animals start talking and singing. This has its own drawbacks though, because, well, real animals don't talk and sing, and so it looks rather weird when they do. It also means you they portray the same facial expressions as with animation, which means the animals, despite looking so life-like, lose a lot of the character, energy, and emotion that brought the original The Lion King to life. In the original The Lion King, the songs are moments where the film bursts into life; they're colorful, fantastical creations where the animals sing and dance, the backgrounds changing and spotlights shining.



It's not just that the songs themselves are great, but that they mesh so perfectly with the animation, which allows the team to get more creative with its setting, while also still carrying the necessary emotion in songs. Directed and produced by Jon Favreau, said the virtual cinematography technology he used in The Jungle Book would be used to a greater degree in The Lion King. Although the media reported The Lion King to be a live-action film, it actually utilizes photorealistic computer-generated animation.

Disney also did not describe it as live-action, only stating it would follow the "technologically groundbreaking" approach of The Jungle Book. While the film acts as a remake of the 1994 animated film, Favreau was inspired by the Broadway adaptation of the film for certain aspects of the remake's plot, particularly Nala and Sarabi's roles. Favreau also aimed to develop his own take on the original film's story with what he said was "the spectacle of a BBC wildlife documentary".



The film utilizes "virtual-reality tools" that the filmmakers used motion capture and VR/AR technologies, with the production team combining VR technology with cameras in order to film the remake in a VR-simulated environment. Disney's President of Production, called the film's visual effects "a new form of filmmaking", and felt that "Historical definitions don't work", stating that "[it] uses some techniques that would traditionally be called animation, and other techniques that would traditionally be called live-action. It is an evolution of the technology Jon used in Jungle Book".



By,

Mr. M. Venkatram, AP/CSE

**RECENT TECHNICAL INNOVATION**  
**SOLAR CELLS USING 'KUMKUM DYE'- THIRD GENERATION**

Scientists at IIT Hyderabad have developed low-cost, environment-friendly solar cells by employing an off-the-shelf dye used to make kumkum or vermilion in India. The dye-sensitized solar cell (DSSC) is based on New Fuchsin (NF) dye with aqueous electrolyte and platinum-free counter electrodes, according to the research published in the **Solar Energy journal**. The most familiar solar cells today are made up of silicon and can be seen in the various overhead panels and other places. However, this technology is limited by huge fabrication costs as silicon processing is very expensive and involves very high temperature methods that leave a large carbon footprint. "It's cheap, non-toxic and is soluble in water and importantly does not degrade in the presence of water, Dye-sensitized solar cell (DSSC) is a third-generation thin-film organic molecule-based energy conversion device. DSSC consists of **three components**: A monolayer of dye molecule adsorbed on semiconductor material, titanium dioxide (TiO<sub>2</sub>) deposited on transparent conductive oxides, like indium tin oxide (ITO) and a liquid electrolyte with an excess of electrons. Sunlight is absorbed by the dye molecule and gets excited. The electrons from the excited dye molecule get injected into the conduction band of TiO<sub>2</sub>. The electrons are transported to the charge collector. The dye cation (after losing its electron) takes an electron from the surrounding electron-rich liquid electrolyte. The counter electrode, typically, is platinum-coated ITO. The best performing DSSCs use organic solvent-based liquid electrolytes. These liquid-electrolytes come with various drawbacks such as high vapour pressure, toxicity and sometimes explosives resulting in severe environmental impact in addition to being corrosive to the platinum counter-electrodes, thereby limiting long-time stability of the devices. The best device it showed a photo conversion efficiency of about three per cent which is among the best obtained with DSSC with other natural photosensitizers with a simple molecular structure. This technology using NF dye, researchers said, could be used to build integrating photovoltaic.

By,

Mr. P. Rajvel Nagarajan, AP/EEE

**SMART POLLUTION DETECTION AND TRACKING SYSTEM EMBEDDED WITH AWS**  
**IOT CLOUD**

Pollution has a major role in depleting air system. The health risks of air pollution are extremely serious. The Internet of Things (IoT) is the interconnection of uniquely identifiable embedded computing devices within the existing Internet infrastructure. The IoT concerns the connection of physical devices (cars, thermostats, smart phones, home lighting sensors, smart meters, etc.) to the Internet. There are more devices connected to the Internet than people on the planet, and the prediction is that there will be 50 billion IoT devices by 2020. In previous papers, to integrate sensors with cloud computing and IoT, other authors have opted for ZigBee hybrid network connected to a WiFi or Ethernet gateway. The main objectives of this paper are to implement IoT to measure the pollution of public transport using MQ7 Arduino which is sensitive for Carbon Monoxide. Global positioning system (GPS) is implemented in these arduino which would find the location of the transport vehicle. The amount of Carbon Monoxide emitted is sensed once in (say 20km) and also the locality of vehicle is used for finding the area which is polluted the most. These are then integrated to the Amazon Cloud IoT which is more securable and many services of AWS can be used along with it. This would enable a Simple Notification Service (SNS) to the mobile when the vehicle is causing higher level of pollutants.

