KNOWLEDGE IS POWER

SRK INSTITUTE OF TECHNOLOGY

VIJAYAWADA

DIGITRONIX

THE SILICON STUFF

ELECTRONICS &
COMMUICATION
ENGINEERING

VISIT US ON:

WWW.SRKIT.IN

Secretary's Message

Sri B.S.Appa Rao
Chairman
SRK Foundation

Chairman's Message

Sri B.S.Sri Krishna
Secretary
SRK Foundation

"DIGITRONIX" is a wonderful journal portrayal of young logical minds of SRKIT. This magazine is highly info-bound and initiates readers to get into a new technological atmosphere. "DIGITRONIX" focusses on revealing cutting-edge technologies to every SRKITian. I wholeheartedly congratulate the team for their marvellous efforts!
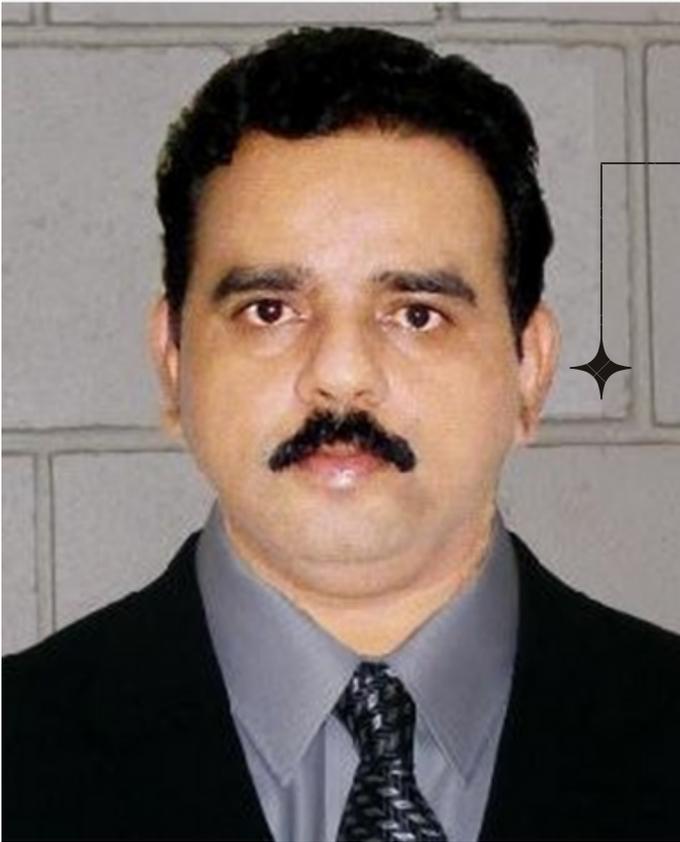
"DIGITRONIX" is an art of technical thoughts budding out from the students of ECE department. It gives me immense pleasure to know that the students are exploring new technologies, innovative ideas and bringing out the magazine. I congratulate the team for their extraordinary skills. I believe that this work will be interesting and informative to the readers.

Dr. M. Ekambaram Naidu
Principal

Principal's Message

ECE department's innovative and intelligent students bring out the department's magazine every year with good articles and an ensemble of tit-bits. This year is no exception. The association members are rapidly progressing towards the cutting-edge technologies of computer science. It helps to depart from existing academic world and to explore the new trends in technologies and developments. My hearty wishes for the team for their eminent efforts!

HoD's Message

I am glad to pen in this magazine "DIGITRONIX" which is a fruitful result of the student's editorial team. The magazine provides various updates on technical events, news and other creative articles that make the readers to think wide about the technology and the era. . As the Head of the Department, I extend my complete support and wishes to the team. I also wish the team to continue serving the department and the students in the upcoming years.

Dr. S. Sri Gowri
HoD, ECE Dept.

PROGRAM EDUCATIONAL OBJECTIVES (PEOS)

PEO1: To identify, analyze and apply engineering concepts for design of Electronics and Communication Engineering systems and demonstrate multidisciplinary expertise to handle societal needs and meet contemporary requirements.

PEO2: To attain technical competence with an aptitude to foster in higher education with an inclination towards continuous learning.

PEO3: To develop effective communication and interpersonal skills to demonstrate leadership qualities, and exhibit professional ethics.

Program Specific Outcomes (PSOs)

PSO1: Ability to apply the acquired knowledge of core subjects in design and development of Communications/Signal and Image processing.

PSO2: Analyze and solve complex Electronics and Communication engineering problems using hardware and software tools.

