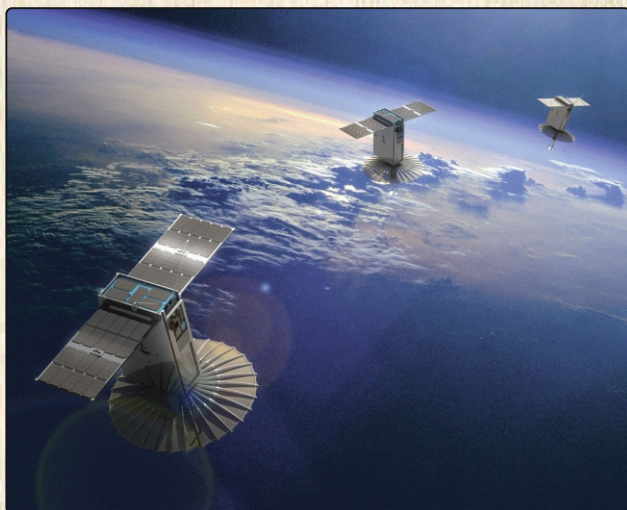


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DEPARTMENT OF ELECTRONICS AND COMMUNICATIONS ENGINEERING

About the college

Sreyas Institute of Engineering and Technology is a world class technical education institution and is located in the heart of the city. The first impression as you enter the sprawling green and verdant campus of Sreyas leaves a lasting impression of innate calm and energizing growth. The campus is scientifically planned and artistically designed. The students have access to the latest software and computing facilities for learning and research to groom them into future citizens.

Our student-centric approach will ensure that Sreyans gain not just depth in their chosen area of specialization, but a holistic set of skills that will equip them to face the real world. At every stage, students will have opportunities to expand their boundaries with multiple platforms for collaboration and learning. The infrastructure is absolutely world-class with opportunities to build practical skills in state-of-the-art laboratories and workshops. The thriving, vibrant campus with its multitude of activities will help them develop a well-rounded and grounded personality that evolves naturally.

Finally, our intention is to ensure that every opportunity to learn is utilized by the students to the maximum and transform every student with full of enthusiasm, confidence and knowledge to face global challenges, becoming both individually and professionally successful, as well as socially responsible.

The Campus is located at Nagole, the most happening area in the city of Hyderabad. The Campus is a stone's throw away from reputed media houses, service & IT Industry hubs. This proximity helps us in attracting the beacons of industry to our Campus for regular interactions with our students. The Campus is also the hub for many academic & professional activities making it pulsate with positive energy.

Sreyas Institute of Engineering & Technology was established in 2011 under the aegis of Sreyas Educational Society. The Institution endeavors to impart high quality, competency based technical education in Engineering and Technology to students with skills and abilities to face challenging needs of industry and Society. It is a place for highly ambitious students and professionals who want to excel in career and become hardcore experts in their area of interest. The Institution offers 04 Undergraduate courses and 03 Postgraduate courses in the field of Engineering. The Institution is approved by All India Council for Technical Education (AICTE), New Delhi and affiliated to Jawaharlal Nehru Technological University Hyderabad. The Institution is accredited by National Assessment and Accreditation Council (NAAC).

CHAIRMAN'S MESSAGE



Sri. Ananthula Vinay Kumar Reddy

Sreyas Institute of Engineering and Technology is a product of a dream and vision to excel and a premier institution in the field of engineering. The college has the most modern and best infra structure. It provides a wide arena for the staff and students to showcase their academic and extracurricular activities.

Our endeavor is to provide the students an exhilarating experience. The college is within the city limits yet in the midst of eco-friendly green surroundings. You will find nature and technology blending in our campus.

Sreyas will provide you with all the opportunity and liberty to discover yourself. The institution aims to encourage the students to develop, master and gain the knowledge to the latest technology and global development. I believe that these will be the best years of your lives.

Secretary Message



Sri. Chinthala Ravindranath Yadav

We at Sreyas Institute of Engineering and Technology are committed to build a congenial atmosphere for the next generation of engineers to excel professionally. Our endeavor is to meticulously sculpture our students of both B. Tech and M. Tech in being the best in their chosen fields.

The main emphasis and mandate is excellence, perfection and all round development. We believe and understand that as educators have a special responsibility to nurture co-operation, tolerance and mutual respect in our diverse society.

Sreyas guarantees its students better access to corporate world through summer internships. This in turn will lead them to good placements at the end of their course.

TRESSURER MESSAGE



Sri. Nirvetla Sharath Reddy

The infrastructure at SREYAS is absolutely world class and you will build practical skills at laboratories and workshops. You will also enjoy a vibrant campus life with its diverse and enthusiastic student community.

We are clear that it is our responsibility to help our students to realize their goals in an increasingly competitive world.

At SREYAS, be prepared to be constantly challenged, whether it is in classroom or outside. You can look forward to being trained by excellent and committed

faculty, get hands-on experience in the state of the art technology in world class MNCs and building enduring bonds with your peers.

Finally, SREYAS is about always trying to push the bar a little more, constantly innovating and never standing still. If these are values you believe in too, you will do well at SREYAS. If you have the drive and determination, come to SREYAS and we will help you realize your dreams.

