



SCMS SCHOOL OF ENGINEERING & TECHNOLOGY

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Criteria 6:

Governance, Leadership and Management

6.3.3 Faculty Empowerment Strategies



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Annual reports highlighting the programmes undertaken by the teachers

Report for the period

July 2020 – June 2021

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JULY 2020

Ideation and Prototyping Centre inaugurated

Ideation and Prototyping Centre, a new initiative aimed to foster design and development skills among young engineers and technologists was jointly inaugurated by Albert George, Niranjana Santhosh and Salman P Y, students of SSET. Prof. Pramod P. Thevvannoor, SCMS Group Vice Chairman, Prof. S. Gopakumar, Group Director, SCMS, Dr. Praveensal C. J., Principal, SSET , Dr. Sunil Jacob, Director, Centre for Robotics, SSE T and Mr. Vinoj P. G., Assistant Prof, Dept. of Electronics participated for the inauguration function. The center is equipped with all modern amenities to convert all viable ideas into prototypes. The center is all set to expand its horizon in sync with the India government's schemes such as Make in India and Digital India.

Webinar Sessions

Webinar on demolition of live structures

Dr. Anil Joseph, Managing Director, Geostructurals to share his experiences on the implosion of four residential apartment complexes at Maradu, Kochi on 15th June 2020.

Webinar on digital project delivery & digital twins” with iconic project examples

by Craig Garrett, Digital Advancement Academies Manager, Hub Speaker, Bentley Systems on 9th June 2020

Webinar on occurrence and treatment efficiency of pharmaceuticals in landfill leachates

by Dr. Huan-Jung Fan, Professor, Dept of Safety, Health and Environmental engineering, Hungkuang University Taiwan on 2nd June 2020

Webinar on entrepreneurship

Mr. Sabin Mathew, Director, Imajey Consulting Engineering Pvt Ltd & Creator of Youtube Channel – “Learn Engineering” – Sharing thoughts & experiences on 2nd June 2020.

Online talk on ”Glimps of india’s space mission“

Dr. Murugesan, gave an insight to the rocket history and various launch vehicles in different missions of Indian Space Research Organisation. Also, he explained about special missions like Chandrayan -1, MOM, Reusable Launch Vehicle and Chandrayan-2, on 30th May 2020.

Webinar on ‘communication standards in avionics

A webinar was organized by the Department of Electronics and Communication for the Faculty members, first, second and third year B.Tech students and Final year M.Tech Communication Engineering students as part of the online activities during the lock down period. The webinar session was conducted on 30th May 2020 on the topic ‘Communication Standards in Avionics’ by Ms. Mythili Belle, Embedded Engineering Manager, Honeywell Technology Solutions. The one hour session was conducted on Google Meet Platform. The session started with an introduction to the basics of Aeronautical Telecommunication Network(ATN), Communication In Avionics And Interfaces. Aeronautical Telecommunication Network (ATN) is a global internetwork architecture that allows ground, air-ground, and avionic data sub networks to exchange digital data for the safety of air navigation and for the regular, efficient, and economic operation of air traffic services. Aeronautical Telecommunication Network (ATN) ecosystem comprises of Airlines, Air traffic controllers, Service providers, VHF and HF Datalink Communication along with

Satellite communication. The key communication interfaces in Avionics enable data transfer between Airborne and Ground Systems in the ATN. The speaker also gave an insight on SATCOM Scenario, ARINC Standards and Datalink Advances. The Aircraft Communications and Reporting system (ACARS) is a digital datalink system for transmission of short messages between aircraft and ground stations via airband radio or satellite. The ARINC (Aeronautical Radio Incorporated) standards in the session provided an overview of the protocols used by Aircraft Communication Addressing and Reporting System (ACARS) Management Units (MU) and Communications Management Unit (CMU) and Flight Management Computer(FMC). The speaker gave an overview on FANS CPDLC. Controller Pilot Data Link Communication (CPDLC) is a two-way data-link communication system by which controllers can transmit digital text messages to an aircraft as an alternative to voice communications. Future Air Navigation System (FANS) is an avionics system which provides direct data link communication between the pilot and the air traffic controller. The FANS CPDLC advances play a key role in the future of the ATN in handling the increasing traffic, improved flight efficiency and reducing operational costs. Videos were shared on ATN and ARINC which made the session interesting. The students and faculty were encouraged in clarifying their doubts. The speaker also spoke about her graduation and career journey which greatly inspired the students. She also spoke about the career options students have in the field of Avionics. The speaker mentioned that AI and Machine learning in Avionics is an upcoming topic and final year students can take up the topic as their project. The one hour session ended up with a vote of thanks by Praveena S Kammath, Asst. Professor, ECE and a positive feedback from the Faculty members and students.

Webinar on sustainability in product design

With a burgeoning population and the ensuing drain on all resources on Earth, sustainability is quickly becoming more imperative than ever. Engineering with sustainability should therefore be improved the world over. With this objective, the Department of Mechanical Engineering organized a live webinar on “Sustainability in Product Design” for the students of all departments on 30th May 2020. This webinar

emphasized what sustainability is, how we are using it now in the product design and how we may use it in the future products. It also highlighted how new entrepreneurs are wising up with new sustainable products and the different avenues for research within this vast field. The webinar sessioned by Dr. N L Parthasarathy, Scientific Officer E, Metallurgy and Materials Group, IGCAR, Kalpakkam, had an overwhelming response with 63 participations. 54 students and 8 faculties attended from SSET. The program also witnessed the participation of Mr. Rajesh P Nair, Assistant Professor, Department of Ship Technology, CUSAT. The webinar promoted motivational impetus in students thereby developing interest and engaging them in life-long learning in the context of sustainable product design.

Online session on introduction to data science

Mr. Praveen Devabalan, Senior Manager, PM (Azure Eng)- Microsoft, Redmond gave an Introduction to Data Science and its applicability in the real world on 29th May 2020. He gave an insight of Machine learning and Data Science in detail with real time examples. How to analysis data and to draw inference from the given data set was demonstrated on a live dataset. The concepts and steps were well defined and explained in the session. He concluded the session by giving scenarios where the techniques of data analysis were used.

Webinar on research areas in graph theory and its applications

A Webinar on RESEARCH AREAS IN GRAPH THEORY AND ITS APPLICATIONS was conducted on 29th May 2020 featuring Dr. Anjaly Kishore, Assistant Professor, Vimala College, Thrissur. Graph theory is one of the fastest-growing branches of mathematics. Until recently, it was regarded as a branch of combinatorics and was best known by the famous four-colour theorem Now graph theory is an area of its own with many deep results and beautiful open problems. The concept of a graph is one of the most basic and readily understood mathematical concepts, and the Reconstruction Conjecture is one of the most engaging problems under the domain of Graph Theory. Graphs on surfaces form a natural link between discrete and continuous mathematics. Spectral graph theory concerns the connection

and interplay between the subjects of graph theory and linear algebra. In this talk, the speaker discussed graph reconstruction, graphs on surfaces and spectrum. Some problems and the methodology of research were discussed.

Webinar on covert channels

Prof. Mauro Conti, Full Professor, University of Padua, Italy detailed on “Side Channel and Covert Channels”. He started the session stating the definitions of Side Channel and Covert Channel on 22nd May 2020. He also discussed about how to deal with Network Traffic Analysis on Mobile Devices. He gave a demonstration on how Side Channels can be used to retrieve private information of users. He introduced the concept of Context Aware Computing. A Power Snitch Application demo was given. He also discussed about accuracy measures, time information leakage on keystrokes and the different attacks on a Network. He also stated the research opportunities in the field of Malware Analysis and the different projects carried out in the University of Padua, Italy.

Webinar on safety valves and insights into international codes and standards

Safety valves are one of the most important equipment within the industrial plants, as they are the last line of defense against a possible overpressure situation which could result in pressure vessel rupture or explosion. Safety is everybody’s responsibility. With this objective, the Department of Mechanical Engineering organized a live webinar on “Safety Valves” on 22nd May 2020 for the emerging Mechanical Engineers who are new to the pressure relief devices environment. With some insights into the ASME Code and API standards used for the sizing, selection, installation and preventative maintenance of safety valves in industries, this webinar gave a good overview on how safety valves are designed for overpressure protection. The webinar was sessioned by Mr. Rahul Raj, Sales and Market Developer, LESER GmbH & Co. KG, UAE, who is also an alumnus of SSET (Mechanical Engineering 2004-08 batch). The program received an overwhelming response from 65 participations, with 58 students and 7 faculties from SSET. The students were conferred with testing equipment and procedures practiced in LESER, the largest manufacturer of safety

valves in Europe and one of the leading companies in its industry worldwide. The webinar provided education credits to students by developing interest and engaging them in life-long learning in the context of safety valve design and testing.

Webinar on ‘agile software development methodology’

An overview on software development cycle and the transition to Agile software development method. A technical webinar on “Agile Software Development Methodology” was organized by the Department of Electronics and Communication Engineering of SCMS School of Engineering and Technology, Karukutty. Welcome Address was given by Dr. Saira Joseph, Associate Professor and Head, ECE Department. The resource person was Ms. Shalini Nair, Senior Program Manager, Infosys Ltd on 22nd May 2020. The talk mainly characterizes the meanings that are currently associated with the concept of “agile”, and to provide a definition of the agile software development method. The session started with an introduction to the famous “Waterfall Model” which is the earliest SDLC approach that was used for software development. The talk then progressed showing the main difference between waterfall model and Agile Project. This comparison gives an interesting and an enlightening perspective and provides some background for analyzing the agile software development methods. The webinar also highlighted the four values and twelve principles of Agile as provided by Agile Manifesto. Then she explained in detail about the Scrum Agile Methodology. Students were encouraged to ask questions in between the talk. The target audience was Final Year and third year B. Tech students of Electronics and Communication Engineering stream. The webinar was very informative and useful to all students, specifically final years who are going to hear all these Jargons within a few months. They understood the significance of Agile Project Management in Software technology which is based on continuous improvement, flexibility, productivity of the team, and delivery of products with high quality. The session was attended by 70 students and 12 faculty members. The one hour session ended up with a vote of thanks by Dr. Saira Joseph, HOD, ECE and a positive feedback from students. The possible learning outcome of the session would

be a basic understanding of terms like Agile Methodology, Scrum Master, and some Sprint Terminologies.

Online talk on evasion techniques of malware : a perspective

Dr Corrado Aaron Visaggio, Professor, Department of Engineering, University of Sannio, Italy delivered a session on Malware and gave a perspective of the different Evasion Techniques on 21st May 2020. The Professor detailed on the Evasion Techniques for Malware, its components and its implementation. He explained the file system and structure of a Malware Resident System and about the Registry Structure. For the student members in the meeting he concluded stating about the challenges and future direction for research.

Online talk on “electric grid overview”

Er. GopakumarGopinathan provided an over view of Electric Grid System on 18th May 2020. During his presentation he explained, operation of electric grid, smart grid and micro grid. Er. GopakumarG also covered the topics like the effect of renewable energy sources in grid system, market and industry needs and future of Electric grid system.

Webinar on ‘IoT usage in manufacturing’

An introduction to the latest IOT based Industry 4.0 which integrates various new technologies such as artificial intelligence, vision systems, sensors, PLC integration and robotics in automobile industry. A technical webinar on “**IoT Usage in Manufacturing**” was organized on 16th May 2020 by the Department of Electronics and Communication Engineering of SCMS School of Engineering and Technology, Karukutty. Dr. Saira Joseph, Associate Professor and Head, ECE Department, welcomed the guest. The guest, Mr. S K Vijay, General Manager (Production Engineering), TVS Motors presented the session on “IoT Usage in Manufacturing”. The session started with an overview of TVS Motor Company, one of the leading 2/3-wheeler manufacturers in India. He briefed about the technological advances in the 2/3-wheeler industry. Throughout the session, emphasis was given to the latest IOT

based Industry 4.0 which integrates various new technologies such as artificial intelligence, vision systems, sensors, PLC integration, robotics etc. He described how the virtual replication of machine and process is done in the manufacturing sector. He also highlighted on the skills and competencies expected from a new age engineer and urged the students to keep their mind open to learn new technologies. The target audience were second year B. Tech students of Electronics and Communication Engineering, Mechanical Engineering and Automobile Engineering stream. The session was attended by over 80 students and 15 faculty members. The possible learning outcome of the session would be a familiarity with the IoT applications in manufacturing industry. The webinar was organized through zoom platform.

