

ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES (Autonomous) :: RAJAMPET

AN EXCLUSIVE NEWS LETTER OF DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING  
FROM ANTRIX-ECE ASSOCIATION

Reach us at [www.aitsrajampet.ac.in/ecedept/index.htm](http://www.aitsrajampet.ac.in/ecedept/index.htm)

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**Antrix Newsletter** is an amalgamation of all the events held in the Department of Electronics & Communication Engineering, Annamacharya Institute of Technology & Sciences, Rajampet. This e-News letter is compiled by Antrix-ECE Association with the inputs of the Faculty and Students of the Department. It plays an instrumental role in providing a greater exposure of the achievements accomplished.



## VISION

To offer educational experiences those make the students globally competent, socially responsible and bring in answers to ever-ebbing problems in the field of Electronics & Communication Engineering.

## MISSION

To offer high quality premier education in the field of Electronics & Communication Engineering and to prepare students for professional career and higher studies. To promote excellence in technical research, collaborative activities and positive contributions to society

## Program Educational Objectives (PEOs)

- 1) Work efficiently as Electronics & Communication Engineers, including supportive and leadership roles on Multidisciplinary teams.
- 2) Communicate effectively, recognize and incorporate societal needs and constraints in their professional endeavors with high regard to legal and ethical responsibilities.
- 3) Develop attitude in lifelong learning, applying and adapting new ideas and technologies as their field evolves.

## PROGRAM OUTCOMES

*Students in the Electronic and Communication Engineering program should, at the time of their graduation, are in possession of:*

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## EVENTS ORGANISED

- One day online webinar on “SIW ANTENNAS FOR 5G APPLICATIONS” was conducted on 9th August 2021 by the dept. of ECE and in association with ANTRIX. In this guest lecture III B. Tech ECE students are participated. The resource person is Dr. Gunasekaran Thangavel, Program Director-Electronics & Telecommunication Engineering, University of Technology and Sciences, Muscat, Sultanate of Oman. Students are learned about the basic concepts of 5G vs 6G and it’s applications.
- This webinar provides a comprehensive study of 5G communications with the help of wide bandwidth antennas to be operated at high frequencies. This webinar was successful in teaching the improvement in higher frequencies using Substrate integrated waveguide (SIW) antennas with high gain and high radiation efficiency compared to microstrip antennas.



**ANNAMACHARYA INSTITUTE OF TECHNOLOGY & SCIENCES :: RAJAMPET (AUTONOMOUS)**  
Thallapaka Panchayat, New Boyanapalli-516126, Rajampet, Kadapa ( Dist.), Andhra Pradesh.  
(An AICTE Approved, JNTUA Ananthapuramu, A.P, affiliated & NAAC 'A' accredited Institution)  
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

Organizes an Online Webinar on  
**SIW ANTENNAS FOR 5G APPLICATIONS**  
Date: 9th August 2021 (Monday) Time: 10:30 A.M. to 12:00 P.M.

**LINK TO REGISTER :**  
<https://tinyurl.com/5ra4du68>

**No Registration Fee**

Last date for registration : 08/08/2021

**Chief Patrons:**  
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Sri. Dr. C. Ramachandra Reddy, Chairman, AET  
Sri. C. Yella Reddy, Vice Chairman, AET  
Sri. C. Abhishek Reddy, Executive Director, AET

**Dr. GUNASEKARAN THANGAVEL**  
Program Director - Electronics & Telecommunication Engineering,  
University of Technology and Applied Sciences,  
Muscat, Sultanate of Oman.  
(In India – on vacation)

