NEWS LETTER

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From President's Desk



Dear Members,

Welcome to the latest issue of the IETE Newsletter that serves as a credible platform to highlight multifaceted technical activities of country's premier professional body and its various units.

I am pleased to share that HQ and Centres hosted a number of professional events showcasing the most cutting-edge technologies, in addition to the value-added programmes provided by ISFs and PACs. An effort has been made to highlight IETE>s multidimensional reach in order to stay current of the mind-boggling technical advances produced by academics and industry, thanks to a favourable policy ecosystem. Despite barriers brought on by pandemic and global uncertainties, zeal and

vitality remained unabated — a true indication of our collective resilience.

One-day online seminar on "Applications of Gamma Rays in Medical Diagnostics" on 29 Jan 2022 provided new perspectives in this interdisciplinary exotic area, including contributions by renowned biomedical experts. It effectively highlighted the applications of electronic innovations for the identification of metabolic afflictions. On 19 February 2022, a one-day webinar on indigenous development of telecom systems for an Atmanirbhar Bharat highlighted epoch-making initiatives on cutting-edge technologies/initiatives such as PM-WANI, 5G, G-PON, and smart city solutions carried out at organizations/institutions such as C-Dot, IITH, and BSNL, among others.

This year's Sir CV Raman Memorial Lecture & Webinar held on 12 March 2022 at HQ was truly an inspiring experience. Apex Forum on 9th April 2022 discussed the current notion of 'Digital University,' a breakthrough educational concept that IETE plans to implement in the near future. The compelling purpose behind this concept is to increase employability, maintain a clear focus on an industry-centric strategy, and be the entity that grants degrees.

ISFs are proving to be irresistible magnets for students in search of a sense of belonging. New ISFs are being established at numerous colleges and universities. The most recent addition is the School of Information and Communication Technology at Gautam Buddha University. Similarly, I applaud the recently created ISFs at AISSMS College of Engg in Pune, Oxford College of Engineering in Bengaluru, and Universal College of Engineering and Technology in Guntur. This forum teaches students effective networking and participation skills in innovative platforms.

We have taken due cognizance of new technologies knocking at our door. A Committee on post diploma courses in emerging technologies at IETE Centres / Sub-Centres, has been formed to explore the conduct of courses in IoT, Blockchain, MLM etc. Besides, in tune with the times, it is proposed to conduct the AMIETE & DipIETE examinations in online mode. The feasibility and modalities to conduct online exams are being worked out.

Our publications continue to forge ahead with higher impact factors. Honorary services of Editorial board and reviewers of manuscripts are gratefully acknowledged. To clear backlog of pending articles, we are bringing voluminous thick issues of IETE Journal of Research. Announcement of annual IETE Awards is eagerly anticipated by silently working professionals in country's R&D labs to push frontiers of research and development.

IETE Membership is widening its base with the Centres providing avenues for updating the domain knowledge. I heartily welcome new organizational members. I am grateful to all of our resource people, including Governing Council members, Centre Chairpersons, and ExeComm members, who have contributed to the success of IETE. There is no doubt that each contribution, including yours, is valuable.

Further, we are profoundly saddened by the unexpected loss of Distinguished Fellow Brig Lakshman Singh, VSM (Retd), and senior Fellows: Dr Maganty Srinagesh and Dr (Prof) S Shreenivas R Jog. They contributed significantly to the growth of the IETE. The fraternity will miss them.

I have no doubt that coming days will sketch the blueprint for sustainable all-round progress of IETE.

Jai Hind!



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News from IETE Headquarters

Seminar on Applications of Gamma Rays in Medical Diagnostics

IETE HQs organized a one day online seminar on "Applications of Gamma Rays in Medical Diagnostics" on 29 Jan 2022. Resource persons included: Dr M R Ambikalmajan Pillai, Group Director at Molecular Group of Companies, Kollam, Kerala, as the chief guest; Dr Tapas Das, Head RphCS, RPhD, BARC, Mumbai; Dr Abhay Deshpande, Scientist Medical Div-1, SAMEER, Mumbai and Shri Yuvaraj Nitin, Scientific Officer-E, Radiation Medicine Centre – BARC, Mumbai, as three invited speakers. Wg Cdr (P) Prabhakar, President IETE, presided over the function.

Shri Parag Walinjkar, Chairman Mumbai Centre, welcomed everyone. A moment of silence was observed in memory of **Prof S R Jog** (F-174692L) of Pune, who expired on 27th Jan 2022. In his introductory remarks, **Dr M H Kori**, vice president and chairman of the TPPC, praised the topic selection. He stressed that microwave radiation's non-ionizing actions do not cause cancer.

In his presidential address, **Prof P Prabhakar** welcomed the 144 plus attendees and said that the number of corporate members, organisational members, students, and ISF colleges had expanded and that he valued the vast number of technical programmes and activities held by the institution in the recent past. President enumerated IETE's many milestones, including CDS (Late) Gen Vipin Rawat's recent participation at IETE's Innovation Meet. He praised scientists and physicians for their contributions to pandemic control. He added that developing gamma ray equipment in India would provide a competitive advantage in the biological sciences in particular. The support of R&D organisations to industry is a step towards Atmanirbhar Bharat.

The keynote speaker, **Dr M R Ambikalmajan Pillai**, took a holistic approach when discussing "The Application of Gamma Rays in Medical Diagnosis." Beginning with the discovery of gamma rays, which are high-frequency electromagnetic radiations, he established the three guiding principles for developing gamma ray applications: high energy, high penetration, and external detector qualities. He stated that gamma rays are good sensors and tracers. He described the diverse applications of gamma rays, such as radiation therapy, sterilisation of medical products, food preservation, radiation polymerization, and artificial transmutation of elements reactions utilising photons with exceptionally high energy. Attenuation of gamma rays is used to explore the qualities of a substance. Gamma radiography has assisted in the detection of interior defects and irregularities. As an NDT technique, it is utilised to determine the integrity of welding in industry. And the most significant application of gamma rays was as a tracer, which was established by George de Hevesy, the 1943 Nobel Laureate in Chemistry and creator of activation analysis, and is utilised in the majority of medical applications. In nuclear medicine, gamma rays are also utilised for diagnostic reasons in imaging techniques. In a PET scan, for instance, a radiolabeled sugar called fluorodeoxyglucose releases positrons that are destroyed by electrons, resulting in pairs of gamma rays that highlight cancer since it typically has a greater metabolic rate than surrounding tissues. Technetium-99m, a radioactive isomer that produces gamma rays with the same energy range as diagnostic X-rays, is the most commonly utilised gamma emitter in medical applications. Radioimmunoassay (RIA), often known as the "queen of analytical sciences," was developed in the late 1950s and marked a turning point in the history of the application of radionuclide methodology to biology, medical research, and clinical practise. The method enables the measurement of otherwise inaccessible or difficultly detectable materials.

Dr Tapas Das, Head Pharmaceutical Chemistry Section, Radiopharmaceuti-

cals Division, Bhabha Atomic Research Centre, Mumbai, addressed the audience on "Radio-pharmaceuticals for Diagnostic Imaging" and underlined the importance of radiation and radioisotopes to human well-being. Tracers are employed in biomedical areas for diagnosis, therapy, and sterilization; in industry and hydrology for radiography, gauging, and radio processing; in food and agriculture for food preservation and mutation; and in research for probes. He focused on the applications of radioisotopes and radiations in medicine. He explained radio-pharmaceuticals, which are radioactive substances used for both diagnostic and therapeutic purposes. According to him, radio pharmaceuticals are created everyday for usage in patients and have an advantage over X-rays, CT scans, etc. since they provide unique functional anatomic information. He spoke about the reactors (Dhruva and Apsara) and cyclotrons in Mumbai and Kolkata, where India manufactures neutron-rich isotopes and neutron-deficient neutrons for a range of purposes. The speaker described properties of a diagnostic radionuclide for diagnosis, the most significant of which is 99mTC, also referred to as the workhorse of nuclear medicine.

Dr Abhay Deshpande began his presentation on the topic"Linear Electron Accelerator for Radio Isotope Generation and other Medical Applications" by introducing the audience to SAMEER, which is currently developing a 6MeV Linac for radio isotope generation and other medical applications. He described the 15 MeV linac being built at SAMEER, from the design phase through the establishment of simple, replicable technologies. The production of X-rays and its crucial role in the fight against cancer were explained, as high-energy radiation is utilised to kill cancer cells and shrink tumours. Fluorescence by X-rays is a technique that involves the creation and detection of X-rays within an object. X-rays are used in industrial radiography to inspect industrial components, particularly welds. The S-Band Linac was described as a side-coupled, standing-wave structure working in mode 2. The speaker discussed the "Siddharth" 6 MV Linear Electron Accelerator-based Radiotherapy system created and developed in-house. It is the first device of its sort to be manufactured in India, and it is currently in use at the Adyar Cancer Centre (Chennai), Indore, and Amravati Hospitals. He claimed that global efforts are being undertaken to create accelerator-based mechanisms as a viable alternative to reactorbased production since accelerator-based mechanisms are deemed cleaner and pose no long-term risks. He reported that SAMEER is constructing a 30MeV system, which will be delivered to INMAS for final beam parameter demonstration, 99Mo production, and 99mTC elution.

The third invited speaker, **Shri Yuva Raj Nitin**, discussed **the "Role of Medical Cyclotron in Human Disease Diagnosis.**" He began with PET-based molecular imaging, which employs radioisotopes that produce positrons following radioactive decay. He described PET scanning, PET isotopes produced in standard medical cyclotrons, the creation of Flourine Positron emitters, and the amount of energy necessary to release this isotope. Isotopes and disorders that can be identified using these isotopes, cyclotron basics, and Ion Sources Penning were also mentioned. He described the Medical Cyclotron's subsystems at BARC's Radiation Medicine Centre.

Secretary General **Gp Capt Sonpal Singh(Retd)**, **Veteran**, concluded the programme with a vote of thanks. He thanked the dignitaries for volunteering their valuable time and sharing their extensive knowledge on their respective topics. He added that their talks raised everyone's knowledge of the domestic development of highly efficient equipment.

Glimpses of the Seminar

Applications of Gamma Rays in Medical Diagnostics



Indigenous Development of Telecom Systems for an Atmanirbhar Bharat: A Report on the Webinar

IETE HQs organised a webinar on "Indigenous Development of Telecom Systems for an Atmanirbhar Bharat" inviting experts from leading telecom R&D organisations and the best institutes for ICTs, to discuss the importance of indigenous R&D in achieving national development objectives on 19th Feb 2022.

Prof (Dr) AP Thakare, VP and Co-Chairman of TPPC, gave opening remarks to start the programme. He also talked about the many activities that are going on now that technology has given operational excellence a new lease on life. He said that the telecom industry is changing and will keep changing, with parts of education and entertainment going through a digital transformation. In 5 years, the number of telephones in rural areas went from 42% to 61%, which led to a big rise in FDI. Because of this, in the networked world of today, it makes sense to build virtual industries that work together. He said that IETE hopes to be one of these kinds of groups.

In his presidential address, **Prof P Prabhakar** talked about how important atmanirbharta is and went into more detail about the topic chosen. He said that it was the same as what the founders of IETE had in mind back in 1953. He emphasized the vision of the founder members, who literally thought of all verticals, which is being highlighted at this time to expand the frontiers of ICT in the country and develop technology solutions, architectures, systems, and standards for India-specific problems. He said that cell phones are the foundation of the modern telecom revolution. He talked about how ICTs quickly and effectively spread digital knowledge by using cutting-edge technologies to get around language barriers, sharing IT experience

and expertise, promoting digital inclusion, and turning intellectual property into business opportunities. He talked about how big telecom companies like Reliance are doing in the country and how they are pushing the job market and making a name on global platforms. C-DoT, working hard to make a change in the country. Things are happening on a large scale with BEL, IT companies, and the Prime Minister's new business opportunities. He also talked about the presence of number of mobile companies in the market and said that he hoped the Indian telecom industry would soon be able to start exporting things instead of bringing them in.

Dr MH Kori, VP and Chairman of TPPC, talked more about the webinar's theme by saying that the spread of broadband across the whole country is an important part of Digital India that will help close the digital gap between urban and rural areas and between rich and poor people. He talked about how telecom has changed over the past few years and how little of that change has come from the country's own efforts. He also talked about how the country's lacking efforts in the areas of R&D, IP, manufacturing of parts, less telecom players, and India's contribution to the world. Even though the country is doing a lot of good work, it is not getting any of the benefits. He introduced the expert speakers who were going to speak and thanked them for coming.

Delivering the first invited talk, **Dr SN Gupta**, Chairman-India & BIMSTEC, Asia, Country Managing Director, Bluetown (India) Pvt Ltd, Delhi, remarked that internet is the single most self-empowering infrastructure available for masses in the 21st century. He elucidated concept of Wi-Fi access using PM-WANI (Prime Minister – Wireless Access Network Interface) technology

as an economical and rapid way of connecting the unconnected. It provides broadband services under distributed architecture. It will give opportunity to a new generation of entrepreneurs to bridge the need of last mile connectivity. The project will benefit millions of users in India waiting to get affordable access to Internet.

The Chief Guest, Dr Raj Kumar Upadhyay, Executive Director of the CDoT, in his address talked about the latest telecom research and development activities at the organisation and how they are used. He said that C-DoT built its own 4G LTE core and built a reliable 4G echo system with help from the business community (TCS, Tejas Network). Atam Nirbhar Bharat is in sync with their own 4G system. Proof of concept of C-DoT Indigenous 4G LTE has been going on in BSNL network at Chandigarh & Ambala with great success. The speaker also talked about some other important R&D projects, such as: 4G Solution, which is made up of C- DoT's 4G Core and Tejas RAN; 'COVID-19 Savdhan,' which is based on Common Alerting Protocol and is used by 12 states and union territories to send 23.11 crore COVID-19 pandemic SMSs; Quantum Key Distribution (QKD) system along with PQC (Post Quantum Cryptography) Encryptor and Route demonstrated in the Army Network Telecom Security Operation Centre: Additional 24 Internet Gateways that have been completed using in-house developed 200 Gbps IPFIX probe; Upgrading GPON to XGS-PON to meet increasing demand on bandwidth in villages. He added that C-DoT designed an all-encompassing network management system for BharatNet. 5G Non-Stand Alone (NSA) Core development: this work is in progress to upgrade 4G eNodeB to make it compatible with 5G NSA. Development of 5G NSA Core will be completed by August 2022.