PSO3: Identify and apply domain specific tools for Design, Analysis and Synthesis in the field of VLSI and Embedded systems.

PROGRAM OUTCOMES (POS)

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: 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.

PO3: 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.

PO4: 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.

PO5: 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.

PO6: 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.

PO7: 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.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: 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.

PO11: 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.

PO12: 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.

CHIP ADVANCEMENTS

Qualcomm 8cX Gen-2 5G

Qualcomm's Snapdragon chips are based upon the Arm architecture, a competitor to the X86 chips manufactured by both AMD and Intel. Apple ushered Arm into the spotlight with its M1 processor, an Arm chip that is now featured inside Apple MacBooks. UL's PCMark 8 isn't officially supported as a modern benchmark, though it provides a nice point of comparison to older devices where it is was still in service. Like its more modern cousin, PCMark 10, PCMark 8's Creative test includes tests for word processing and spreadsheets, but also web browsing, light gaming, plus photo and video editing.
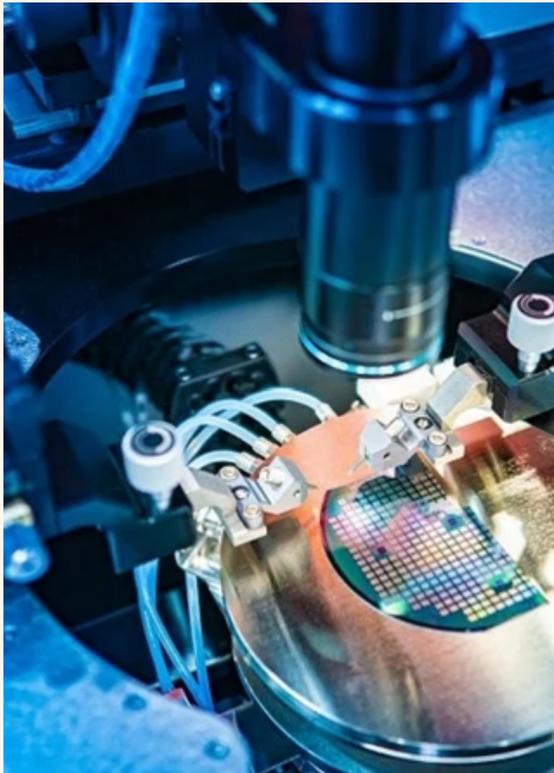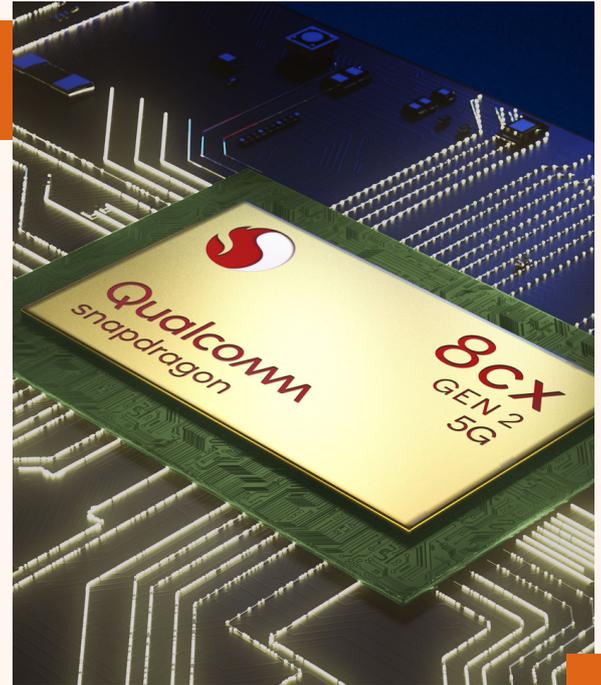
IBM's 2 nM Chip Technology

The 2 nm design demonstrates the advanced scaling of semiconductors using IBM's nanosheet technology. Its architecture is an industry first. Developed less than four years after IBM announced its milestone 5 nm design, this latest breakthrough will allow the 2 nm chip to fit up to 50 billion transistors on a chip the size of a fingernail.
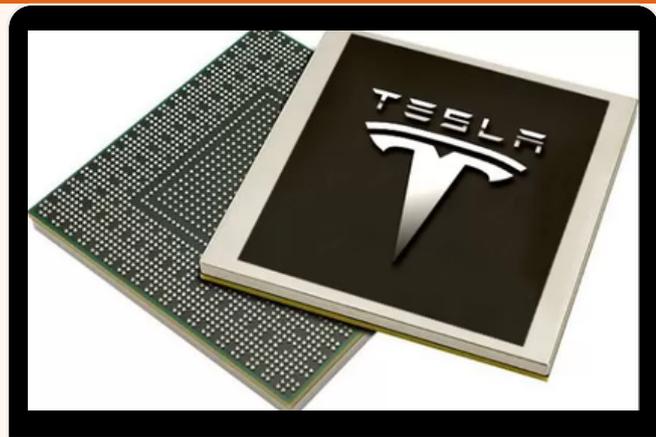
TESLA's FSD Chip