Principal Message



Dr. Suresh Akella

Sreyas Institute of Engineering & Technology is established with a vision of nurturing young talents. The primary aim of this of our institution is to provide professional education, in a vibrant atmosphere to deserving students. It is the desire of SRYS to promote sustained growth and inclusiveness by harnessing young talents who are pro-active enough to meet the demands and challenges of the volatile global environment.

SREYAS looks at education, not merely in terms of quantity of knowledge, but in terms of quality of knowledge that helps form the character of students, 'total formation of individuals. In a world of unequal and unjust society, SREYAS forms students as catalysts of social change in order to march with the marginalized to the summit of empowering the powerless.

Vice- Chairmans Message



Sri. Ananthula Hriday Reddy

At SIET, the real challenge is creating leaders in the sphere of Engineering and Technology. We intend to accomplish by offering world-class academics coupled with intense personality grooming. We are very global in character and the education system at SIET is closely related to the newest and the cutting edge trends in the world. Shape the future of the youth through quality education and holistic personality development i.e. to focus on high standard, value based education that will add a meaning to the life, creating awareness on professional & academic development, social, moral and economic issues. It is our endeavor that every stream should produce a generation

of intellectually sharp professional who are dynamic and psychologically well-trained.

HOD Message



Mr. B. Sreenivasu

In modern times, nations which have rich engineering and experienced management teams in various sectors are flourishing economically and are providing better lives to their people. We have identified the needs of modern engineering, technology and management education for modern age students. Hard work with a vision and mission accompanying transparency, accountability and accessibility keeps us abreast and also ahead of our competitors.

Sreyas Institute of Engineering and Technology aims high to achieve success with innovation and creativity. The budding engineers of this institute are trying to

prove their worth in different fields. I assure you all that the me and my team of dedicated and highly qualified faculty are totally committed to produce Engineers of a very high caliber to meet the growing and ever-changing demands of industries and global market in Core and Industry side to bridge the curriculum to real time.

About the Department

The Department of Electronics and Communication Engineering was established in the year 2011. The main focus of the department is to produce graduates and post graduates with strong fundamentals in Electronics and Communication Engineering Domain. Apart from Curriculum we adopt some of the technologies like, IoT, Networking and Robotics.

Vision of the Department

To excel in electronics & communications engineering education with the knowledge of innovation, research and ethics.

Mission of the Department

1. To Provide academic environment that promotes student centric learning through quality education and state of the art infrastructure.
2. To make the students aspire towards innovation and collaborative research to meet the technological needs of society.
3. To engage the students in activities which inculcate professional practices with social concern.

Program Outcomes (POs)

- PO-1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO-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.
- PO-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.
- PO-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.
- PO-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.

- PO-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.
- PO-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.
- PO-8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO-9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO-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
- PO-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.
- PO-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.

Program Specific Outcomes (PSOs)

- PSO-1: Design, analyze and develop modules and systems for applications in advanced electronics and communication systems.
- PSO-2: Utilize modern tools for modeling and computational techniques in IC fabrication and RF technologies.

