# SYNCOM

# ECE Dept. NEWS LETTER

## VOICE OF ELECTRONIC AND COMMUNICATION ENGINEERING

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## Vision

Developing highly Qualitative, Technically Competent and Socially Responsible Engineers.

## Mission

To provide quality education in the domain of Electronics and Communication Engineering through

- Enriched curriculum for addressing the needs of Industry.
- Effective teaching learning processes through congenial environment.
- Gaining contemporary knowledge through research, development, curricular, co and extra-curricular.

## ECE Program Educational Objectives

Graduates of Electronics & Communication EngineeringShall

**PEO1:**Develop a strong background in basic science and mathematics and ability to use these tools in their chosen fields of specialization.

**PEO2:** Have the ability to demonstrate technical competence in the fields of electronics and communication engineering and develop solutions to the problems.

**PEO3:** Attain professional competence through life-long learning such as advanced degrees, professional registration, and other professional activities.

**PEO4:** Function effectively in a multi-disciplinary environment and individually, within a global, societal, and environmental context.

**PEO5**: Take individual responsibility and to work as a part of a team towards the fulfillment of both individual and organizational goals.

The institute is a symbol of egalitarian outlook without discretions. KITS student activity council is organized exclusively by students with representatives from various disciplines stands for the advocacy of democracy and leadership opportunities provided by the institute. KITS student clubs enable all the students and staff mingle freely to express their views and share their talents and expertise. **KITS imparts Outcome Based Education (OBE)** which gives equal opportunities to teaching and learning curricular, co-curricular and extra-curricular activities

# Independence Day

The 73rd Independence Day was celebrated in the college on 15th August 2019 to pay tributes and remember all the freedom fighters who had contributed a lot and fought for the Independence of India.

On 15 August, the Chairman **Sri Koyi Subba Rao Garu** hoists the Indian flag in the college campus. In his speech, the chairman Sir highlights the past year's achievements, raises important issues and calls for further development

Speaking at the gathering he said Independence Day of India is a National Festival, celebrated every year on 15th of August. It is a day of great significance for the people of India. On this day in 1947, India got freedom from the British rule after long years of slavery. It has been declared as the National and Gazetted Holiday throughout the country, to commemorate its independence from British Empire on 15th of August in 1947. It was not easy for the India to get freedom from the Britishers; however, our freedom fighters, political leaders and the people of India were determined to gain independence.

Finally they succeeded on August 15, 1947, when the complete Legislative powers were granted to the Indian Constituent Assembly. Many have sacrificed their lives in attaining the freedom for their future generations without worrying about their comfort, rest and freedom.

They planned and acted upon various Independence Movements including violent and nonviolent resistance to gain absolute freedom.

**VUTLA NAVYA (16JR1A04E2)** and **VELCHURI SRI LAKSHMI SUBHASHINI (16JR1A04D7)** selected for the Codevita. As you start a new career, I wish you good luck in your new job, may you continue to shine as you have always done. I wish you all the best in your new job, may it be the job you have always dreamed of. Enjoy the greener pastures!

A new routine, new life and new job! Congratulations on new job. Continue doing great and all the blessings will come your way. Congratulations **VISSAMSETTY NAGA VENKATA VISWA TEJA (16JR1A04H2)** on your new job! You really deserved it.

III year students participated in a workshop from 16th August to 19th August on "Applications of LAB VIEW Engineering" by **Mr. Jeejesh Kumar** and **Mr. Joel Jebraj** of VI Solutions,Bangalore **.**

LabVIEW is systems engineering software for applications that require test, measurement, and control with rapid access to hardware and data insights.

