

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING (ECE)

VISION OF THE INSTITUTE

To be a unique Institution that enables students to become contributing Humans towards technology, business and sustainability of natural world.

MISSION OF THE INSTITUTE

Our mission is to facilitate students with harmonious teaching and experiential learning by integrating industrial and societal needs with curriculum, providing requisite infrastructure facilities and imbibing ethical values.

ABOUT THE DEPARTMENT:

Electronics and communication engineering synthesizes science, mathematics, technology, and application-oriented designs into world-class consumer products, timely microprocessors, state-of-the-art computers, advanced electronic components, and much more. From cutting-edge technology revolutions to real life applications, the innovations of electrical engineers continue to lead the future and elevate the standards in the marketplace. With a shortage of electrical engineering talent in the job market, the demand for graduates with an electrical engineering degree remains at an all-time high.

VISION:

- To be a centre for Excellence in Electronics and Communication Engineering by fostering professional competence with ethical values

MISSION:

- To embrace innovative teaching and learning methodologies that lead to the self-improvement of students.
- To embed contemporary technical knowledge and problem-solving skills in core and allied field by having collaboration with industry.
- To enhance the competency of students to meet the challenges posed in industry on employment through research and innovative ideas.
- To enlighten our students with ethical, human values and leadership.



SRJET – ECE NEWSLETTER

BRNJCKA- January-June 2022

SRIET Profile:

Sri Ranganathar Institute of Engineering and Technology (SRIET) came into existence in 2011, out of an ardent desire of Dr. V. Narayanasamy to contribute manifold to the society that nurtured him. SRIET is an Innovative Educational Institution where the curiosity, creativity and intellectual joy of students all drive to academic excellence. Our Institution provides complex problem-solving skill and imbibes service to the public good. SRIET is defined by strong association and working in ways that excel in traditional boundaries.

LIST OF CONTENT:

- Journals Publication (National/International)
- Conference Presented (National/International)
- Books Publication
- Programmes Organized
- Seminar/Workshop Attended
- FDP/STTP Attended
- Proposals submitted
- Extension Activity
- Interaction with outside world
- Student's Achievements



Journals Publication (National/International)

- Dr.M.Meenakumari published journal on “FPGA based Implementation of Lossless ECG compression for Low power Devices in VLSI systems”, on May 2022 (Accepted for Publication) in Scopus Indexed.
- Published Journal in FPGA based Implementation of Lossless ECG Compression for Low Power Devices in VLSI systems in IOP Journal of physics Conference series (ISSN: 1742-6588)(Accepted for publication) by Dr. M.M.Meenakumari.
- Published Journal in Optimized spectrum Sharing Scheme for 5G Networks in Computational Intelligence and Neuro Science by P.Jeyabharathi.

Conference Presented (National/International)

- Dr.M.Meenakumari presented International conference in Wireless Gesture Controlled Robot for Disabled and Elderly people in Conference on Emerging Trends in Information and Communication Technologies - ETICT 2022, at Sethu institute of Technology, Kariapatti TK. From 28.05.2022 to 29.05.2022.
- S.Pavithra presented National conference in Intelligent Shopping Cart in “Recent Advancement in science, Engineering and Technologies” at Banari Amman Institute of Technology from 13.05.2022 to 14.05.2022.
- P.Dhilipkumar presented International conference in Solar Floor Cleaner Robot in “Intellectual Research in Science Engineering and Management” at St.Joseph College of Engineering and Technology on 28.05.2022.
- A.Periyanan presented International Conference on Evolutions in Intelligent computing and computer communication Engineering (ICEICCCE-2022) in Design and Development of unmanned aerial vehicle (drone) for real time applications at Solamalai Engineering College on 26.05.2022.
- P.Jeyabharathi presented International Conference on IOT Assisted Segregation and Monitoring Waste for Smart Cities in Conference on Evolutions in Intelligent computing and computer communication Engineering (ICEICCCE-2022) in Design and Development of unmanned aerial vehicle (drone) for real time applications at Solamalai Engineering College on 26.05.2022.