Webinar on ‘adding enhanced features to embedded systems’

The talk will focus on integrating IoT techniques onto Embedded Systems and provide a hands-on session on customising Google Assistant with Android platform. The Webinar on Adding Enhanced features to Embedded Systems was organised by Department of Electronics and Communication Engineering, SSET on 16th May 2020 from 2.30pm-3.30pm. The speaker Ms Gayathri M Nair is Senior Engineer R&D Electronics IoT at VGuard. The webinar started off with the power point presentation on the basics of Microcontroller explaining its relevance in building Embedded Systems, followed by basic embedded system model. The design of PCB and various steps involved in embedding the various peripherals were discussed step by step. The various add on boards interfaced and burned to the controller boards were also covered. The data that is passed through the internet need to be protected by preventing the manipulation by hackers. This requires customised security features between the client and server machines involved in the IoT cloud. Using DLS and AES encryption technique the data security in IoT environment was ensured. The technique of OTA was also introduced. Many real time applications of embedded systems were discussed. The presentation further discussed various existing protocols such as MQTT and COAP; both being the main connectivity protocols used in IoT. It also featured integrating IoT techniques onto Embedded Systems. An insight was given on various Voice assisted features provided for the smart phones. It also

included a hands-on session on customising Google Assistance with Android platform. The session concluded with an interactive online Quiz session with 10 questions which covered mainly Embedded Systems and IoT. The participants of the Webinar were S8,S6 and Mtech VLSI students.

Live webinar on ‘chemical aspects of covid – 19’

An online talk on Chemical Aspects of Covid 19 was conducted on 16th May 2020 featuring Dr. Rejimon P K. The webinar discussed about the Infectious diseases that represent a major threat to human health in the world. In nearly December 2019, the cases of Severe Acute Respiratory Syndrome Corona Virus (SARS-CoV-2) infected pneumonia were identified in Wuhan City Hubei Province, China. Since then, the 2019 corona virus disease (COVID-19) outbreak has rapidly spread throughout the country and around the world. A rapid and accurate laboratory method for the diagnosis is urgently needed. Scientist and physicians have been racing to understand this new virus and the pathophysiology of the disease to uncover possible treatment regimens and discover effective therapeutic agents and vaccines. The diagnosis and treatment cover a large number of chemicals. Therefore chemistry can take part a crucial role in these processes.

Webinar on systems concept in hydrology

A webinar on the topic “System Concepts in Hydrology” was organized by the Department of Civil Engineering on 15th May 2020. The session handled by Dr. Suresh A Kartha, Associate professor (CE), IIT Guwahati was held through ZOOM platform. The webinar started at 11:00 am witnessed a participation of almost 50, including students and faculty of the department. He explained the concepts in hydrology considering hydrology as a system where every input provided to the system gives us an output, where input is the cause and output is the effect produced due to the cause. This session was based on the concepts by VenTe Chow in his book, ‘Applied hydrology’. During the session, Dr. Suresh explained that hydrology encompasses the occurrence, distribution, movement, and properties of the waters of the earth. It involves the interaction of water with the physical and biological

environment. Hydrologic system is a system of interrelated components, including the processes of precipitation, evaporation, transpiration, infiltration, groundwater flow, streamflow, etc., in addition to those structures and devices that are used to manage the system. Hydrologic system is subject to different kind of weather pattern and spatial complexity, and is dynamic and random in nature. Each of component in hydrological cycle are called processes. He also explained watershed as a system with natural barriers like hill surrounding it thus watershed becomes a system with a single inlet and a single outlet .He also explained modelling techniques used in hydrology. The systems analysis approach examines the overall operation in the system generating output from the input. This approach helps in simulating a mathematical model for simulating the output based on the input provided and considering various physical and chemical processes occurring in the system. The systems can be time dependent or time independent, deterministic or stochastic , linear or nonlinear based on the time , space and probability .He also explained that unit hydrograph is a deterministic approach and also explained how calibrations are made based on each approach. He explained in detail about deterministic and stochastic model. A deterministic system is a system in which no randomness is involved in the development of future states of the system , hence it was simpler than the stochastic model in which randomness is involved hence modelling is more complex as it varies with time. The session was very helpful to us as we got basic concepts used in hydrology, how hydrology works as a system and how it can be modelled based on the input and the physical , chemical and biological processes occurring in the system. At the end of the one hour session doubt clearing session was also provided. Dr. Suresh also gave us information on various internships offered by IITG and the procedures for applying to the internship. In short the session was very informative and beneficial to us.

Webinar on pathology of concrete cracking

The Department of Civil Engineering organised a webinar on the topic “Pathology of Concrete Cracking”. The session was handled by Er. Sebin Jose, Assistant General Manager,Zuari cements on 14th May 2020. The session witnessed a participation of

around 50 attendees, including students and faculty of the department. In the session, he elaborated on reasons of concrete cracking from cosmetic defects to total failure. He discussed in detail the types and causes of cracking of concrete. Concrete provides structures with strength, rigidity, and resilience from deformation. These characteristics result in concrete structures lacking the flexibility to move in response to environmental or volume changes. Cracking is usually the first sign of distress in concrete. It is possible for deterioration to exist before cracks appear. Cracking can occur in both hardened and fresh, or plastic, concrete as a result of volume changes and repeated loading. Once the crack is formed, reseal the cracks by injecting with liquid resin. Shrinkage is another parameter regarding cracking of concrete. Mainly there are two types of shrinkage: thermal shrinkage and hydraulic shrinkage. These types, effects and ways of perverting shrinkage was explained by him in the session. Another reason for cracking in concrete is due to carbonation and corrosion of reinforcement. Concrete structures deteriorates due to corrosion of reinforcement due to poor cover. Carbonation in concrete occurs due to atmospheric carbon dioxide, on the building located at height and in contact with atmospheric carbonates. When rusting takes place, concrete separates from corroded steel reinforcements. Cracking of concrete can also takes place due to alkali aggregate reaction, which are most common in dams, bridges, walls etc. this reaction is complex in nature and the salt formed causes the concrete to swell. Hardened concrete cracking leads to excessive swelling, which expanding cracks, reducing strength etc. Hence this will affect the durability of the concrete structures. Hardened concrete will be subjected to creep, which is the deformation of concrete under sustained loading. When the load is removed, the deformation can be partially reversed. For the above reasons for cracking of concrete, there are many recommendation on choose of materials, atmospheric conditions, admixtures if any, temperature etc. webinar on pathology of concrete by Er.Sebin Jose was effective and we request more webinars on interesting topics.

Webinar on writing research proposals

Prof Lance Chun Che Fung, Post Chair, IEEE Region 10 Education Activities Committee detailed on how to write research proposals on 13th May 2020. He also discussed on the different resources and agencies through which research proposals can be approached and send.

Webinar on mobile security

Dr. Eleonora Losiouk, Postdoc Research Fellow, University of Padua, Italy detailed Mobile Security. Dr Eleonora spoke about Android App Development on 12th May 2020. She discussed about the threats involved while downloading apps from the Appstore. She explained the five different classes of vulnerabilities and demonstrated it using examples. She explained the importance of using virtualisation on android devices. The need for Mobile Security and its security issues were also discussed in her session.

Online talk on “advanced electrical machines for ev applications”

Dr, Sreeju S Nair, explained about different types of motors used for electric vehicle applications on 12th May 2020. He also gave an insight to the required characteristics, construction and control aspects of different types of electric motors like, Brushless DC Motors, Induction Motors, Permanent Magnet Synchronous Motors, Switched Reluctance Motors etc.

Lockdown - vehicle maintenance

Mr Anoop M S, Asst Prof, Automobile Engg Dept, SSET to talk about self-vehicle maintenance during lockdown on 12th May 2020. The webinar was meant to give an idea of self-vehicle maintenance during this period of National lockdown where vehicles have very limited to no movement. It will help an average person with very little vehicle knowledge to maintain their car. The webinar was open to the general public and was handled by Mr Anoop M S, Assistant Professor, Department of Automobile Engineering, SSET. He started the webinar by identifying the easy to

reach parts which can be checked for wear and tear and also where the reservoirs for various fluids are. The webinar was divided into things that can be done before starting our vehicle after lockdown and things to do after starting our vehicle.

Webinar on economical & durable concrete with blended cements

A webinar on the topic “Economical and durable concrete using blended cements” was organised by the Department of Civil Engineering, SCMS School of Engineering and Technology on 12th May 2020 from 11.30 am to 12.30 pm. The speaker was Er. Sebin Jose who is currently the Assistant General Manager, Customer Services, Zuari Cements. There were 55 participants for the webinar including students and faculty of the department of Civil Engineering. The webinar provided insights into blended cement concrete for durable corrosion free concrete structures in aggressive environments. Webinar started with the discussion on the basic concepts of ordinary portland cement, its manufacturing process and properties. Use of different materials to be added as ingredients for manufacturing blended cements was also dealt with. A comparison of the properties of concrete with ordinary portland cement and blended cement was made. Different advantages of using blended cement in concrete were explained in detail and the discussion mainly focussed on pointing out advantages of blended cement in durability and economical aspects. Chemical reactions that contribute to the strength development in concrete using blended cement were also explained. The session concluded with a doubt clearance session where the students got the opportunity to clear their doubts regarding the use of blended cements. The problems related to the mixing of ordinary portland cement and blended cement in construction sites was a topic of discussion.

Online live talk on data analytics

An online live talk on Data Analytics was held on 9th May 2020 by Dr. Balagopal G Menon, Assistant Professor , IIT Kharagpur. The webinar discussed Statistics is a critical tool for robustness analysis, measurement system error analysis, test data analysis, probabilistic risk assessment, and many other fields in the engineering world. Traditionally, however, statistics are not extensively used in undergraduate

engineering technology (ET) programs. Design of Experiment is a specific application of statistical techniques to enable rapid and robust development. This technique can be directed towards factor screening or process robustness depending on specific needs of project phase. These experiments result in a stronger process understanding, while requiring less time and fewer material resources. This talk addressed the fundamentals of applied statistics which include multivariate statistics and Design of Experiments.

Online talk on threat actors: where reach exceeds imagination

Mr. Shyam Sundar, Lead Security Researcher CISCO Umbrella took a session on the Cyber Threats and its effects on 8th May 2020. He spoke about stealing data and the havocs created in the Cyber World. He explained about the threat actors and what they can do. He introduced the tools to block the threat actors and to block data movements. Antivirus design for dynamic analysis was also given an insight. Highlights about the area of Cyber Security as career opportunities were also discussed.

Jaguar land rover power trains

Dr Deepak Hari, Electrification Strategy Lead, JLR, UK and an SSET alumni from the 2004 – 2009 batch of Automobile Engineering talked about the various power trains of Jaguar and Land Rover onn 8th May 2020. Dr Deepak started by discussing the various powertrains developed by Jaguar and what it means to own a Jaguar – “you don’t need a Jaguar, you want one”. He elaborated on the various powertrains that have been developed to meet emission standards especially hybrid powertrains and pure electric power trains. Dr Deepak also shared the developments of Land Rover and why it occupies a very unique position of being a luxurious vehicle with immense off-road capabilities. The students during the Q&A session also enquired about the prospects of higher education in the UK and his experience during his Master’s and PhD at University of Bath, UK.

Webinar on start ups

We are moving into an era where entrepreneurs are coming up with various types of Startup Companies and are facing difficulty in acquiring funds/investments for the development and growth of their establishments. This was causing many Startups who had creative and ground breaking ideas to just vanish from the market. Startups and Innovation being the mantra among engineering students of the future, it was apposite to organize a webinar talk about the paradigms in the industry related to startups. So to develop knowledge on the financial aspect of raising investments for startups, the ARIME in collaboration with the ASME SSET Chapter (American Society of Mechanical Engineers) and the IEDC SSET Chapter organized a webinar on the topic “Startups - When, Where and How to get Funding” on the 8th May 2020. The webinar was delivered by Mr. Anand T S, Mergers and Acquisitions, Paragon Holdings, Ireland and had an overwhelming response with 164 registrations out of which there were 84 participants during the webinar. The program witnessed the participation of 82 students and 2 faculty members from various departments of SSET. The webinar established a very formulated concept on how the new entrepreneurs need to face the issues in acquiring funds for their developing ventures and future endeavours. Mr. Anand wrapped up the webinar explaining the terms and jargons in the startup and venture capital industry and the resources from where the startups could acquire funding in a very easy to understand language even to the layman in the field.