LabVIEW offers a graphical programming approach that helps you visualize every aspect of your application, including hardware configuration, measurement data, and debugging. This visualization makes it simple to integrate measurement hardware from any vendor, represent complex logic on the diagram, develop data analysis algorithms, and design custom engineering user interfaces.
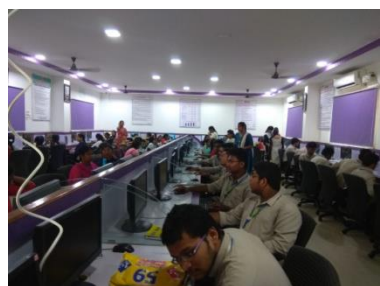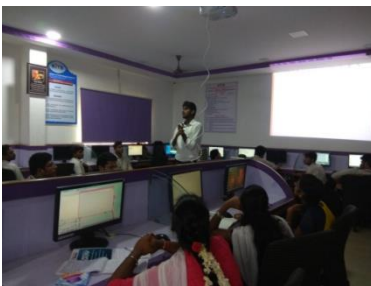


**Dataflow programming**

The programming paradigm used in LabVIEW, sometimes called G, is based on data availability. If there is enough data available

to a subVI or function, that subVI or function will execute. Execution flow is determined by the structure of a graphical block diagram (the Lab VIEW-source code) on which the programmer connects different function-nodes by drawing wires. These wires propagate variables and any node can execute as soon as all its input data become available. Since this might be the case for multiple nodes simultaneously, Lab VIEW can execute inherently in parallel. Multi-processing and multi-threading hardware is exploited automatically by the built-in scheduler, which multiplexes multiple OS threads over the nodes ready for execution.

## Graphical programming

LabVIEW integrates the creation of user interfaces (termed front panels) into the development cycle. LabVIEW programs-subroutines are termed virtual instruments (VIs). Each VI has three components: a block diagram, a front panel, and a connector pane. The last is used to represent the VI in the block diagrams of other, calling VIs. The front panel is built using controls and indicators. Controls are inputs: they allow a user to supply information to the VI. Indicators are outputs: they indicate, or display, the results based on the inputs given to the VI. The back panel, which is a block diagram, contains the graphical source code. All of the objects placed on the front panel will appear on the back panel as terminals. The back panel also contains structures and functions which perform operations on controls and supply data to indicators. The structures and functions are found on the Functions palette and can be placed on the back panel. Collectively controls, indicators, structures, and functions are referred to as nodes. Nodes are connected to one another using wires, e.g., two controls and an indicator can be wired to the addition function so that the indicator displays the sum of the two controls. Thus a virtual instrument can be run as either a program, with the front panel serving as a user interface, or, when dropped as a node onto the block diagram, the front panel defines the inputs and outputs for the node through the connector pane. This implies each VI can be easily tested before being embedded as a subroutine into a larger program.

## ARTICLE ON EDUCATION

Education is the systematic process of improving and enhancing the hidden skill inside us by which we develop capacity to change this world at social, political and economical level. Education is the medium by which we can not only improve our own life but also can establish a new world with lots of positive things that is highly required since many years.

Education is the systematic way of learning information or getting knowledge about any kind of existing living or non living things in this world. The famous president of South Africa Mr. Nelson Mandela has rightly made a sentence about the education that "Education is the most powerful weapon to change the world". We all somehow completely accept these wordings. Education can be the life changing element for us in all prospects like:

- In matter of making us earnable so that we can easily fulfil all the demand raised by our family members.
- Providing us knowledge regarding any such issue that we have imagined or listened somewhere.
- To make our kids manner full, gentle and decent in front of others.
- To change our own point of view regarding any social issue that has influenced many people of India with negative thoughts like child labour, male female discrimination, dowry system and many more.

### Importance of Education for Individual:

We cannot reserve the right of education for any individual group of people. The importance of education is same for all, especially for kids and better way.

Government has also focused on women and child education by launching many schemes in manner to provide them proper education. "Saakshar Bharat Mission for Female Literacy" is one of the latest schemes which are launched by Government to reduce the illiteracy rate of women in India. Many other schemes are launched by government time to time for increasing the literacy rate of children and women in India women, it is highly essential. In present time after seeing the situation of women in India, we can say that education is the best option for them by which they can improve their life in a

According to "Right to education act", it has been made compulsory for all children of age 6 to 14 years to get basic education from any authorized school. Mid day meal, scholarship, reservation, free books, free uniforms, etc are the some attractive programs launched by the government to provide education to more girls and poor children.

## Education in Rural Areas:

Though rate of education in rural areas has been increased in recent past years but still government could not get complete success in bringing education to those backward areas. Behind this failure many reasons can be counted, some of them are: lack of good teachers and lack of proper resources and awareness about education.