In his invited talk on "Indigenous 5G Technology Development," Prof Kiran Kuchi from IIT Hyderabad and the founder of WISIG Networks talked about 5G use cases and requirements, such as Massive Machinetype communications and ultra-reliable and low-latency communications. He told the audience about the WiSig Networks incubator at IITH, the commercialization of 5G Technology building blocks and intellectual property (IP) like Massive MIMO, 5GgNB & UE, and NB-IoT SoC, as well as patents and standards. He talked about how more than 110 patents, including SEPs, were filed, and 350 technical papers which are authored/coauthored on 5G standards development at 3GPP. He talked about the NB-IoT chip, which was made in India and can be used in sensors, metres, and smart city applications. The first massive MIMO demo was held in 2017. He said that the next generation of RAN will have a lot of software-defined parts. WiSig will offer differentiated PHY, Stack, and end-to-end solutions. The differentiated mMIMO L1/2/3 stack will use less power and have better radio performance. As 5G spreads to more industries, the amount of money that can be spent on 5G infrastructure has grown to more than \$200 billion. In India, infrastructure companies like Tejas, TCS, HFCL, L&T, Mavenir, Rakuten, Jio, Altiostar, DISH, and others are starting up. Integrated Access Backhaul (IAB), which will be used for defence communications, will also be needed by Tier I vendors. Tier II players would need PSY and Stack that are ready for deployment, and WiSig Networks would be able to meet all of those needs.

Shri A Jisnu from Tejas Networks gave the third invited talk. He talked about "Building 4G/5G infrastructure out of India" (Building 4G/5G infrastructure in India). It talked about a group of flexible and innovative broadband products and showed that Indian telecom equipment companies can make products that are the best in their class in terms of technology, quality, and price, making them useful for both developing and developed markets. With the help of the PLI Scheme, his company is increasing production to meet local demand and lower the FTTx segment's \$5 billion import bill. He said that the TJ1400 cutting-edge product family, which was made in India, gives a telecom operator the flexibility to quickly and cost-effectively roll out broadband services on both fibre and wireless. It does

this by packing broadband access and packet transmission features into the smallest possible footprint, which lowers the cost of rolling out high-speed broadband networks. 349 patents have been filed because of innovations like programmable, software-defined hardware architecture with a common software code base that makes it easy to add new features and keep up with technology standards. He said that all of this points to the possibility of high-tech exports in the area of mobile broadband services and an increasing number of intellectual property rights (IPRs).

In the fourth invited talk, Dr Pankaj Kumar Dalela, Director, CDoT, said that "Focus Groups" would be set up to work on 5G, 6G, advanced optical communication, and quantum computing. BharatNet-National optical fibre network (powered by C-DoT's indigenous G-PON technology) will improve high-speed broadband connections in rural areas of the country. This makes it possible for people in remote and hard-to-reach places to learn how to use computers and the Internet. Several service providers and MSMEs offer applications like e-Health, e-Education, e-Agriculture, e-Government, etc. to the rural population. Internet access has made it easier for people in villages to start businesses, made it easier for people to work together, and opened up new job opportunities. The "Samvad" mobile app is a secure call and chat service popular with police. It runs on servers based in India. AI and ML are used to figure out face recognition. Communication tools were made for disasters like floods and cyclones. With the Covid Quarantine Alert System, a person, who leaves without permission can be found. There are now smart city solutions. He said that C-DoT also made terrabit routers and switches, as well as fiberbased total telecom solutions. It is changing its Transfer of Technology policy so that it gives full information about hardware and software, including the source code. Also, they will set up a start-up incubation centre to work with start-ups that are related to telecom R&D and give them the money, space, and help they need. C-DoT will figure out a well-coordinated way to do joint research and development (R&D) with industry, academia, and other relevant parties to develop joint intellectual property rights (IPRs).

Shri Sushil Kumar Kansal, GM, (Consumer Mobility), BSNL Haryana Circle, gave the fifth invited talk. He talked about the development of 4G core equipment in India and how it is used by BSNL. He made an interesting point when he said that homegrown 4G core equipment will also work with 5G. So, not only will the cost of imports go down, but security concerns will also be taken care of: Since telecom is a key sector, they do not want their data to leave India. He stated that the biggest worry with Chinese vendors was that Indian data wasn't safe. The cloud-based system that uses routers and switches made by the C-DoT is flexible, scalable, has lower capital and operating costs, and uses less power. C-3GPP DoT's Access software is used by the LTE architecture. It is open to software from new companies. The system will be used all over India by BSNL.

In conclusion, **Dr M H Kori** thanked all the speakers for talking about the latest research and development work their organisations are doing and how hard they are working to create cutting-edge technologies. He highlighted epoch-making indigenous design approach of C-DoT telecom systems that were deployable in actual field conditions. He highlighted about how C-DoT telecom systems were designed in a way that made history and could be used in the real world. Innovative programmes from the C-DoT, such as joint research and development with industry and the transfer of technology, are very helpful because they make it possible to expand operations. The talk of Dr SN Gupta on Wi-Fi PM-WANI was also appreciated by all, which aims to achieve internet proliferation across the country, connect the far flung areas including remote villages with participation of local people, start-ups and MSMEs and boost village-level entrepreneurship and create employment opportunities. Vote of thanks was offered at the conclusion by **Gp Capt Sonpal Singh, Veteran**, Secretary General, IETE.

Sir CV Raman Memorial Lecture & a Webinar on 'Digital Education – India's Step towards a Digital Future'

IETE HQ organized Sir CV Raman Memorial Lecture & a webinar on 'Digital Education— India's Step towards a Digital Future' under the guidance of President, Prof (Wg Cdr) P Prabhakar on 12th March 2022. Chief Guest, Prof Tarun Souradeep, Director Raman Research Institute delivered Sir CV Raman Memorial Lecture. Three thought-provoking talks were delivered by eminent invited speakers: Prof V Ramgopal Rao (EE Department, IIT Mumbai), Dr Pramod Kumar (Principal Scientist, CEERI Pilani) and Prof Sandeep Sancheti, Provost(Vice-Chancellor), Marwadi University, Rajkot. The webinar hosted through Zoom link generated a great deal of interest with its interesting observations.

Dr MH Kori, Vice President and Chairman of the TPPC, welcomed attendees, including participants from various geographical regions, and introduced the Sir CV Raman Memorial Lecture by giving its history. He remarked that IETE hosts a number of Memorial Lectures, such as the Bhabha Memorial Lecture and the Vikram Sarabhai Memorial Lecture, on specific dates. **Dr MH Kori** briefly traced milestones of Sir CV Raman: His groundbreaking work on light scattering earned him the Nobel Prize in Physics in 1930; In 1954, he was awarded the Bharat Ratna, India's highest civilian honour; India commemorating the discovery of the Raman Effect in 1928 with National Science Day, every year on February 28th.

President IETE, **Prof (Wg Cdr) P Prabhakar** in his address remarked that IETE has great role to play in nurturing scientific temperament. Consequent to government's 'Digital India' initiative, Digital Divide between urban and rural regions narrowed – mainly aided by proliferation of mobiles in villages. This phenomenon ushered accessibility of Digital Education to students all over the country, including those residing in remote far-flung areas.

Prof Tarun Souradeep, the speaker for the **Sir CV Raman Memorial Lecture**, was introduced by **Prof AP Thakare**, VP and Co-Chairman TPPC, IETE. His areas of expertise were revealed to include cosmology and gravitational wave physics. It was also informed that he's been working on the LIGO India project, a technology-driven frontier endeavour in India.**Prof Souradeep** explained that in 1915, Albert Einstein proposed the General Theory of Relativity in which gravity is described by distortion of the fabric of space-time surrounding massive cosmic objects. Einstein's theory also predicted that perturbations in this web of space-time would produce gravitational waves (GW) that carry information about their sources. Collisions of massive cosmic objects, such as black holes and/or neutron stars, can produce such GWs. GW travel at the speed of light and are transverse

in nature, having two states of polarization. It was a major qualitative prediction beyond Newtonian mechanics. He spoke of the **Discovery of the Century**: Two black holes revolved around one other and fused into one billions of years ago in a distant galaxy. 2015 saw the detection of gravitational waves released by black holes by detectors in the United States, which was triple whammy: Direct detection of gravitational waves; direct observation of Blackholes; and Direct detection of a Binary Black Hole system. Consequently, astronomers utilizing the Laser Interferometer Gravitational-Wave Observatory (LIGO) observed gravitational waves emitted by merging stellar black holes. CV Vishveshwara published "Blackhole Ring Down" in Nature in 1971; S Dhurandhar and S Sathyaprakash set the foundation for data analysis in 1991; and Blanchet *et al.* and BalaIyer laid the foundation for source modeling in 1995.

In approximately 0.2 seconds, three solar-mass objects were turned into gravitational waves, according to the speaker's assertion. Since 2015, 90 instances of black holes merging into a single entity have been seen. It requires the detection of tiny displacements of the order of 10⁻¹⁸m. Prof Rainer Weiss, Prof Barry C Barish, and Prof Kip S. Thorne were awarded the 2017 Nobel Prize "for decisive contributions to the LIGO detector and the observation of gravitational waves" based on the ultrasensitive Laser interferometer apparatus used to make this finding. LIGO-India gained preliminary government approval in February 2016. The Laser Interferometer Gravitational-Wave Observatory (LIGO) is a sophisticated gravitational-wave observatory that is the result of collaboration between a consortium of Indian research institutes and the LIGO Laboratory in the United States, as well as their international collaborators. Located in the Hingoli District of Maharashtra, its completion is anticipated in 2024 at a cost of Rs. 12.6 billion. It will usher in the era of Quantum measurements. Exceptional features of the project include an evacuated volume of 10000 m³ pushed to 10⁻⁹ torr and mirrors with a superlative surface polish. Validation of designs and equipment is performed at the National Training and Testing facility at the Raja Ramanna Centre for Advanced Technology in Indore. Such multidisciplinary mega science and technology projects will sustain R&D activities in frontier domains, hence creating new opportunities for advanced study.

The first invited talk was delivered by **Prof V Ramgopal Rao**, currently a Professor in EE Dept Mumbai and the immediate Past Director of IIT Delhi. Prof Rao viewed the conversion of many courses to digital content as the silver lining of a two-year pandemic. Teachers are more comfortable delivering online lectures, and students are enthusiastic about the new learning

method. IIT Delhi has been profitable despite having a low entry barrier and 6-month course fees ranging from Rs.50000 to Rs.1 lakh. From zero to three thousand registrations, this is the objective of the e-Vidya education initiative. Children with specific needs can benefit greatly from digital education. So, the best way to move forward in the education sector would be to use a hybrid method of learning, which would help a wider range of students.

The second invited talk was given by Dr Pramod Tanwar, Principal Scientist, CEERI Pilani, specializing in cyber physical systems, internet of things (IoT), computer architecture, robotic vision, FPGAs & GPUs. He was of the view that in Digital world, it's not the big fish that eats the small fish but fast fish that eats the slow fish. He said that digital education has problems in the areas, viz.- About 20% of students have trouble connecting to the internet at home; Peer-learning isn't there, and there's no way to spot fakes or deep fakes. He talked about the benefits of digital education, such as being able to access it at any time and being able to use what you make only once. NPTEL seems to have a set of structured lectures that have been recorded, and there is now NPTEL+; Theory used to count for 70% and practical work for 30%, but now practical work counts for most; The 10th graders of today are going into Start-ups; Making content is the hardest part of digital education; Society 5.0: Generation Z wants to work for a society that puts people first. He also talked about the good things about NEP, like its focus on research, early exits for vocational skills, early dropouts to optouts to optins, and well-educated and well-rounded citizens. He cited several advantages of digital education, including: on-demand access to everything, anytime, anywhere; visualization, animation, and simulation; blended learning; special needs for persons with disabilities; gamification; personalisation through algorithms; and touch is more natural than typing. In essence, Digital Education is reinventing the education. e-Pathsahala incorporating augmented reality enables visualization based learning.

Prof Sandeep Sancheti, Provost (Vice Chancellor) at Marwadi University and former Vice-Chancellor at SRM Institute of Science

and Technology, Chennai, emphasised in his talk that Indian educational institutions were making the much-needed transition from traditional teaching methods to those that incorporate technology. Financial and banking sectors have previously embraced the digital sphere, but education has only recently entered it. It is currently referred to as Education 4.0. According to him, the most important change was a shift in viewpoint. He also mentioned that the launch of Digital University was announced in this year's budget. He then asked the audience questions to help them comprehend the notion of Digital Education.

Prof Sancheti talked about the foregoing: a) Key activities in higher education: Admission to Alumni (A to A), the fact that everything is becoming digital, education and learning that can now be done online, and the usefulness of virtual labs. Digital money transfers are used for things like paying for college. tests that are also given on computers. There are internships and placements that can be found and done online. b) Digital Campus: He asked what kinds of things are usually needed for digital campus. Internet access, smart classes, 24×7 Virtual Labs where practicals can be done safely, the importance of cost reduction and sharing, and, of course, the need for devices like laptops, Data Centers because a lot of data is created, relevant software tools, and so on. c) Differentiation: Prof. Sancheti talked about the differences between traditional education and digital education, which has changed a lot over the years. He said that education should be open and flexible, and that's the only way for students to make their own lessons. You can make up your own degree, like a "Degree of Liberal Education." There was some talk about the ABCs of Credits. d) Proprietary: The speaker talked about how there are many different ways to teach and learn. There is a new generation of courses that focus on the business world. It is now possible to work together. Because it's digital, it can be scaled up and replicable.

Secretary General **Gp Capt Sonpal Singh (Retd) Veteran,** concluded the programme by thanking the chief guest, invited speakers, president, immediate past presidents, members, and staff for making the event a success.

IETE Apex Forum on "Digital University"

IETE Headquarters organized Apex Forum under the guidance of President, **Prof (Wg Cdr) P Prabhakar** on the theme 'Digital University' on 9th April 2022. The programme started with the welcome remarks by Secretary General IETE, Gp Capt Sonpal Singh (Retd) in which he highlighted the role of conduct of Apex Forum. Moderated by **Dr MH Kori,** VP & Chairman, Technical Programs and Publicity Committee of IETE, the Forum saw participation from 22 experts. Immediate Past Presidents, **Prof (Dr) JW Bakal** and **Prof (Dr) KTV Reddy** and **Lt Gen AKS Chandele, PVSM VSM (Retd)** were also present.

President IETE **Prof P Prabhakar** in his address remarked that as a consequence of the government's 'Digital India' effort, the Digital Divide between urban and rural areas has shrunk - assisted in large part by the proliferation of mobile phones in rural areas. Interestingly, IIT Chennai has begun offering a whole programme focused on Digital University. He stated that he would meet with Prof M Jagadesh Kumar, Chairman of the University Grants Commission, to acquire his perspective on the matter.