Online talk on ‘role of artificial intelligence in cctv and access control industry’

Mr. Sooraj P N, Territory Sales Manager, South India, Security Products, Johnson Controls

An insight on the latest trends in the Surveillance industry Migration to cloud and Artificial Intelligence enabled automation. A webinar was organized by the Department of Electronics and Communication for the Faculty members as part of the online activities during the lock down period. The webinar session was conducted on 7th May 2020 on the topic ‘Role of Artificial Intelligence in CCTV and Access Control Industry by Mr. Sooraj P.N., Territory Sales Manages, Johnson Controls. The one

hour session which was a Knowledge Sharing Program was conducted in Microsoft Teams Platform. The session started with an Introduction to the basics of Access Control system, the major components and its working. The components include an input card/biometric reader, a controller which is called the heart of the system and a feedback sensor or an alarm device. When a proximity card is presented to the card reader, card information is compared to that of the control list and access is granted or refused and all such transactions are stored in a database. The faculty was encouraged to ask queries in between the session which made it more interactive and lively. The briefing on the concepts of CCTV and its types ranging from analog to IP Cameras, the technological advancements in the industry and the cyber threats faced in the market were some of the take away points of the session. The speaker gave an insight on the latest trends in the Surveillance industry Migration to cloud, Artificial Intelligence enabled automation mentioning a few. According to the speaker, The definition of AI still remains abstract as it is still an emerging area of research, and it may be defined as to develop a system which is able to perform tasks normally requiring human intelligence such as visual perception, speech recognition, decision making and translation between languages. The journey of AI started with Assisted Intelligence in which humans comprehended data and generate insight over through Augmented Intelligence and now into the reach of ultimate Autonomous Intelligence wherein the decision making and execution happens autonomously. Autonomous intelligence may be possible with newer techniques on Deep learning concepts. The videos were shared on Temperature Detection of employees in COVID 19 scenario was a recently launched product from Tyco Security, and the Usage of Drones for recreation and security purposes made us well informed on the updates in Surveillance industry. The one hour session ended up with a vote of thanks by Dr. Saira Joseph, HOD, ECE and a positive feedback from the Faculty members.

Webinar on industry 4.0: the role of ai and big data

Dr. Ajith Abraham, Director of Machine Intelligence Research Lab took a session on “The Role of Artificial Intelligence and Big Data” on 2nd May 2020. He detailed on Data Science, Intelligent Computing and Flexible Tree Structure. The session was

started with the Industrial Revolutions in Information Technology followed by the potentials of IoT. Big Data properties were discussed, later explaining the main components of Intelligent Computing. He also gave an insight on Evolutionary Computing, Artificial Neural Networks and Fuzzy Modelling. He concluded the session by discussing the challenges in Industry 4.0 and interpretations of Machine Learning techniques by the humans.

Webinar on reliability and maintainability of automobile systems

An automobile is one of the largest purchases that people make. Buying a new vehicle is never easy, with the range of conditions including everything from fuel efficiency to the number of safety features. In such investments, unexpected breakdowns should not happen. Recent investigation from automotive research firm reveal that the majority of consumers selected reliability as the defining factor in their new car purchases, indicating that, above all else, drivers demand vehicles that won't cost them exorbitant in terms of repairs and other maintenance. Maintaining the quality of an automobile is a major concern for the manufacturers as quality is the ultimate driver of reliability. With this objective, the Department of Mechanical Engineering organized a live webinar on “Reliability and Maintainability of Automobile Systems” for the students of all departments on 2nd May 2020. This webinar emphasized the importance of preventing unexpected failures of components, improving the product life cycle, maximizing the efficiency and safety of passengers. The webinar was delivered by Dr. Ajith Tom James, Associate Professor, Automobile Engineering Department, A. D. Patel Institute of Technology, Gujarat. The program received an overwhelming response with 84 participations. 79 students and 5 faculties attended from SSET. The webinar promoted life-long learning impetus in the students by engaging them in designing reliable products.

Webinar on bonded post tension slabs

Er. Madhu Sethumadhavan, Project Manager, Colliers International detailed on Post tension bonded systems used in bridges and buildings as a part of webinar organized by the Department of Civil Engineering on 2nd May, 2020 at 3:30pm. The session

held through ZOOM platform was attended by almost 25 participants, including students and faculty of the department. The session started with an introduction to the concept of post tensioning where he discussed its principle and made a comparison of the same with conventional techniques. Post tension bonded systems are used in bridges and buildings as they allow for flat slabs eliminating the need of drop beams and increasing the span length while staying more economical than conventional systems. He also briefed on components and various types of post-tensioning. The systems of post-tensioning were well explained with figures. The advantages and disadvantages of the system was also pointed out in the webinar. The talk was quite interesting as he added certain animation videos to explain the post tensioning system. At the end of session, the participants had an interaction with the resource person. The webinar enlightened the attendees in understanding the importance of adapting this technique in construction.

Webinar on stress transfer mechanism in soils

SCMS School of Engineering and Technology (SSET), Karukutty organized a webinar for the 3rd year students of Civil Engineering Department at 4:00 pm on 1st May 2020 to make use of the lockdown period effectively. The speaker of this program was Er. Jayakrishnan Menon, who is currently the Director of TDAC Solutions Pvt. Ltd, Ernakulam. He is a highly acclaimed Geotechnical Consultant. The session came true with the kind support of the HOD of Civil department Dr. Anitha G Pillai and the faculty members of civil department. The webinar started with the discussion on basic concepts of Geotechnical Engineering and why students tend to dislike or have less interest in Geotechnical Engineering. Types of root path of trees near barriers were shown in the slide. There was a comparison between clayey soil and sandy soil. Sandy soil was represented as magnetic balls stacked over other and clayey soil was represented as rough balls. Later, failure of soil due to exerted load was discussed and it was affirmed that failure of soil is due to shear. Local shear failure and general shear failure was discussed and interactive videos were shown to illustrate failure patterns in soil. After that he described about how to get an idea about characteristics of soil based on surrounding topography and animals

present. He mentioned elephants as an example that elephants are found only in the places where there is good soil strength. The session was concluded by sharing his experience as an engineer and a geotechnical consultant. The session ended at 6:00 pm and Ms. Geethu R Babu, Assistant Professor, Department of Civil Engineering proposed the vote of thanks on behalf of the department for spending his valuable time with the students.

Webinar on id cnn and nlp

Dr. Basant Agarwal, Assistant Professor in Computer Science and Engineering, IIIT, Kota detailed on “1D Convolution Neural Networks and Natural Language Processing” on 30th April 2020. In the session he detailed on the working of 1D Convolution Neural Networks, its applicability, concepts of Machine learning and Deep Learning with examples.

Engineering behind tyres

Mr Arjun Sethumadhavan, Assistant Manager, J K Tyres & Mr Vishnu Moorthy, Scientist, HASETRI, Mysuru to talk about tyres. The webinar was conducted on 29th April 2020, there were two speakers, both were students of Automobile Engineering from 2011 -2015 batch of SSET. Mr Arjun and Mr Vishnu are currently employees of J K Tyre Pvt Ltd. The webinar was started by Mr Arjun who explained the construction of a tyre and the differences between car, truck and two-wheeler tyres. He briefed the participants on how a tyre was designed based on its application. Mr Vishnu who is a Scientist at HASETRI (Hari Shankar Singhania Elastomer & Tyre Research Institute) elaborated on the various methods and processes of testing a tyre to meet the customer’s requirements. He mentioned that the tyre would be released for production only after meeting the requirements.

My future in mobility

The webinar was conducted on 28th April 2020. The speaker Mr Collin is the Mobility Partner at Robert Bosch Engineering and Business Solutions. He gave the participants insight into the various job opportunities for a graduate in automobile engineering and

how one should go about looking for a job. His advice was to try and get a job at one of the suppliers which are classified as Tier 1, Tier 2 and Tier 3. Tier 1 being companies like Robert Bosch, Continental Automotive etc which supply a number of components to OEM's (Original Equipment Manufacturer's like Ford, Mahindra, Maruti Suzuki etc). Tier 2 are companies which supply specialised parts to multiple companies in multiple domains for example SKF – which is a bearing company; supplies bearings to multiple industries including automotive companies. The webinar also included a discussion of the fate of the automobile industry after the Covid - 19 lockdown. Screenshots from the webinar.

Introduction to autonomous driving and advanced driver assist systems

Mr Girish Mohan, System Test Engineer, T&S Engineering Germany to talk about the tech in autonomous driving systems and ADAS on 27th April 2020. The speaker for the webinar is also an Automobile alumni of SSET who is currently working in Germany. Mr Girish Mohan is a Test engineer of Advanced driver assist systems and Autonomous vehicles. He shared his experience in the development of driver assistance systems like lane departure warning and collision avoidance systems. The participants were also exposed to the various levels of autonomous driving as stipulated by SAE International standard J3016.

Study and career opportunities in sweden

Mr Telbin Thomas, M.S Scholar at Jönköping University, Sweden to share his experiences on studying and working in Sweden on 24th April 2020. The speaker for the 2nd webinar was an Automobile alumni from the 2013 – 2017 batch of SSET. Mr Telbin Thomas is currently pursuing his masters at Jönköping University, Sweden. He shared his experience of trying to apply for higher studies, the formalities involved and the job oppurtunities available in Sweden. He gave an informative talk on the advantages of doing student design projects and the advantages such projects offer when applying for higher studies.

A world without ic engine

The webinar was inaugurated by Mr Gopakumar S, Senior Group Director, SCMS Group of Educational Institutions in the presence of Dr Praveensal C J, Principal, SSET. Mr Brezhnev Jeevanandam shared his experience in the world of simulation and design of the automotive industry and was of the opinion that IC engines will be available for atleast the next 20 years as the electric vehicle industry still has a long way to go become as cost effective as an IC engine on 23rd April 2020. He also mentioned that the auto industry would definely shift to the EV market as a lot of companies had already released EV's in their vehicle line up.

Webinar on web/mobile based integrated solutions for construction management

An online session on web/mobile based integrated solution for construction management by Er. Reji Zacharia, S & R consultant was held on 13 th April, 2020. The session was held in Zoom for the faculty members from the Civil Engineering Department. The session provided an overview of the topic Aadspro (Analysis, autoscan design, detailing, scheduling and sequencing program) which is a new generation design package which can be used for a number of applications in Civil Engineering. Aadspro is integrated with commonly used programs like Etabs/STAAD.Pro and AutoCAD and has different modules including beam, slab, column, footing detailing etc. Estimax software was also introduced which is swift in performing quantity estimation as well as is capable of performing rate analysis AadsproERP which is a leading ERP platform for the construction sector which helps builders, contractors, and consultants to manage their daily activities and control them in a better way was also introduced. . The Aadspro ERP helps them to monitor the daily activities in their organizations. A six dimensional approach connects engineering, time, cost and information through all platforms. Different modules in AadsproERP include: Design & detailing (direct from CAD), Estimation (direct from CAD to Estimax), Planning, Accounting, Inventory management, Quality control, Optimization, Customer relation management, Communication modules, HR management and Document

management. At the end of the talk, an interactive section was also conducted, wherein faculties were given the chance to ask him questions and the session came to an end. Actually the talk was really an informative one for all the faculty members as it pointed out the importance of this software as well as its numerous advantages like how well its capable of helping the construction industries to manage their daily activities in a better and efficient way.