**Keyword:** AWS IOT (Amazon Web Services Internet Of Things), GPS(Global Positioning System), SNS(Simple Notification Service), MQTT (Message Queue Telemetry Transport), IAM(Identity Access Management)

By,

Mr. A. Harivelayutham, AP/EEE

## RECENT INVENTIONS IN THE ELECTRICAL ENGINEERING INDUSTRY

### HIGH EFFICIENCY PHOTOVOLTAIC CELLS

One of the enduring challenges of modern electrical engineering is to find an implementation of photovoltaic technology that is efficient, effective under varying operating conditions, highly resistant to damage and not being cost-prohibitive. Perovskite-based cells have recently captured the most attention in major research facilities.

### GREEN ENERGY ELECTRICAL POWER CONVERTER

A new power converter developed in the department of Electrical Engineering at the University of Arkansas will now make it easier for user of renewable energy to shunt excess energy into the power grid. This has the potential to rooftop solar initiatives much easier and to further incentivize homeowners to pursue energy efficient technology.

### SMART ELECTRICAL GRIDS

As energy systems become more complex and energy sources become more diverse, smart grids are growing in importance worldwide. Smart grids integrate innovative electrical technology at multiple levels to improve flow control, detect malfunctions, and automate service delivery.

### EYE TRACKING TECHNOLOGY

As it has matured, eye tracking technology has grown into an important frontier in accessibility for the disabled, allowing technology access through eye movement. Sensitive electronic sensors are the basis of virtually all eye tracking.

### PERSONAL FLYING CARS

People – engineers and others – have been thinking about flying cars since The Jetsons. Now, a private U.S. firm called Terrafugia is tackling the engineering challenges necessary to deliver a personal flying craft that offers the control and safety required for regular civilian use. To create a commercially viable dual-use vehicle, Terrafugia has had to combine best practices in automotive technology and aeronautics.

By,

Ms. S. Aswathy, AP/EEE

## IMAGE SENSOR 2019

A digital image sensor is an integrate circuit used for measuring light intensity. Image sensors have become ubiquitous over the last decade , finding the way into phones, computers, digital cameras, and auto mobiles. Film has been made all but obsolete due to the advances in image sensor technology. The two key image sensor technologies are charge-coupled devices (CCD) and complementary metal – oxide – semiconductor (CMOS). Although they were both created a roughly the same time, CCD image dominated the market for many years due to superior image quality . As fabrication technology improved, CMOS imagers eventually became a viable option. Today, CMOS imagers dominate the low-cost consumer electronics space, whereas CCDs still provide exception image quality but at the cost of speed. There are several important image sensor specifications to consider. The number of pixels captured is typically given in megapixels. Pixel counts can range dramatically from sensor to sensor. Pixel size refers to the area on the sensor dedicated to each pixel. Larger pixel areas can receive more photons and therefore typically provide cleaner, less noisy image. Note that for a given sensor size, increasing the pixel count decreases pixel area and vice versa. Another important aspect of image sensors is how they capture color information: a single-chip sensor uses a Bayer filer to capture only red, green, or blue at each pixel. A three-chip camera captures RGB at every pixel.

By,

Mr. A. Sheik Sidthik, AP/EEE

## Stop Sleep Walking !!!

People, in general, live in three states or worlds.

1. Awaken state or material world
2. Dream state or virtual world
3. Deep sleep state or unknown world

A human with all senses is very active in **awaken state** or known world using all of them. With the association of mind, senses keep receiving, sending and storing pieces of information in the material world. In **dream state** or virtual world, all the stored data is retrieved in different permutation and combination according to the day time activities, felt through all sense organs at brain which is referred as dream. A human virtually lives in dream world created by his own content. In **deep sleep**, a person does not experience anything at all. It is almost a non-existent state.

All three worlds are different. A person should completely live in either material world or virtual world. That sense of completeness is missing with human!