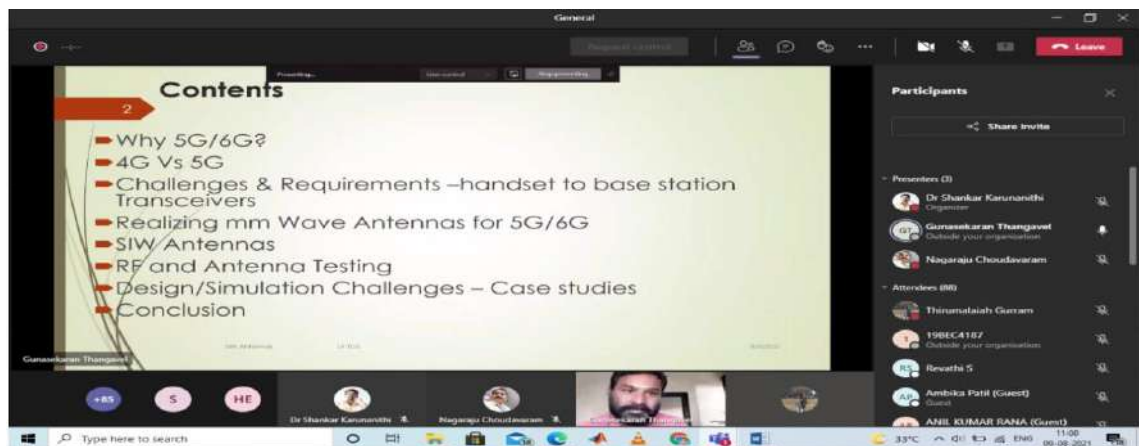
**Speaker**

**Patron:** Dr. S.M.V. Narayana, Principal, AITS:Rajampet  
**Convener:** Dr. CH. Nagaraju, Professor & HOD-ECE

**Program Coordinator(s):**  
Dr. K. Shankar, Assoc. Professor, ECE  
Mr. G. Thirumalaiah, Asst. Professor, ECE

**Organizing Committee:**  
Faculty members of ECE

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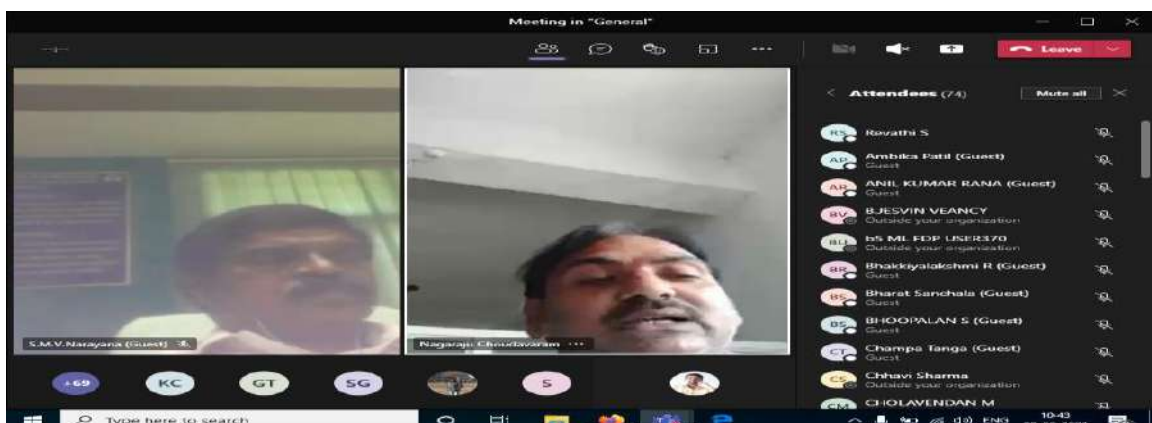


**Contents**

- Why 5G/6G?
- 4G Vs 5G
- Challenges & Requirements –handset to base station Transceivers
- Realizing mm Wave Antennas for 5G/6G
- SIW Antennas
- RF and Antenna Testing
- Design/Simulation Challenges – Case studies
- Conclusion

Participants:

- Dr Shankar Karunanithi (Organizer)
- Gunasekaran Thangavel (Outside your organization)
- Nagaraju Choudhvaran (Outside your organization)
- Thirumalaiah Guntam (Attendee)
- 198EC41E7 (Attendee)
- Rovathi S (Attendee)
- Ambika Patil (Guest)
- ANIL KUMAR RANA (Guest)