Placement News

The following numbers of offers were given to our 2020 batch students by:

Wipro – 8

UST Global - 9

Hexaware Technologies - 4

Byjus Think and Learn – 2

Redblack Software – 2

VVDN Technologies-2

SEPTEMBER 2020

Seminars and Workshops

The Department of Computer Science and Engineering conducted a five day Android App Development workshop for all the faculties of SSET. The workshop was headed by Ms. Dhanya K A, Assistant Professor, Dept. of CSE and all sessions were handled by faculty of Dept. of CSE. The sessions were mainly in hands-on mode, and participants were given training in Android framework, Input controls, intents, animations, database and publishing Android Apps. Participants were divided into batches of 35 and each batch was given a slot from August 17 to 21, September 7 to 11 and September 14 to 19.

The Department of Automobile Engineering, SCMS School of Engineering and Technology in association with Petroleum Conservation Research Association (PCRA) & Society of Energy Engineers and Managers (SEEM) conducted a webinar

titled “Transport sector Fuel Efficiency Behavioral and Technological” on September 21. The speaker was Shri Suresh Kumar M, Additional Director, Petroleum Conservation Research Association (PCRA).

Campus Activities

SSET celebrated EOnam 2K20 from August 28 to September 2, in a first of its kind, online mode. The event comprised competitions themed in the spirit of onam such as Arpo Erroo Erroo, Malayali manka, Kerala Sreeman, Ormayiloruonam, Tarang, Trollanmar Ithile Ithile, A, Aksharotsav, Padhmavyuham and Onnathallu . Special guests included Shabareesh Varma – Actor, Akash S Menon - Guitarist and Geo C Anto – Singer. The winners of the various competitions were

1. Drawing-1st-Sreeram V Dev (S7ME), 2nd-Aiswarya Anand (S7 EEE)
2. Singing-1st-Dheeshna M N (S7 CSE), 2nd-Rifana Razack (S7 CE)
3. Instrumental- 1st-Vinay Arun Deo (S7 CS), 2nd-Krishna Ganesh (S7 EC)
4. Troll- 1st-Arjunan V M (S5 EEE), 2nd-Ajaysuryan P A (S3 CSE)
- 5, Sreeman/Manka- Praveena K.P (S5 CS), Anshya (S7 EEE), Akash (S7 ME)
6. Photography- 1st-Gokul Krishna D (passout), 2nd-Arjun V S (S7 ME)
7. Writing-1st-Gayathri S (S5 CSE), 2nd-Ijaz Babu(S7 CSE)
8. Quiz- 1st-Arjun S (S5 CSE), 2nd-Rohith Sreenivasan (S3 ECE)
- 9, Pubg- 1st-Mohammed Yaseen (S5 CSE), 2nd-Gaurav basheer
- 10, Treasure hunt- 1st-Bestin (S7 ECE), 1st-Abhinav C, 2nd-Ajay S Kumar(passout), 2nd -Shahistha Shereef (S7 ME)

The Department of Automobile Engineering conducted the grand final of AUTO QZ 2020 on Google Meet. The grand final was a culmination of an online quiz from 6 July to 4 September which saw 1400+ participants out of which only 6 cleared the 3 level Auto Quiz to compete for the title of AUTO QZ Grand Champion. The winners of the event were Gayathri Dili Champion (Faculty, Dept of CSE, SNGIST), Ameer Muhammed 1st Runner up (3rd year EEE, GEC Thrissur) and Daksh Pandey 2nd Runner up (3rd year Auto, SRMIST, Chennai).

College Achievements

The 8th semester final degree examinations results were published on September 19. This is the second KTU batch to graduate from SSET. Mr. Ajay S Kumar bagged 5th rank in Mechanical Engineering while Mr. Ganesh Babu secured 9th rank in Computer Science and Engineering.

Placement News

Dr. Varun G Menon, Associate Professor, Dept. of CSE & Corporate Relations and International Collaborations In charge, joined Vini Jose, Training and Placement Officer, Sahradaya College of Engineering and Technology in a live session on “Placement preparedness and recruitment trends during and post the COVID pandemic” organized by MM Horizon & Conduria Online’s Placement Preparedness Test Winners on September 3.

Obituary

It is with grief and sorrow that we inform the untimely demise of Amal K M on August 29. He had completed his B.Tech in Automobile Engineering from SCMS School of Engineering and Technology and was a student of the 2010 - 2015 batch.

OCTOBER 2020

Campus Activities

The department of Automobile Engineering in association with TORQUE, the Automobile Engineering Students' Association of SCMS conducted a series of webinars “Road Safety Awareness – Understand Engineering and save lives” for high school students to raise awareness of road safety and also to teach them the importance of following the rules of the road. The procedure to apply for license and the preparations needed for the Learner’s test was also discussed. Mr Amal P Dev, Assistant Professor, Mr Sujay K, Assistant Professor and Mr Anoop M S, Assistant Professor were the speakers for the webinar. The programs were conducted at Mar Augustine Memorial Higher Secondary School, Koratty, Thrissur, PS Higher Secondary School, Thirumudikunnu, Thrissur, Union Higher Secondary School, Annanad, Thrissur and LBSM Higher Secondary School, Avittathur, Thrissur.

College Achievements

17th October 2020 marked a day of pride and joy for faculty and staff at SSET as it marked the completion of 19 years since the first batch of B-Tech engineering students set foot on the campus.

Staff Achievements

The Directorate of Environment & Climate Change Dept of Environment had funded the project ‘Micro Plastic Pollution: Source characterization, transport modelling and assessment of impact on fish population in Kadambrayar river and Vembanad backwater region’ for a total amount of Rs. 13,09,000/-. Of the sanctioned amount, Rs. 5,23,600 has now been released to Dr. Nisha L, Associate Professor, Department of Civil Engineering.

The paper titled “Intelligent vehicle collision avoidance system using 5G-enabled drone swarms” by Dr. Sunil Jacob, Director, SCMS Centre for Robotics, Dr. Varun Menon, Associate Professor, Department of Computer Science and Engineering and Ms. Parvathi R, Assistant Professor, Department of Electronics and Communication Engineering has been published in DroneCom '20: Proceedings of the 2nd ACM MobiCom Workshop on Drone Assisted Wireless Communications for 5G and Beyond, at MobiCom '20: The 26th Annual International Conference on Mobile Computing and Networking London United Kingdom.

Dr. Sunil Jacob, Director, SCMS Centre for Robotics is developing a Smart Mask in collaboration with The Higher College of Technology, Oman that has received a funding as part of COVID-19 research program initiated by Research Council, Oman for the project titled ‘Prediction, Analysis and Smart Mask based on Social Distancing’.

Student’s Achievements

Two of SSET’s students are among the toppers in the APJ Abdul Kalam Technological University exams conducted for the 2016-2020 KTU batch. Mr. Ajay S Kumar of Department of ME (CGPA: 9.71) and Mr. Ganesh Babu of Department of CSE (CGPA: 9.51) secured 5th and 9th rank in their respective branches.

Final year students of Department of Automobile Engineering Mr. Basil John, Mr. Arjun V Pillai and Mr. Prajul M P were adjudged 2nd position winners in the Auto quiz conducted as part of the National Level SAE Tier 3 event.

Placement News

The following companies have conducted recruitment drive for our 2021 batch students:

1. H&R Block Inc. – 5 offers
2. TCS-1 offer

3. Infosys Limited- 52 shortlisted

4. White Rabbit- Result awaited

Indian Army, The South Indian Bank, Newton Consulting, AUKI Digital Innovations, Cisco, SPINNY and Eleation conducted recruitment drives for our 2020 batch students:

Konfidence Praktiz tests are opened for our 2021 batch training registered students.

Online meeting of Capitaire Career Excellence, H&R Block Inc. Pre Placement Talk were conducted during October 2020.

Dr. Varun G Menon, Associate Professor, Dept. of CSE & Corporate Relations and International Collaborations In charge, attended CII SR Placement Coordinators Forum on 30th October 2020.

Reflections and renaissances

“Success is no accident. It is hard work, perseverance, learning, studying, sacrifice and most of all, love of what you are doing or learning to do”. These were the words of Pele, one of the greatest ever footballing masterminds. His ideology seems to have an uncanny resemblance to the one which I have employed at SSET which drove me to secure fifth rank amongst my peers in Mechanical engineering branches of various colleges under A P J Abdul Kalam Technological University, Kerala.

A seed does not germinate and become fruitful unless it is planted in the right soil. My main aids to prepare for examinations were the notes provided by the faculties and those notes paints a vivid picture about their expertise and technical prowess. The helpful nature of the competent facility and a library unlike no other, in terms of eco friendliness and the plethora of reference books in its arsenal helped increase my knowledge base. Ergo, metaphorically speaking and I say this with great pride; I was planted in the best soil. The curriculum which our batch had followed provided the opportunity to put all of our gained knowledge to good use in the form of a project which had to be socially relevant too. Under the guidance of Dr. Sheeja Janardhanan and Dr. Vidya Chandran, we were able to come up with a project that harnesses energy from vortex induced vibrations; The Hydro Vortex Power Generator. It was an acclaimed project and received many accolades at various podiums.

Another fascinating experience would be with the placement cell of our college. Currently there are over 240 job offers for our batch. This is due to the tireless efforts of the placement cell and they did an extremely well of a job and so they could provide maximum students with at least one opportunity to get placed.

In this age of information, one needs to be extremely talented to be successful. I am really passionate about social services and organic farming. I could nurture both of these passions under the NSS Scheme of our college. Under the guidance of NSS Programme Officers Mr. Rakesh A and Mr. Sujay K, I was able to hone my leadership and crisis management skills. Also my zeal for organic farming could be channelled into the organic farm of NSS, where I cultivated a lot of vegetables over the span of 3 years. Dance being one of my avocations, SSET also has provided me with the opportunity to participate and improve my skills as a dancer. Thus SSET sets a precedent by providing equal importance to curricular and extracurricular activities.

From being a normal job aspirant to a pursuant of doctoral degree in engineering, SSET has taught me to dream big, learn more and reach new heights. This institute will be forever cherished by me as the heaven of my life. I will always be proud to be part of the Royal Mech family and forever proud to be an SSET'ian.

(Ajay S Kumar 2020 passout - B.Tech Mechanical Engineering)

NOVEMBER 2020

Campus Activities

To commemorate the late Vice Chairman Dr. Pradeep P Thevannoor, the annually held Dr. Pradeep P Thevannoor Innovation Awards (PPTIA) was changed to a new format with a series of talks under the banner Dr. Pradeep P Thevannoor Innovation Talks, 2020. The talks are organized in online mode from 17th to 27th November 2020 from 6.00 pm to 7.00 pm with eminent speakers from academia and industry sharing their expertise on innovation and entrepreneurship.

The department of Computer Science and Engineering organized a Virtual Colab Webinar on the topic “Getting started to Azure and Azure AI” on 12th November 2020.

The session was handled by Mr. Tiago Costa, Microsoft Certified Trainer and Mr. Aaromal Sujith, Microsoft Learn Student Ambassador, S7 CSE student at SSET.

The department of Mechanical Engineering organized an online alumni talk on 6th November 2020 by Mr. Amarnath Sankar (2013-2017 Batch) Application Engineer, KSB MIL Controls Ltd in which he elaborated on his journey with a talk titled ‘Transition: Student to Engineer’.

The department of Electronics and Communication Engineering in association with IEDC-SSET, organized a 3 day online workshop on “Arduino and Tinkercad” for fifth semester ECE and EEE students from 4th to 6th November 2020. The workshop was conducted to help students carry out projects as part of Design Project course in KTU fifth semester syllabus.

The Institute of Electronics and Telecommunication Engineers (IETE) chapter at SSET conducted an online quiz program ‘Quiztronics’ on 30th October 2020. A total of 49 students from various engineering colleges participated in the event and the first prize was bagged by Ms. Sajo Joseph of Amal Jyothi College of Engineering while second place was won by Ms. Navneeth K Sujith of Model Engineering College.

College Achievements

SSET Women’s Cell was inaugurated on 14th November 2020 with a talk by Dr. Sheela C Babu, MD (Gynaec), DGO, Senior Consultant- Obstetrics and Gynaecology, Ernakulam Medical Centre on the topic “Menstrual Hygiene and Health”.

Staff Achievements

The project “Artificial Deep learning Brain Actuated Lower Limb Exoskeleton for Paralyzed” was awarded a 15 lakh INR funding from BIRAC SITARE- Gandhian Young Technological Innovation (GYTI) Award 2020. The team members are Vinoj P G, Saira Joseph and Varun Menon guided by Dr. Sunil Jacob. This is the second Gandhian award for a project from SSET. Mr. Vinoj P G, Assistant Professor, Department of Electronics and Communication Engineering was conferred the award in an online function on 5th November 2020.