Initiating discussions, **Dr MH Kori** emphasized that during Budget 2022, setting up of Digital University was announced. He

posed a series of thought-provoking questions, *viz.*, What does it mean to say "Digital University?" • Is it just the change from using a blackboard to using Powerpoint?• Does it mean the same thing as On-line education?• How will it fix what's wrong with the current education system?• Can there be a Digital University without a Campus?• Can a regular university turn into a Digital University?• Can IETE turn into a digital university?• What are the costs of putting together a Digital University?• What can be done to create a hybrid way to teach technical skills?• What can IETE do to become a Digital University? Insisting that the participating specialists give a comprehensive perspective on the issue, he drew a comparison to the establishment of a semiconductor Fab facility in India, despite the proliferation of hundreds of designand-testing chip start-ups. The following were the opinions stated by the experts:

- Prof Ravinder Kumar Sinha asserted that it was the right time to set up Digital University, an idea whose time had come. Crucial point was the recognition aspect for such online education, which can fruitfully achieve up-skilling of workers in industry.
- 2. **Dr Gautam Bose** remarked that after Covid, a Digital University has a lot of potential because people can sign up for short-term courses to learn new things and stay up-to-date in a world where technology is changing so quickly. Even though there was a lot of freedom, he questioned whether Digital University's rules for admission, administration, and evaluation should be carried out on a virtual campus.
- 3. Prof Sandeep Sancheti, Provost of Marwari University in Gujarat, said that the term "Digital University" hasn't been clearly defined by the government yet. Let it be known that Digital University is about much more than just digital technology. It was good to hear that an MTech programme on the subject had started at IIT Chennai. In the same way, IIIT in Kerala started this before the NEP was made public, which he thought was more of a document for the future. In a country like India, a Digital University had to have a flexible way of teaching that used both online and offline methods. It should be based on the "Digital Internship" framework. Also, there needs to be a National Accreditation Body (NAB) to certify a Digital University so that employers can trust them. When he talked about problems, he said that the lack of virtual labs for the practical parts of education was a big one. He told IETE to branch out into areas related to computers and to build a framework with the help of industry and partnerships. He said that IETE's number of alumni might grow if it switched to a digital university model.
- 4. Prof (Dr) Shevgaonkar, EE Dept, IIT Bombay and the former director of IIT Delhi, said that a university is a place that gives out degrees. Also, a university has to follow UGC rules, which he thinks are very strict. For example, only the top 100 universities in India can give online courses degrees. So, a

- new digital university that hasn't made its mark yet won't be able to give degrees. This will make it hard for students to get jobs, especially in industry. Also, the UK is the only place in the world where a university is only a digital university, even though it has three times as many teaching faculty as support staff. IETE Diplomas are popular because students can work while getting them, which gives them valuable hands-on experience. So, for IETE to even think about Digital University, it needs to find its own niche, *i.e.* a clear way to stand out that will act like a magnet for students. Basically, it needs to adopt a programme that is focused on the industry. Lastly, it's important to keep the accreditation framework and full-time faculty in mind from the beginning of the planning process.
- 5. **Prof P B Sharma**, Vice Chancellor of Amity University said that not everyone can go to college because of the high costs. Here, the Digital University can meet the needs of tens of thousands of people. Start by making a National Digital University, and then make five more like IITs (one IIT at Kharagpur was succeeded by others). During Covid, smartphones made both urban and rural students more connected than ever. This made it easier for them to study in a different way, but a university is much more than this. He pushed for the idea of Digital University to be used in schools right away. Noting that higher education is about to change in big ways, he remembered Peter Ducker's prediction from 1998 that big universities will be gone in 30 years. No matter what you study, you should learn how to live in harmony with your environment.
- 6. Dr Siva Ram remarked that knowledge enhancement is a major contributor to the society but felt that we are still miles away from a functional Digital University. He recommended commencing with a brick-and-mortar entity to gradually transform itself to a Digital University in an evolutionary manner.
- 7. **AVM PK Srivastava**, IETE Governing Council pointed out that the NEP doesn't say how a Digital University should be set up. He made it clear that a Digital University needs a strong digital backbone in the form of a scalable infrastructure. He said that, for logistical reasons, IETE shoul begin by transforming an already-branded university, and then gradually transition to its own infrastructure for a Digital University.
- 8. **Prof (Dr) J W Bakal**, Past President IETE supported concept of blended mode for the Digital University that is acceptable to AICTE that could also fulfill the need of practical labs in such scenario. **Prof (Dr) KTV Reddy** expressed satisfaction that recognition of need for Digital University offers golden opportunity to forge ahead in meeting the objective of 'Reaching the Unreached'. He urged that work on modalities begin immediately.

- 9. **Shri Sunil**, Additional Director General, Prasar Bharati, President BES, and member of the IETE Governing Council, emphasized the importance of three factors in any project: the concept, the content, and how to differentiate oneself from the competition. For the application portion, he outlined Doordarshan's strategy for increasing the number of educational channels from 12 to 200 through the addition of six transponders to the satellite infrastructure and the acquisition of 4-5 hour slots on various channels, all in accordance with the vision of the Honourable Prime Minister. He asked IETE to foster an environment conducive to its need, establish a task force, and apply for a spot on Doordarshan. He also offered his assistance in obtaining a 24-hour slot for IETE at a reduced rate. This was an ideal opportunity to begin preparing for IETE's Digital University.
- 10. Prof MN Hoda stated that while a Digital University is an excellent idea, we must be crystal clear about its intended audience. He stressed that there is no alternative for face-to-face engagement in higher education. Due to the enormous diversity of learners in the country, it must be a blended form of education up to the graduate level. He believed that a Digital University would be beneficial for up-skilling and postgraduate education. Corporate sector inputs are desirable. He emphasized the importance of analyzing gross enrollment, the program's overall credibility, accreditation and its implementation, and developing a specialty programme, particularly at the PG level.
- 11. **Dr DS Bormane,** IETE Governing Council Member from Pune emphasized that the advantages and disadvantages of the new Digital University initiative should be thoroughly explored to ensure its success. He reiterated IETE's successful establishment of Centres /Sub-Centres throughout the country. Professionals / experts that can contribute to the curriculum, practical that can be performed in virtual labs, and education that can be delivered in a hybrid style.

- 12. **Prof Ratnadeep Deshmukh,** IETE Governing Council Member from Aurangabad, remarked that in view of AICTE's support for online programs for MCA & MBA courses, Digital University has a bright future. Additionally, the UGC advises that 40% of content be in an online format. IETE, which has experience with online education, should pursue a Digital University model.
- 13. **Dr N Venkateswaran,** Chairman of the IETE Chennai Centre stated that collaborative contacts among various stakeholders will go a long way toward ensuring the success of the Digital University, which has been established with the goal of increasing student registration and up-skilling students in the country. He also emphasized the importance of integrating the credit system into the existing system and forming alliances with some established businesses / organizations.
- 14. **Shri G Ramesh**, IETE Governing Council Member from Bengaluru clarified that universities will be interested to collaborate by dint of IETE having vast repository of eminent personalities with diversified competence level. We need to identify committed experts amongst us who can spare their time. We have large number of centres and functional laboratories. He concluded that Digital University is doable by IETE.

Dr MH Kori invited suggestions for specific steps that need be taken by IETE for Digital University.

Dr Shevgaonkar said that IETE shouldn't think about building a campus. Instead, find out why traditional colleges don't work. For example, the business world says that only 20% of university graduates are employable. So, IETE needs to make this a main goal if it wants Digital University to help close these gaps. He told IETE to include multiple entry/exit levels in their program, which others haven't been able to do, to make a flexible curriculum, to offer NEP options while proposing a Digital University, and to make affordability a top priority so that people who can't go to the



main stream can still join. He succinctly summarized the rationale for IETE's push for Digital University as follows: Enhancing employability; Focus on being Industry-centric and Be Degreegranting entity. He said that this approach will be a blueprint to become a differentiator and thus be IETE's USP.

Siva Ram Mallela stated that IETE should acquire degreegranting status, a position of national significance, and build a distinctive curriculum with the help of a large number of members.

Prof P B Sharma suggested that, rather than Digital University, it should be termed the "IETE Digital Universe" (IDU). It should offer the opportunity to provide affordable higher education. It should contain some fundamental courses, do-it-yourself projects with self-learning modules, and courses on emerging technologies for which specialists may be asked to teach (IETE's USP) and also there be formation of a Task Force for this effort.

Prof Sandeep Sancheti agreed with the idea of the "Digital Universe." He thought that the best way to move forward was to use what was already there. Instead of focusing on electronics, IETE should pay attention to fields related to computers. By moving quickly, IETE should form partnerships with companies that have similar goals, work with AWS, and get infrastructure support for the cloud. This will be different, but it will still fit with what colleges are usually responsible for. Because of this change, it will be easier to work with other universities. IDU will also invite the brightest people from all over the world to make important contributions to education.

Dr MH Kori suggested that IETE should try to make lobbying groups or pressure groups to spread the idea of IDU. He said that the framework for working together with universities could be more useful if there was a way to get degrees from these universities. In the same way, industry is always looking for ways to improve their employees' skills, and thus become a willing collaborator with IETE. Finally, **Dr MH Kori** said that a Task force under the guidance of **Prof (Dr) JW Bakal** be set up to progress the matter further.

The programme concluded with a vote of thanks from Secretary General **Gp Capt Sonpal Singh(Retd), Veteran.**

IETE STUDENT FORUM INAUGURATED AT GAUTAM BUDDHA UNIVERSITY, GREATER NOIDA

A Students' Forum of the Institution of Electronics and Telecommunication Engineers (IETE ISF) was inaugurated at the School of Information and Communication Technology (ICT) of Gautam Buddha University (GBU) on March 26, 2022. The inauguration function took place at the International Convention Centre of the University. The School of ICT also joined the IETE as an organizational member. The event was presided over by the Chief Guest, Prof (Wg Cdr) P Prabhakar, President IETE in the august presence of Prof R K Sinha, Vice Chancellor, GBU. Prof Sinha is a Fellow of IETE and has been Chairman of IETE Chandigarh Centre. Other dignitaries present for the inauguration were Col Ashok Bhanot, Chairman IETE Noida, Col (Dr) Bipin Pandey, Hony Secretary, IETE Noida, Col P K Sharma, Executive Committee Member, IETE Noida, Mr GP Singh, Executive Committee Member, IETE Noida, Col Manoj Pande, immediate Past Chairman, IETE Noida amongst other members of IETE Noida and faculty and students of the School of ICT. Prof Sanjay Sharma, Dean of School of ICT has been instrumental in facilitating this association. Prof Vidushi Sharma and Prof Neeta Singh organised and conducted the event as well as coordinated the membership drive in the School of ICT, GBU.



The President said that this collaboration will promote research, publications and enable joint technical meetings. Prof Sinha, appreciating the research being done under the aegis of IETE and its research publications, said that the membership will benefit the faculty and students. **Col (Dr) Bipin Pandey**, Hony Secretary, IETE Noida Centre, highlighted huge opportunity for networking. He offered to help setup an ICT Project Management Centre of Excellence and a Data Analytics Centre at the School of ICT.



News from IETE Centres /Sub- Centres

AHMEDABAD

- The Centre in association with Gujarat Technological University (GTU) Graduate School of Engineering and Technology, Chandkheda, Ahmedabad organized an online expert lecture by **Dr Yogesh Verma**, Sci/Eng-SF, PPG-ITND, SAC/ISRO Ahmedabad, on "**Network Security and Research Opportunities**" on 01st Jan 2022 for PG students. During session various types of networks security issues, different types of attack, wireless sensor networks and its securities, IoT networks, data sanitization along with possible research opportunities were discussed. The research carrier opportunities were also deliberated upon. **Shri R M Makwana**, Centre Chairman & Corp members including participation from about 50 participants apart from various colleges and industries witnessed the event. **Prof (Dr) Komal Borisagar**, Faculty and Fellow IETE member initially introduced the speaker and afterwards gave vote of thanks.
- The Takniki Chaupals were held online between 9th Jan-3td Apr 2022, to discuss the newest breakthroughs in science and technology, as well as contributions by individual members to the betterment of IETE. The 1st तकनीकी चौपाल was held on 9th Jan 2022, with corporate members. The following topics were discussed: Shri Chintan Bhatt enquired about the weight of four Tan satellite launch costs in India. Shri Sudhir Agarwal talked about the battery charging period for an electric two-wheeler, and the distinction between Li-ion and Li-phos batteries. Smt Dagur spoke about impending solar-powered vehicle technology. Shri Survakant Gupta/Rasesh Dave informed that plasma physicists working together in France on the International Thermonuclear Experimental Reactor [ITER] project. Shri D S Kushwaha discussed the private sector's participation in India's space programme and how IETE can turn this into an opportunity. Shri Jaswant Sharma proposed creating an expert directory of IETE members so that their knowledge and experience can assist startups. It was suggested that the IETE Ahmedabad Centre distribute a Google form to members to collect their details, skills, and experience data, which could be adjusted to membership data accessible with the centre. The 2nd तकनीकी चौपाल was held on 6th Feb 2022 wherin the corporate members joined in video conferencing mode. Shri Madhukant Patel proposed that IETE collaborate with his Australian acquaintance on an ML and AI training programme. He also advised that the "Learn with Fun" programme for children be restarted. He stated that he wishes to give a practical lecture on the Raman Effect, and Shri V K Jain advised that he do it on National Science Day. Shri D S Kushwaha proposed that IETE Centers be established in Canada and California. The Free Space Optical Communication/OISL (Optical Inter Satellite Communication) discussion was proposed by Shri
- VK Jain. A SAC/PRL/IPR member can assist in the organisation of a seminar or conference. Shri Sudhir Agarwal announced the establishment of a Bopal SAC/ISRO E-space facility for students, young entrepreneurs, and private fellows to receive a basic business idea/facility. Shri Ravi Saksena, Shri Arvind Tyagi, and Shri V K Jain talked about 5G communications, Free Space Optical Communication for wide bandwidth, and high-speed satellite internet, Shri Ravi Saksena spoke village tourism. The 3rd तकनीकी चौपान of the year 2022 took place on 3rd Apr 2022. The following themes were discussed: DOS and DAE Grade Pay; Smart City and Citizen Amenities; Industry-4.00 standard and its applications; RFID technology and its use/applications; Gaganyan launch; Electronic/electrical compliance testing opportunities; IOT and Big Data Analysis perspectives
- On 20th Feb 2022, the Centre commemorated **Student's Day** by hosting an online elocution and presentation competition for IETE and ISF engineering students on "**6G Technology or Internet of Things (IoT).**" Judges included **Prof (Dr) Mihir V Shah**, HoD EC, LD College of Engineering, and **Prof (Dr) N P Gajjar**, Prof Nirma University. The event was attended by **Smt Smriti Dagur-** Past President of IETE, Past Chairmen of IETE Ahmedabad- Prof J V Dave, Shri VK Jain, LEC members and corporate members, and college professors. Thirty members and students in all attended the event. **Ms Janvi Kapadiya** (GEC, Gandhinagar) got the first prize of Rs 500/-, **Ms Prachi Jain** (GEC, Gandhinagar) won the second prize of Rs. 300/-, and **Mr Zenil Roy** earned the third prize of Rs 200/- (GEC, Gandhinagar). Ms Pinky Mandalia delivered the vote of thanks and effectively anchored the program.
- National Science Day was held in partnership with BeeNation Ahmedabad and IEEE AP/MTT, Gujarat on 6th Mar 2022. The event was supported by Sterling Hospital, Green Field Technology, and Reve Automation. Neurosurgeon Dr Chirag Solanki delivered the keynote talk "IT in Deep Brain Stimulation." He discussed how embedded and IT engineering are utilized to cure Parkinson's disease and other prevalent neuron-related ailments. Shri Madhukant Patel (former Sci/ Engr. SAC/ISRO) gave a presentation entitled "IoT for Bee and Honey Sciences" and discussed the concept of a "Smart Supper Box" to preserve bee eggs and larva. The Guest of Honour, Dr Rahul Yadav, spoke on global scientific achievements over the past two years as well as the Covid situation. He highlighted the advancements in Tele-education, Tele-governance, and health care technology. In addition, he discussed the mass media, communication, and cyber power for the survival of humanity. The chief guest, Shri Nilesh Desai, Dir, SAC, ISRO, commended and thanked both professionals and offered SAC/ISRO cooperation

for the development of Neurochips. He compared the involved technology to launch vehicle/satellite technology in terms of sophistication and complexity.

