





## VISION

 *To become a reputed Department of learning in Electronics and Communication in research and transform the students in to professional engineers.*

## MISSION

 *To provide strong foundation in core electronics and communication engineering that will make students to explore advances in research for higher learning.*

 *To provide the learning ambience to nurture the young minds with theoretical and practical knowledge to produce employable and competent engineer.*

 *To imbibe moral values, professional ethics, team spirit and leadership qualities among students and faculties to contribute to the continuously evolving technologies.*

 *To inculcate empathy for societal needs and concern for environment in engineering research development and practices.*



# E-Sancharika

DEPARTMENT OF ECE NEWSLETTER

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***“THE SCIENCE OF TODAY IS THE  
TECHNOLOGY OF TOMORROW”  
- EDWARD TELLER***


**About The Department**

The ECE Department was established in 2011 with an intake of 120 students. Dr. N. Srinivasa Rao HOD ECE completed Ph.D in ELECTROMAGNETICS and he has 28 years of experience. The interested research area is DSP ANTENNAS EM FIELD THEORY. He was the CHAIRMAN for IEEE EDUCATION SOCIETY The department has excellent laboratories and well qualified faculty. The department trains the young engineers to cater to the technological needs of the nation.

**From HoD Desk**

The field of Electronics and Communication is being advanced at a very rapid rate. Mobile telephony and Personal Communication System have grown exponentially over the last one and half decade. In the coming years, we will be dealing with intelligent networks, smart electronic devices and advanced access techniques. Department emphasis on deeper understanding of fundamentals of electronics, communication, digital processing, computing, new protocols and access techniques that are essential both for teachers and students.

**New Staff Profile**

S.N	Faculty Name	Profile
1.		Mr. T. Siva Shankar Technical Assistant, mail ID: <a href="mailto:sivashankar3433@gmail.com">sivashankar3433@gmail.com</a>

**Students' Internships**

Mr. V. Kalyan, Mr. K. Sai Nikhil , Miss.Tejaswini and Miss. Chaturya 4<sup>th</sup> semester ECE have undergone internship from 25.06.2018 to 09.07.2018 at Powergrid 400KV substation Budidampadu(V), Kammam(D) , Telangana -507182

**Students' Professional Body Activities**

1. IEEE DAY CELEBRATIONS-TECHNICAL TALK ON "IOT EDGE ANALYTICS"
2. TECHNICAL TALK ON "RENEWABLE ENERGY SOURCES" BY IEEE-WIE

**Faculty Publications**

- 1.Conference publication by K. Ashok Kumar "Improvement of code utilization CDMA for onchip communication Architecture using orthogonal Gold code".
2. Dr. R. Prakash Rao, Dr. P. Hara Gopal Mani, K. Ashok Kumar and B. Indira Priyadarshini, "Implementation of the Standard Floating Point DWT using IEEE 754 Floating Point MAC", International Conference on Intelligent Communication Technologies and Virtual mobile Networks [ICICV 2019] to be held in Francis Xavier Engineering College, Tirunelveli from 14-15 February 2019 and published in **Springer Lecture Notes - Accepted.**

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**Editorial Team:**

*Faculty Co Ordinators:*  
 Dr. N.Srinivasa Rao -  
 Professor & Head, -*Editor*  
 Dr.R, Prakash Rao -*Co-Ordinator*  
 Mrs.A. Narmada - *Co-Ordinator*

*Student Co Ordinators:*  
 Mr. K. Pavan Kumar IV ECE  
 Mr. Ch. Harsha, IV ECE  
 Mr. M.Sai Kumar, IV ECE  
 Ms. Srinija, IV ECE  
 Mr. Akshit Alwala, IV ECE  
 Mr. Rohith, III ECE  
 Ms.K.V.Mriganaini, III ECE

### Students' Achievements

1. VINITA KOTLA bearing roll number 160814735061 achieved university 2<sup>nd</sup> Rank .
2. VADDEBOINA MOUNIKA bearing roll number 160814735001 achieved university 7<sup>th</sup> Rank
3. Department of ECE students participated in Abhiigyan2k18-Project. Out of 22 projects exposed, two projects namely "Audio Watermarking using Fibonacci series" by students namely (P. Akhil, P. Mayank, Y. Sai Kiran) won 1<sup>st</sup> prize and "Electronic watchdog using 555 Timer" by students namely (K. Ratha Sree:16-87, Shivani Jupudi:16-99, Ch. Tejaswini:16-88) won 2<sup>nd</sup> prize.
4. R .Kanya Kumari of ECE 4th year has selected in NCC Air-wing in 2nd year got eligibility for scholarship from the NCC Air-wing event on 25.09.18 which was held at secunderabad Bison Polo Grounds.