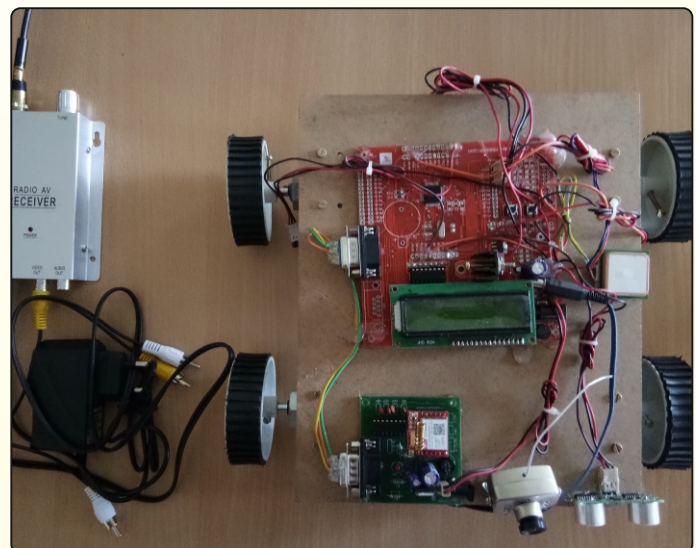
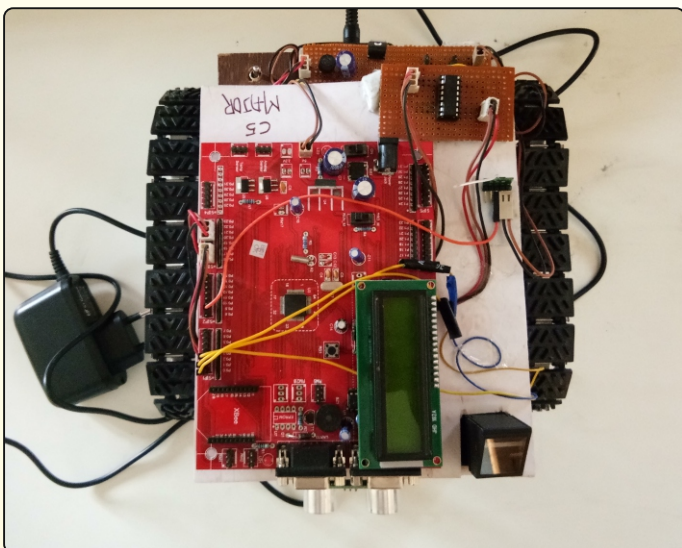
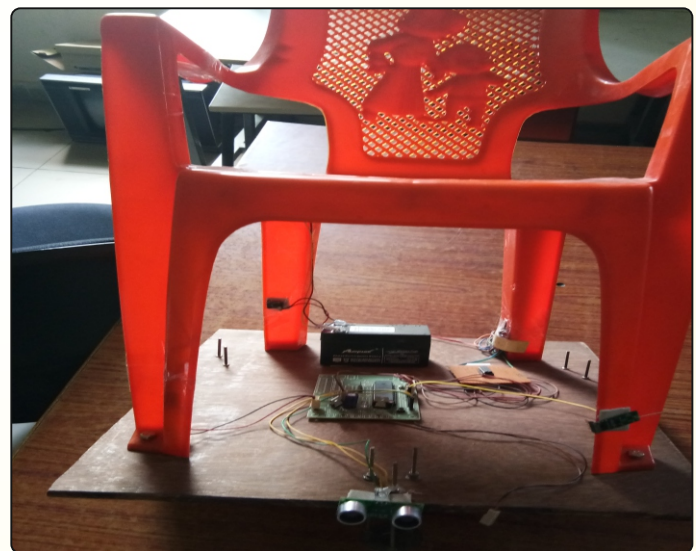
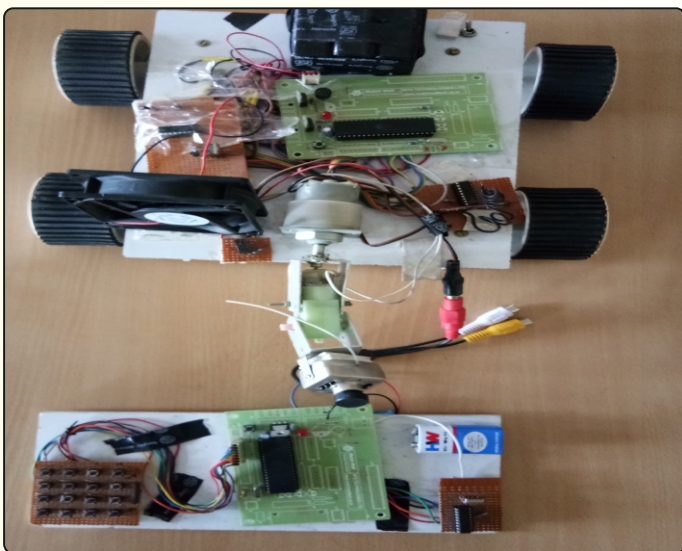
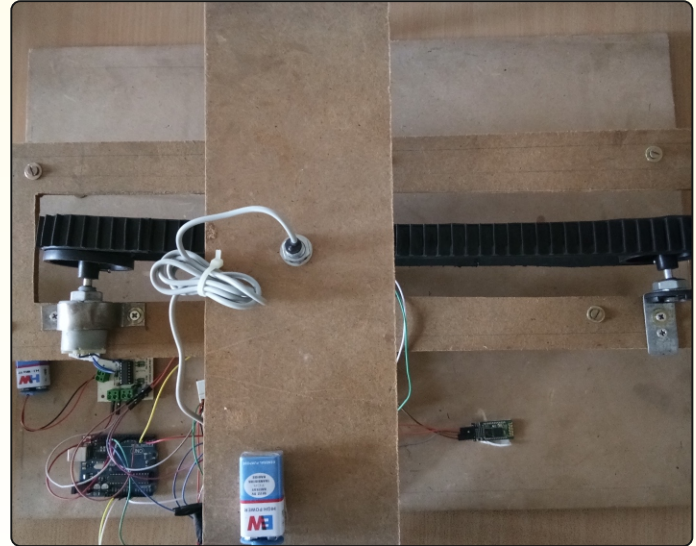
Faculty Awards

Dr. Sandeep Kumar has received Best Paper Award in 2nd International Conference on "Interdisciplinary Research and Technological Developments" IRTD Nepal on 28th October 2017.