Full Self-Driving Chip (FSD Chip, previously Autopilot Hardware 3.0) is an autonomous driving chip designed by Tesla and introduced in early 2019 for their own cars. Tesla claims the chip is aimed at autonomous levels 4 and 5. Fabricated on Samsung's 14 nm process technology, the FSD Chip incorporates 3 quad-core Cortex-A72 clusters for a total of 12 CPUs operating at 2.2 GHz, a Mali G71 MP12 GPU operating 1 GHz, 2 neural processing units operating at 2 GHz, and various other hardware accelerators.

Mr.D.Ravi Tej
Asst Prof

ARTIFICIAL INTELLIGENCE IN MEDICINE

Surgical Robot

Robot-assisted surgery or robotic surgery are any types of surgical procedures that are performed using robotic systems. Robotically assisted surgery was developed to try to overcome the limitations of pre-existing minimally-invasive surgical procedures and to enhance the capabilities of surgeons performing open surgery.

In the case of robotically assisted minimally-invasive surgery, instead of the surgeon directly moving the instruments, the surgeon uses one of two methods to perform dissection, hemostasis and resection, using a direct telemanipulator, or through computer control.
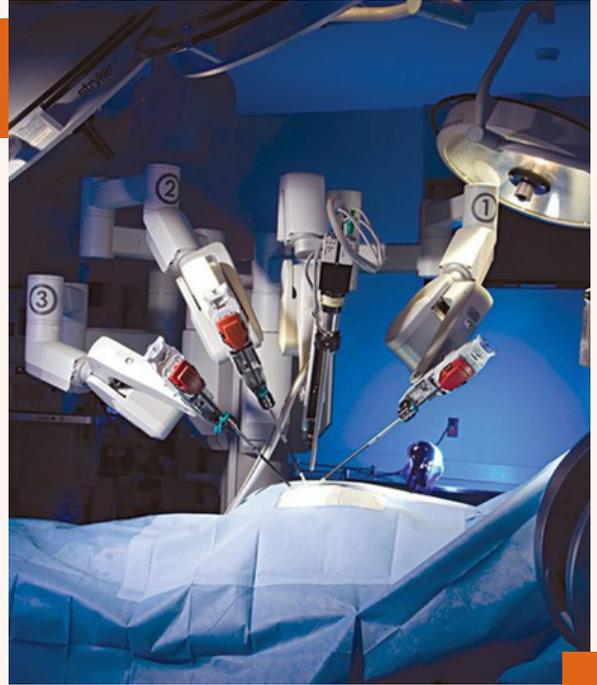
It's likely that before too long, robots will be in the home to care for older people and help them live independently. To do that, they'll need to learn how to do all the little jobs that we might be able to do without thinking. Many modern AI systems are trained to perform specific tasks by analysing thousands of annotated images of the action being performed. While these techniques are helping to solve increasingly complex problems, they still focus on very specific tasks and require lots of time and processing power to train.

Modernising medical imaging equipment so that it complies with recent technology is necessary. The medical device industry will undergo a global transformation, according to GE Healthcare and NVIDIA. Throughout their ten-year collaboration, AI has improved the efficiency and precision of computerised tomography (CT) scans. Small patterns of organ damage that are simple for doctors to miss can now be reorganised by AI systems. Finding these smaller facts will make diagnosis easier and more precise. Researchers are finding accurate and effective ways to make medical devices reliable and automated using artificial intelligence. While medical imaging is an area that is gaining traction, clinically approved wearable devices are the focus for the future. Experts are also focussing on eliminating major patient-related challenges using AI, like adherence to medical treatments. Artificial intelligence will help doctors and medical professionals shift the onus of medical adherence from the patient to a reliable, automated medical device that will help in significantly improving the quality of life.

B.Jaswanth
18X41A0407

NAAC PEER VISIT

THE PEER TEAM VISIT

The peer team visited the campus on 27th and 28th January 2022 to inspect the infrastructure, academic and other facilities. Dr K.Mallikarjuna Babu, Dr Md.Altaf Khan, Dr Srinivasa K.G are the members of the peer team.