- An Introduction to **Vipassana Meditation program** held on 13th March 2022. Gautama Buddha rediscovered and taught Vipassana, one of India's oldest ancient meditation practices, as a universal cure for universal illnesses. 35-to 40 IETE members with family attended.
- A meeting on Election Committee 2022-24 was held on 16th Mar 2022. Prof J V Dave, an observer, joined the meeting online.
- The Centre commemorated International Women's Day on 20th Mar 2022. The Centre Chairman, Shri R M Makwana, made inaugural address. Former IETE President Mrs Smriti Dagur delivered the welcome address and informed about IETE activities. Chief Guest Dr Sasmita Chaurasia, SCI/ENGR, SG, SAC Bhopal Campus, emphasized that women perform multifaceted tasks effectively. Prof (Dr) Komal Borisagar, Asstt Prof at the GSET/GTU in Ahmedabad, gave a theme lecture on «Gender Equality in the Present for a Sustainable Future." She explained the distinction between biological and gender differences. Examples of gender disparity, the need for equality and its benefits, women's roles in the home, community, and economy, hidden capabilities of women, nurturing of females, were taken up. Key elements addressed included health, education, socioeconomic obstacles, work-life balance, and financial literacy. As a whole, it was argued that only women's empowerment and acknowledgement is a crucial factor in the growth of society. Prof Dr Richa Metha, Asstt Prof, B P College of Computer Studies, Kadi Sarva Vishwavidyalaya (University), Gandhinagar, gave an expert talk on "Women e-Suraksha." The speaker examined many roles and characteristics of women, such as generous, dependable, affectionate, emotional, firm, sensitive, elegance, kind, calm, soft, devoted, and wise, with the motivational comments of a few of today's most prominent women. The knowledge sharing talk concluded with the empowering words of reverend Shri Mahatama Gandhi (Father of the Nation) - "First they ignore you, then they laugh at you, then they fight with you, and then you win" and Hon'ble PM Shri Narendra Modi's words, "I dream of a digital India where Cyber Security is an integral part of our National Security." Everything was summed up by addressing all questions/comments/concerns with a live case study video. Dr Sasmita Chaurasia, Sci/Engr SG, SAC Bopal Campus, addressed the audience and discussed her mother's involvement in her career advancement and how she manages her household responsibilities with her husband's support. She indicated that women may perform multifaceted tasks extremely effectively. Her emphasis on the need of a healthy family was noteworthy. Shri Sanjeev Kulshrestha, Hony Secretary, addressed with concluding remarks.

- The March 2022 **Theory Exam** was administered for DipIETE and AMIETE students. The March 2022 **Practical Project Examination for DipETE/AMIETE** has been conducted.
- The quarterly **in house bulletin** "INFOBYTE" from July-December 2021 was printed and published.
- From the Annual Grant 2021-22, **books for the library** were bought.

ALIGARH

- The Centre organized a **consultative meeting** to review the activities held/ to be held in situation like Covid pandemic by the Centre through online mode.
- A two-day online workshop on "Project Management in Industry: Role, Responsibilities, and Execution" was held on 15th -16th Mar 2022. **Prof M M Sufvan Beg**, Principal of Zakir Husain College of Engineering and Technology and Chairman of the Dept of Computer Engineering at Aligarh Muslim University, was the Chief Guest. Prof Beg emphasized the element of time management in his inaugural remarks. He expressed his appreciation that IETE had taken a timely initiative to host an industry-oriented workshop and hoped the event will help participants learn important ideas and advanced understanding needed to be industry-fit professionals. The welcome address was given by Prof Muzaffer Ahmed Siddiqi, Chairman of the IETE Aligarh Centre. Dr Abdus Samad, Assoc Prof, Computer Engineering Department, and Hony. Secretary, gave an overview of the workshop. Vote of thanks was given by Dr M Ayyub Khan, Asso Prof (EES), University Polytechnic. Ms Mayuri Vaish of Pooja International Apparels Export, Ghaziabad, led two technical workshops on "Responsibilities for Project Planning and Execution" and "Role of Merchandiser." Shri Ranjit Kumar, Director KidofyIndia, led technical workshops on "Essential Roles of a Project Manager" and "Project Management Tool." Dr Gitanjali conducted the valedictory function.

ALLAHABAD

The Centre observed **Students' Day** online on 13th Feb 2022. **Dr Vishwesh Nath**, US Scientist, spoke on "Advances of AI in Radiology via Medical Open Network and Federated Learning."

BENGALURU

The Centre conducted number of technical activities in the review period as follows:-

03 Oct 2021- A ten-week online course on **Python Essentials**, conducted by **Dr Pramod Kumar**, MSRIT, that ended on 19th Dec 2021.

24 Oct 2021- An AI & ML Using Python course by Dr Suresh Kumar.

07 Nov 2021- The 68th IETE Foundation Day was commemorated. Dr Shivaprasad Yadav, Hony Secretary, welcomed the gathering and distinguished guests. Shri Satyanandan, Chairman of IETE Bangalore, also addressed the gathering. President IETE Prof Prabhakar spoke on the recent IETE-Industry Innovation Meet. The Guest of Honour, Shri Vinod Palakkil, Regional Director, PTC Bangalore, was then introduced by Dr Ravishankar, Vice Chairman. Dr Shivaprasad Yadav welcomed the Chief Guest, Shri Radhakrishna, Director of LRDE Bangalore, who awarded the Prof NV Gadadhar Memorial Award to Shri Renukaprasad for his contribution to the development of vehicle mounted radar. Shri CP Dwivedi, Vice Chairman, welcomed Guest of Honour Shri MV Rajasekhar, Director (R&D) BEL who read the citations for the IETE IRSI awards and presented the recipients of the Main and Young Scientist Awards. Shri Sunil Kumar Vuppala, Dr BK Sujatha, and Shri Prikshat Sharma were among the winners of other IETE prizes. The Chairman presented the citations and medals to the winners in attendance. The Senior Executive in charge of training at C DoT, Dr YVS Lakshmi, was then invited to speak online. Dr Lakshmi announced that C DoT and IETE Bangalore had signed a Memorandum of Understanding, which was an important move that corresponded with the Foundation Day's theme of Skill Development. The vote of thanks was proposed by Shri K S Ravi, a member of the Executive Committee.

14 Nov 2021- A course on **Embedded Systems & Design** by **Dr Shivaprasad Yadav** for about 10 weeks.

25 Nov 2021- PTC Thingworx presentation at Reva University by **Shri Rajkiran**, Dir, PTC Inc, in the presence of **Shri C Satyanandan**, Chairman and **Dr R C Biradar**, Dir, Reva University. Almost 500 students attended the lecture.

05-20 Dec 2021- Conduct of examination by Institute of Chartered Accountant of India (ICAI) under the supervision of Centre Chairman **Shri C Satyanandan; Prof C Murali**, Former Vice President; **Shri C P Dwivedi**, Vice-Chairman; **Dr S G Shivaprasad Yadav**, Hony Secretary and **Shri Ranjeet Kumar**, Hony Treasurer. Shri Dinesh, invigilated the conduct of the exams for around 2500 students.

12 Dec 2021- A ten week course on Advanced FPGA Design, started by Shri Balaji M, M/S Cytech Global Pvt. Ltd.

18 Dec 2021- Inauguration of an ISF Chapter at Ramaiah Institute of Technology (RIT) by Shri C Satyanandan, Chairman. **Dr D G Rao**, Scientist 'F' and Project Director, LRDE-Bangalore, was the Chief Guest on this occasion and delivered a technical talk on the advancement of Radar Technology. **Dr B K Sujatha**, Prof & HoD ETE, and **Dr S G Shivaprasad Yadav**, Assoc Prof, Dept ETE, RIT, were also in attendance and addressed the participants.

18 Dec 2021- Prof C Murali, Former Vice-President, IETE delivered a technical talk on 'Intelligent Connectivity fusion of **5G**' at Sri Krishna Institute of technology, Bengaluru.

24 Dec 2021- The Centre, in collaboration with Dr T Thimmaiah Institute of Technology (TTIT), KGF, Kolar, hosted an online webinar. Shri Naveen Sonkar, DGM-R&D, Product Engg Dept, BEML Ltd, KGF, delivered a technical talk on the topic of "Digitalization and the application of artificial intelligence in the earth-moving industry" as the Chief Guest. He discussed the importance of modern digitalization techniques and artificial intelligence in today's industrial evolution, as well as the implementation of AI in the heavy-duty engineering industry. Prof Jenitha, Assoc Prof of Electrical and Computer Engineering, welcomed the gathering, and Prof R Tamilvani proposed a vote of thanks.

28-30 Dec 2021- The MVJ College of Engineering held a faculty development programme. **Dr C V Ravishankar**, Vice-Chairman of the Centre and keynote speaker, delivered an address on "Introduction to soft computing". **Prof Ramya Ravikiran**, FIETE, presented a talk on "Fuzzy theory, fuzzy logic, and artificial neural networks."

30 Dec 2021- Shri C Satyanandan inaugurated the ISF Chapter at Oxford College of Engineering in Bengaluru. Prof C Murali, as the Guest of Honour, delivered a technical talk on **5G and Its Applications** for the benefit of students and faculty members, motivating and encouraging them to join professional societies such as IETE, which can assist them in carrying out the project work, seminars, and conferences, among other things. The ISF was coordinated by **Dr R Bahragav Rama Gowd**. The function was presided over by **Dr K Kannan**, Principal of the College. The vote of thanks was proposed by **Dr Manju Devi**, HoD, EC Department.

28 Feb 2022- National Science Day was observed online. The welcome address was given by Hony Secretary Dr Shivaprasad Yadav. Dr MH Kori, Vice President of IETE, gave an overview of Science Day and the year's theme, as well as the IETE Bengaluru Magazine was released on the occasion. Shri Satyanandan, Chairman, welcomed Shri M Sankaran, Director, U R Rao Satellite Centre (URSC),the Chief Guest, who in his adder ss highlighted URSC's collaboration with IETE, citing the IETE International Conference, which was hosted at URSC in 2018. He hoped that ISRO's support for the Centre would continue in future. Prof H S Bhatia, Chairman and Immediate



Past Chairman, honoured the Chief Guest. Shri M Sankaran was then introduced by the Chairman. He stated that India is on the road to achieving sustainable growth and that India will soon become a global technical giant. The 13th edition of the IETE Bengaluru Magzine was also released by Shri Sankaran. Prof Prasad Shastry, Professor at Bradley University, United States, complimented IETE Bangalore for its efforts to hold the Raman Memorial Lecture every year.

13 Mar 2022- The Centre commemorated International Women's Day. The Chief Guest was Ms HK Bharathi, Retd. CE & MD, KPTCL. Guests of Honour were Dr Shobha Yeduraj, Karnataka High Court Advocate, Ms AP Revathy, ADE-DRDO Scientist, Ms MV Roopa, Scientist Engineer, ISTRAC- ISRO, and Ms Disha Poovaiah, Cine Actress. Centre Chairman Shri Satyanandan, presided. Dr YVS Lakshmi FIETE, Head of C Buddhi, C-DoT Bangalore's training wing, and Group Leader IPR, Marketing, and Knowledge Management at C-DoT, was named "IETE Bangalore Woman Achiever of the Year 2021-22." The event was moderated by Dr Nandini, the ISF Coordinator. Dr Shivaprasad Yadav, Hony Secretary, welcomed the guests, and Vice Chairman Dr C V Ravishankar offered the vote of thanks.

BHOPAL

- IETE Bhopal Centre observed **IETE Foundation Day** on 2nd Nov 2021. The chief guest for the celebration was **Prof G S Tomar**, Principal, Rajkiya Engineering College, Sonbadhra. **Shri Deepak Loada** and his team of MITS ISF students delivered a presentation on **Blockchain Technology**. The function drew a total of 98 members.
- On 18th Nov 2021, IETE Bhopal Centre in collaboration with IES University ISF, Bhopal, organised a short course in hybrid mode. The course was titled "Space Intelligence for National Defense," and Ms Suman Agarwal, Scientist F, Directorate of Special Projects, Defence Research and Development Organization (DRDO), Hyderabad, served as the program's resource person.
- On 15th Dec 2021, the Centre hosted an expert lecture on "Machine Learning and Its Applications," which drew 78 members.
- National Conference on "VLSI, Communication, and Signal Processing" was organised in collaboration with MANIT Bhopal. The inaugural function was graced by **Dr Tripta Thakur**, DG, NTPC Training Centre, Faridabad, as the chief guest and was attended by 80 members.
- From 20th -22nd Dec 2021, the Centre hosted a three-day online **Faculty Development Program** on "**Developing Outcome-Based Curriculum and Digital Pedagogy.**" **Prof S K Mondal,** IIT Kharagpur, served as the resource person for the programme.
- Online student proficiency tests were conducted in Guidance