Students Innovation

Department of Electronics and Communication Engineering Final Year Students have shown their innovative thoughts to live examples called Major Projects. The following are some of the best projects from (2013-17) Batch:



Faculty Publications

- Dr SANDEEP KUMAR "A Comparative Study on Face Spoofing Attacks" IEEE International Conference pp. 1104-1108 AY-2017.
- Dr V A SANKAR PONNAPALLY Design of Multi-Beam Nonagon Fractal Array for Satellite Applications SIJOST Vol.1 (3); pp-33-36; 2017.
- Dr V A SANKAR PONNAPALLY Smart Drip Irrigation System with Intelligent Nutrition Management System IJARECE Vol: 6(10), October 2017
- J.PANDU RANGA RAO "Optimal Sequence for MIMO Radar," International Journal of Engineering Research and Development Vol .13, No.13 December, 2017.
- PANDU RANGA RAO J IOT Based Driver Alertness and Health Monitoring System International Journal of Advanced Research in Electronics and Communication Engineering (IJARECE) Vol.6, No.10, pp 1093-1099 October, 2017.
- J.PANDU RANGA RAO Web based Monitoring and Controlling of Mobile Robot Through Raspberry PI Board International Journal of Advanced Research in Electronics and Communication Engineering (IJARECE) Vol .6, No.10, pp 1078-1082 October, 2017.
- J.PANDU RANGA RAO Printing Watermark Image By Using Direct Binary Search Half Tone International Journal of Advanced Research in Electronics and Communication Engineering (IJARECE) Vol .6, No.11, pp 1291-1297 November, 2017.
- J.PANDU RANGA RAO ix Phase Optimal Sequence Design for MIMO Radar Global Journal of Researches in Engineering Vol .17 ,No.3, pp 55-61 June, 2017.
- J.PANDU RANGA RAO Eight Phase Optimal Sequence Design for MIMO Radar Using PSO International Journal of Advances in Engineering Research, Vol .13 ,No.5, pp 64-74 May, 201.
- Dr. C. JOHN MOSES Queen, "High Performance Adder-Based Stepwise Linear Interpolation" DJ Journal of Advances in Electronics and Communication Engineering vol.4, no. 1, pp. 16-23 Dec-17.
- Dr. C. JOHN MOSES Ramalingam4, "FPGA Implementation of Non-Adaptive Image Interpolation Algorithms – A Survey". AGU International Journal of Science and Technology Vol. No. 5 Jul-Dec 2017.
- Dr. C. JOHN MOSES Queen, "Linear Interpolation Algorithms and their Architectures for Image Scaling-A Survey". DJ Journal of Advances in Electronics and Communication Engineering vol.4, no. 1, pp. 1-8 Dec-17.

Faculty Publications

- Dr. MD RASHID MAHMOOD "Design and Implementation of framework for Smart city using Lora Technology". SREYAS International Journal of Scientists and Technocrats Vol 1, Issue 11, pp. 36-43 November, 2017
- Dr. MD RASHID MAHMOOD "A Comparative Analysis On Image Denoising Using Different Median Filter Methods".IJRASET Vol. 5, No 8, pp. 231-239, 2017 with ISSN: 2321-9653 November, 2017.
- Dr S VENKATESWARLU Review on Classification on Models and Determination of the Parameters for Channel Modeling UGC Dec 2017.
- Dr S VENKATESWARLU Channel Modelling -Parameters and Conditions to be Considered UGC Nov 2017.
- Mr B SREENIVASU "Health Care System by Monitoring the Patient Health Using IOT and GSM", IJARECE ISSN: 2278 – 909X Volume 6, Issue 11 November 2017.
- Mr B SREENIVASU "Execution For Remote Sensor System For ESP 8266 Linux Pauling Built Web-Server". IJARECE Volume 6, Issue 11, Nov-17.
- Dr SANDEEP KUMAR "Advance Card Locking System using Microcontroller". International Journal of Recent Research Aspects Vol. 4, No. 2, pp. 28-30, 2017 with ISSN: 2349-7688.
- Dr SANDEEP KUMAR "A Comparative Analysis On Image Denoising Using Different Median Filter Methods". International Journal for Research in Applied Science & Engineering Technology (IJRASET) Vol. 5, No 8, pp. 231-239, 2017 with ISSN: 2321-9653.
- Mr B SREENIVASU "Printing Watermark Image By Using Direct Binary Search Half Tone" . IJARECE 2278 – 909X Volume 6, Issue 11 Nov-17.
- Mr B SREENIVASU "Web based Monitoring and Controlling of Mobile Robot Through Raspberry PI Board". IJARECE ISSN: 2278 – 909X Volume 6, Issue 10 Oct-17.