The team members have physically visited various laboratories in the department, incubation centre, department library, class rooms and interacted with the students, faculty, alumini and other stake holders.

The peer team after the visiting, observing and evaluating various facilities in the campus, teaching learning methodologies, IQAC initiatives and various best practices, social relevant activities etc.. have ranked the institute with **NAAC A Grade**

PLACEMENT CORNER

SAVANTIS placement drive been conducted in the training and placement department. Twelve students selected for Seventis from ECE department.

Students selected in CAGEMINI drive posing with the HR team and SRK placement department.

Students selected for ZENSAR technologies in the drive conducted on compus.

Students selected for in Tata Consultancy Services

HACK PEEP

Must Have Apps

School
- Cymath
- Photomath
- The Homework App
- Slader
- Google Slides
- Google Docs
- Mathway
- Quizlet

Lifestyle
- Spot On
- Eye
- Plant Nanny
- My Fitness Tracker
- SnipSnap Coupon
- Shopular

Music
- Soundcloud
- Musi
- Spotify
- Youtube
- My Mixtapez
- Spinrilla

Social Media
- Pinterest
- Instagram
- Snapchat
- Twitter

@yo.glo

life hacks   #412

When you're at an airport, add "?.jpg" at the end of any URL to bypass the expensive WiFi and access the Internet for free.

@1000LifeHacks
1000LifeHacks.com

life hacks

Forgot your computer password? Boot up in safe mode (F8 during startup), log in as the administrator, and then change your password.

life hacks   #114

After a job interview, if asked "Do you have any questions?" always ask "Yes, is there anything about my application that concerns you?"

life hacks

Can't afford Microsoft Word? Get OpenOffice; it's the same thing except it's free and has a lot more features.

Did you know?

PDF

If you download a "PDF" file and you see it ends in ".exe" delete it. It's a virus.

FACULTY ACHIEVEMENTS

PATENTS

- Dr.S.Sri Gowri - The Smart Medical Aid Application for covid - 19
- Ms.T. Vishnu Priya - Adaptive ensemblefeature extraction based multiclass deeplearning frame work for real time streaming action

GUEST LECTURES

- Dr.S.Sri Gowri - Emerging Trends in New Age Technologies(VITW)
- Dr.S.Sri Gowri- Digital Communication(VITW)

CERTIFICATIONS

- CCNA INSTRUCTOR TRAINING-Mr.G.Surya Prakash
- AVR Micro Controller Programming-Ms.N.Kalavathi
- AVR Micro Controller Programming-Ms.K.Anu Swetha
- Palo Alto Academy Cyber Security-Mr.B.Ravi
- AWS certified solutions architect- Ms.A.V.P.Sarvari
- Basics of Android App Development with Kotlin-Ms.T. Vishnu Priya
- Basics of Android App Development with Kotlin-Ms.K.Anu Swetha
- CISCO Networking Academy Introduction to IoT-Ms.T.Manogna
- CISCO Networking Academy Introduction to IoT-Ms.Ch.J.Gayathri

WEBINARS

Faculty attended webinars on
- National Education Policy
- Covid Third wave challenges and immunity booster
- How to write a viable research proposal.

ALUMNI TALK

I got placed in "Infosys". I am really thankful towards our college , department and placement cell, for supporting and providing us opportunities to learn interview skills, communication skills and guiding us in placements. The staff was supportive and informed us with enough notice regarding every placement drive. I am grateful to have such a good atmosphere.

Bharat Kanakamedala
18X41A0477

I got placed at "TCS". Our T& P department helped a lot during the process of placement. They motivated us a lot and were ready to help us 24*7. They guided us for every step from resume building to final HR round. We are lucky to have such a great supporting atmosphere.

K.Anil Kumar
18X41A0484

I am proud to express my gratitude to the SRKIT, which give me path to mold my knowledge. For being a Engineering Student, the biggest attainment is to get an opportunities to get start their career in a good reputed organization. I am very grateful to all my professors and mentors, for mentoring me to achieve this goal by cracking into "Wipro" and where I am presently.

S.Bhagya Sri
18X41A04A1

It was a great experience studying at SRKIT, a memory to cherish for lifetime. My experience at SRKIT was full of learning and grooming. I am thankful to all the faculties, mentors, and entire ECE department for providing us with quality education. The relationship between faculties and student is very cordial, which gave me an opportunity to excel in my area of interest.

T.Supriya
18X41A04A3

We take this oppertunity to INVITE your articles to the next issue

SSRIGOWRI_ECE@srkit.in