Schools in rural areas are still very few in count and sometime one school between two villages thus lack of accessibility is the another reason for low literacy rate in rural areas. Available private schools in rural areas are generally not preferred by poor people due to their expensive fees, uniform and other goods. Government has now become strict towards the education in rural areas too and applying many schemes for improving the poor situation of education over there.

## Conclusion:

We can surely say that education is the best saving for any particular person which he or she can use in their unstable time period of life. We have seen so many examples regarding advantages of education thus it should be fundamental right of each and every child in manner to provide them a life with health, wealth and financial security.

**By/- Ch.Naveena (II ECE-A)**

# A Battery less Sensor Chip for the Internet of Things

A prototype sensor saves power by using transistors that never fully turn "on."

The promise of the Internet of things is, in a sense, passivity. Our homes and offices will monitor us, and respond to our needs without instruction. But for tiny wireless sensors all over us and our things to really be feasible, we'll have to replace today's power-needy devices with more self-sufficient alternatives.
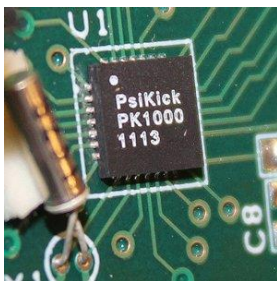
Low-power chip: PsiKick's first low-power chip runs on harvested energy. It includes only a subset of components that the company plans to incorporate on its first commercially available chip.

A new kind of ultra-low-power microchip design could help make this possible.

Normally, the transistors in circuits are either on, with current flowing through them, or off, with no current flowing through them, depending on whether their voltage supply is above or below a certain threshold value. In reality, though, a small amount of current leaks through most transistors even when they are technically switched off. For certain tasks, chips can be designed to take advantage of this phenomenon and use this current, dramatically reducing their need to switch to a more power-intensive "on" state.

A Virginia-based startup called PsiKick is developing one such microchip for simple sensing tasks. Depending on the application, it consumes between 1 and 0.1 percent of the power of comparable chips on the market, says PsiKick cofounder David Wentzloff.

Wentzloff and cofounder Benton Calhoun did their graduate work together in Anantha Chandrakasan's Energy-Efficient Circuits and

Systems lab at MIT. The two went on to become professors at the University of Michigan and the University of Virginia, respectively, but continued their collaboration. The startup plans to sell its first chips in 2015.



Wentzloff and Calhoun aren't the only ones developing what are known as "sub-threshold" microchips. Others exploring the concept include ARM Holdings, the British microchip company that licenses designs for many mobile processors, and IMEC, a microelectronic research center based in Belgium.

Requiring so little power means PsiKick's chip can function even with the small amounts of power that can be scavenged without using a battery. Wentzloff and Calhoun have tested their chip design in a wearable EKG monitor that runs entirely on body heat. Thanks to other energy-saving techniques, the device required 0.1 percent of the power consumed by a typical EKG monitor, Wentzloff says.

In the future, the energy could come from a small solar panel; an antenna that collects ambient radio wave energy; a thermoelectric material that absorbs body heat; or piezoelectric devices that collect energy from movement.

"If you can actually pull off designing devices that work off of harvesting energy, it opens up an incredible number of applications,"

*Ceze says. "It's pointing toward a trend that I think will be incredibly exciting."*

*By/- Maduguri Sudhir , Asst. Prof.*

The following III ECE students participated in the workshop - **"How to Crack GATE"** held on 30th June 2019 Organized by Lakshya GATE .

| S.No | Roll. No. | Name of the student |
|------|-----------|---------------------|
| 1 | 17JR1A0464 | KANCHETI JAHNAVI |
| 2 | 17JR1A0471 | KOTTAPALLI TEJA SREE |
| 3 | 17JR1A0477 | LINGISETTY LOURDU SASI REKHA |
| 4 | 17JR1A0490 | NALLAPU SAHITHI |
| 5 | 17JR1A0491 | NARNE POOJA SREE |
| 6 | 17JR1A0492 | NELAKUDITI LAKSHMI CHANDANA |
| 7 | 17JR1A0498 | GUNDAVARAPU VISHNUVARDHAN |
| 8 | 17JR1A0499 | GUNDU SAI VIPUL |
| 9 | 17JR1A04A1 | K.VENKATA VAMSI KRISHNA |
| 10 | 17JR1A04A3 | KANCHARLA RAJU |
| 11 | 17JR1A04B6 | MEKALA DHEERAJ KRISHNA |
| 12 | 17JR1A04B8 | MOHAMMED ASIF |
| 13 | 17JR1A04G5 | SANDU SURESH |

**Congratulations!!** to **DUDDUKURI JYOTHSNA (18JR1A0419)** won the first prize in **Essay writing** competition conducted by NSS in the college Campus.