Meeting in "General"

Attendees (7/4)

- Rovathi S
- Ambika Patil (Guest)
- ANIL KUMAR RANA (Guest)
- B.JESVIN VEANCY (Outside your organization)
- b% ML FDP LICER170 (Outside your organization)
- Bhaktiyalakshmi R (Guest)
- Bharat Sanchala (Guest)
- BHOOWLAN S (Guest)
- Champa Tariga (Guest)
- Chhavi Sharma (Outside your organization)
- CHOLAVENDAN M

- A Online National Conference on **SUSTAINABLE ELECTRONICS AND APPLICATIONS-2021**” (NCSEA-21) was conducted on 21/08/2021, by the department of ECE. Chief guest and speaker of this event was Mr D.Srinivasula Reddy, scientist-D, DRDO, Hyderabad. In this online conference, 26 papers are presented by various engineering college students and this conference speaker was given a key note about the conference and at the end of the program, the general chair person of the conference Dr. B. Abdul Rahim addressed to the participants in the function.
- The overall conference provides an overview of combine fundamental material scientific research with innovative material and design concepts for micro- and nanoelectromechanical systems (MEMS/NEMS) to build sustainable electronics. This also discussed the role of sustainable electronics promoting treatment, recycling chain. This workshop emphasized more on resource and recycle efficiency to improve reparability, extend product life and use of secondary raw materials



**ANNAMACHARYA**  
**INSTITUTE OF TECHNOLOGY & SCIENCES**  
(An Autonomous Institution)  
Approved by AICTE, New Delhi & Affiliated to JNTU University, Anantapur, Anantapuramu.  
New Boyanapalli, Rajampet, Kadapa (DT),  
Andhra Pradesh, India – 516126  
[www.aitsrajampet.ac.in](http://www.aitsrajampet.ac.in)



**National Conference on Sustainable Electronics and Applications (NCSEA-2021)**  
21<sup>st</sup> August 2021

**Chief Patrons**  
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Sri. C. Yella Reddy, Vice Chairman, AET  
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Mr. M. Ravi Kishore, Assistant Professor- ECE  
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Mr. G. Sudha Kiran, Assistant Professor- ECE  
Mr. Y. Pavan Kumar Reddy, Asst. Professor- ECE  
Mrs. B. Prashanthi, Assistant Professor- ECE  
Mr. S. Javed Basha, Assistant Professor- ECE  
Mr. K. Giridhar Chaitanya, Asst. Professor- ECE

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Mr. S. Nazeeq Hossain, Assistant Professor- ECE  
Miss. V. Sai Anusha, Assistant Professor- ECE  
Mrs.J. Hima Bindhu, Assistant Professor- ECE  
Mr. N Naveen Kumar Raju, Asst. Professor- ECE

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Dr. K. Prasanna, HOD- AI & DS, AITSR  
Dr. M. Rudra Kumar, HOD- CSE, AITSR  
Dr. P. Subramanyam, HOD- MBA, AITSR  
Dr. Madan Kumar Reddy – HOD-MCA-AITSR  
Dr. B. Bala Nagendra Prasad, HOD- H&S, AITSR

**About the college**  
Annamacharya Institute of Technology & Sciences, Rajampet is an **AUTONOMOUS** institution and is affiliated to JNTUA, Anantapuramu. The institute was started in the year 1998 under the auspices of Annamacharya Educational Trust in picturesque surrounding on a spacious 30 acre campus near Tallapaka, the birth place of Annamacharya, the renowned saint poet. The institute is established by Annamacharya Educational Trust (AET) which has vast experience in running technical institutions at RAJAMPET, TIRUPATI, KADAPA, & HYDERABAD.