- J.R.Nishanth presented International conference in Smart Energy Powered Robot for Defence Application in International Conference on Technological Advancements in Computers and Communications 2022 at Adhiparasakthi Engineering College, Kanchipuram on 30.05.2022.
- V.R.Mani presented International conference in Smart Bike using IOT International Conference on Evolutions in Intelligent computing and computer communication Engineering (ICEICCCE-2022) at Solamalai Engineering College on 26.05.2022.
- D.Silambarasan presented International conference in Smart assistance for Isolated covid patients using Medicine Dispense in International Conference on Emerging Trends in Information and Communication Technologies - ETICT 2022 at Sethu institute of Technology, Kariapatti TK on 28.5.22-29.5.22

Seminar/Workshop Attended details:

- Attended 5 Days Online Workshop on Internet of Things and its Applications from 23-08-2021 to 27-08-2021 at CARE COLLEGE OF ENGINEERING
- Attended National workshop on “Recent Trends in Radar Signal Processing” from 03.01.2022 to 05.01.2022 at Gayatri Vidya Parishad College of Engineering For Women.
- Attended 5 Days Online Workshop on “Impact of Digital Pedagogy in Professional Development of Engineering Teachers”, from 21.01.2022 to 28.01.2022 at Sai Ram Institute of Technology.
- Attended Webinar on “Advanced Antennas Design for 5G MIMO with CST Studio Suite & Antenna Magus”, on 24.01.2022 at Kongu Engineering College, Perundurai.
- Attended one week Seminar on “Refresher course on Intelligent Decision support systems using Machine Learning Techniques”, from 02.02.2022 to 08.02.2022 at KCT College of Technology.
- Attended seminar on “Science Academies Virtual Lecture Workshop on Mathematical Biology”, from 25.02.2022 to 26.02.2022 at Kumaraguru College of Technology.
- Attended Webinar on Personal Finance support and Wealth Creation Startups on 09-03-2022 at GMR Institute Of Technology & Sri Sairam Institute Of Technology



- Attended Webinar on Financial strategies and innovative approaches during post Covid Era- Indian Perspective on 01-04-2022 at Jawaharlal Nehru Technological University.
- Attended workshop on Intellectual Property Rights and IP Management for Startups” on 24.05.2022 at P. R. Pote (Patil) College of Engineering & Management, Amravati , Sethu institute of Technology,Kariapatti TK.
- Attended Webinar on Atmanirbhar Bharat: Need of the hour for reviving as Self-Reliant India amid the Pandemic Covid from 19-09-2022 to 20.09.2022 at SRM Institute of Science and Technology.

FDP/STTP Attended

- Attended 5 days FDP on Research Ideas in Image Processing and Communication from 27.12.2022 to 01.01.2022 at Siddartha Institute of Science and Technology, Pittur, Andra Pradesh
- Attended STTP on Outcome based teaching Assesments and Evaluation from 02-08-21 to 04-08-21 at Singhad school of Engineering Pune
- Attended 5 days STTP on Block chain for digital Transformation from 12-08-21 to 16-08-21 at Chaitanya Bharathi Institute of technology
- Two Days online Faculty Development Program on National Education Policy 2020 from 26-08-2021 to 27-08-2021 at NEHRU INSTITUTE OF ENGINEERING & TECHNOLOGY
- Attended FDP on “Research Capabilities in FOG and Edge Computing”, from 14.02.2022 to 18.02.2022 at Sri Sairam Institute of Technology.
- Attended FDP on “Applications of Deep Learning Techniques in 5G Wireless Communication Technologies”, from 08.02.2022 to 12.02.2022 at Vel Tech Rangarajan and Dr. Sagunthala R & D Institute of Science and Technology, Chennai.
- Attended FDP on Block Chain and its Applications from 07.03.2022-11.03.2022 at Presidency University
- Attended FDP on Distrubtive Technology in Communication from 30-03-2022 to 31-03-2022 at Sri Sairam Institute of Technology



- Attended FDP on Recent Pedagogy in Teaching and Research from 09.05.2022-11.05.2022 at Dr.M.G.R Educational and Research Institute.
- Attended FDP on Research Methodology from 02-05-2022 to 07-05-2022 at Kamla Nehru Mahavidyalaya, Nagpur.