**Congratulations!!** to **BURRA SUMA  (17JR1A0413)** won the second prize in **Essay writing** competition conducted by NSS in the college Campus.

**Congratulations!!** to **UPPALAPATI VAMSI (17JR1A04G7) & RAVULA JYOTHIR ADITHYA (18JR1A04F2)** won the second prize in **Quiz** competition conducted by NSS in the college Campus.

Congratulations to III Year Students **K.Greeshma-17JR1A0466, P.valli-17JR1A0495, M.Sirisha-17JR1A0480, B.Haritha-17JR1A0408, B.Lakshmi Deepthi-17JR1A0406, C.Jai ram-17JR1A0453, Ch.Sindhu-17JR1A0417, C.Baswanth Vignesh-17JR1A0448 D.Anitha-17JR1A0419, sreeja-17JR1A0421 and Sai chaitanya-17JR1A0437**

who's project was selected for National Startup Boot Camp organized by MHRD, India.

The title for their project was

## "Cutting Chillies And Protecting Them While Drying During Rain Fall Automatically"

For this project the problem is extracted from traditional agricultural methodologies. It is a problem faced by the farmers who grow chilly in their fields. As a solution of this problem we designed a prototype for cutting chillies and protecting them while drying from rain fall in an effective way. We are going to use a automatic covering device which is connected to a motor, micro controller & sensor which indicates rain fall and covers automatically.



**INNOVATION & UNIQUENESS:**
- This is very handy
- The cost of the our project is less when compared to others

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- It can be used by any one easily ,it does not need any extra knowledge about it

**GROUP PIC:**



**About National Startup Boot Camp :**

- They  are a global family of industry-focused programs.
- They  support early-stage tech founders to rapidly scale their companies by providing direct access to an international network of the most relevant mentors, partners, and investors in their industry.
- As each program focuses on an industry, they're able to provide an unmatched level of support to the startups selected into our programs.



సెప్టెంబర్‌లో జాతీయ స్టార్టప్ ప్రదర్శన

ఎంపికైన కిట్స్ విద్యార్థుల మిర్చి ప్రాజెక్టు

వట్టిచెరుకూరు, న్యూస్‌టుడే: కేంద్ర మానవ వనరుల మంత్రిత్వ శాఖ ఆధ్వర్యంలో దిల్లీలో సెప్టెంబర్ 9, 10, 11 తేదీలలో జరిగే జాతీయ స్టార్టప్ బూట్ క్యాంప్ ప్రదర్శనకు కిట్స్ ఇంజినీరింగ్ విద్యార్థులు రూపొందించిన ప్రాజెక్టు ఎంపికైంది. కళాశాల విద్యార్థిని దాసరి అనిత ఆధ్వర్యంలో విద్యార్థుల బృందం 'మిర్చి కట్టింగ్, రెయిన్ ప్రొటెక్షన్ కవర్ ప్రాజెక్టుకు రూపకల్పన చేశారు. మిరపకాయలను చేతులతో తాక కుండా కోయడం, పంటను కళ్లంలో ఆరబెట్టిన సమయంలో వర్షం పడితే ఆటోమెటిక్ టెక్పాల్ తీతో కవర్‌తో రక్షణ కల్పించడం ఈ ప్రాజెక్టు ప్రత్యేకత. హైదరాబాద్‌లో ఈనెల రెండో వారంలో జరిగిన స్టార్టప్ పోటీలో 28 రాష్ట్రాల