As soon as a person wakes up from dream state or deep sleep state, he becomes conscious with active sense organs. Is it a completely awaken state? No, in dream state or world, he was using the past data to create a new world and lived happily or nightmarishly. Then, all external sense organs were completely at rest. Now, at awaken state or real world, he must come to real world completely and become conscious which is not happening.

The external sense organs aligned with their corresponding brain parts are supposed to receive, store and retrieve the data whenever they need. But, the reality is different. As soon as we open our eyes, thinking starts (unnecessarily) which is equal to living in dream world.

### *Thinking is nothing but dreaming.*

In awaken state, we live neither in real world or dream world completely. Being conscious or awakening means living without thinking or no-mind.

By,

R. Thirumalai Rajan, AP/S&H

## Students' Column

### Report on Visit to Amar Seva Sangam, Ayikudi

We, the first year students, started our journey to Amar Seva Sangam, Ayikudi from our college at 10.00 am on 22<sup>nd</sup> July 2019. We reached the place within 10 minutes of journey. When we are reaching the place, some of the students were playing in the ground. Among them, two students were handicap and they were sitting in the wheel-chair and watching the other students. Our madam asked us to stand in the line and we went inside the auditorium. There, they played a video about the services of Amar Seva Sangam. The video lasted about 10 minutes. That video contained the information about the history of Amar Seva Sangam and its founders and also about its facilities for the physically challenged people. After watching the video, we visited the orthopedic centre. In the orthopedic centre, they were making artificial legs, wheel-chairs, shoes for the physically challenged people. The Public Relation Officer explained that the artificial legs were weightless and it would be very useful for the physically challenged people.

After visiting the orthopedic centre, we visited the medical testing unit. There, they were giving treatment to the physically challenged people along with training to do their basic needs by themselves without the help of others. They were redeeming people from the blood sugar that was caused due to continuous bed rest. Total number of patients in this unit was 15 and almost 150 patients were in the wait list to get such treatment. These patients were admitted due to their spinal cord injury. While, we were visiting the next block, we saw two patients in the bed. They were recently affected by the spinal cord injury. And more wheel-chair persons were getting the training to fulfill their basic needs by their own. Most of the buildings in this Amar Sea Sangam were built by the donations received from other countries like China, Japan. And then, we visited the school for mentally retarded students. After visiting the school, the principal of that school talked to us about the school. She said that the children with 21 disorders were studying in that school. The disorders are like sickle cell anemia, down syndrome, albinism, etc. The members of staff working in this school are very calm and taking care of the students with kindness. There are hostel facilities for handicapped girls and trainers. Then, we visited the rehabilitation centre. There, the secretary of Amar Seva

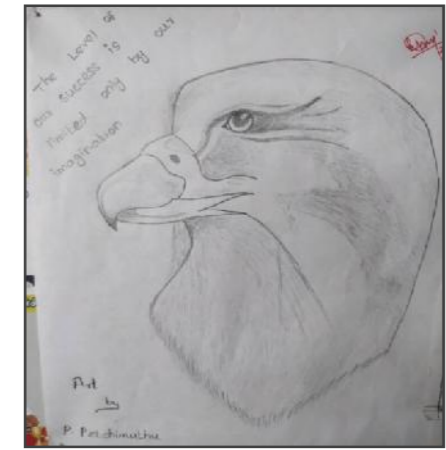
Sangam met us and explained again about the institution. He said that they were not giving only the treatment but also giving chances to the handicapped to study in colleges within Amar Seva Sangam campus. Along with this, they were training the handicapped to do handworks like making toys, tailoring, basketry, chalk making, job work, etc. and they were selling these things within the campus. At last, we visited the paper making industry. One special thing in this factory is that the persons working here are physically challenged. An industry from Coimbatore is donating 2 tons of paper per month to this organization for free of cost. They are making papers into notes & selling to the customers. In addition to these, they were offering typewriting courses for handicapped and also for normal people.

At last, our return journey was started to our college by 1.00 pm. The journey to this Amar Seva Sangam was an amazing experience. After visiting this place, our helping mentality has increased. Addition to all these things, they have an open account. If we want to see how our donations help the physically impaired they will give detailed information about that. For this reason, more countries are certainly offering the donations to this Amar Seva Sangam. The maximum fee for spinal cord treatment in this place is just Rs.1000-3000 per month. If you have a chance to visit this place then don't miss it.