Mr. Jenson Joseph, Assistant Professor, Department of Mechanical Engineering was awarded Doctorate Degree for his research on “Manufacturing and characterization of tungsten reinforced high-density polyethylene and epoxy resin composites” from National Institute of Technology, Trichy on 23rd October 2020.

Dr. Varun G Menon, HoD, Department of Computer Science and Engineering has been made a part of the Editorial Board of Computer Communications Journal. He is a member of the journal’s Technical committee.

The following faculties have taken charge as HoD from 1st November 2020:

Mechanical Engineering - Dr. Sheeja Janardhanan, Computer Science & Engineering - Dr Varun G Menon, Civil Department - Dr Nisha L and Humanities - Dr. Sreelekha B

Placement News

The following companies have conducted recruitment drive for our 2021 batch students:

1. Dexlock – 1 offers

2. White Rabbit- 3 shortlisted

Accenture, Hawkins, Carestack, Unitybees, Ellobees Technologies, Citrus Informatics conducted recruitment drives for our 2020 batch students:

2020 passout B.Tech – 2 students are placed with Byjus Think and Learn Pvt. Ltd.

Konfidence Praktiz tests are opened for our 2021 batch training registered students.

DECEMBER 2020

B.Tech 20th batch virtual inauguration

The virtual inauguration of B.Tech 20th batch was conducted on 30th November 2020 with Mr. Kris Gopalakrishnan, Co-founder of Infosys and Chairman, Axilor Ventures as the Chief Guest. The inauguration was followed by an induction program by Dr. Anitha G Pillai, Dean- Academics and department wise induction program in the afternoon session.

Campus Activities

The 6th edition of the annual Dr. Pradeep P Thevannoor Innovation Awards was conducted from 17th to 27th November 2020 in a new format with a series of online innovation talks by eminent entrepreneurs from across the world. The speakers for the event included Mr. John Devadasan from Saint Gobain Glass India Pvt. Ltd., Dr. Rajesh Nair from Asia School of Business, Ms. Lakshmi Menon from Pure Living, Mr. Prasad Krishna from NITK Surathkal, Mr. Joffin Joseph from FullContact Inc., Dr. Jaishankar Prasad the former CEO of KSUM, Mr. Anith Raj from World of Origins, Dr. Thomas Joseph, Adjunct Professor at IIM Udaipur and IIT Delhi, Mr. James Joseph from God's own Food Solution Pvt. Ltd. and Mr. Robin Tomy from TCS.

The association of Department of Electronics and Communication Engineering, EXPLORA, conducted an online talk by Mr. R N Krishnakumar, CTO, RAS Research Labs, on the topic 'Digital Communication in Practice' on 17 December for the final year students of the department.

The Department of Mechanical Engineering in association with ASME SSET student's chapter conducted an online debate competition on the topic 'COVID has been a boon on technology' on 25th November 2020. The first place winners were Ms. Ardra Anilkumar (S7 ECE) and Mr. Abhiram (S5 ME1) and second place was won by Mr. Akshay P and Mr. Badareekrishna (S5 ME1).

College Achievements

Faculty members of 12 engineering colleges have received the government nod to carry out quality checks of the roads to be repaired by the Department of Local Self Government under the Rebuild Kerala initiative. The engineering colleges have been selected based on their competency and capability and faculty members belonging to SCMS School of Engineering and Technology are among those selected for the task.

Staff Achievements

The special issue on "Intelligent and pervasive computing for cyber-physical systems" edited by Dr. Varun G Menon was published in the Journal of Supercomputing, Springer with Impact Factor 2.600

Dr. Varun G Menon has been appointed as Associate Editor of Physical Communications Journal, Elsevier with Impact Factor 1.594, Technical Editor of Computer Communications Journal, Elsevier with Impact Factor 2.816 and Associate Editor of Alexandria Engineering Journal, Elsevier with Impact Factor 2.460

NSS Activities

KTU NSS cell had decided to create awareness about Kerala Sarkar's Samoohika Sannadhasena among NSS Volunteers so as to plan and execute several projects in cooperation with it. In this regard, SSET NSS units conducted an online session to know more about Sannadhasena and its activities. The session was handled by Shalu Subair & Adhil Krishna, master trainers of Ernakulam district and former Best NSS Volunteer Hari was the chief guest for the event conducted on 22nd November 2020. 'Ente Veedu' was a plan of action launched by NSS Volunteers of SSET on 17th December 2020. The event created a platform for volunteers to introduce a member from their family and to speak about their qualities, how that particular member influenced them, etc. Volunteers actively participated in the event by sharing a photo of that personality and their qualities with a voice note.

Placement News

The following companies have conducted recruitment drive for our 2021 batch students:

1. Infosys Limited – 16 offers
2. TCS – 28 offers
3. Gadgeon – 1 offer
4. Prodapt Technologies- 2 offers

Experion Technologies, Sutherland Global Services conducted recruitment drive for our 2021 batch students and results are awaited.

2020 passout B.Tech – 4 placed with Airpay Digital

2019 passout B.Tech – 4 placed with UST Global

Hawkins, Accenture, Verdant Telemetry, Ellobees Technologies, General Electric Power, Go Prac, Citrus Informatics conducted recruitment drive for our 2019, 2020 batch students and results are awaited.

Webinar on 'Global Career Opportunities and Higher Education Abroad' was conducted on 1st December 2020, in association with Eazylink Academy for passed out batches and around 60 participated.

Our 2022 passout batch student, Mr. Alan Babu is offered internship with TalentSev India in association with Internshala during December 2020.

ICTAK organized Microsoft AI session for B.Tech students during 14th to 19th December 2020.

Infosys "Bridging Gap between Theory and Practice in Analytics and AI" was conducted on 15th December 2020 for our 2021 and 2022 batch B.Tech students.

Reflections and Reminiscences

Dream To Limitless

So finally, I have completed the four-year journey of my B.Tech graduation in Computer Science and Engineering. I was having second thoughts of taking up this course in Kerala, as I was born and brought up outside. You never know what's in store for you. All I could do was to take one step at a time and let fate decide my destiny.

College life at the start can be intimidating, that is when SSET Happened, the road to graduation was a long story of early mornings and sleepless nights, emotions, and struggles that I've made up successfully. The journey through SSET was extremely new. I evolved as an individual and learned many life lessons. I want to thank my respected Principal, Head of the Computer Science Department, the Senior faculties, my department teachers, subject teachers, the receptionist, my other department teachers, office and placement faculties, librarians, my hostel wardens, and all those

who have helped me to set a mark to represent this prestigious Institution. They were sincere and had a parental approach, they helped me evolve, they cared, and they acknowledged, gave me opportunities and recognition for more than I could ask for. Everyone was very welcoming and this is what I liked about SSET.

My teachers were there every day and every time to motivate and uplift me whenever I was down. They were like a pillar of support and guidance for me, who inspired me and believed in me to reach greater heights. Along with that my journey could not have been completed without my friends, batchmates, juniors, and seniors who were kind, who helped me realize my potential and were a great support. I thank them for giving me unforgettable memories as these contributed to the journey I was on.

With God's grace, I was able to achieve 9th rank in APJ Abdul Kalam Technological University, and was astounded at my victory. I had come a long way. I have to thank my family and my teachers. My sincere gratitude towards those who wished me on my success. I'm happy taking these learning's along the way for a new beginning by making me a part of the SSET family.

Lastly, I would like to conclude by saying DREAM to limitless reach, always BELIEVE in achieving it, always try and never give up HOPE, when you have all these things in your hand, no one can stop you to CONQUER it.

(Mr. Ganesh Babu, 2020 passout - B.Tech Computer Science and Engineering)

JANUARY 2021

Paper Presentations

A paper titled " Mechanical and tribological performance of Al-Fe-SiC-Zr hybrid composites produced through powder metallurgy process" by Ms. Sruthi V, Associate Professor, Department of Basic Science and Humanities has been accepted in the

Campus Activities

The Department of Civil Engineering in association with SCMS Water Institute had conducted a workshop at Kerala Engineering Research Institute, Peechi on Rejuvenating Rivers of Kerala and pollution abatement on 8th January 2021.

The Department of Basic Science and Humanities conducted an online talk titled ‘The Role of Chemistry in Engineering’ on 8th January 2021. The resource person for the talk was Dr. June Cyriac, Assistant Professor, Department of Chemistry, SH College, Thevara.

Staff Achievements

Mr. Sanju A. C., Assistant Professor, Department of Mechanical Engineering has been nominated as SSET’s Nodal officer of “Nava Keralam Yuva Keralam” – an initiative by honourable Chief Minister of Kerala. He along with selected students of SSET will be interacting with honourable Chief Minister in the first week of February 2021.

Ms Febini M Joseph, Assistant Professor, Department of Basic Science and Humanities was a resource person for an orientation programme on the topic "Assisting Visually Impaired Students" at SB College, Changanasserry on 8 January.

Student’s Achievements

Ms. Rintu Kurien, MTech Computer Aided Structural Engineering 2018-2020 batch won second prize for the story ‘Corrosion in public’ in a story writing competition conducted by IIT Madras in December 2019.

Ms. Ameena Azad, S7 CSE student and Ms. Abay Raju M, S3 CSE student emerged the winner and runner up respectively in the intra SCMS online coding competition ‘Codequake’ conducted by SCMS School of Technology and Management on 16th December 2020.

NSS Activities

The National Service Scheme Technical Cell Directorate Level State Awards 2019-20 were declared on 13 January and the SCMS NSS units secured 3 awards. Mr. Jayesh Mohan (EEE student) received Best Volunteer award and Mr. Ajay S Kumar (ME student) and Ms. Heleena Joy (ECE student) received top scorer awards in their respective batches.

Placement News

The following companies have conducted recruitment drive and offered our 2021 batch students:

1. Sutherland Global Services – 24 offers
2. Byjus – 5 offers
3. Redblack Software – 1 offer

Experion Technologies, Factweavers Technologies, Quest Global conducted recruitment drive for our 2021 batch students and results are awaited.

Veda lighting Designs, Prudent Technologies, Orion innovation, Ever Green Energy Technology, Accenture, Infosys Limited, RM ESI, RCKR Software, Tuttifrutti Interactive, Ganesh Technical Consulting Services, Rapidvalue Solutions conducted recruitment drive for our 2019, 2020 batch students and results are awaited.

Firstnaukri Placement Readiness test for 2022 passout batch was conducted on 16th and 17th January 2021.

Free Webinar on 'Upskilling Strategies To Create Future-Proof Career' was conducted on 21st January 2021, for B.Tech 2021, 2022 batch students and resource person was Mr. Arjun V, Co-founder and CEO at Arivupro Academy.

Knowledge Hour with Infosys LinkedIn Live Chat on "Navigating the next in financial services through technology modernization" was conducted for our 2021, 2022 batch B.Tech students on 21st January 2021.

Webinar on 'Strategic Approach to crack your Placement Interview Process' was conducted on 26th January 2021, for B.Tech 2021 batch students and resource person was Mr. Rajeev Markanday, Industry Expert.

Webinar on 'Higher Grade Rebars: Challenges and Opportunities' by JSW Steel Engineering was conducted for B.Tech All batch students on 28th January 2021.

Mahindra Pride Phase2 free training for our B.Tech 2021 batch-EC,EE, 10 students, are scheduled from 27th January to 28th March 2021.

FEBRUARY 2021

Department Activities

The Arts Club of Department of Electronics and Communication Engineering conducted an online painting competition to commemorate World Radio day on 13 February. Mr. Gurudutt S Prabhu of S1ECE secured first place and Mr. Harikrishna K S of S1ECE was adjudged second place for the event.

Department of Electrical and Electronics Engineering organized a webinar in association with Movie and Theatre Club on 13 February. The webinar was on the topic 'Scope and challenges of cinematography' and the speaker was Mr. Yedhu Radahkrishnan, Cinematographer and Alumnus of 2016 EEE Batch.