- **Classes** to prepare students for GATE. Video lectures have been created by members of the IETE Bhopal Centre and made available on the Bhopal Center's website at www.ieteb.org.
- The Centre, in collaboration with MITS Gwalior ISF, conducted a **MATLAB training session**. Two MTech students used IETE Bhopal Centre resources for completing their dissertations. One other candidate used IETE Bhopal Centre resources to complete her PhD thesis.
- Faculty of ECE, IES College of Technology, conducted a threeday International online Conference on "Education Technology" in association with IETE, Bhopal Chapter and IQAC Cell, with Prof (Wg Cdr) Prabhakar, President of IETE, New Delhi, as the Chief Guest on 12th-15th Feb 2022. The conference was formally inaugurated by Dr Sunita Singh, Dir, IES College of Technology in Bhopal. Experts from different countries participated: Dr Andi Asrifan, Muhammadiyah University of Sidenreng Rappang, Indonesia; Dr Muthmainnah, Universitas Al Asyariah Mandar, Indonesia; Dr Arab Naz, Prof and Chairman Department of Sociology University of Malakand; Dr Lucas-Afolalu Queen Elizabeth Award-Winning Author, Entrepreneur; Dr Chris Sotiropoulos, Dir, Mainstage (Australia); Prodhan Mahbub Ibna Sera, Asst Prof. Dept of English American International University-Bangladesh; Fides Del Castillo, EdD Affliation: De La Salle University Manila Laguna, Philippines; Luís Miguel Cardoso, Polytechnic Institute of Portalegre and Centre for Comparative Studies of the University of Lisbon, Dr Bong Borero Lumabao, Founder and CEO, ILMO. Inc Philippines; Dr Shyamal Kumar Das Mandal, Prof, Centre for Educational Technology IIT Kharagpur, Vice Chairman ERP and Dr Abhishek Rawat, Institute of Infrastructure Technology Res & Mgmt, Ahmedabad. The members in the conference paper review committee were: Dr Binod Kumar Soni, Professor UIET, RGPV, Bhopal; **Dr Pooran Gaur**, Principal NRI Institute of Technology, Bhopal; **Dr Rajesh Nema**, HOD ECE, IES College of Technology, Bhopal and Dr Pramod Kumar Patel, Assoc Prof, ECE, IES College of Technology, Bhopal. The introductory remarks were given by Asst Prof Ankita Namedev and Dr Anuprita Mishra, Principal IES College of Technology, Bhopal, while vote of thanks for inaugural session was by Dr Jyotiram Sawale. The final vote of thanks for sessions were from Dr Rajesh Nema (HOD, ECE), Dr Geetash Goga (HoD ME) and Dr Shweta Singh. The session coordinators were: Ms Neha Shrivastava, Dr Shweta Singh. The speakers spoke excellently and the conference assisted the participants to enhance their understanding regarding education technology, entrepreneurship, tools used in education technology, drone technology. The sessions were very fruitful, informative and useful.
- An International webinar on "A Step towards Pollution Control" was organized by Govt Kamla Raja Girls Post Graduate, Autonomous College in association with the IETE Bhopal Centre

on 29 Jan 2022. Dr Vinita Agrawal, Head, Dept. of Chemistry, inaugurated the webinar and Dr PK Singhal, Chairman delivered the welcome address. Motivational talks were delivered by Dr Sanjay Swarnkar, Academic Secretary, KRG, College, Gwalior and Dr MR Kaushal, Principal, KRG College Gwalior, Director, Director Secretariat, C&CR, Pondicherry University, Pondicherry, India. The Guest of Honour Dr Nevara Radwan Assoc Prof, King Abdulaziz University, Jeddah, Saudi Arabia and Faculty of engineering, Suez University, Egypt. Dr M R Kaushal, Additional Director Higher Education Department, Gwalior Chambal Division chaired. Chief Guest and keynote speaker was Prof Rajeev Jain. Dr Neyara Radwan spoke on 'Municipal Waste Management and integrated sustainable waste management framework'. Dr Arun Sharma highlighted different pollution control methods specially plastic pollution control and management of domestic plastic waste. Dr Deepak Pathak proposed vote of thanks and Dr Priyanka Tripathi conducted the event as an Organizing Secretary.

- On the occasion of National Science Day on 28th Feb 2022, the ECE Department of the LNCT Group of Colleges in Bhopal, in conjunction with the IETE Bhopal Centre, organized a competition titled 'Think Outside The Trash', which focused on the effective utilization of increasing amounts of household and industrial waste. Dr Monika Kapoor and Dr Tarun Verma served as faculty coordinators, while Hardik Arora and Sanskriti Gautam served as student coordinators. Nearly ten contestants participated in the competition and displayed their ingenuity in the form of product and presentation. The participant's inventiveness, resource usage, aesthetic composition and design, eco-friendliness, product utility, and overall presentation were evaluated. The winners of the competition were Arushi Adhruj and Yash Shrivastava.
- Online Tech Intellect Quiz Competition and Virtual Project Exhibition were held on 1st Feb 2022. Prerna Jain, Sarthak Agrawal, Shreeyansh Bhudoliya, Ansh Agrawal, Sameer Agarwal, Harsh Agrawal, Aditi Jain, Harshita Shrotriya, Amrit Kaur, Jayati Yadav, Yashita Mudgal, Disha Chaurasia and Rishu Raj Singh, comprised the organising teams for both events. Top scorers for 1st event were: Bhavya Surana and Himanshu Mishra; Winners for 2nd event included Raman Sharma/ Dhruv Modi (a low-poly android racing game) and Suhas T B (E-commerce website for food).

BURDWAN

National Science Day was held on 16th Mar 2022, at the Department of Physics, University of Burdwan's. **Dr Anindya Bose**, Chairman of the Centre, delivered the welcoming message and extended greetings to the many school students, teachers, MTech students, and research scholars in attendance. **Prof Abhijit Chakraborty**, Associate Professor, Department of Physics, The

University of Burdwan, delivered the keynote address on "C V Raman: His works and their significance."

CHANDIGARH

The Centre in collaboration with the Atal Community Innovation Centre (ACIC), the Dept of RISE, and CEC Landran, celebrated IETE Student's Day via a virtual platform on 02nd Feb 2022. Shri Subhash Chander Jain, Chairman, IETE Chandigarh Centre, welcomed IETE GC member Gp Capt RC Goyal, VSM (Retd); Dr Sushil Kaura, Past Chairman, of the Centre; Er Manish Pandit, Senior Technical Officer, Chandigarh Institute of Drone, Chandigarh; Centre's Executive Committee Members; senior corp members; **Prof Praveen Singla**, Head – Drone Technology, **Prof Veena** Hanamsagar, ACIC RISE Association CEC Landran, Chandigarh. He highlighted IETE's role in disseminating highquality information about the latest developments in electronics, telecommunications, information technology, and computer science engineering, IETE publications and awards, as well as the benefits of ISF membership. He went on to discuss the importance and applications of drones in the current environment, and about other technologies involved. Gp Capt RC Goyal, VSM (Retd), GC Member, in his address discussed the benefits of IETE, corporate, and ISF student memberships. Dr Amod Kumar, Vice Chairman, IETE Chandigarh Centre, read out the message received on IETE Students' Day from IETE President. With the message focusing on the advancement and emergence of new technologies such as blockchain, 6G, AI & ML, cyber security, and IoT in the field of information technology and telecommunications, he said that students now have greater freedom and opportunities to pursue their career goals. Prof Veena Hanamsagar, CEO, ACIC Rise, Mohali, briefed the audience on the Association's professional activities and commitment to providing space for all new start-ups. Er Manish Pandit delivered an expert talk on "Physics of Drone Technology Physics." The talk was extremely well received by the participants. The event was attended by over 40 IETE corporate members, IETE Chandigarh Centre staff, ISF staff and students of the Indo Swiss Training Centre (ISTC), CSIR-CSIO Chandigarh. A formal vote of thanks was presented by Dr PK Awasthi, Centre's Hony Secretary.

CHENNAI

- IETE Chennai Centre held "**Ayudha Pooja Festival**" at the Centre's premises, which was attended by the Chairman, Executive Committee Members, and senior members on 15th Oct 2021. The celebration drew a total of sixteen members.
- The **Students' Day** was observed on 31st March 2022. **Dr N Venkateswaran**, Chairman of the IETE Chennai Centre, provided the opening remarks. **Prof T J Jeyprabha**, the Hony Treasurer, read the day's message from the President. **Dr Ananad Lakshmanan**, Dept of Engineering Design, IIT Chennai,

participated as the event's distinguished speaker and chief guest. The Best ISF Centre Award that received twelve submissions from various colleges, declared category's first prize to Sri Sairam Engineering College, the second prize to Sri Venkatwara Engineering College, and the third prize to Jeppiaar Institute of Technology. There were 15 submissions for the Project display/ Paper Presentation. The winners for *Project Display* included T S Srinivasan Centre for Polytechnic College (1st Prize), Veltech Multi Tech Dr SRR Engineering College (2nd Prize), and Aarupadai Veedu Institute of Technology (3rd Prize). The winners for *Paper Presentation* were- Sri Sairam Engineering College (1st Prize); Hindustan Institute of Tech and Science(2nd Prize); and R M K Engineering College (3rd Prize). Prof M Arun, Co-opted Member, offered a vote of thanks at the end of the meeting.

COIMBATORE

The Centre conducted a number of activities in collaboration with following IETE Student Forums:-

- ➤ ISF, PSG College of Technology, Coimbatore
 - Bits & Bugs: A weekly series designed to promote and enhance the coding abilities of students enrolled in both the circuit and non-circuit branches. Every Tuesday a coding snippet was posted on their Instagram page, and responses were accepted until Wednesday via Instagram story replies. Solutions were released on Thursdays. Weekly shout outs were given to individuals who responded quickly and correctly, and a leader board was maintained. Certificates were presented to the series' top performers. The series was well-received by students, and the series' Instagram following grew to over 1,000.
 - **IETEian Diaries**: A platform started on Oct 2021 for alumni of the IETE association to share their college and placement experiences. Students clear up any doubts about placements and careers by posting their questions on the Instagram Q/A storey, which are answered by an Alumnus. This initiative was created to foster communication between alumni and current students.
 - Celebrating Great Minds: This series honours great scientists and their inventions all across history on the anniversary of their birth. It is shared via Instagram and WhatsApp as a poster that includes a brief description of the person and their invention.
 - Apotrophis: This was the year's (2021-22) first event, with over 185 registrations. The competition featured two rounds: Brainup and Instincto. The first round, dubbed Brainup, featured non-technical subjects such as logos, trivia, and rebus puzzles. Instincto, the second round, was a story-telling round. The participants were shown a series of images and were required to spontaneously

- generate an interesting storey. The finalists were evaluated on a variety of factors, and six individuals were crowned "the Stars of The Apostrophis."
- > ISF, Ratinam Technical Campus, Coimbatore,
 - A webinar titled, "Achieving problem solution fit & product market fit product" by **Dr Sharan Kumar Shetty**, was organized on 22nd Nov 2021.
 - A webinar on "Innovation inside you" by Shri Vignesh Kalirajan, Business Advisor was held on 24th Nov 2021
 - "Design Thinking Boot-camp" by Dr R Arunkumar, Head Rathinam Innovation and Incubation Center was organized on 23rd Nov 2021
 - A Quiz Contest was arranged by ISF Faculty Advisor on 29th Nov 2021
 - **Ideathon** by ISF Faculty Advisor on 5th Dec 2021
 - "Future Thinking- Smart Gadgets" by ISF Faculty Advisor was organized from 6th Dec 2021 to 19th Dec 2021.
- > The Vice-Chairman and Honorary Secretary, IETE Coimbatore Centre, guided office bearers of IETE Student Forums at RVS College of Engineering and Technology, Ratinam Technical Campus, and Dhanlakshmi Srinivasan College of Engineering to carry out professional activities for the benefit of members. The Coimbatore Centre mentored faculty members at Karpagam Institute of Technology and Karpagam College of Engineering in Coimbatore, and received approval from IETE headquarters to conduct professional activities under the auspices of the IETE Student Forum. The Centre assisted the management of KGISL Institute of Technology, Coimbatore in obtaining organizational membership in IETE. The process of establishing ISF at KGISL Institute of Technology is also on.

DEHRADUN

- June 2021 Examination was conducted from 4th Oct 2021 to 11th Oct 2021 while the Practical Examination was held on 23rd Oct 2021.
- On 13th Oct 2021, **Shri Alok Nanda**, CTO GE South Asia & CEO GE India, delivered an online talk, titled "**My Innovation Experience**". Around 50 people attended the presentation.
- An **ECM meeting** was organized on 11th Nov 2021 to improve the Centre activities.
- Shri V K Jaiswal and Shri V S Lakhera met with students at Shivalik College of Engineering in Dehradun on 22nd Nov 2021.

GOA

As part of the IETE Students' Day celebrations, the IETE Goa

Sub-Centre hosted a webinar on "Big Data and Cloud Computing" on 2nd Feb 2022. Ms Sonia Kuwelkar, Hony Secretary of IETE Goa Sub-Centre, opened the event with a welcome address. The participants received a message from IETE President, Prof P Prabhakar. Dr R B Lohani, Chairman, Sub-Centre, greeted the students and addressed the gathering. Shri Nikhil Bhat, Engineering Lead, Persistent Systems Ltd, was the event's speaker. He discussed the evolution of Big Data and Cloud computing over the last decade and demonstrated how to get started with Amazon AWS. He emphasised the various tools that students can use to excel in this domain. Numerous platforms were demonstrated that provide training and certification in big data, python, and cloud computing. Over 85 people attended the webinar. Participants included faculty and students from Mahatma Gandhi Institute of Technology, AISSMS IOIT Pune, Pravara Rural Engineering College, Kasturba Gandhi Degree and Postgraduate College for Women, and Pankaj Laddhad Institute of Technology and Management Studies, Yelgaon Buldhana, Shivajirao S Jondhle Polytechnic Assangaon, Vidyavardhini's College of Engineering and Technology, Dr Rajendra Gode Institute of Technology and Research, Amravati, and Goa College of Engineering. The webinar was attended by a number of senior IETE members. Ms Mahima Dalvi, Chairman, ISF at Goa College of Engineering, presented the vote of thanks. A certificate of appreciation was presented to the speaker, and electronic certificates were distributed to all attendees. Following the webinar, the top three scorers were announced as the winners of a quiz competition.

HYDERABAD

The IETE Hyderabad Centre hosted a number of Knowledge Sharing Sessions (KSSs) / workshops/ technical activities with subject experts during the first quarter of 2021-22, as follows:-

- KSS-46: Webinar -76 took place on 5th Dec 2021, through an online platform. **Dr Dharmana Ranganadham**, DDG (Engineering) and the head of the Doordarshan Kendra, Vijayawada, was the guest of honour at the event. He gave a talk on "The New Face of Broadcasting" with 89 members in attendance.
- The Centre conducted an **IETE Membership Covid-19 Discount Awareness Program** at Matrusri Engineering College via physical mode on 9th Dec 2021. **Er Nuli Namassivaya**, Hony Secy, explained the discount being offered to students and faculty and encouraged them to take advantage of the opportunity. The same programme was repeated on 15th Dec 2021 through physical mode at University College of Engineering. **Er Nuli Namassivaya**, Hony Secretary explained about the discount of IETE Membership for the students as well as Faculty.
- Memorial Lecture 05: Webinar-77: An online presentation of the Prof Ganti Subrahmanyam Memorial Lecture was

held on 12th Dec 2021. **Ms Lakshmi**, Scientist 'F' DLRI, Chandrayangutta Hyderabad, presented a lecture on 'Cyber Warfare'. The event drew a total of 79 attendees.