PROGRAMS ORGANISED

- Signed MOU with IPCS Global Solutions Pvt Limited on 07.01.2022
- Dr.M.Meenakumari Organised National level Quiz on Basic Electronics for 162 participants.
- Dr.M.Meenakumari Organised webinar on Design Thinking Practitioner Concept by Chief guest v Dr.P.Gnasundari Prof/ECE, SNSCE
- Department of ECEC conducted one day Seminar on Custom IC design using Cadence EDA on 09.04.2022 by resource person Mr.S.Parthipan, ASIC Layout Designer, Synaptics, Bangalore.
- Department of ECEC conducted Guest lecture on Importance of GATE 2022 on 03.05.2022 by resource person Mr. S. Sivakumar, Managing Director, Gate Forum, Trichy.
- Department of ECEC conducted Seminar on LI-FI Technology on 16.02.2022 by resource person Mr.B.Dhamodaran, Associate Professor, Sri Eshwar College of Engineering, Coimbatore.
- Department of ECEC conducted Seminar on Artificial Intelligence in Substation Control on 03.06.2022 by resource person Mr.S. Parthipan ASIC Design Engineer, Synaptics, Bangalore.

Extension Activity

- Guest Lecture on Digital Image Processing at Sri Ranganathar Polytechnic College on 04.05.2022
- Guest Lecture on on Role of Artificial Intelligence in Medical Field at St.Joseph College of Engineering and Technology on 26.05.2022.



The Following NPTEL Courses are registered

- Embedded Sysytem Design
- Bio Medical Signal Processing
- Discrete Time Signal Processing
- Electromagnetic fields in 3D

Student's Achievements

Internship Details

S. No	Duration	Name of the Company	Name of the Student	Area of training
1	05/01/22 to 5/03/2022	Worksbot	Deepika.J	Embedded Systems
2			Divya Bharathi	
3			Janani.V	
4			Logeshwari.L	
5			Nanthini.N	
6			Ranjthi.C	
7			Prathap.A	
8			Sasikala.K	
9			Swetha.S	
10			Tamilselvi.K	
11			Varshini.P	

Placement Details

S.no.	Name of the student placed	Name of the Employer
1.	Brintha A	Future General Total Insurance
2.	Deepika J	Worksbot Application
3.	Divya Bharathi S	
4.	Srinidhi R	
5.	Divya M	
6.	Gopinath N	
7.	Logeshwari L	
8.	Praveen M	
9.	Ranjith C	
10.	Swetha R	
11.	Tamilselvi K	
12.	Thenmozhi E	



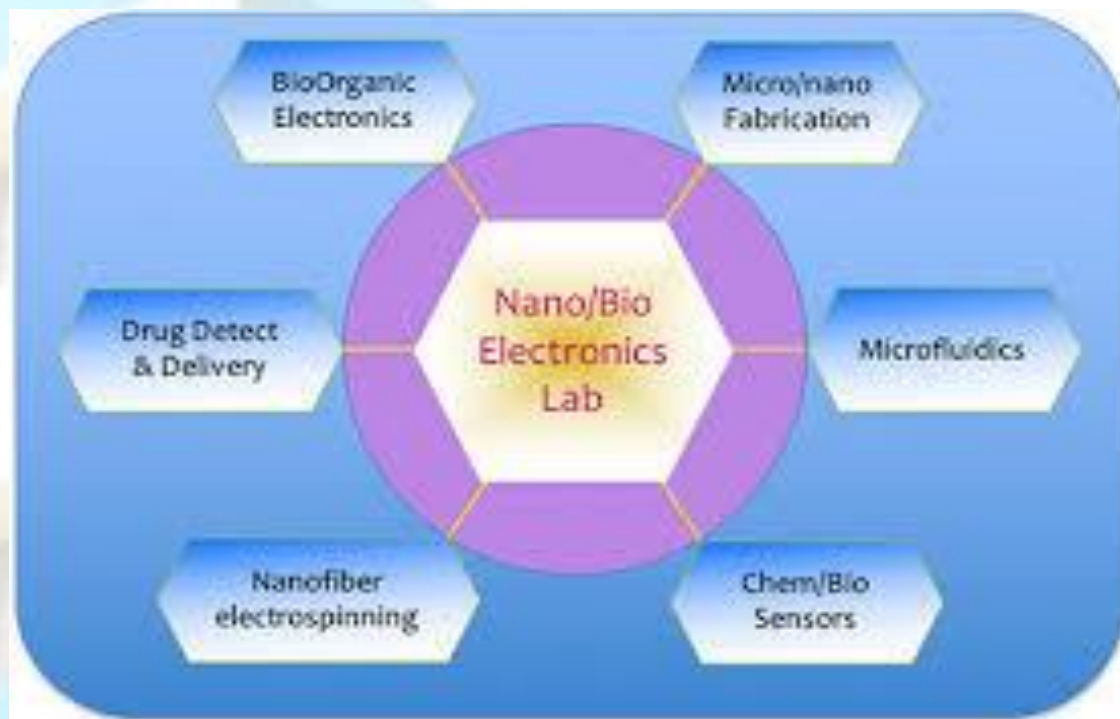
13.	Raseethanwer M	
14.	Sangeetha S	
15.	Janani V (07-01-2001)	Ss Systems
16.	Keerthana R	Solution Champs Technologies
17.	Reshma S	
18.	Nanthini N	Prompt Personal
19.	Nithya M	
20.	Premalatha P	
21.	Priyadharshini V	
22.	Selvaraj S	
23.	Umamaheswari S	
24.	Varshini P	
25.	Shalini B	
26.	Sasikala R	Exteroo
27.	Sri Sudarshan S S	Paragon Digital Services/Extra Marks
28.	Sugasini R	JP Solutions