Department of Mechanical Engineering in association with ARiME organized an Industrial talk on 'Development in Design and Automation for Industry 4.0' on 22 January. The speaker for the event was Mr. Vinay S, Manager, Education and Training (Conceptia Connect).

Department of Civil Engineering organized a talk by Dr. John Tharakan, Visiting Professor from Howard University who visited the campus and delivered a lecture to M.Tech Environmental Engineering Students on Hazardous waste Management on 29 January.

Department of Civil Engineering in association with SCMS Water Institute is involved in providing Technical assistance for the study to develop Detailed Project Report (DPR) for Kechery River in Thrissur District (Stretch from Puliyanor to Kechery) and Kadambrayar River in Emakulam district (Stretch from

ManckakadavutbBrahmapuram). This project is part of Tie up between Engineering colleges and Water Resources Department for Pollution Abatement of Rivers under the direction of National Green Tribunal(NGT).

Campus Activities

The Internal Complaints Committee organized a webinar on ‘Sexual harassment: Awareness and Safeguards’ on 25 January. The session speaker was Adv. Asha P Kuriakose, Advocate, High Court of Kerala.

The national flag was hoisted at the campus on 26 January by Dr. Praveensal C J, Principal, SSET. The ceremony was also attended by NSS coordinators and students.

Staff Achievements

Mr. Sam Joshy, Assistant Professor, Department of Mechanical Engineering was awarded PhD for the thesis titled "Influence of in-service microstructural changes in hot forging dies on die failure" from University Of Calicut. The award is effective from 27 November, 2020.

Dr. Mini Tom, Professor, Basic Science & Humanities Department was the Key Resource Person and conducted a two days session on Basics and Fundamental Concepts of Integration for the first year B.Tech students and aspirants of GATE exams as part of an "Online Workshop on Fundamentals of Engineering Mathematics" organized by Institution of Electronics and Telecommunication Engineers (IETE), SC Kozhikode and Regional Science Centre & Planetarium, Calicut from 18 to 23 January.

Ms. Febini M Joseph, Assistant Professor, Basic Science & Humanities Department delivered a talk on "Koottu Charitable Trust" (assists the academic needs of visually impaired students) for the staff of SCMS Polytechnic College on 21st January 2021. After the session, teachers shared the idea of starting a small recording unit in the institution.

Febini M Joseph, Assistant Professor, Basic Science & Humanities Department chaired a session on "Innovative Techniques to Engage Students In Online Classrooms" for Skilled development trainees in ASAP (Additional Skill Acquisition

Programme), Government of Kerala on 24th January 2021. The session included details regarding technological innovations that can improve the online teaching learning process.

Dr. Ratish Menon, Associate Professor, Department of Civil Engineering has been approved by the syndicate as Member of KTU Board of Studies for Civil Engineering.

Ms. Beena Puthillath, Assistant Professor, Department of Electrical and Electronics Engineering published a paper titled "Energy Generation From Dairy Effluent Using Mfc Technology and Piezo-Electric Transducer" in UGC Care List Journal Bulletin Monumental Journal Volume 22, Issue 2, January 2021.

Dr. Vidya Chandran, Associate Professor, Department of Mechanical Engineering has been assigned as the SPOC, SSET Chapter by NPTEL

Dr. Jenson Joseph E, Associate Professor, Department of Mechanical Engineering, published a paper titled "Surface modification of tungsten fillers for application in polymer matrix composites in" Scopus indexed journal Materials Today: Proceedings, Elsevier Publications.

Dr. Raghav G.R. Associate Professor, Department of Mechanical Engineering, published a paper on "Mechanical and tribological performance of Al-Fe-SiC-Zr hybrid composites produced through powder metallurgy process" co-authored by Dr. Sheeja Janardhanan, Sajith, E, Dr. Vidya Chandran, and Sruthi V, in Scopus indexed journal Materials Research Express.

Mr. Francis Thomas, Assistant Professor, Department of Mechanical Engineering, published a paper on "Modeling and Optimization of Spine and Lower Extremities of a Motor Cycle Rider" in Second International Conference on IoT, Social, Mobile, Analytics & Cloud in Computational Vision & Bio-Engineering ISSN: 1556-5068

Student's Achievements

Mr. Jibin Lukose, S1 MTech VLSI and Embedded Systems student has received an idea grant of Rs. 2, 00,000 from Kerala Startup Mission for the startup Beurokrat. This is one of the most prestigious accolades from KSUM.

Ms Sreya M, Student, M.Tech Environmental Engineering has been selected for a 5 month online internship program by Danish Hydraulic Institute(DHI).

Two projects by ECE students guided by Dr. Sunil Jacob and Dr. Saira Joseph have secured second position in separate themes in the Keio University (India Japan Laboratory) collaboration with Indian Institute of Science (Centre for Society and Policy) Social Innovation competition with funding support.

1) Smart mask and gloves disposal unit (S3ECE students-Niranjan Santhosh, Sreelakshmi T U, Sidharth K S, Salil C L)

2) Efficient water management and distribution system using IOT (S5ECE students-Akhil Paulson, Jeslin Merin Sajeev, Kavya Krishna, Nisha Benny).

Placement News

The following companies have conducted recruitment drive and offered our 2021 batch students:

1. Quest Global – 12 offers
2. RCKR Software – 1 offer
3. Muziris Softech– 2 shortlisted
4. Rapidvalue Solutions – 1 shortlisted

Speridian Technologies conducted recruitment drive for our 2021 batch students and results are awaited.

Webinar on 'Studying German language' by Irinjalakuda German classes conducted for 2021 batch B.Tech students on 22nd February 2021.

Knowledge hour with Infosys Live chat on 'Keeping up with the current technology trends' for B.Tech ongoing students conducted on 26th Feb 2021.

MARCH 2021

Department Activities

The Department of Civil Engineering has associated with Department of Water resources, Kerala for a project on Rejuvenation of Rivers. The rivers Kechery and

Kadambrayar were assigned to the department for DPR preparation and it was submitted to the Irrigation minister by Nodal officer for Kechery, Ms. Suja of Kerala Engineering Research Institute on 25 February. An online presentation of the DPR was made by Dr. Akhila M, Associate Professor, Department of CE on the same day. As part of Knowledge Sharing Series program, the Department of Computer Science and Engineering had organized a talk on ‘Innovative approaches to teaching and learning for the digital age’ by Ms. Nisha S Raj, Assistant Professor, Department of CSE on 15 March.

The Department of Basic Science and Humanities organized an International online FDP titled ‘Coalescences of Science and Humanities in Engineering’ on 22 to 26th February. The 5 day FDP provided new insights to faculties and research scholars about how science and humanities help in creating socially productive and creative engineers for future.

Staff Achievements

Mr. Manikandan H, Assistant Professor, Department of Mechanical Engineering has been awarded PhD on 27 October, 2020 from BITS, Pilani for his work on ‘Investigations on Characterization of Surface Errors in Turning of Thin-Walled Components’.



Dr. Manikandan H, Assistant Professor, Dept. of ME

Dr. Varun G Menon edited and published a conference proceedings and book on Cloud Computing as part of the 10th EAI International conference, Cloud Comp 2020 held at Qufu, China on 11-12 December, 2020.

Dr. Varun G Menon was also a speaker at IEEE Kerala Section Panel Discussion on Connected and Automated Vehicles- Recent trends on ethical aspects held on 20 February.

Mr. Ajith Kumar, Assistant Professor, Department of Mechanical Engineering has acquired a funding of 9.28 lakhs from the Central Government for a project titled 'Design and Analysis of Hydrodynamic Depressor' with Defence Research and Development Organization, India (NPOL, Kochi).

Ms. Susmi Jacob and Ms. Deepasri Verma, Assistant Professors of Department of Computer Science and Engineering have been awarded ACM India 2021 Anveshan Setu Fellowship award. SSET is the only private engineering college from Kerala featuring among the list of awardees that includes mainly IIT's, IIIT's and NIT's.

Ms. Jane Theresa, Assistant Professor, Basic Science and Humanities published a chapter titled 'Living in the Wilderness' in the book 'Perspectives on Contemporary Literature' by Jeevan publication. Another paper titled 'Literary Perspectives of Humanism' was presented and published by her in the International Conference on 'The Spirit of Humanism' held at AVVM College Trichy on 6th March 2021.

Ms. Febini M Joseph, Assistant Professor, Basic Science and Humanities chaired a session on 'Donate Your Voice' for the faculties and students of Mariam College, Kuttikanam on 8th March 2021.

Ms. Febini M Joseph, Assistant Professor, Basic Science and Humanities delivered a talk on 'Goal Setting' for the students of SCMS School of Business as part of Orientation programme on 10th March 2021. She also engaged an interactive session with NSS Volunteers of SSTM on the topic 'Seven Habit to Increase your Social Productivity' on 16th March 2021.

Ms. Divya M S, Assistant Professor, Basic Science and Humanities published a paper titled 'Nature and Environmentalism: Postcolonial Ecocritical rereading of selected Nigerian Poems' in International Journal of Humanities and Arts on 17th January 2021.

Student Achievements

A team of students Mr. Fazal Jabbar, Mr. Abhishek R, Mr. Arjus S, Ms. Abhinaya, Ms. Gayathri S and Ms. Jagan Venugopal of S5CSE have been shortlisted for the Grand Finale of Toycathon 2021 for their idea ‘Secret of the Vedas- Action Adventure Game’. The team is mentored by Ms. Rosebell Paul, Assistant Professor, Department of CSE.

Mr. Vaishnav T S, S1ME student won the Champion title at the Badminton Championship held at Angamaly Indoor stadium on 7 March.

NSS Activities

A program ‘Maram Oru Varam’ introduced by Unnat Bharat Abhiyan, was conducted by NSS unit of SSET on 1st March. The program aimed at identifying trees at public places of Koratty Gramapanchayath and fixing QR code on them to get details such as name of the tree, life of tree, origin, botanical name, utilities and other related details, with the intention that the trees will be protected by public on knowing the need and importance of a particular species. The program was inaugurated by Gramapanchayath president Mr. P. C. Biju at Koratty Gramapanchayath premises in a function chaired by Dr. Praveensal C J, Principal, SSET. Dr. Sunny George Director of SSET Water Institute presented the project details. The NSS program officers Mr. Rakesh A, Mr. Sujai. K. and Dr. Rathish Menon of SCMS Water Institute were the coordinators of the program. Former NSS program officer Mr. K. K. Gopalakrishnan also spoke on the occasion.



Dr. Praveensal C J, Principal, SSET (extreme left) with members of Koratty Gramapanchayath on the occasion of 'Maram oru varam'

Women's Forum Activities

The Women's Forum of SSET organized an online live talk on 'Women Empowerment' by Dr. C Udayakala, Writer, Orator and Ho HoD of Malayalam Department, All Saint's College, Trivandrum on 8 March to commemorate Women's Day.

Placement News

The following companies have conducted recruitment drive for our students:-

1. Innovature Labs – 3 placed from the 2021 batch
2. Cipher School – 1 placed through intershala
3. Rapid value conducted placement drive for our 2020 students and shortlisted 6 of them
4. Carestack called for an online test for our circuit branches, 2021 batch
5. Clodium conducted a test for those who applied from 2020 batch
6. TCS – 1 placed from 2019 batch
7. Bourntec Solutions, Kakkanad – 1 placed from 2020 batch
8. People 10 conducts a drive for 2021 batch and 2 shortlisted for the technical round

APRIL 2021

Department Activities

The department of Automobile Engineering in association with SAE India Collegiate Club of SCMS conducted a series of webinars titled "Electric Vehicles: An overview" from March 15th to March 31st 2021. The webinar was hosted for the students of final year polytechnic college from across the state. The webinar was conducted in 14 polytechnic colleges and was attended by 1102 students and faculty. The resource

persons for the webinar were the faculty of the department of Automobile Engineering, SSET. The webinar received a lot of positive feedbacks and the department was invited by other polytechnic colleges to conduct this webinar after the end of the polytechnic college exams.

A Three Days Workshop on “C Programming Language” was organized by the students of Electrical and Electronics Engineering Department in Association with ACE Hack Elite-Technical club of Department of Computer Science and Engineering of SSET from 24th March to 26th March 2021. The sessions were handled by Ms. Sindhya. K. Nambiar and Ms. Asha. S, Assistant Professors of Computer Science Department, SSET. The workshop provided opportunities to students to enrich their technical knowledge in the field of Computer Science Engineering. The workshop also helped students to develop their programming skills for aptitude tests related to placement.