- The Centre held a physical **Meeting of the IETE Students Forum (ISF) Coordinators** on 13th Dec 2021. This event drew a total of 30 faculty coordinators and office bearers from various engineering colleges. **Col Ashok Bhanot (Retd)**, Chairman, IETE Noida Centre, was the Chief Guest and engaged actively with ISF Co-ordinators regarding IETE events and membership discounts. The same programme was also repeated on 25th Dec 2021.
- A two-day workshop— 01: Webinar—78: A two-day workshop programme was organised on 18th-19th Dec 2021 during which **Dr Avaru Venkataramana**, PhD, Senior Faculty in ECE, Dept of Technical Education, Govt Polytechnic, Siddipet, Telengana, presented a talk titled "Emerging Techniques for ECG Signal Analysis Using MATLAB." This workshop drew a total of ten students.
- KSS-47: Webinar-79: On 26th Dec 2021, an online webinar was held in which **Er Anupam Tiwari**, Senior Fellow member (F-209735), delivered a lecture on "Overview of Blockchain **Technology, its Applications, and Challenges.**" This event drew a total of 84 participants.
- KSS-48: Webinar-80: On 2nd Jan 2022, Shri P Narasimha Rao, Retd Scientist–G ,DLRI (DRDO), Senior FIETE spoke on "New Product Specifications -An Innovators's Perspective".
- On 7th-8th Jan 2022, MVSR Engineering College hosted a conference on "Latest Trends in Electronics & Communication **Engineering.**" While delivering his address during the inaugural ceremony, the chief guest Dr Dasrath Ram Yadav, Dir, DRDL, Hyderabad, underlined the need for students to have different skill sets for creating new technologies. He discussed how contemporary technology makes things easier. He asked students to focus on research. The Guest of Honour, Prof Dr E GovindRajan, Chairman, Pentagram Group of Companies in India, US, and Canada, talked about how advanced India's defence technology, which he said is on par with that of the Super Powers. Er K Gnaneshwar Rao, Prof OU and the Center Chairman, talked about the vision and mission of IETE and how the Indian government has recognised IETE as a SIRO. He encouraged the students that they should publish and read papers in the IETE journals to develop their research skills and compete for the IETE's yearly awards. He talked about the activities that the local centre performs on a monthly basis and highlighted that the IETE Hyderabad Centre earned the Best Centre Award for 2020-2021. Prof & Head, ECE at MVSR Engineering College Dr SP VenuMadhav Rao, who was in charge of putting together the event, talked about the college, the technical event, the theme of the event, and how the participants would benefit from it. Dr K

Seetha Ram Babu, a member of IETE Governing Council and a representative of the ORG, talked about the ORG's members, their benefits, their roles, and what they plan to do in the future. Er N Namassivaya, Centre Hony Secretary gave the vote of thanks. In Session -1, Prof Dr E Govind Rajan spoke on "Off-Line Analysis and Estimation of Radar Signal Parameters for Creating Electronic Order of Battle Records" and covered state-of-the-art upgraded techniques related to "Electronic Intelligence" and "Electronic Order of Battle" where Electronic Intelligence (ELINT) provides both direction of arrival of intercepted radar signals along with signal parameters. In Session-II, Shri K Vijay Kumar Gupta, CEO, Kwality Photonics & LED Chip Indus P Ltd., spoke on "Emerging Applications of LED and RAYPURE". Using Anti-Microbial Spectrum incorporated in its White illumination lighting, create a sterile space by eradicating virus, bacteria, and fungus, including Covid-Virus. Raypure's non-UV, non-IR lighting doesn't necessitate evacuating the room, unlike UltraViolet lights, and creates an infection-free zone in hospitals, schools, offices, and homes. As a light source, it works 24/7. Prof KSR Murthy, former Technology Director, Instrumentation Division, DRDO, Hyderabad, spoke on "Advanced Missile Instrumentation" at Session-III. He discussed the parameter measurement needs for flight vehicle applications in the missile area. He said new setups are needed to acquire a wide variety of signals for testing flight vehicle subsystems and multiple recording systems with redundant instrumentation. The next day at IETE, Hyderabad Centre, Dr M B Srinivas, Dean and Prof, BITS Pilani, Hyderabad, spoke on 'Technology and Climate Change.' He discussed climate change and its influence on earth and what countries could do to reach net zero emissions. He spoke to students about future options and their path of action, including Solar Photovoltaics, Electric vehicles, Battery storage, and Renewable energy. Dr PSR Srinivasa Sastry, Outstanding Scientist & Director for Special Projects, DRDO, Hyderabad, spoke on "Satellite Technologies and New National Initiatives" He discussed orbit classification, numerous orbits, satellite applications and their usage in defence, space situational awareness, and national initiatives to promote space technology. Dr B Yegnanarayana, INSA Senior Scientist, IIIT Hyderabad, and ex-faculty of IISC and IIT, spoke on "Communication Engineering from Techniques to Technology" In his discussion, he described the progression of communication engineering leading to today's Technology-Driven Society. Shannon's Mathematical Theory of Communication led to FFT algorithm, Linear Prediction Analysis of Speech, hidden Markov Models, Artificial Neural Networks, and Gaussian Mixture Models. Large computing power led to supervised and unsupervised machine learning approaches. He explained how data-driven AI, ML, and DL have switched the focus from tactics to technologies. From a communication engineering perspective, he explored the pros and cons of DL-based AI applications. In the valedictory event, Chief Guest Dr K P Srinivas Rao, Chairman

of Matrusri Education Society, praised the college's achievements over time. He praised IETE for organising technical event and all the event's stakeholders. **Dr BayyaYegnanarayana** INSA Senior Scientist, IIIT, Hyderabad, and advisor to MVSR Engg College, complimented MVSR College and IETE for jointly hosting the technical event for the students and encouraged both institutions conduct such events in the future.

- KSS-49: Webinar-81: On 9th Jan 2022, **Dr Manikyam Puram**, Director, Doctor Millets Agro Industries Pvt Ltd, Hyderabad, spoke on "Food Processing Machines Manufacturing and Technologies".
- KSS-50: Webinar-82: On 16th Jan 2022, **Dr P A** Harshavardhini, Prof Vignan Institute of Technology and Science Deshmuki, Hyderabad, delivered an address on "Research Paper Writing".
- KSS-51: Webinar-83: Shri T Shanker Prasad, Scientist-'SF' National Remote Sensing Centre, ISRO, Hyderabad spoke on "Indian Space Program" on 23rd Jan 2022.
- The Centre observed **73**rd **Republic Day** on 26th Jan 2022. The EC felicitated few EC members for their achievements on the occasion.
- KSS-52, Webinar-84: On 30th Jan 2022, **Dr S Aruna Mastani**, Asst Prof, Dept of ECE, JNTUA College of Engg, Anantapuramu, spoke on "Introduction to Intellectual Property Rights and Process of Patent Filing".
- KSS-53, Webinar-85: Shri Sitangshu Sekhar Biswas, Scientific Officer–F and Engineer in Charge (Design and R&D), Bharatiya Nabhikiya Vidyut Nigam Ltd, Dept of Atomic Energy, Kalpakkam, spoke on "Basic of Vector Control of Induction Motor and its simulation for Electric Vehicle Application" on 06th Feb 2022.
- **Prof A Gopal Sharma**, Prof in ECE & Director Information and Systems, Stanley College of Engineering & Technology for Women, was the Chief Guest for **IETE Students' Day** on 13th Feb 2022. About 60 memberrs participated.
- KSS-54, Webinar-86: Dr P Narahari Sastry, Prof, ECE department, Chaitanya Bharathi Institute of Technology in Hyderabad, gave a talk on "Digital Document Analysis Applied to Palm Leaf Character Recognition" on 20th Feb 2022.
- KSS-55, Webinar-87: Dr Rakesh Kumar Mishra, Dir, Tata Institute for Genetics and Society (TIGS), Bengaluru, Distinguished Emeritus Professor (AcSIR), and JC Bose Fellow, CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad, gave a presentation titled "Public Health Perspective on Covid-19 Pandemic" on 27th Feb 2022.
- KSS-56: Webinar 88: Prof Ameet Chavan, Prof, ECE, Dean (Innovation & Research), President Institute Innovation Council,

SNIST delivered a lecture on "Public Heath Perspective on Covid 19 Pandemic" on 13th Mar 2022.

• The National Science Day was celebrated on 20th Mar 2022. The event was graced by Dr Ellenki Sadasiva Reddy, Chairman, Ellenki College of Engg and Technology, Hyderabad, as the Chief Guest, while Guests of Honour included- Prof M Sambasiva Reddy, Director and Dr P John Paul, Principal, Ellenki College of Engg and Technology, Hyderabad. Dr Paul spoke on "Integrated Approach in Science and Technology for a Sustainable Future".

INDORE

• A **poster competition** was held at IETE Sub-Centre Indore on 12th Feb 2022 to mark **IETE Students' Day.** Students from different fields of study put together a poster and presented brief about the given topic. The subject was "**The Digital World.**" On 20th Feb 2022, the Centre gave e-certificates to the participants. Many students expressed their views about the event and how shared their feelings. Students from all engineering fields (CS, EX, CE, ME) as well as UG and PG students came to the event.

KANPUR

- The IETE Kanpur Centre, in collaboration with MedTech, IIT Kanpur, and the Dept of CSE at Harcourt Butler Technical University, Kanpur, celebrated IETE Students' Day on 06th Feb 2022. Prof Narendra Kohli, the Centre's Chairman, welcomed participants. Prof J Ramkumar, Hony Treasurer, read the President's Message for Students' Day and introduced the chief guest. The chief guest Shri Prasanjit Sharma, delivered a lecture titled "Ongoing Automobile Trends and Futuristic Automotive Engineering in the Coming Era." He stated that the Automotive engineering has grown in importance and popularity ever since the new trend of passenger transportation via motor vehicles became popular. Automotive engineering is a subfield of mechanical engineering that encompasses the design, manufacture, and development of automobiles, motorcycles, buses, trucks, and other on- and off-road vehicles. There was a discussion about the distinction between automobile and automotive engineering. Recent trends and the diverse range of available vehicles were discussed. Its ramifications for society and the environment were also considered. A brief overview of an automobile engineer's qualifications and skill set was provided, as well as future expectations. Honorary Secretary, Shri Prashant **Kumar**, proposed a vote of thanks.
- On 4th Mar 2022, the IETE Kanpur Centre, in collaboration with the IE (India) Kanpur Local Centre; MedTech, IIT Kanpur, and the IEEE-UP Section, commemorated **World Engineering Day**. **Prof Narendra Kohli,** Chairman of the Centre, welcomed guests and participants. According to the chief guest **Dr Santosh Kumar**, MD, Vam Consulting Engineers & Architects, Pvt Ltd, Kanpur, the

world's population is depleting natural resources rapidly. Rising human consumption, ever-increasing industrial activity, rising demand for fossil fuels in automobiles and industries, massive production of synthetic chemicals for use in pharma, paints, and polymer-based industries, rising waste on land, polluted water bodies and air, and other factors all pose a threat to the planet's survival. He expressed major concerns confronting humanity today that he divided into the categories of excessive emissions of greenhouse gases, depletion of natural resources, waste management in the industrial, commercial, home, and agricultural sectors, land, water, and air pollution, food and safe drinking water, poverty eradication, renewable energy sources, energysaving devices large-scale housing, raising per capita income and creating new job opportunities, smart city development and improved quality of life. Md Haseen Akhtar, Research Scholar, IIT Kanpur said the Covid-19 outbreak has affected people from all walks of life, especially the impoverished, aged, disabled, and pregnant. Poor people suffer disproportionately from the virus's health and economic effects, according to statistics. Inequality, exclusion, discrimination, and worldwide unemployment may intensify if the Covid-19 pandemic is not tackled by inclusion, collaboration, and empathy. To solve these problems, sustainable engineering solutions and a Sustainable Development Goalsaligned action plan are needed. Engineers must develop smarter ways to adapt and evolve. Er Rama Kant Yadav, MIE, Honorary Secretary, IE (I), Kanpur local centre, thanked the guests and participants.

KOCHI

- The IES College of Engineering, Kochi, organized an online workshop for beginners titled "Create your first Electronic **Product**" on 26th Aug 2021 The programme began with a welcome address by Ms Rachana MK, HOD-Associate Professor, ECE Dept, IESCE, followed by an introduction speech by Principal, Dr Brilly S Sangeetha, IESCE. Ms Rasha Jalaludeen, ISF IESCE's Executive Student Member, introduced the resource persons, who demonstrated how an idea can be transformed into a product. Ms Devika Narayanan, S4 ECE student proposed the vote of thanks to resource persons and expressed the gratitude towards dignitaries, ISF coordinator, faculty from IES College of Engineering and all the participants for their endless support and cooperation to make their event a successful one. All participants completed an online attendance form, and e-certificates were issued. The entire session was effective, and both students and faculty received technical training.
- IETE Kochi Centre organized a five day long seminar series "Way to Women Leadership" from 3rd Mar- 9th Mar 2022. The MGM College of Engineering and Technology (MGMCET), Ernakulum, one of the engineering colleges having an IETE Student Forum under IETE Kochi Centre joined the hands with

Kochi Centre for hosting the programme. The following are the specifics of the five-day event:

SI. No.	Program Title	Program objective	Date and Mode	Resource Person	Designation and Organization Name
1.	Cyber Awarene ss for Women	To create awareness about cyber risk and its impact among women.	3/3/2022 Offline 60 to 90 Minutes	Mr. Ajesh K P	Kerala Police Janamythri Trainer
2.	Legal awareness for women	To impart knowledge about various women related laws, to make them fit to face the real- life challenges.	4/3/2022 Online 60 to 90 Minutes	Adv. Lakshmi V R	Advocate High Court of Kerala.
3.	Health and Hygiene for women	To increase the awareness among adolescent girls on menstrual hygiene and to maintain their health.	5/3/2022 Online 60 to 90 Minutes	Dr. Revathy	Nangelil Ayurvedic Hospital
4.	Women Entrepre neurship	To inspire women to face challenges of the world and to become a women entrepreneur.	8/3/2022 Online 60 to 90 Minutes	Ashwathy Venugopal	Co-founder Avasarshala
5.	Nutrition for women	To promote awareness to maintain health for reducing the risk of chronic diseases by following a healthy diet.	9/3/2022 Online 60 to 90 Minutes	Dr Susan Itty	HOD, Clinical Nutritionist, Aster Medicity

KOLKATA

- About 70 students from various universities, institutes, and colleges participated in the IETE Kolkata Centre's online celebration of **IETE Students' Day**. "Internet of Agricultural **Things**" was the topic of the address delivered by **Dr Debashis De**, Prof Dept CSE at the Maulana Abul Kalam Azad University of Technology in West Bengal.
- The 7th edition of the Emerging Applications of Information Technology (EAIT) conference, was organised by the Computer Society of India, Kolkata Chapter (CSI-KC), which was technically and financially sponsored by the IET, IETE-India, IEEE Computer Society, UK, and the DST, Govt of West Bengal. This conference consisted of technical sessions, tutorials invited talks, discussions, and keynotes on the theme, healthcare. A total of 272 research articles were received from authors of diverse nations. Out of this the organizers accepted only 57 full articles for the final publications in the Springer LNNS proceedings. The detailed information of the conference is available in the conference website: http://www.csikolkata.org/eait2022/.