Faculty Publications

- Mrs VARSHA AGARWAL a, "A Study on Internet of Things Applications and Related Issues" International Journal of Applied and Advanced Scientific Research Vol. 2, No. 2, pp. 273-277, 2017 with ISSN: 2456-3080 Dec-17
- Mr G VIJAY GOUD IMAGE SEGMENTATION BY REGION GROWING IJAEECEC ISSN (Online):2533-8945 VOLUME 3 ISSUE 6 ISSN (Online):2533-8945 VOLUME 3 ISSUE 6,158-166 Dec-17
- Mr G VIJAY GOUD DESIGN AND IMPLEMENTATION OF PAPR REDUCTION TECHNIQUES FOR OFDM IJAEECEC ISSN (Online):2533-8945 VOLUME 3 ISSUE 6 ISSN (Online):2533-8945 VOLUME 3 ISSUE 6,133-136,DEC-2017.
- Mr G VIJAY GOUD "Execution For Remote Sensor System For ESP 8266 Linux Pauling Built Web-Server". IJARECE Volume 6, Issue 11, Nov-17
- Mr G RAMACHANDRA KUMAR "LABEL IMAGE CONSTRAINED MULTI ATLAS SELECTION FOR IMAGE SEGMENTATION" IJECEC ISSN 2533-8945 VOLUME-3,ISSUE 6 01-12-2017.
- Mr B SREENIVASU " IoT Based Driver Alertness And Health Monitoring System".IJARECE ISSN: 2278 – 909X Volume 6, Issue 10 Oct-17
- Mr B SREENIVASU Smart Drip Irrigation System with Intelligent Nutrition Management System.IJARECE ISSN: 2278 – 909X Volume 6, Issue 10 Oct-17
- Dr SANDEEP KUMAR "An Improved Face Detection Technique for a Long Distance and Near-Infrared Images". International Journal of Engineering Research and Modern Education Vol. 2, No 1, Page Number 176-181, 2017 with ISSN: 2455 - 4200.
- Dr SANDEEP KUMAR S.Mounica and Dr. Sandeep Kumar, "Zigbee Based Communication System for Future Micro-Grids Using Http and MQTT Protocols". SREYAS International Journal of Scientists and Technocrats Vol 1, No 3, pp. 36-41, 2017 with ISSN: 2456-878.
- Mr CH S V MARUTHI RAO Raspberry Pi based Traffic Density Observation with associate Controlling System IJARECE VOL 6, Issue 10 01-10-2017.

Faculty Publications

- Mr Y SRAVAN KUMAR " Single-Stage Grid-Connected fly back micro inverter with hybrid" IJREAM ISSN : 2454-9150 Vol-03, Issue-07, Oct 2017.
- Mr Y SRAVAN KUMAR " Power Electronics Application On Wind Turbines" International Journal for Research & Development in Technology Volume-8, Issue-3, (Sep-17), ISSN (O) :- 2349-3585 Sep-17.
- Mr Y SRAVAN KUMAR Implementation of Multi-level Inverter for GRID Connected Application by using Hybrid Wind Solar Power IJREAM Volume IV/I Apr-2018.
- Mrs A SOWJANYA "Optimization of Orthogonal Polyphase Coded Waveform for Mimo Radar using Mo-Micro Particle Swarm Optimization Algorithm" International Journal of Engineering Research & Technology Vol.6 issue 05 01-05-2017.
- Mrs A SOWJANYA "Optimization of Orthogonal Polyphase Coded Waveform for Mimo Radar using Mo-Micro Particle Swarm Optimization Algorithm" International Journal of Engineering Research and Technology.
- Mr B SREENIVASU "Wireless Transmission of Electrical Power", Overview of Recent Research & Development. IJESAT ISSN: 2250-3676 Volume-7, Issue-3, 218-221 May-Jun 2017.
- Mr B SREENIVASU "Wireless Transmission of Electrical Power", Overview of Recent Research & Development. IJESAT ISSN: 2250-3676 Volume-7, Issue-3, 218-221 May-Jun 2017.
- Mr G D BASAVARAJ "Wireless Transmission of Electrical Power", Overview of Recent Research & Development. IJESAT ISSN: 2250-3676 Volume-7, Issue-3, 218-221 May-Jun 2017.
- Mr Y SRAVAN KUMAR "Stochastic Transmission Impedance Control for Enhanced for Renewable Power Integration" IJREAM ISSN : 2454-9150 Vol-03, Issue-08, Nov 2017.

Faculty Publications

- Dr SANDEEP KUMAR " A Performance Analysis on Iris Image Enhancement Using Histogram Techniques" International Conference on Interdisciplinary Research and Technological Developments (IRTD) pp. 28-32 28th October 2017 Nepal.
- Dr SANDEEP KUMAR "A Novel Method For Video Watermarking Using 2LWT in YCbCr Color Space" International Conference on Interdisciplinary Research and Technological Developments (IRTD) pp. 19-24 28th October 2017 Nepal.
- Dr SANDEEP KUMAR "A Study on Smart Home Automation Based on IOT" International Journal of Advance and Innovative Research Vol. 5, No. 1, pp. 37-43,ISSN: 2394-7780 January - March, 2018
- Dr SANDEEP KUMAR "A Study on Solar/Wind Hybrid Energy Harvesting For Super Capacitor-Based Embedded System" International Journal of Advance and Innovative Research Vol. 5, No. 1, pp. 44-47, ISSN: 2394-7780. January - March, 2018
- Dr SANDEEP KUMAR "A Study on Various Health Parameters Monitoring Using PPG Sensor" International Journal of Advance and Innovative Research Vol. 5, No. 1, pp. 48-52, ISSN: 2394-7780. January - March, 2018
- Dr SANDEEP KUMAR "Smart Baby Cradle Using Arduino and IoT" International Journal of Advance and Innovative Research Vol. 5, No. 1, pp. 53-59, ISSN: 2394-7780. January - March, 2018
- Dr SANDEEP KUMAR "A Study on Child Safety Wearable Devices" International Journal of Creative Research Thoughts Vol. 6, No. 1, pp. 603-606, ISSN: 2320-2882 2018.
- Dr SANDEEP KUMAR "FPGA Implementation of 16-Point FFT Algorithm Using Digital Signal Processing" International Journal of Scientific Research and Modern Education Vol. 3, No. 1, pp. 10-15, ISSN: 2538-4155.2018.
- Dr SANDEEP KUMAR , "A Study on Internet of Things Applications and Related Issues" International Journal of Applied and Advanced Scientific Research Vol. 2, No. 2, pp. 273-277, ISSN: 2456-3080 2017.