Department of Electronics and Communication Engineering organized a three day workshop on JAVA Programming Language in association with HackElite-Technical club of Computer Science and Engineering Department from 24th March to 26th March 2021 for S8 ECE students.

Department of Electronics & Communication Engineering organized a three day workshop on C Programming Language in association with HackElite-Technical club of Computer Science and Engineering Department from 24th March 2021 to 26th March 2021 for S6 ECE students.

Staff Achievements

Dr. Mini Tom, Dr. Sreelekha B, Ms. Surya K A, Ms. Reshma R, Ms. Nuja M Unnikrishnan, Ms. Sophia Cletus, Ms. Preema T S and Ms. Nitty Rose Augustine, faculty of Basic Science and Humanities attended **5-day workshop on technical report writing using LaTeX** scheduled from 05/04/2021 to 09/04/2021, organized by the School of Electronics Engineering (SENSE) in association with Academic Staff College (ASC), VIT-AP University, Amaravati, India.

Ms. Divya M S, Assistant Professor of Basic Science and Humanities completed a one-week online workshop on 'Recent Trends in Research Article Writing' organized by RSRI Society for Research International on 22nd to 27th March 2021.

Ms. Jane Theresa, Assistant Professor of Basic Science and Humanities completed a one-week online workshop on 'Recent Trends in Statistical Analysis' organized by RSRI Society for Research International on 3rd April.

Dr. Ratish Menon received a letter of appreciation from KTU for serving in the curriculum committee.

Student Achievements

The student team from 8th semester Mechanical engineering mentored by Mr. Sanju A C, Assistant Professor, Department of Mechanical Engineering won 15th position in Global level ASME competition in 'Human powered vehicle challenge'.

Two CERD student projects submitted from SSET, Dept. of Civil Engineering have been Shortlisted for presentation by KTU. Proposals submitted by Ms Praseeja AV & Ms Anjana Susan John. The names of projects with the students involved are as follows:

Empirical & Numerical analysis of geocell reinforced dredged soil-

Mentor- Ms Anjana Susan John

Students- Archana Vijayan, Aravind Jaya, Hima Sudarshan, Mahin KA

Tipping bucket rain guage with weather monitoring system-

Mentor- Ms Praseeja AV

Students- Mohammed Afthab, Mohammed Saheel PA, Nandakrishna R, Rishab KM

Publications:

Vishnu, H., R. Ajith Kumar, R. Sujith, R. Suraj, Assistant Professors, Department of Mechanical Engineering and K. E. Girish. published an article on "Damage tolerance design of transport aircraft." In *IOP Conference Series: Materials Science and Engineering*, vol. 1091, no. 1, p. 012065. IOP Publishing, 2021.

Gibin George, Assistant Professor, Department of Mechanical Engineering, Kumar, Vineet, Jacob I. Hayes, Yulin Lin, Burak Guzelturk, Jianguo Wen, and Zhiping Luo. published an article on "Dopant site-dependent luminescence from rare-earth doped dibarium octafluorohafnate Ba₂HfF₈ nanocubes for radiation detection." *Journal of Materials Chemistry C* 9, no. 5 (2021): 1721-1729.

G. R. Raghav Associate Professor, Department of Mechanical Engineering, Nagarajan, K. J., N. R. Ramanujam, M. R. Sanjay, Suchart Siengchin, B. Surya Rajan, K. Sathick Basha, P. Madhu, published an article on. "A comprehensive review on cellulose nanocrystals and cellulose nanofibers: Pretreatment, preparation, and characterization." *Polymer Composite*

Dr Akhila M published the paper 'Salinity reduction in well water using Zeolite' in IOP Conference Series: Material Science & Engineering (Open source, Scopus Indexed)

Ms Sruthy MR published the paper 'Liquefaction resistance improvement of Silty sands using cyclic preloading' in IOP Conference Series: Material Science & Engineering (Open source, Scopus Indexed)

NSS Activities

NSS Volunteers cleaning the fish pond at SSET

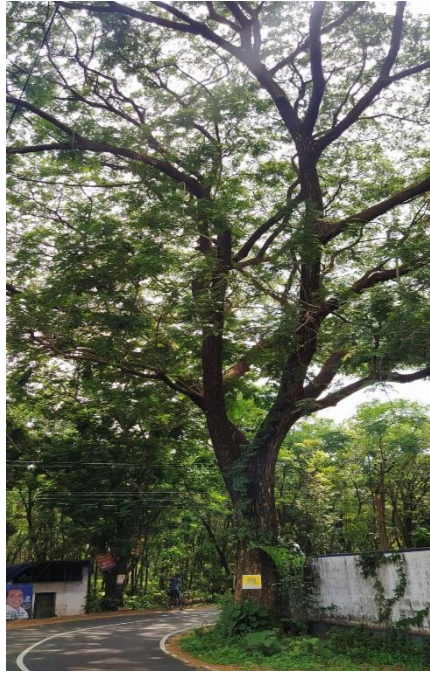


Amidst the global pandemic, NSS volunteers of SSET lead by Aryan C Rajan and volunteer secretary Anakh Valsan, along with 30 other volunteers collectively did an outstanding work, cleaning the fish pond of SSET, following the covid protocol on 19th March 2021. They also harvested tapiocas which were planted in the campus. It was a successful work portraying great synergy by all the volunteers.



NSS Volunteers doing the farming activities in the SSET campus

NSS Volunteers of SSET made a strong comeback to their farming activities done in SSET campus on 20th March 2021. A team of 20 volunteers lead by Vishnu and Volunteers Secretary Arjun Mohanan, actively put their effort to make the land cultivable once again. Covid protocol was followed in all means from the procedure of temperature checking at the entrance to proper sanitation before and after the work.



NSS Volunteers observing various trees as part of Tree Walk activities

The NSS volunteers of SCMS School of Engineering and Technology jointly conducted a tree walk to conserve trees on the roadside, prone to deforestation on 26th March 2021. An enthusiastic group of volunteers started their journey from our SSET (palissery) to koratty covering approximately 6kms in cycles. While on their way, students identified the trees, their biological name and species assigned to them and also took a count of the trees which need to be protected. Those trees will be provided with a nameplate and QR code assigned to them which will be covered in the 2nd phase of the Tree Walk session.

UNNAT BHARAT ABHIYAN (UBA) BASELINE HOUSEHOLD SURVEY



NSS Volunteers doing the survey at Palissery and Koratty

During this time of covid outbreak, strictly following the covid protocol, NSS volunteers of SSET conducted a survey covering houses under koratty panchayat on 27th March 2021. Volunteers were divided into groups by volunteer secretaries, lead by an executive panel member and each group were assigned a particular area for survey. Volunteers were handed over the UBA baseline household survey forms having questions covering the water supply, waste management, enquiries regarding the pension received if any and so on. Each of these questions in the said form was filled by the volunteers and was collected by the NSS programme officers.

COVID VACCINATION CAMP PARAVOOR

During this time of Covid outbreak, the NSS volunteers of SSET showed their whole hearted helping mentality by volunteering for the vaccination camp that was held at Paravoor municipality on 22nd to 26th March 2021. The Covid vaccine camp was meant to vaccinate all the citizens who are above 60 years of age. The volunteers worked there to help those people who didn't have much knowledge about internet and for those who couldn't register themselves for vaccination in the CoWin website. This was a five day camp and the volunteers along with the NCC cadets and the health workers helped in the smooth running of the camp. By the end of the camp, almost

everybody got vaccinated and by this the volunteers could also create a database of people those who got vaccinated.

Newspaper Bag Making

Admit of the Covid situation, strictly following the Covid protocols, NSS volunteers managed to make newspaper bags which would help in reducing the usage of plastic bags in our day to day life on 27th March 2021. Each volunteer were taught to make paper bags and then later on they were divided into five groups for making the paper



bags further. They made a number of paper bags and the group who came up with the maximum number of paper bags was also awarded. Later on, all these paper bags where distributed among the nearby shop's to encourage the use of paper bags instead of plastic bags.

Placement News

As on 30th April, 2021 the statistics of placements for 2017-2021 stands on 187 offers from 18 companies.

13 plus companies contacted us for placements and some have

already conducted technical tests as well as HR interviews.

132 students (batch 2017-2021) placed in various companies.

H & BLOCK	6	
INFOSYS	37	
TCS	32	
DEXLOCK	1	
GADGEON	1	
EXPERION TECHNOLOGIES	7	
SUTHERLAND	24	
BYJUS	5	
PRODAPT TECHNOLOGIES	2	
REDBLACK SOFTWARE	3	
QUEST GLOBAL	12	
CIPHER SCHOOLS	1	
INNOVATURE LABS	3	
PEOPLE10	1	
IMAGE INFO SYSTEM	4	
TOA SOFTWARE, JAPAN	1	
SUTHERLAND (ASSOCIATE)	46	
IBM	1	
	<hr/>	
	187	
	<hr/>	

2 of 2020 batch placed in Rapid value

1 of 2020 batch placed with Ey GDS

MAY 2021

Department Activities

The Department of Mechanical Engineering has taken the initiative to launch the student chapter of AEE and the very first event hosted by the chapter was the official virtual inauguration of AEE- SSET chapter on 21st of April 2021 from 10.00 am and was hosted online on Google Meet. The event was followed by a technical guest session delivered by the chief guest of the event Prof. Dr. T V Ramachandra, Coordinator Energy & amp, Wetland Research Group, Center for Ecological Sciences [CES], Convenor, Environmental Information System, [ENVIS], Associate Faculty, Centre for Sustainable Technologies (astra), Centre for infrastructure, Sustainable Transportation and Urban Planning [CiSTUP], Indian Institute of Science, Bangalore.

The Department of Electrical and Electronics Engineering organised an Alumni Talk on “Tips to enhance Entrepreneurship skills ” by Mr. Justin Anto, Technical Manager, Delta Wye Calibration company , Dubai, Alumni 2009 EEE batch on 27/04/202. The speaker discussed about the current trends and challenges in the field of entrepreneur for an engineer and also his journey towards this field by sharing his real-life experiences with his own company. Webinar was opened to S4, S6& S8EEE students. Totally seventy participants attended the program.

The Department of Electronics and Communication Engineering, SSET conducted an alumini talk on ‘AUTOSAR’ by the resource person Ms. NeethuV, Senior Product Engineer, Harman International PVT Limited, Bangalore on 21st April 2021.

Department of Electronics and Communication Engineering in association with IEDC, SSET organized a three day online workshop on Arduino and Tinkercad for S4 ECE students from 10th-12th May 2021.

Department of Electronics and Communication Engineering, SSET organized a knowledge sharing session on the topic ‘Artificial muscle intelligence systems with deep learning for post stroke assistance and rehabilitation’ by the resource person Mr. Vinoj P J, Assistant Professor , Dept of ECE,SSET on 27th April 2021.

Department of Electronics and Communication Engineering, SSET organized a knowledge sharing session on the topic ‘Probing the Feasibility of using Green Power to charge EVs’ by the resource person Ms. Sreeja K A, Assistant Professor , Dept of ECE,SSET on 19thMay 2021.

SCMS Centre for Robotics successfully completed Two day Workshop on “Robotics Skills Development for School Students”. Students from various schools across the world participated in the workshop.

Campus Achievements

CMR, in association with Dataquest recently completed the best T-School survey,

Top T-Schools in India 2021.

SCMS SCHOOL OF ENGINEERING AND TECHNOLOGY ranked **77th** amongst

100 T-Schools over all (government and private sector) and **64th** amongst Top T-Schools

(private sector).

Staff Achievements

Dr.G.R.Raghav, Associate Professor, Department of Mechanical Engineering attended One day FDP as a Guest Speaker on “Advancements in Material Science” at Dhanalakshmi Srinivasan College of Engineering on 31-03-21.