KOZHIKODE

• The IETE Kozhikode Sub-Centre, in collaboration with the IEEE Malabar Subsection, hosted a webinar on 'Internet of Things-An Emerging Technology for Future Applications' on 2nd Dec 2021. Dr Ashok Kumar K, Asst Prof, Dept of ECE, Matrusri Engineering College, Hyderabad, delivered the presentation. Dr Mredula Pradeep, Sub-Centre's Hony Secretary, earlier delivered the welcome address on the occasion. The gathering was also addressed by Dr Sabiq P V, Centre

Chairman. **Shri Hemand E P** proposed the vote of thanks. A total of 30 students attended the event. Other notables present were Prof Pratap G Nair, Shri Hemand E P and Shri Swaradh P.

• The Sub-Centre also hosted a webinar on **Fuzzy Logic-Coping with Partial Information** on 3rd Feb 2022; a Faculty Development Programme on **AI and ML** from 28th Feb to 5th Mar 2022; and another webinar on the **Role of Solar PV Systems in the Future Energy Scenario** on 24th Mar 2022.

MHOW

- On 1st Feb 2022, the IETE Sub-Centre at Mhow hosted an online lecture on "Implementation of Dockers and Containers for Virtualization on Computers in the Indian Army," in celebration of IETE Students' Day. The talk conducted by Lt Col Radhakrishnan Pothirajan, FCE, MCTE at Batra Hall, MCTE, Mhow, was warmly welcomed by ISF and MCTE faculty members
- The Sub-Centre hosted a talk presentation on "Software Development Challenges in the Indian Army" by Maj Gurpal Singh, FCT&S at Batra Hall, MCTE, Mhow, on 15th Mar 2022. By all accounts, it was well received by students and staff members at MCTE
- The Sub-Centre hosted a lecture titled "The Post Quantum Era" on National Science Day, 28th Feb 2022. Lt Col Dibyajyoti Goswami, FCE presented the lecture at Iyappa Hall, MCTE, Mhow. The lecture was received favourably.

NAGPUR

- IETE Nagpur Centre hosted a national level online Quiz competition on 'Artificial intelligence for Healthcare' on 4th Oct 2021. It was open to all engineering disciplines. There were around 159 ISF and non-ISF students from Maharashtra and other states who took participated. Dr Sanjay Badjate, Centre Chairman who was present, spoke about the event and its significance for engineering and polytechnic students. Dr Suresh Rangankar, Hon Secretary, provided a detailed presentation on the quiz competition's conduct, participants, and award winners. He announced the winners of the quiz competition. Trushant Thakre, of YCCE Nagpur took first place in the engineering category, followed by Vaibhav Vaidya of KITS Ramtek and Swaroop Wajagi of KITS Ramtek. The Hony Secretary presented vote of thanks.
- 68th IETE Foundation Day celebrated on 11th Dec 2021, on the theme, "Advancing Skill Development to the Next Level A Paradigm Shift to Amalgamate Skills & Academics with Seamless Transitions." Shri Angad Kulkarni, Director, Viprush Technologies Pvt Ltd, Nagpur, was the chief guest and keynote speaker. He talked about bridging the Industry-Academia gap with skill development. Dr S L Badjate, Chairman, presided over

the function and delivered welcome speech. Secretary **Dr Suresh Rangankar** read out the message from President IETE.

• IETE Students' Day was observed by arranging a two-hour online session of hands on training on Python and Robotics on the 18th Feb 2022. There were about 350 registered students. The different projects were exhibited by Shri Abhishek Angole, a Python and Robotics expert. Following the hands-on session, an evaluation test was conducted on the workshop's contents. The first place was snatched by Ms Laxmi Khawase, PCE College(Rs 1,000/-); second place was bagged by Anisha Shende, GP, Nagpur (Rs 375/-) and Yogesh Hirpurkar, SBJITM (Rs 375/-) and the third position was taken away by Rochan Awasthi, Centre Point School, with (Rs 250/-). Dr Suresh Rangankar, Hon Secretary, planned and executed the programme with the help of Dr Sanjay Badjate, Centre Chairman.

NASHIK

The following events were conducted by the Centre jointly-

- In collaboration with the Astro club at K K Wagh Institute of Engineering Education and Research (KKWIEER), Nashik, the IETE Nashik Sub-Centre commemorated 'World Space Week-2021' by hosting a webinar on "Astronomical Detectors." It was conducted by Shri Ashish Mhaske, Scientific and Technical Officer, IUCAA, on 6th Oct 2021.
- The Dept of ETE at **Guru Gobind Singh Polytechnic, Nashik**, in collaboration with the IETE Nashik Sub-Centre, commemorated **World Financial Planning Day** by hosting session on "**Financial Planning and Literacy**" featuring **Shri Vishwesh Suvarnakar**, Area Manager and **Shri Girish Lahoti**, Branch Manager, Nippon Mutual Fund on 6th Oct 2021. This session drew a total of 40 staff members.
- On 13th Oct 2021, the Entrepreneurship Development Cell, ET Dept of **KKWIEER**, Nashik, in collaboration with the IETE Nashik Sub-Centre, hosted a webinar titled "Success Story of the First 3D Game in Maratha History" by Shri Vaibhav Mahajan, Founder and CEO of Abraca Dabra Software Solutions Pvt Ltd.
- On 11th Nov 2021, the Career Development Cell of the Dept of ET at **KKWIEER**, Nashik, in collaboration with the IETE Nashik Sub-Centre, hosted a webinar titled "A Walkthrough on UPSC-IAS Examination" by Shri Harshad Dhananjay Bele, Dir, Connect India IAS Academy, Nashik.
- The Dept of ETE at KKWIEER, Nashik, in collaboration with IETE Nashik Sub-Centre hosted a Panel Discussion on Scope and Career Opportunities in Electronics and Telecommunication Engineering on 20th Nov 2021. Eminent panelists included: Prof (Dr) M S Sutaone, Dy Dir, Govt College of Engineering, Pune; Prof (Dr) Varsha Patil, Chairperson, Board of Studies in Computer Engineering SPPU, Pune; Shri

Shailesh Waghulade, Head (R&D), Siemens India Ltd, Ambad, Nashik; Shri Sriram Krishnan, Delivery Head-Middle-East, India, Africa and Russia, Thomson Reuters, Bengaluru; Shri Tajas Kshatriya, Associate Vice President Hybrid Electric Technology, KPIT Technologies Ltd, Pune; Ms Tracy Austina, Head, Global TTL-Tech Varsity TATA Technologies, Pune; Ms Kanishka Thakur, Career Counsellor, Strategic Marketer and personal branding Consultant Moderator. An online workshop on "8051 Interfacing and Programming" was organized by Shri Ashish Bhopale on 22nd Nov 2021.

- An online webinar on "Career Opportunities for E&TC Engineers in the Automation Industry" was held by the Training and placement cell of Dept of ETE of KKWIEER, Nashik, on 23rd Nov 2021.
- The ET Dept of **KKWIEER**, **Nashik** in collaboration with **IETE Nashik Sub-Centre** organized online workshop on "Computer Networks & Security" by Mr Yogesh Pawar on 29th Nov 2021.
- A webinar on "Challenges for Women in STEM" was organized by **Dr Julie Desai**, Lawyer, Mentor & Human Rights Activist on 8th Dec 2021.
- Another online workshop organized in collaboration was on "PIC18F4550 Architecture and Interfacing" by Shri Ashish Bhopale on 10th Dec 2021.
- On 11th -12th Dec 2021, the Dept of ETE at **Guru Gobind Singh Polytechnic, Nashik**, in collaboration with the Sub-Centre, organised a two-day workshop on "**Arduino and Simulator Software**" in association with the E&TC Dept under the supervision of HoD, **Prof Sushama Kolhe. Shri Santosh Kamble**, Dir, Saitronics, Navi Mumbai, served as the event's resource person.
- Training and Placement Cell of ET Dept of **KKWIEER** in collaboration with the Sub-Center organized webinar on "**Placement Guidance Session**" by Shri Kartik Rajurkar and Shri Shubham Raut, System Engineers, Emerson Export Engineering Center, Nashik, on 3rd Jan 2022.
- On the occasion of **IETE Students' Day**, the Sub-Centre, in collaboration with **KKWIEER**, **ETE Dept**, organized an introductory on line session on "**Electric Safety**" on 03^{rd} Feb 2022. **Er Anant Krishna Waghchoure**, Sales Manager at Megger India Pvt Ltd, was the session's speaker. **Prof Rupali Chothe** delivered the President's message for IETE Student's Day to the participants. **Er Anant** came up with some novel ways to engage participants on the importance of electrical safety by demonstrating various methods of protection. Additionally, personal protective equipment such as NFPA 70E was discussed. The participants were shown a live video of a 'crane entering an unsafe zone of over head' and a 'mechanical impact created by

a truck colliding with overhead linking and resulting in a blast'. This webinar was moderated by **Prof (Dr) D M Chandwadkar**, HOD, and **Prof Dr S A Patil**, Academic co-ordinator. **Prof R V Chothe** and **Prof Sagar Zalte** organised it.

- The ETE Department of the **KKWIEER**, Nashik, along with the IETE Nashik Sub-Centre, held a webinar on "Campus to Corporate: A Transformation Journey" by Mrs Meenakshi Kulkarni, founder of AdeptVision, on 25th Feb 2022.
- Joseph Mathew, Sci E, Control & Instrumentation Group, C-DAC, Vellayambalam, Trivandrum, Kerala, spoke about "An Overview of the Embedded Development Ecosystem" at a talk put on by the Institute and the Nashik Sub-Centre of IETE on 15th Mar 2022.
- On16th Mar 2022, **Shri Vipul Bramhankar**, Technical Architect, Atgeir Solutions Pvt Ltd, Pune, spoke at a webinar called "**The Era of Cloud Computing**," which was put on by the Students' Association of Electronics Engineering (SAEE) of the Department of ETE at the **KKWIEER** Nashik, in collaboration with the Sub-Centre.

NAVI MUMBAI

The Centre observed IETE Students' Day on 1st Feb 2022 via online mode. On behalf of the IETE Navi Mumbai Centre, ISF of SIES Graduate School of Technology, Nerul, hosted this event. Prof (Dr) A P Thakare, Vice-President and Chairman of the CCC Committee, and Co-Chairman of the TPPC Committee, IETE New Delhi, was the invited speaker on this occasion. The programme began with a welcome address by Hony Secretary Sanjay A Patil, followed by addresses from Centre Chairman Dr Mukesh Patil; Prof (Dr) Ajay P Thakare, Vice President IETE; Dr B U Rindhe, Immdt Past Chairman; Dr Mansi Subhedar, Immdt Past Secretary; Shri Gote, Immdt Past Treasurer and **Dr Dhananjay Dhak**, Hony Treasurer IETE Navi Mumbai Centre. The speaker then discussed the student-centered activities organized by various ISFs at their respective colleges in commemoration of IETE Students' Day. He informed that ISF at Vishwaniketan COE, Khalapur, organized a series of seminars / presentations by BE students on cutting-edge topics such as artificial intelligence, data science, and machine learning, as well as a technical guiz based on the seminar topic. On 17th Jan 2022, an online event was held to establish and inaugurate a new ISF at Vishwaniketan's Institute of Management Entrepreneurship and Engineering Technology, E&TC Department. The ISF at Ramrao Adik Institute of Technology in Nerul held an online quiz, while ISF at Saraswathi College of Engineering in Kharghar held a technical debate competition in commemoration of IETE Students' Day. On 29th Jan 2022, the ISF at SIES Graduate School of Technology, Nerul, held an event titled 'Ideation' to commemorate the day. The Centre's Chairman, Dr Mukesh Patil, expressed gratitude to the invited speaker for accepting the Center's invitation. Ms Dharani Arikrishnan, ISF Member from SIES Graduate School of Technology, Nerul, read out the IETE President's message. **Prof (Dr) Ajay P Thakare**, Vice-President IETE, was introduced and welcomed by another ISF student member from SIES Graduate School of Technology, Nerul, Ms Arfah Mubin Upade. **Prof Thakare** delivered a talk titled "Significant Role of Professional Societies in Engineering Education" to an audience of over 65 corporate members, ISF student members from various colleges, and EC members. He spoke about the value of professional societies in both personal and professional life. **Prof (Mrs) Leena Ladge**, ISF coordinator, SIES Graduate School of Technology, Nerul, proposed a vote of thanks, with a special mention for **Dr Dhananjay Dhakane**, Hony Treasurer, IETE Navi Mumbai Centre, who coordinated the meet.

PALAKKAD

• The Centre commemorated **IETE Students' Day** by hosting a live webinar on the topic "**Importance and Overview of IoT**" and **online quiz** for various college students in Palakkad on 6th Feb 2022. **Dr V Devi,** Chairperson, presided over the function. **Shri Beji K Mathew**, Hony Secretary welcomed the attendees. **Shri C K Haridas**, Founder Chairman and Former Member of the Governing Council, addressed the gathering. **Shri P Suresh**, Hony treasurer served as the resource person. 95 students took part in the quizzes. The winners received cash awards. **Dr V Devi** and **Shri C K Haridas** sponsored the cash awards jointly.

PILANI

- **Dr Rajlaxmi Chouhan**, Asst Prof, Dept of Electrical Engg, IIT Jodhpur, gave an invited talk on "Reimagining Engineering Education through blended and immersive learning" on the occasion of the IETE Foundation Day on the 19th Nov 2021, in front of 60 members.
- Career counselling was discussed by Shri Vivek Chaudhary, a Delhi Metro Rail Corporation Manager and former Deputy Engineer in BEL, in an invited talk on 23rd Nov 2021. There were 65 students in attendance.
- **Dr Achu Chandran**, a scientist at CSIR-NIIST, Thiruvananthapuram, gave an invited talk on "**Flexible and Printed Devices for Next Generation Electronics**" on 4th Dec 2021, attended by 55 members.
- Cyber Security and Ethical Hacking Training was provided by visiting faculty member, Shri Manal Swami (CISA, CCSP, CEH, LPT) over the course of 10 days from 13th -23rd Dec 2021.
- A webinar on "Awareness of Drug Addiction among Youth" was held on 16th Dec 2021. On this occasion, Shri Kaushal Kishore, Hon'ble Minister of State for Housing and

Urban Affairs, Government of India, delivered a motivational speech at BKBIET Pilani, online, which was attended by 150 members.