By,

J. Anusha, S. Sudarmathi and N. Shanmuga Leela

1<sup>st</sup> Year Students

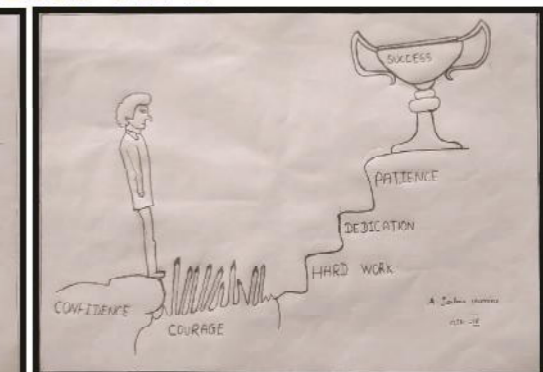


Arts by P. Petchimuthu, 3<sup>rd</sup> Year, CIVIL

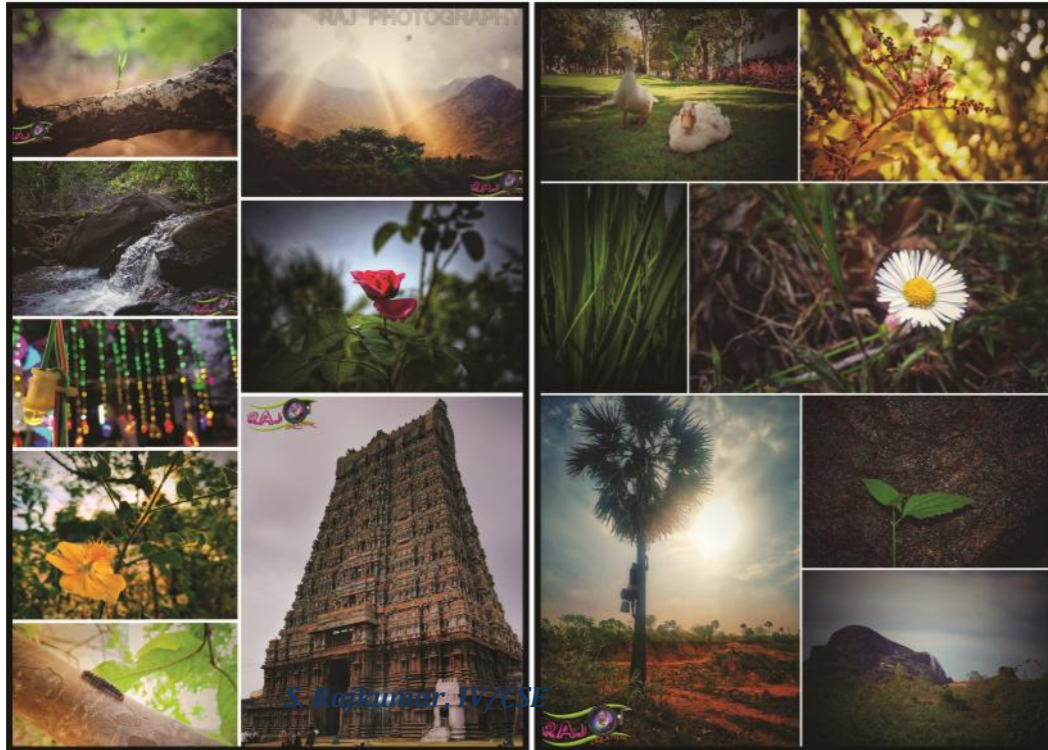


Art by Karthick Raja, 3<sup>rd</sup> Year, CIVIL

## Student Art



# Real Photo Capture in Camera



S. Rajkumar, IV/CSE



Art by Mr. S. Jabez Kiruba AP/EEE

# Student's Poem's & Drawing

**கவிதை**

நீ உதறத்தே வினாக்கெவ்வது  
 உதறத்தேயுள்ள...  
 மீறும்வது இன் அன்  
 உதறத்தேயுள்ள...!!!

உதறத்தேயுள்ள...  
 அன் அன்  
 மீறும்வது உதறத்தே...!!!

SURITHANMATHI  
 II-CSE

**கவிதை**

இன்பமும் துன்பமும் உதறத்தேயுள்ள...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...!!!

S. Usha Mathi  
 II-CSE

**WORLD SCENARIO**

By  
 T. Jyothi Lakshmi  
 [CSE-IV]

**கவிதை**

உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...!!!

S. Usha Mathi  
 II-CSE

**கவிதை**

உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...  
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 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...!!!

S. Usha Mathi  
 II-CSE

**கவிதை**

உதறத்தே...  
 உதறத்தே... உதறத்தே...  
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 உதறத்தே... உதறத்தே...  
 உதறத்தே... உதறத்தே...!!!