Faculty Publications

- Dr SANDEEP KUMAR "Health Care System by Monitoring the Patient Health Using IOT and GSM." International Journal of Advanced Research in Electronics and Communication Vol. 6, No. 11, pp.1218-.1223, ISSN: 2278-909X. Nov-2017.
- Dr SANDEEP KUMAR "Advance Card Locking System using Microcontroller" International Journal of Recent Research Aspects Vol. 4, No. 2, pp. 28-30, with ISSN: 2349-7688. 2017.
- Dr SANDEEP KUMAR "A Comparative Analysis On Image Denoising Using Different Median Filter Methods" International Journal for Research in Applied Science & Engineering Technology (IJRASET) Vol. 5, No 8, pp. 231-239, with ISSN: 2321-9653 2017.
- Dr SANDEEP KUMAR "An Improved Face Detection Technique for a Long Distance and Near-Infrared Images" International Journal of Engineering Research and Modern Education Vol. 2, No 1, Page Number 176-181, with ISSN: 2455 - 4200. 2017.
- Dr SANDEEP KUMAR "Application of Power Wheelchairs for Pediatric Users for Rehabilitation" International Journal of IT, Engineering and Applied Science Research Vol 5, No 8, pp. 16-21, with ISSN: 2319-4413 August 2016.
- Mr. MARUTI RAO Raspberry PI based traffic density observation with an associate controlling system IJETAE Vol6,issue 10 OCT 2017.
- Mr. J. Pandu Ranga Rao FPGA Implementation of Electronic Warfare Threat Simulator" International Journal of Research in Technology and Management (IJRTM), Vol.2,No.5, July,2016
- Mr. J. Pandu Ranga Rao FPGA Implementation of High Speed Radar Signal Processing GJRE Vol.16,No.1,2016.
- Mrs. A.Sowjanya Optimization of orthogonal polyphase coded waveform for MIMO radar using Mo-Micro particle swarm optimization algorithm IJERT 2278-0181 May 2017.
- Mrs. Alladi Praveena Optimization of orthogonal polyphase coded waveform for MIMO radar using Mo-Micro particle swarm optimization algorithm IJERT 2278-0181 May, 2017.

Faculty Publications

- Dr. T Ravichandra Babu A Novel Approach Of Global Navigation Satellite Systems for High Integrity Train Positioning and Localization ICRTESTM 2348 – 8549 April, 2017.
- Dr. T Ravichandra Babu Design & Implementation ISP MPLS Backbone Network on IPV6 using 6PE Configuration ICRTESTM 2348 – 8549 April, 2017.
- Dr. T Ravichandra Babu Design and Testing of 155 Mbps Link Between STM-16 SDH System Along With Protection ICRTESTM 2348 – 8549 April, 2017.
- Dr. T Ravichandra Babu Design of android based hand gesture control robot using MEM'S ICRTESTM --- April, 2017.
- Dr. S Syed Basha Design of android based hand gesture control robot using MEM'S ICRTESTM --- April, 2017.
- Dr. T Ravichandra Babu Development of centralized monitoring and alerting system for realtime core network ICRTESTM --April, 2017.

HFSS is high frequency structure simulator

HFSS is high frequency structure simulator it is high performance full wave electromagnetic field simulator 3D volumetric passive device modeling that takes advantages of familiar Microsoft Windows graphical user interface .it integrates simulation, visualization, solid modeling and automaton in easy to learn environment.

Typical uses

- 1.Package Modeling
- 2.PCB Board Modeling
- 3.EMC/EMI
- 4.Antenna Mobile Communications
- 5.Connectors
- 6.Waveguide
- 7.Filters

Mathematical Method used in HFSS: HFSS uses a numerical technique called the finite element method. This is procedure where a structure is subdivided into many smaller subsections called finite element. The finite element used by HFSS are tetrahedra and entire collection of tetrahedral is called mesh. Solution is found for the fields within the finite element and these fields are interrelated so that Maxwell's equations are satisfied across inter-element yielding.

– Dr. V.A Sankar Ponapalli

ENERGY-EFFICIENT RECONFIGURABLE COMPUTING

Emergent demands for wireless and portable computing appliances have focused much consideration on energy consumption. Energy-optimized implementations utilize less resource and operate at nominal operating frequency. Nowadays reconfigurable devices like FPGAs are favored for such applications due to their ability of managing complexity and avoiding the hazards and delays allied with fabrication. In preference to running sequential system at a high clock rate, an FPGA-based system at a lower rate can have similar performance by having tailored circuits executing in parallel. The programmability of FPGAs would sustain resource expenses. A small FPGA can hold a large design by time-division multiplex and run-time reconfiguration, facilitating trade-off in execution time and the quantity of resources required.