### Events Organized

- INDUSTRIAL VISIT TO GMRT-PUNE
- INDUSTRIAL VISIT TO KWALITY PHOTONICS
- Abhiigyan2k18-Project expo
- MoUs – M/S EDGATE TECHNOLOGIES BANGLORE. ISIE

### Product Development

Dr. Nookala. Srinivasa Rao Professor & HOD of ECE developed a PRODUCT called " SMART DUST BIN " in the month of November-2018.

### Award Received

Dr. Nookala. Srinivasa Rao Professor & HOD of ECE has received a best paper presentation award on 31-10-2018 by the Electronics & Telecommunication Engineering Division at 4<sup>th</sup> Annual Main Function held on 31<sup>st</sup> October, 2018 for the title "A Broadband Micro-Strip Antenna with Capacitive Coupling for C-Band Applications".

## **The Challenges and Benefits of Analog/Mixed-Signal and RF System Verification above the Transistor Level**

Mr. K. Pavan Kumar IV ECE

Today's on-chip Analog/Mixed-Signal and RF (A/RF) systems have reached a limit of size and complexity where transistor-level SPICE and FastSPICE simulation approaches cannot deliver a verification solution on time. Challenges include, of course, circuit size, but also the heterogeneous nature of the A/RF systems, their architectural complexity (e.g. modulation schemes, analog/digital mix, in-built configuration, calibration and compensation schemes), and demanding specifications (e.g. high Q, repeated sub-blocks). Such challenges can only be surmounted by moving to a level of abstraction above that of the transistor. We consider how this can be done in practice, while maintaining the level of simulation accuracy needed for A/RF verification. The benefits of this approach are illustrated with examples based on new tools that work at the Analog System Implementation (ASI) level of abstraction and which favor schematic, rather than language-based, descriptions of the A/RF system.

## **6 Major Challenges of Cloud Computing**

Mr. Kunda. Praveen  
Asst.Professor ,ECE Department

1. **Cost:** Cloud computing itself is affordable, but tuning the platform according to the company's needs can be expensive. Furthermore, the expense of transferring the data to public clouds can prove to be a problem for short-lived and small-scale projects. Companies can save some money on system maintenance, management, and acquisitions. But they also have to invest in additional bandwidth, and the absence of routine control in an infinitely scalable computing platform can increase costs.
2. **Service Provider Reliability:** The capacity and capability of a technical service provider are as important as price. The service provider must be available when you need them. The main concern should be the service provider's sustainability and reputation. Make sure you comprehend the techniques via which a provider observes its services and defends dependability claims.
3. **Downtime:** Downtime is a significant shortcoming of cloud technology. No seller can promise a platform that is free of possible downtime. Cloud technology makes small companies reliant on their connectivity, so companies with an untrustworthy internet connection probably want to think twice before adopting cloud computing.
4. **Password Security:** Industrious password supervision plays a vital role in cloud security. However, the more people you have accessing your cloud account, the less secure it is. Anybody aware of your passwords will be able to access the information you store there. Businesses should employ multi-factor authentication and make sure that passwords are protected and altered regularly, particularly when staff members leave. Access rights related to passwords and usernames should only be allocated to those who require them.
5. **Data privacy:** Sensitive and personal information that is kept in the cloud should be defined as being for internal use only, not to be shared with third parties. Businesses must have a plan to securely and efficiently manage the data they gather.
6. **Vendor lock-in:** Entering a cloud computing agreement is easier than leaving it. "Vendor lock-in" happens when altering providers is either excessively expensive or just not possible. It could be that the service is nonstandard or that there is no viable vendor substitute.