NANOELECTRONICS



- ❖ Nanoelectronics refers to the use of Nanotechnology on electronic components, especially transistors.
- ❖ Although the term nanotechnology is generally defined as utilizing technology less than 100 nm in size
- ❖ Nano electronics often refer to transistor devices that are so small that inter-atomic interactions and quantum mechanical properties need to be studied extensively.
- ❖ As a result, present transistors do not fall under this category, even though these devices are manufactured with 45 nm, 32 nm, or 22 nm technology.
- ❖ Nanoelectronics are sometimes considered as disruptive technology because present candidates are significantly different from traditional transistors.
- ❖ Some of these candidates include: hybrid molecular/semiconductor electronics, one dimensional nanotubes/nanowires, or advanced molecular electronics.



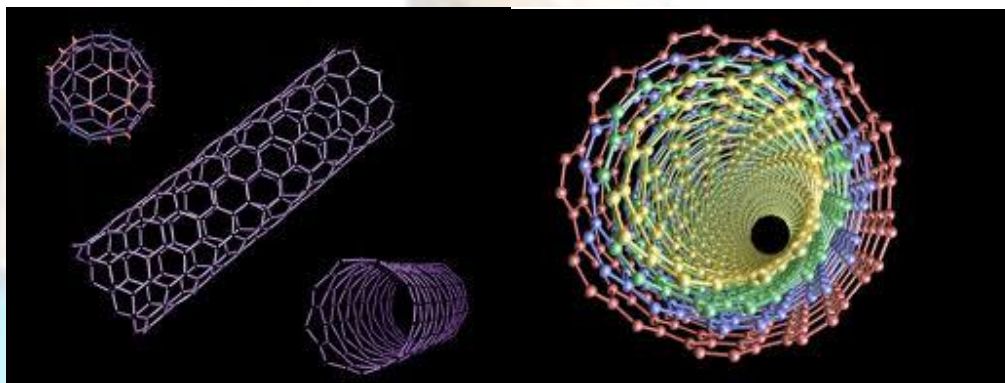
WHY NANO

The term Nano is occupying a remarkable place in modern technology. But, I believe many of us are wondering what Nano can really do for us. The aim of this blog is to give an overview about the nanotechnology to students, academic heads aiming to start nanotechnology course in their institutes, and industrialists willing to know the potentiality of nanotechnology to influence their industry.

The basic element of most of the electronic devices has been the transistor which replaced previously existing vacuum tubes, since its invention in 1947 by John Bardeen and Walter Brattain at AT&T's Bell Labs in the United States. A Nobel Laureate of Physics for the year 1965, "Richard Feynman" has emphasized the potential of nanotechnology with his famous quote "There's Plenty of Room at the Bottom" made in 1959. In 1965, Gordon E. Moore, co-founder of Intel predicted that the number of components on the integrated circuit doubles every two years for at least 10 years from then. This trend is called Moore's law has been valid even now and is expected to continue for a couple of more years.



CARBON NANOTUBES (CNTS)



- ❖ Carbon Nanotubes (Cnts) are allotropes of carbon with a cylindrical nanostructure.
- ❖ Nanotubes have been constructed with length-to-diameter ratio of up to 132,000,000:1, significantly larger than for any other material.
- ❖ These cylindrical carbon molecules have unusual properties, which are valuable for nanotechnology, electronics, optics and other fields of materials science and technology.
- ❖ In particular, owing to their extraordinary thermal conductivity and mechanical and electrical properties, carbon nanotubes find applications as additives to various structural materials.



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M. Praveen-IV Year



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