– Dr. C. John Moses

Students Explore

EUV lithography

Now an advanced manufacturing technique known as extreme ultraviolet (EUV) lithography is set to bring game-changing benefits by making it possible to fabricate chips on smaller scales than ever before. EUV lithography is not entirely new - the first prototype tool (NXE:3100) was first shipped in 2010. However, it has taken the best part of ten years to develop the technology, which is expected to be in high-volume use by 2020.

EUV lithography makes chips cheaper, more powerful, faster and less power hungry. So it is a key element in the production of the hi-tech componentry required to facilitate the Internet of Things (IoT) and 5G, as well as AI and machine learning.

The dominant global player in the field of EUV lithography is Dutch company ASML, which manufactures and sells its tools to the 'big three' global semiconductor fabricators – Intel, Samsung and Taiwan Semiconductor Manufacturing Company (TSMC). They share the same goal - to save Moore's Law – a law first expounded by the co-founder of Intel, Gordon Moore, observing that the number of transistors in an integrated circuit doubles about every two years and predicting that this trend would continue indefinitely.

EUV – how it works: The technology uses light with a very short wavelength to construct fine patterns more quickly and accurately. Think of the old technology as a large paint brush, and an EUV light source as a fountain pen. The latter is much better equipped to produce smaller transistor sizes capable of making processors and other electronic devices cheaper, more powerful and more energy efficient.

--Valaboju Kranthi Kumar
(13VE1A04A1)

“IoT in Everything”

The Internet of Things (IoT) has come of age in recent years, but not without some growing pains. Security concerns, slower than anticipated adoption of smart home products and fragmented IoT ecosystems are just a few of the challenges facing the industry. Despite these obstacles, we expect to see continued, robust IoT market growth in 2018 and beyond. By 2025, an estimated 70 billion connected devices (lights, smart meters, thermostats, wearable devices, and countless others) will be deployed.

A recent report by McKinsey estimated these devices will be responsible for contributing an estimated \$11 trillion in value to the global economy. Gartner predicts IoT technology will be embedded in 95 percent of new electronic product designs by 2020.

Connected lighting, in particular, is a bright spot in the IoT market. More and more of the lights in our homes and commercial spaces are converting to LED technology, providing a platform for the addition of sensors, controls and connectivity to lights. In the coming years, we will see the addition of cloud analytics and intelligence – the ability to make decisions based on data derived from lighting networks.

-- K.L. Saimitha
(13VE1A04H4)

MEMs in the medical industry

The potential of MEMS technology to improve medicine is beginning to be realised and the medical MEMS field is booming with a growing number of development projects such as: glucose monitoring contact lenses from Google, transdermal skin patch sensors for detecting electrolyte balance, electronic drug delivery pills, implantable electronics and ingestible sensors.

Advanced biomedical devices, however, require extensive interdisciplinary development efforts from technologists and medical professionals as well as extensive testing and certification.

Despite these challenges MEMS are having a massive impact on the development of biotechnology, providing researchers with the ability to search for, locate and influence biological and chemical compounds in the body and its many complex subsystems. This will lead to new ways to identifying and preventing illnesses and debilitating conditions. For example, the use of MEMS technology in nerve prosthesis is now being explored, research that could help the blind see or return some mobility to the disabled - clearly real life enhancing developments.

MEMS has been a disruptive innovation within the medical sector for diagnosis and health care, and been very successfully applied in pressure sensors. Today MEMS-based pressure sensors that communicate using RF can be implanted into the body, providing valuable insights into the condition of organs and arteries. Recent advancements in the packaging of MEMS has been instrumental here.

-- M. Rohit Kumar Chowdary
(13VE1A0431)

Millimetre-wave Technology Key to Future 5g Applications

The availability of new mmWave frequency bands will be key to achieving the ambitious mobile data rate targets associated with 5G. But what are the likely operating bands or the technology and packaging options that will help to realise those essential mmWave components. 5G is intended to offer data rates in excess of 10GBps, extremely low latency, and uniform coverage over a wide area, as well as a thousand-fold increase in capacity. It is expected to enable and encourage the development of new markets, technologies and applications beyond high-speed mobile communications, including massive machine-type communications (mMTC) – the enabling technology for the cellular constituent of the IoT – as well as mission-critical applications (such as autonomous vehicles), and even last-mile fixed broadband.

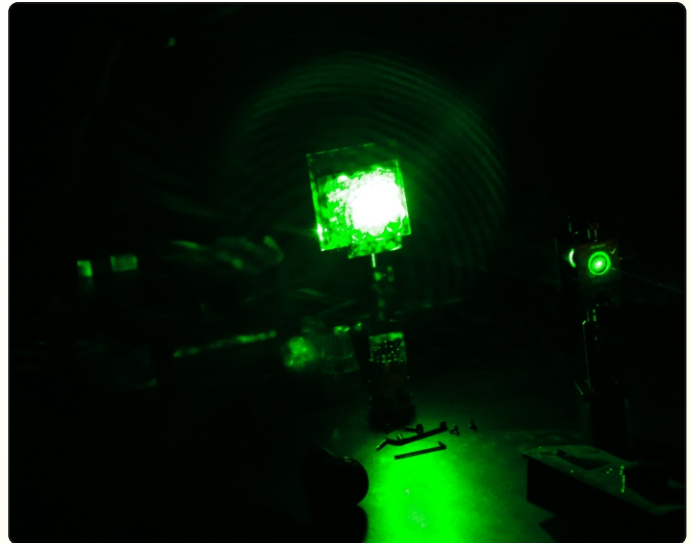
Because of the high target data rates for 5G, large chunks of contiguous spectrum will often be required, and as a result mmWave is considered to be a key component in the roll-out of 5G.