**About ECE Department**  
The ECE department was started in the year 1998 with an intake of 40 and it is increased to 240 subsequently. The Department has well Qualified & Experienced faculty. The Department is actively involved in conducting Conferences, Symposia & Workshops. The Department is having MOU with Industries like Emware Technologies, Hyderabad to improve the students stands and make them industry ready. The Department has well equipped labs, which meet the standards specified by the AICTE & JNTUA Anantapuramu. The Department is motivated not only by its alumni and philanthropist but also guests from academia & Industry.

**About the Conference**  
The aim of National conference is to provide a platform to enthusiasts to share their knowledge & experiences on Sustainable Electronics and applications. The Primary objective of the conference is to bring together the experts from academic institutions, industries and research organizations in the areas of Electronics and Communication Engineering. The conference facilitates fruitful interaction among members for exchange of views and dissemination of knowledge. Keynote Speaker from Industry and Academia are arranged to know the latest advancements in the field of Sustainable Electronics.

**Call for Papers**  
Conference chiefly covers following topics **but not limited to:**

- Micro Electronics and VLSI System Design
- Embedded Systems
- Digital System Design
- Automotive Electronics
- Advanced Computer System & Modeling
- Bio Informatics
- Mobile Computing
- Signal Processing & applications
- Image processing
- Digital & data Communications
- Information Coding Techniques
- Satellite & ndaz Communications
- Adhoc & Wireless Networks
- Network security & Cryptography
- Neural Networks & Fuzzy systems

**About the Location & Route Map**  
The institute is located on Chennai – Mumbai highway, 54 Km from Kadapa(C) & 90 Km from Tirupati (A) and housed in a sprawling, lush green well-planned, 30 Acre campus near Tallapaka, the birth place of Panda-kavita Pundarika of Telugu Literature, Annamacharya in a serene atmosphere far away from din and clutter of the concrete jungle and conducive for education. Tallapaka village which is in Rajampet (B) mandal of Kadapa district is worth visiting with sacred monuments like Annamacharya Dhyanamandiram, Siddheswaraswamy Temple, chennakeswaraswamy Temple and Sudarshana Chakra Devasthanam.



**Organized by**  
**Department of Electronics & Communication Engineering**

**A.I.T.S. RAJAMPET**

**ENGINEERING**

**In Technical Collaboration with Professional Bodies (IEEE SB, ISTE SBand IEI SB)**  
Sponsored by  
**Annamacharya Educational Trust (AET)**

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**GUIDELINES TO AUTHORS:**  
Papers should be strictly confined to the Conference format, limited to 6 pages and submitted to [ncsea21@gmail.com](mailto:ncsea21@gmail.com) in MS Word (.doc) format. All accepted papers will appear in the proceedings with ISBN No.