N. Mahesh Baban





Art by V.Chandralekha of II-EEE



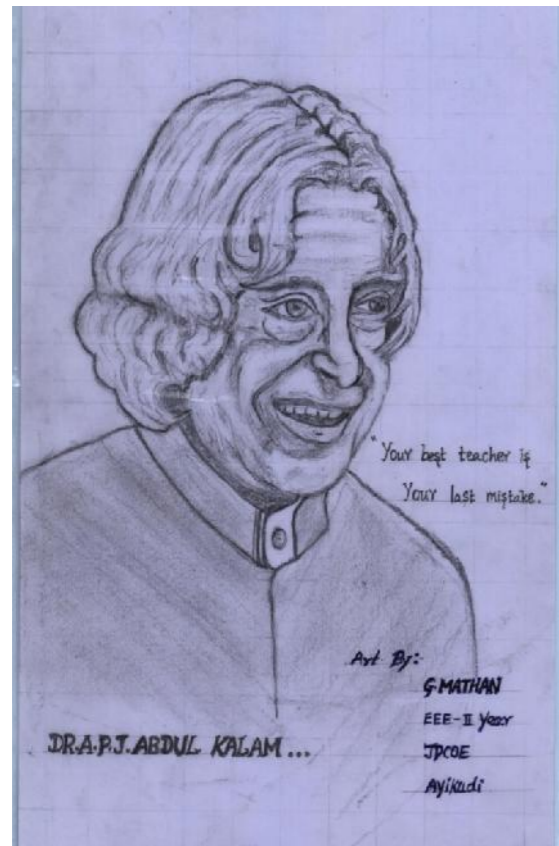
Art by S.Prabhathi of II-EEE



Art by Arjilin of III-EEE



Art by Manjula of III-EEE



Art by G. Mathan Kumar of II-EEE



Art by S. Fathima Reenu of II-EEE



Art by J. Melsiya of IV-EEE



Art by K.Pon Prabha of IV-EEE



Art by M. Maharaja of IV-EEE



Art by Lourdhu Austin of IV-EEE

நாய் மண்

4திய இந்தியா பிறந்தது  
 அலங்காரம் அங்கோ பறந்தது  
 மீனாண்டை காப்பாற்றாதான்  
 இங்கே! நீத்தேன் அங்கிருந்து  
 பாலைமலை சீண்டி காண்,  
 ஹைட்ரோ கார்பன் அங்கிருந்து  
 சோறு தருவாணை ஹந்தால்  
 தூ பரவாயில்லை  
 சோறு அப்படி உரும் அன்பதை  
 ஹந்தி அடாதீர்கள்

By,  
 P. Mathina  
 EEE - II year

Poem by P. Mathina of II-EEE

மாற்றம்

இன்று ராணையுடன் 4த்தகவலை வளத்தையோடு  
 விரிய மனமில்லாமல் சீரிய கிராமம்  
 இன்று தொழில்நுட்பமும் தயவுக் கிராமம்  
 கையாள்வின் கருவுகளை.....

A. SIVASAKTHI  
 EEE - IV

Poem by A. Sivasakthi of IV-EEE

Puzzles

By adding a number of plus sign and  
 minus sign between the digits on left side  
 123456789 = 100  
 How many different ways are there to make a  
 correct equation?

The are 11 different ways.

$123 - 45 - 67 + 89 = 100$   
 $183 + 4 - 5 + 67 - 89 = 100$   
 $123 - 4 - 5 - 6 - 7 + 8 - 9 = 100$   
 $123 - 45 - 67 + 89 = 100$   
 $12 + 3 + 4 + 5 - 6 - 7 + 89 = 100$   
 $12 + 3 - 4 + 5 + 67 + 8 + 9 = 100$   
 $12 - 3 - 4 - 5 + 6 + 7 + 89 = 100$   
 $1 + 23 - 4 + 56 + 7 + 8 + 9 = 100$   
 $1 + 23 - 4 + 5 + 6 + 78 - 9 = 100$   
 $1 + 2 + 34 - 5 + 67 - 8 + 9 = 100$   
 $1 + 2 + 3 - 4 + 5 + 6 + 78 + 9 = 100$

KALPANA G  
 EEE - IV

Riddles by G. Kalpana of IV-EEE



**If you fail, never give up because  
F.A.I.L means “First attempt in Learning”.  
End is not the end; in fact  
E.N.D Means “Effort Never Dies”.  
if you get No as an answer,  
remember N.O. means “Next Opportunity”.  
- Abdul Kalam**