ఇంజినీరింగ్ కళాశాలల విద్యార్థులు తమ ప్రాజెక్టులతో పాల్గొన్నారు. అందులో ఆంధ్రప్రదేశ్ నుంచి కిట్స్ విద్యార్థులు తయారు చేసిన మిర్చి ప్రాజెక్టుకు ప్రశంసలు లభించడంతో పాటు, జాతీయ స్టార్టప్ బూట్ క్యాంప్ ప్రదర్శనలో పోటీపడే అవకాశాన్ని దక్కించుకుంది. ఈ నేపథ్యంలో బుధవారం వింజనంపాడులోని కిట్స్ ఇంజినీరింగ్ కళా లలో జరిగిన కార్యక్రమంలో అనిత బృందాన్ని

మిర్చి కట్టర్, ప్రొటెక్షన్ కవర్ ప్రాజెక్టు రూపొందించిన విద్యార్థులను అభినందిస్తున్న చైర్మన్ కోయి సుబ్బారావు

చైర్మన్ కోయిసుబ్బారావు, కార్యదర్శి కోయిశేఖర్, డైరెక్టర్ కె.హరిబాబు, ప్రిన్సిపల్ పి.బాబు, కంప్యూటర్ సైన్స్ ఆచార్యులు చిట్టిసేని ఆరుణ అభినందించారు.

**Faculty Corner**

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| **Dr.M. RamBabuNaik, Professor** submitted a "Three Days Workshop on Wireless Networking using Network Simulator-3 " to Science and Engineering Reasearch Board (SERB) with file number SSY/2019/000802 on 27th August 2019.. |
| **Dr.M. RamBabuNaik, Professor** submitted a Project Proposal on "Design and Implementation of Wireless Sensor Network in Precision Agriculture Applications" to CHORD (NSTMIS) |
| Mr.K.MuraliKrishna **Assitant Profesor** published a paper on **"Artifact Elimination in Impedance Cardiography Signals using Median Adaptive Algorithms**" in International *Journal of Engineering and Advanced Technology (IJEAT) ISSN:2249-8958, Vol.8, Issue.5, June 2019* |
| **Ms.Nuthalapati.Soniya, Assitant Profesor** published a paper on **"TEXT SENTIMENT ANALYSIS BASED ON CNNS AND SVM**" in International *Journal of Research - GRANTHAALAYAH*.Vol.7 (Iss.6): June 2019, ISSN- **2350-0530(O), ISSN- 2394-3629(P).** |
| **Mr. Mangipudi Venu, Assistant Professor** enrolled for Ph.D in Vel Tech University |
| **Mr.K.Mallikarjuna, Assistant Professor** enrolled for Ph.D in Vel Tech University |
| **Mr. G.V. Yashwanth, Assistant Professor** Published a paper on "**Artifact Elimination in EEG Signal Using Block and Sign Based Normalized Least Mean Square Techniques**" in International journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Vol.8, Issue.10, August 2019. |

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| **Mr.K.MuraliKrishna Assitant Profesor** published a paper on **"Adaptive Noise Cancellation Techniques for Impedance Cardiography Signal Analysis"** in International journal of Innovative Technology and Exploring Engineering (IJITEE) , *ISSN:2278-3075, Vol.8, Issue.9, July 2019* |
| **Mr.K.MuraliKrishna Assitant Profesor** published a paper on **"Artifact Elimination in Impedance Cardiography using Gradient Based Adaptive Signal Enhancement Techniques"** in International *Journal of Recent Technology and Engineering (IJRTE) ISSN:2277-3878, Vol.8, Issue.2, July 2019* |
| **Dr.M. RamBabuNaik, Professor** Attended for A national level Summer Faculty Development program  conducted by  An Initiative of Ministry of Electronics & IT, Govt. of India from 08th July to 15th July on "VLSI Chip Design hands on using open source EDA". |
| **Dr.M. RamBabuNaik, Professor** Attended for A Two week Faculty Development program  on "Emerging Trends and Research Challenges in Cyber Security Cryptanalysis and Cyber Physical System "conducted by  Chadalawada Ramanamma Engineering College, Tirupathi  from 10th June to 22nd June, 2019. |
| **Mrs.P.Sarala, Assistant Professor** published a book on "**Efficient Adaptive Antenna Steering using INLMS Algorithm**" (Smart Antenna) in Lambert Academic Publishing. |
| **Dr. Sk. Khamurudden, Assistant Professor** applied for a Intellectual Property India Patents to a Journal |