Until recently, the mmWave bands above 24GHz that are under consideration were considered inappropriate for mobile and non-line-of-sight use. However, research has now shown that those issues can be addressed and overcome. Utilising these bands will be a key factor in the new 5G radio interface.

– M.Sai Chand
(13VE1A0498)

Holography

Department of Electronics and Communication Engineering conducted the National Level Workshop on "Holography" on 11th & 12th January, 2017. Students from Sreyas and other colleges have attended and participated in this workshop to enhance their knowledge in 3D-Holography. The keynote speaker was Dr. P.T Ajit Kumar, Light Logistic Pvt Ltd. He demonstrated 3D-holograms practically with the help of the equipments.



TWO WEEK FDP ON RECONFIGURABLE ANTENNAS AND MICROWAVE DEVICES

Department of Electronics and Communication Engineering conducted One week National Level Faculty Development program on "Reconfigurable antennas and Wave propagation" by ICT Academy, NIT Warangal in association with MHRD. This programme was useful for the staff members of Sreyas and other colleges. It was held at sreyas during 12th to 18th September, 2017. Various resource persons have shared their knowledge to deal with Antennas and hands on sessions were conducted for the staff to meet realtime requirements by using HFS Tool.



Graduation Day - 2k17

Graduation Day was celebrated by the Department of Electronics and Communication Engineering for the batch of 2013-2017 at Sreyas Auditorium. The Dignitaries, Staff and Students have graced the occasion. The students have shared their views during the session. The management has encouraged the students by presenting Best Outgoing Students Awards to V. Kranthi Kumar and Kancharla Shreya Reddy. The Chairman has wished all the graduated students for future endeavours.



Placement Activities

Sl. No.	Name of the company	No. of Selected Students	package
1	Genpact	7	(1.35-2.0) Lakhs
2	Leothundra	2	(2.0-2.4) Lakhs
3	Avance Consulting	8	1.65 Lakhs
4	Sutherland Global Services	9	(1.85-2.4) Lakhs
5	Amazon	4	(2.10-2.90) Lakhs
6	IBM	1	2.2 Lakhs
7	Just Dial	2	3.12 Lakhs
8	Vendext	10	2.7 Lakhs
9	Global Logic	4	2.0 Lakhs
10	AVEON	3	0.9 Lakhs
11	Integrated Wireless Solutions	6	2.0 Lakhs
12	Bacelor	2	2.0 Lakhs
13	Tvasthri Technologies	1	2.0 Lakhs
14	Westline	17	18 Lakhs

Our Corporate Recruiters: 2016 - 17

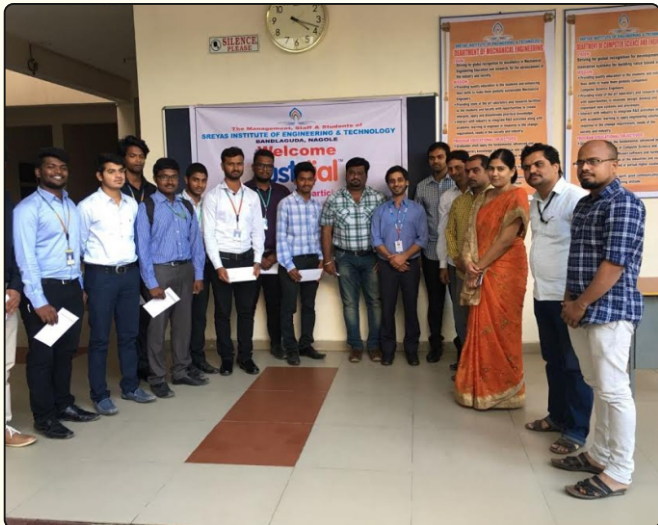


Placement Giant

Department of Electronics and Communication Engineering, (2013-17) Final Year students' snapshots for placements of (2016-17).



Placement Giant



CONGRATULATIONS TO BEST OF THE BEST.....



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Editorial Board

Head of the Department

Mr. B. Sreenivasu, (PhD), ISTE, IETE, MISTE.
Associate Professor
Ph: 9502251564, E-mail: sreenivasu.b@sreyas.ac.in

In-charge Head

Mr. Ch.S.V Maruthi Rao
Ph: 9177656868, E-mail: directormines@yahoo.co.in

Designed by

Mr. K. Narasimha
Ph: 9177370311, E-mail: narasimha.k@sreyas.ac.in

Student Co-ordinator

Mr. V. Kranthi Kumar (14VE1A04A1)