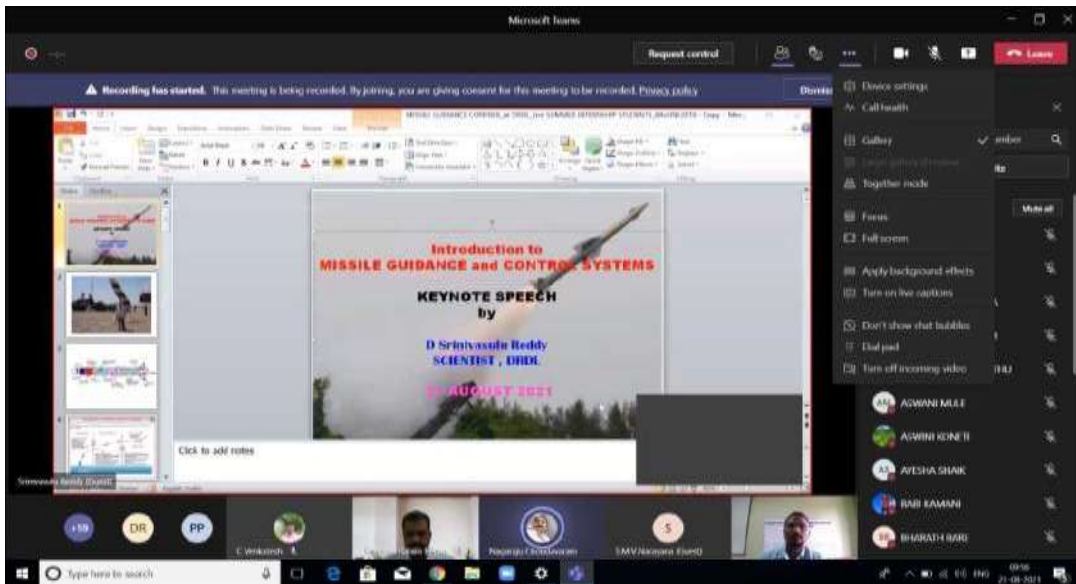
**NO REGISTRATION FEES**

Registration form and Conference Template can be downloaded from Institute Website. ([www.aitsrajampet.ac.in](http://www.aitsrajampet.ac.in))

**IMPORTANT DATES:**

Submission of full paper	8 <sup>th</sup> August 2021
Intimation of the acceptance	14 <sup>th</sup> August 2021
Final Camera Ready Paper & Registration	17 <sup>th</sup> August 2021

**For further details contact:**  
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- One-week online certificate program on **“OPEN POWER RISC ARCHITECTURE”** was conducted from October 18<sup>th</sup> to 29<sup>th</sup> march 2021 by the department of ECE. In this online certificate programme, faculty members and students are participated and the resource person was Dr. Sangeetha Singh and Dr. Pankaj Kumar NIT, Patna. In this connection resource person explained about processor, data design, arithmetic circuit design and its applications.
- This certificate program provides the current landscape of Moore’s law and Dennard’s scaling end for processor architecture. This event provides overall High-Performance Computing with the help of OPEN RISC architecture which is rapidly evolving toward high-throughput architectures with specialized hardware for vectors and tensor operations. In this program, each lectures explained a set of building blocks for open power RISC using theory and experimental methods. Also, An Open Hardware CPU written in VHDL, synthesized with Open-Source tools were explored.



- NATIONAL LEVEL TECHNICAL SYMPOSIUM ATM-21 was organized by department of ECE in online mode on 27<sup>th</sup> October 2021. Dr. N. Balaji Professor, ECE Department, JNTUK was the chief guest for inaugural function and Dr. S.M.V Narayana ,Principal, AITS and all the head of the departments were graced the function in online mode.

we received papers from different parts of India, among the received papers were categorized into different domains. The papers were peer reviewed by the technical committee members and 25 papers are selected by the team members.

The Department of ECE played host to a wide array of paper presentations, lectures from leading faculty personnel, symposium on cutting-edge technologies and advances in electronics and communication engineering at its annual national-level student technical symposium. The event also provided a platform for budding electronics and communication engineers to showcase their talents.



### **Antrix- ECE Association Events:**

- **Anthyakshari Competition** was conducted for 1<sup>st</sup>,2<sup>nd</sup> ,3<sup>rd</sup>, 4<sup>th</sup> year students of ECE department on 4<sup>th</sup> November 2021 by ANTRIX ECE Association.
- **Tug of War Competition** was conducted for 1<sup>st</sup>,2<sup>nd</sup> ,3<sup>rd</sup>, 4<sup>th</sup> year students of ECE department on 24<sup>th</sup> November 2021 by ANTRIX ECE Association.
- **Elocution Competition"** was conducted for 2nd, 3rd year students of ECE department on 13<sup>th</sup> December 2021 by ANTRIX ECE Association.
- Elocution competition was focused to improve technical skill along with communication skill focusing on gestures, vocabulary, emphasis, voice modulation, oratory skill, diction, accent and posture to increase the effectiveness of the speech to describe the topics. Based on the above skills, participants are evaluated and given awards.
- Students presented their topics interestingly to the audience



### **Editorial Team**

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Dr.Ch. Nagaraju  
Professor & HOD

#### **Guest Editor**

Mr. B. Abdul Rahim  
Mr. Fahimuddin. Shaik

#### **Editors**

Ms. V Sai Anusha  
Mrs. S Fayaz Begum