Student Achievements

Ms. Gopika Ganga, 8th Semester Mechanical Engineering Student – SSET, was selected by the ASME Student Section Coordinators (SSC) to the position of Student Section Enterprise Committee - Member-At-Large, a 3 year long (July 1, 2021 - June 30, 2024) position sandwiched between Student Regional Chair (SRC) and SSCs. She

is at present the SRC, Asia Pacific of ASME Student Section Enterprise Committee. The Members-At-Large will be the advisory body for the newly selected SRCs to guide and groom them for their regional activities.



Publications:

G R Raghav, Associate Professor, and R Sujith Assistant Professor, Department of Mechanical Engineering published an article on Tribological and Corrosion analysis of Co-20Al-GNSAcomposites produced through powder metallurgy process in IOP Conf. Series: Materials Science and Engineering, 2021

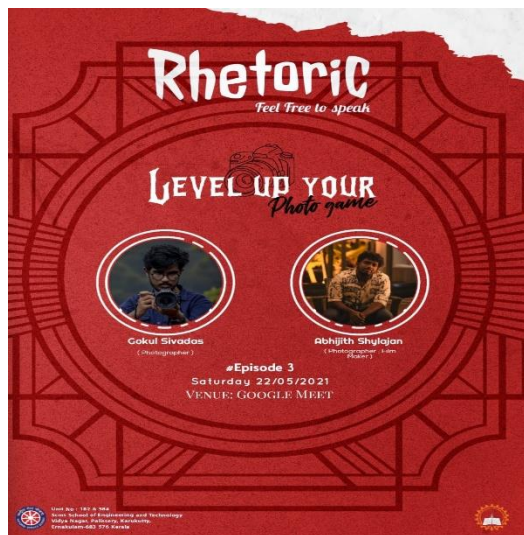
G R Raghav, Associate Professor, Department of Mechanical Engineering published an article on Synthesis and characterization of Co-5Cr-RHA hybrid composite using Powder metallurgy in Materials Today: Proceedings, 2021

Gibin George, H. Manikandan, T.M. Anup Kumar, Sam Joshy, A.C. Sanju, Assistant Professors, Department of Mechanical Engineering published an article on, Effect of nanofillers on the crystalline and mechanical properties of EVACO polymer nanocomposites, Materials Today: Proceedings, 2021.

NSS Activities

RHETORIC

An interactive platform was organized by the NSS panel of SSET to promote the volunteers to come forward and share their ideas and opinions about any topics of their choice. The main aim of the session was to develop communication skills and help students to overcome the fear of speaking before a crowd thereby improving their confidence. Every week 2 volunteers are randomly selected by the panel for conducting the session in which they can share their views on any topic and interact with the fellow volunteers via Google meet. The sessions are usually conducted every Friday at 7:00pm. Volunteers share their honest feedbacks after every session, making it more affable.



Placement News

Anjali K.P. of Semester Eight Computer Science Engineering Batch 2017-2021 gets an Offer from ENVESTNET one of the most famous companies in business.

Intershala selects two students of Semester Eight Nikhil Venugopal (Civil) and Nimisha Manoj (computer Science) for internship at Team Everest and The Socians.

First Naukri.com conducts Pre Placement online tests for Batch 2018-2022 on 12th, 13th and 14th of May 2021.

ICTAK nominates 60 of our interested students for AAU's BOT Aspirant Programme (an 8 hours RPA Beginners Programme) to be conducted from 22nd May to 5th June 2021.

June 2021

DEPARTMENT ACTIVITIES

An alumni talk for the second-year undergraduate students of Mechanical Engineering department was held on 29th May 2021, on Google Meet 10:00 am to 11:30 am. We had our proud alumnus as the speaker, Mr. Muhsin K (2013-17 batch). The topic of the talk was "Struggle, Experience and Achievement" which was intended to motivate the students to lead a successful career after their graduation. 85 students participated for the alumni talk. Talk was followed by an interactive session where students took active part. Mr Muhsin discussed on the benefits of various online courses available to enhance the student's skill set with respect to the engineering stream.

The Department of Automobile Engineering, SCMS School of Engineering and Technology in association with SAEIndia Collegiate Club of SCMS hosted Mr Don Kurian for a **Webinar on "From product conception till start of sale - Various stages of automotive product development"** on May 28th, 2021, at 3:30 pm. Mr Don Kurian is an expert in design of racing vehicles and is currently working for a reputed OEM in Detroit, USA. Mr Don who joined us on Google meet from Detroit

shared the stages of development of a vehicle with the participants. He enlightened us on the steps involved in the automotive product development process; how a concept sketch is converted to a finished product ready for sale in the automobile showroom. SAE India Collegiate club of SCMS in association with Department of Automobile Engineering, SCMS School of Engineering and Technology conducted an online Techfest under the banner **“Rapidez Autofest”** on 11th and 12th June 2021. The Autofest consisted of 6 individual events open for participation without any restriction. The events were 1) Auto Quiz 2) DB8 – the debate competition 3) How things work 4) Photography 5) Project idea pitching 6) Sketch your Wheels Vehicle design competition (Pen and Paper). The participants who registered were from varied backgrounds – a public irrigation engineer, entrepreneurs, freelance consultants, multimedia and arts students, architecture, engineering and diploma students. The events were conducted over the course of two days. All the events were conducted online with the Auto Quiz, DB8, How things work and Project Idea pitching events conducted live through Google Meet. More than 200 participants registered and participated in the various events.

Department of Electrical and Electronics Engineering organised an Alumni Talk on **“Tips to enhance Entrepreneurship skills”** by Mr Justin Anto, Technical Manager, Delta Wye Calibration company, Dubai, Alumni 2009 EEE batch on 27/04/2021.. He discussed about the current trends and challenges in the field of entrepreneur for an engineer, his journey towards this field and also shared his real-life experiences with his own company. Webinar was opened to S4, S6 & S8 EEE students. Totally seventy participants attended the program.

Department of Electrical and Electronics Engineering organised a webinar in association with ACE (Association of Core Electricals), Department Association on **“Role of Supervisors in Electrical Installation in Electrical Inspectorate Perspective”** by Mr Rajesh George, Assistant Electrical Inspector, Electrical Inspectorate, Ernakulam on 22/05/2021.

The session included supply voltage dependent loads and different types of consumers. Students got the clear idea about the rules and regulations in electric sector the functioning of Central Electricity authority and Kerala State Electricity Regulatory

Commission. Students understood the role of Electrical Inspectorate include implementing agency, sanctioning authority etc. The most important knowledge that this webinar shared was that of grades of certifications. Students understood the complete procedure for acquiring A grade and B grade certifications. He deeply explained about the different types of cables which are used for various applications. The webinar really contributes wide and deep knowledge for students.

The event enlightened the mind of the students to new paths. Webinar was opened to S6 & S8 EEE students. Totally sixty participants attended the program.

Department of Electronics and Communication Engineering, SSET organized a knowledge sharing session on the topic '**Enhancing thought put of fully parallel Turbo Decoder with different algorithm for wireless communication**' by the resource person Dr.Parvathy M, Associate Professor , Dept of ECE,SSET on 31stMay 2021.

Department of Electronics and Communication Engineering, SSET organized a knowledge sharing session on the topic '**Malware Visualization**' by the resource person Ms.AnandhiV, Associate Professor , Dept of ECE,SSET on 16thJune 2021.

Department of Computer Science Engineering along with Computer Society of India organized

In-App Awards and Toycathon-2021

Finalists of CSI In-App Awards and Toycathon-2021

The following two teams got selected for the Final Round of **10thCSI In-App International Student Project Awards-2021**organized by Computer Society of India. Both the teams are mentored by Ms. Sreeja Rajesh, Assistant Professor CSE:

- 1) Team titled "Zippy Solutions" with team members Mukul Mehta(S4 CSE), Sandeep Kurian Jacob (S4 CSE), Novaneeth S S(S4 CE)
- 2) Team titled "Intelligent Medical Monitoring based on IoT" with team members Arundathi A, Ardra Nair, Ajil Jaison, ajser jumanudheen K T P of S8 CSE.

The following three teams got selected for Grand Finale of **Toycathon-2021 Hackathon** competition organized by Ministry of Education's Innovation Cell with support of AICTE:

- 1) Team titled "Techafe" with team members Jibin Lukose(S1 VLSI & ES), Aryan C R(S5 CSE), Gokul C S(S5 ME), Vishnu M(S5 ECE), Abhijith Shylajan(S5 ME), Anakh Valsan(S5 ME) and mentored by Dr. Sunil Jacob, Director SCMS Centre for Robotics & Mr. Vinoj P G, Assistant Professor ECE.
- 2) Team titled "Waste-ed" with team members Mukul Mehta(S4 CSE), Sandeep Kurian Jacob (S4 CSE), Novaneeth S S(S4 CE), Sharath K Nambiar, Nithin P, Yedukrishna J of S6 CSE and mentored by Ms. Sreeja Rajesh, Assistant Professor CSE.
- 3) Team titled "Terror 404" with team members Fazal Jabbar, Abishek R, Arjun S, Abhinaya A Menon, Gayathri S, Jagan Venugopal of S6 CSE and mentored by Ms. Rosebell Paul, Assistant Professor CSE.

SCMS Centre for Robotics

Workshop on Robotics SCMS Centre for Robotics conducted two workshops to encourage innovation and research among students and to enable them to create working model with robotics technology. The participants were familiarized with various electronic components, 3D open-source Onshape software, Tinkercad software for designing circuit and simulate them. They were also introduced to Arduino basics, motor interfacing & control of the robot, demonstration of innovative projects that has received accolades & fabricated at SSET fab lab.

- 1) Two Days online ROBOTICS Skills Development Workshop-2021 for School students was conducted on 16th and 17th April 2021. Forty students from various schools from Canada, London, Sharjah, Bangalore, Mangalore, Trivandrum, Kottayam, Ernakulam and Thrissur participated in the workshop.
- 2) Two Days online ROBOTICS WORKSHOP on Familiarization of Open Source software for Robotics & Embedded Systems-2021 for First Year Engineering & Polytechnic students during 21st and 22nd May 2021.

Staff Achievements

Publications:

Mr.Vinoj P G.Assistant Professor,Dept of ECE,SSET published the paper with Title 'IOT powered deep learning brain network for assisting quadriplegic people' in ELSEVIER Computer and Electrical Engineering Volume,92,June 2021,107113.

Dr.Gibin George, Mr Nikhil Asok Assistant Professors, Department of Mechanical Engineering attended published an article on Dispersion analysis of nanofillers and its relationship to the properties of the nanocomposites in *Materials Today: Proceedings* published by Elsevier in May 2021.

Dr. Raghav, G. R., , Dr. Vidya Chandran, Associate Professors, Suraj, R., Sujith, R., & Vishnu, H. Assistant Professors, Department of Mechanical Engineering, Amal P Dev, Assistant Professor, Department of Automobile Engineering published an article on Characterization and analysis of Fe-Co based hybrid composites in *Materials Today: Proceedings* published by Elsevier in May 2021.

Dr. Manikandan, H., & Bera, T. C. published an article on. Modelling of Dimensional and Geometric Error Prediction in Turning of Thin-Walled Components. *Precision Engineering*. May 2021

“ELECTRIC VEHICLES – A journey since its inception”

Mr Anoop M S, Assistant Professor, Department of Automobile Engineering, SCMS School of Engineering and Technology was invited as a speaker for a webinar on “ELECTRIC VEHICLES – A journey since its inception” at Sree Narayana Institute of Technology (SNIT), Adoor on June 10th, 2021. The webinar was hosted by the Department of Mechanical (Automobile) Engineering in association with SAFE (SNIT Automotive Federation of Engineers).

Placement Activities

A webinar New Horizons of IT for the 2020 – 2024 batch was conducted on 10th, 11th and 12th

June, 2021 as part of the Campus Connect program by Infosys. The topics covered were Cyber Security, Introduction to Cloud Computing and Professional DevOps.

Hackwithinfy round 1 result – Rahul Mohan of Computer Science 2018 – 2022 batch wins a pre placement interview offer from Infosys.

Maria Boban 2016 – 2020 batch gets placed with UST through Off Campus selection.

Students from Computer science 2017 – 2021 batch bags offers from:-

Ameena Azad - Mindtree.

Neethu Sunil and Parvathy P. J. - Suntech.

Swati Harish - IBM

Ajil Jaison and Gayathri V – Mphasis