On the occasion of IETE Student's Day, the ISF at B K Birla Institute of Engineering and Technology, Pilani, organized an online quiz competition on 1st Feb 2022. The IETE President's message was read out to the members. The celebration provided students with an excellent opportunity to expand and improve their knowledge while having fun. Numerous students from BTTI and BKBIET, Pilani competed in the event and took home prizes. Around 28 students competed in the event, with the top three students winning the competition included- Shri Ankit Sharma (first prize), followed by Shri Manoj Kumar and Shri Devesh K Bairwa. Shri Akanksha Soni (PR Head, ISF) coordinated the competition, which was supported by the entire IETE team. Dr Krishna Meel, Faculty Coordinator, ISF-BKBIET, commended the student members and expressed gratitude to **Dr Ajav Agarwal**, Chairman, IETE Pilani Centre, and his team for consistently encouraging students to participate in such competitions and workshops.

PUNE

The ISF at the Dept of ECE at MIT School of Engineering, MIT ADT University, organized a variety of social and humanitarian activities in collaboration with the IETE Pune Centre and IEEE Educational Society Chapter Pune Section on 3rd Feb 2022, to contribute to the noble cause and to satisfy the social responsibilities. Health care kits were distributed at the Ganga Tara old age home in Wadki, Pune. Prof G S Mani, former Director DRDO, and Er Girish Khilari, Chair, IEEE Pune Section, as well as department faculty members, interacted with senior citizens at the centre and discussed their daily needs, among other things. To encourage and motivate children in school, educational kits were distributed to needy children in Vele district who attend Z P Primary Schools at Katwadi, Chirmodi, Mangdari, Wangni, and Magjaiwadi. Faculty members interacted with students and teachers at these schools. In collaboration with IIT Bombay, the ECE department laboratory hosted the grand inauguration of the e-Yantra lab. Dr Kavi Arya, Principal Investigator, IIT Bombay, and other IIT Bombay faculty members attended the event. The forum is open to both young aspiring engineers and faculty members of the department who wish to take robotics and automation-related projects to the next level. The event was followed by an exhibition of the project. The laboratory showcased the work of the department's faculty and students. Prof Dr Mangesh Karad, Executive President and Vice Chancellor, Deans, Directors, and Heads of various departments from the university paid a visit to the exhibition, expressing their appreciation for the department's zeal and efforts and motivating them to continue conducting such activities. To keep our students technically elevated, a **job fair** for final-year students was held on this occasion. Prof Dr Virendra Shete, Vice-Principal and HoD, ECE addressed the participants and expressed gratitude to the guests and speakers for their time and insightful sessions. Prof Dr Dhananjay Upasani concluded the session with a vote of thanks.

- IETE, Pune Centre and MIT School of Engineering, MIT ADT University, jointly organized World Radio Day and "Vintage Radio Exhibition" on 13th Feb2022. Dr Vilas Rabade welcomed. Dr Rajendra Mahamuni, Director, Muktangan Science Exploratory, Pune, spoke on 'Radio Yesterday, Today and Tomorrow'. Shri Gopal Auti, Retired Director AIR, explained importance of Radio. Shri Ranjit Pendse elucidated about Ham Radio. Other notables present were -Dr RD Kharadkar, Chairman Pune Centre, Shri Vilas Rabade, Shri KR Shende, Shri Gopal Dawara, Dr Rajendra Mahamuni, Ms Deepali Akolkar.
- A National Level Program was held on "Awareness on Intellectual Property Rights (IPR) on 8th Mar'22 to commemorate International Women's Day. The program was organized in the ET Dept and organized under the banner of ISF and Electronics & Telecommunication Students Association (ETSA). Chief Guest was Dr YS Angal, Vice-Chairman IETE Pune & HOD E&TC, BSIT, Wagholi, Pune. In his talk, the chief guest shared that the women in today's scenario are so much versatile, much qualified and take part in various activities. He also pointed out on security issues related to girls. Other speakers included: Dr T K Nagaraj, Principal; Prof Mrs Meenakshi A. He also mentioned girl-related security concerns. Other speakers included Dr T K Nagaraj, Principal; Prof Mrs Meenakshi A, and other students who, in addition to recounting their experiences, performed a wonderful poem dedicated to women who have reached some milestone in their lives.
- On 12-13 Mar'22, Pune Hams & participants installed G5RV HF all band Antenna and X 30R from Diamond for VHF & UHF across Temple peak and successfully did HF communication. Students from Moze Engg E&TC students & professors participated and learned the basics of Ham Radio and various types of Antennas. Shri Miling Bhagwat, the chief guset demonstrated various parameters of Yagi on Antenna analyser. In the evening Star Party was organized and participants witnessed Moon through Telescope.

RAJKOT

• IETE Rajkot Centre observed Student's Day online on 1st Feb 2022,. A webinar named "Blockchain and Software: Opening the New Page" was held on this occasion. The keynote speaker, IETE members, student members, organisational members, and all other attendees from various organizations were welcomed by Prof (Dr) Atul M Gonsai, Centre Chairman. He gave a thorough introduction to the keynote speaker, as well as a history of IETE and its current status. The keynote address was

given by **Dr Vaidas Giedrimas**, Assoc Professor, Head of ICT Research Group, Faculty of Technology, Panvezys University of Applied Sciences (PANKO), Lithuania. The expert answered the participants' queries during his speech, which was fascinating and instructive. The President's message was read out by **Dr Rahul Mehta**, the Centre's Hony Secretary. The Centre's Honorary Treasurer, **Dr Divyesh Keraliya**, gave a vote of thanks. The entire initiative was overseen by **Er Riddhi Pancholi**. Members and students shared their thoughts on the subject throughout the group discussion. More than 90 people attended the event, representing several IETE Centers and universities/colleges.

- The Centre in association with Dept of E&C, VVP Engineering College, organized an **industrial visit to WELLiT solutions Rajkot.** WELLiT Solutions, Rajkot, a leading company in the development and service of home and industrial automation.
- The Centre paid a **visit to Marwadi University**, one of the leading universities in the Saurashtra region on Dec 20, 2021, and met with university officials to discuss ISF opening opportunities and their organizational membership in IETE. Authorities agreed to initiate ISF and taking organizational membership in their college in the near future.
- On various online platforms, the office bearers of the Centre invited/participated/organized **expert talks** on a variety of topics.
- During the quarter under review, an **executive committee meeting** was held 16th Nov 2021.
- The IETE Rajkot centre organized expert talk on "Social Media Security Awareness and Self Protection for women". The event was arranged on 8th March 2022 to observe International Women's Day at IETE Rajkot Centre. The welcome address was delivered by Prof (Dr) Atul M Gonsai, Centre Chairman. Dr Ashwini D Joshi, EC Member IETE Rajkot delivered introduction speech about International Women's Day. Dr Mital Vora, Asstt Prof, T N Rao College Rajkot, was the chief guest and delivered expert talk on Social Media Security Awareness and Self Protection for Women. Dr Mital Vora explained the topic practically and with some tricks and security solutions useful for women and also explained measures to secure social media accounts with some privacy with live demonstration. The audience had informative discussion on the topics and had number of queries which made the function live and interesting.

SIVAKASI

• ISF of Mepco Schlenk Engineering College (MSEC), Sivakasi organised the **IETE Students' Day** Celebrations'22 via an online meet on 29th Jan 2022. **Dr R Shantha Selvakumari**, Senior Prof & Head / ECE, MSEC, Sivakasi, inaugurated the function and presided over. **Ms T Dhabasvini**, ISF Member, delivered the welcome address. **Ms S Nivedha**, Chairman – ISF, read the IETE Students' Day message. **Dr A Kamaraj**, ASP/ECE, and **Mrs V**

Gnanalakshmi, AP/ECE, were in charge of the celebration. On that day, numerous events were held, including Technical Paper Presentations, Circuitron, ProDigi, Quiz, and Best Manager. Over 65 ISF members took part in the events. Santhosh Raj R and Vishwaugh K were the students who won the Paper Presentation prizes; Madan Kumar A K and Gowtham Vignesh MM were the runners-up. Nivetha A and Alfina Graceline were the Circuitron (Analog Circuits) winners, while Soundarya T and Preethika D were the runners-up. Y Godbin James and P Litheesh Kumar won the ProDigi (Digital Circuits) competitions. The runnersup were Thana Vignesh B N and Pravin Chandar R. Jeopardy (Quiz) category announced the winners Rajeshwari C and Amrithaa G, and the runner-ups as Indralekha R and Joice Jerlin Raji. The Best Manager title was won by Kapilan R and Sowmya S was the runner up. Dr R Shantha Selvakumari, Dr A Kamaraj, and Mrs V Gnanalakshmi, AP/ECE MSEC, Sivakasi coordinated the valedictory function. Certificates were distributed offline to the event's winners and participants. Finally, Ms V Kavya Varshini, ISF Member, addressed the gathering with a vote of thanks.

- The IETE Sivakasi Centre hosted the fourth Techno blaze (2021-22), a lecture and discussion on 11th Oct 2021. Dr Syed Ameer Abbas, Chairman, presided over the event. Dr W Sylvia Lilly Jebarani, Hony Secy, IETE Sivakasi Centre, after welcome address introduced the day's speaker, Dr V Jeyalakshmi, Asst Prof, ECE Dept, Kamaraj College of Engineering and Technology, Virudhunagar, who delivered a lecture on 'Improving the Capacity of Wireless Networks Through Physical Layer Network Coding'. The presentation was comprehensive and exhaustive, covering the need to increase wireless network capacity, decode and forward relaying, and compute and forward relaying. Additionally, she discussed the techniques' performance in Rayleigh fading channels. She then discussed vector quantization and channel coding using nested lattices. She concluded her presentation with a discussion of network coding applications. The session concluded with a vote of thanks from Dr S Syed Ameer Abbas, Chairman of the Centre.
- The fifth Techno blaze (2021-22), was organized on 16th Dec 2021 with the keynote speaker Er M Sathish Kumar Global Program Director in Engineering and R&D Services team at HCL Technologies Ltd, Chennai. He delivered his talk on '5G Technology Digital Transformation Enabler' to an audience of approximately 35 IETE corporate members. He kicked off the discussion by outlining the key drivers of connectivity in the evolution of mobile technology from 1G to 4G. He discussed the various network parameters that affect performance, such as high-speed connections, faster response times, and maximum connection density. He discussed the 5G perspective in terms of speed for home entertainment and virtual, augmented, and extended reality, latency for autonomous driving, health care,

and emergency services, and device connectivity in smart cities, supply chains, and manufacturing. He concluded with different 5G use cases. **Dr R Ahila Priyadharshini**, Hony Treasurer, IETE Sivakasi Centre, concluded the session with a vote of thanks.

- On 10th Jan 2022 the sixth Techno blaze's keynote speaker Er HRagotham, Senior Principal Product Engineer at Semiconductor, Bangalore, took on the topic 'Safety Requirements for Image Sensors in Automotive Applications' for discussion. He began by educating the audience about the ISO26262-ASIL Automotive Standard (Automotive Safety Integrity Levels) and went on to explain that ASIL taking into account the severity of the failure, the likelihood of the failure occurring, and the controllability of the hazardous event caused by the failure. He discussed safety in terms of detecting a fault as soon as it occurs, the time required for the system to detect the fault, respond to the fault, and the effectiveness with which the response controls the hazard. He defined the time interval for fault handling as the sum of the time intervals for fault detection and fault reaction. He concluded by outlining the difficulties inherent in the safety mechanism's implementation. The speaker was presented with a memento by Dr G Indumathi, Immediate Past Chairperson. Dr R Ahila Priyadharshini, Honorary Treasurer, IETE Sivakasi Centre, concluded the session with a vote of thanks.
- The seventh Techno Blaze of the academic year 2021-2022 was held on 26th Feb 2022 by the expert invited speaker Er V Sivalingapandian, Sr Director of Engineering, MEDHOST, Nashville, Tennessee, United States, who spoke on 'Evolving Healthcare and Life Science'. The speaker began by giving an overview of the current healthcare system to the audience. He went into detail on Smart Hospitals, Robot-assisted procedures, and the latest technological advancements that are helpful in the present healthcare crisis. He defined smart healthcare systems as ones that use Genome sequencing to connect the many therapies a person has received across various hospitals with his genetic information. He wrapped off by talking about the difficulties of securely transmitting and storing electronic health records. Air Ambulance and drones giving crucial first aid were among the topics discussed. Dr Syed Ameer Abbas, Chairman, IETE Sivakasi Centre, gave the speaker a memento and gave a vote of thanks at the end of the session.

VADODARA

• 68th IETE Foundation Day was organized on the theme "Advancing Skill Development to the Next Level - A Paradigm Shift to Amalgamate Skills and Academics with Seamless Transitions" by the Centre on 27th Nov 2021. Shri PV Khubalkar organized the event. Shri O P Nautiyal, a senior IETE member, was felicitated during the function. The function drew a total of fifteen members. The Centre's Executive Committee Meeting was held on the same day.

• On 12th March 2022, the IETE Vadodara Centre celebrated International Women's Day. The guest speaker was Smt Sandhya Sharma, a senior academician and research scholar from ADIT, Vallabh Vidyanagar. After the welcome speech, the speaker was introduced by the Hony Secretary, Dr Sorum Kotia, and the Chairperson, Dr Mamta Padole, gave flowers to the guest. "Different Initiatives of DST for Women in Science and Technology" was chosen as the topic. Smt Sandhya Sharma in her address talked about the different programmes that DST has to help more women work in S&T. A lot of detail was given about programmes like Women in Science and Engineering (WISE)-KIRAN and schemes like GATI and CURIE. Initiatives like Women Technology Parks and funding programmes for women scientists like Women Scientist Scheme-A, B, and C were also shown in detail. Smt Sandhya Sharma's own research work of application of Microwave biosensors in detection of breast cancer caught interest of the entire audience.. Smt. Sharma quickly answered the many questions that were asked. Overall, it was a very good and helpful meeting. At the end, members of the EC committee gave the speaker a gift, and Dr Sorum Kotia gave a vote of thanks.

VIJAYAWADA

An ISF was inaugurated in the Dept of ECE at the Universal College of Engineering and Technology (UCET), Dokiparru (Post), Medikonduru (Mandal), Guntur Dist, AP on 18th Nov 2021 by Sri Pammi Kalee Prasad, Hony Secy IETE Vijayawada Centre. The ISF enrolled a total of 165 students from BTech in ECE and EEE. Sri Kalee Prasad, who is also a senior engineer with Doordarshan Vijayawada, discussed the benefits of the IETE and the upcoming Student Forum activities. Rev Fr Malepati Marredy, Secretary & Correspondent; Fr V Vijaya Bhaskara Reddy, Administrator & Treasurer; Dr Ch Kesava Reddy, Principal; Shri K Vijaya Kumar, HoD of ECE; and Dr M Koti Reddy, ISF Coordinator of the Universal College of Engineering and Technology, also attended the inauguration session. It was organized and attended by EC Members, students and faculty from the college.

Following the inaugural session, the ISF hosted a seminar conducted by **Shri Pammi Kalee Prasad** on **'Artificial Intelligence and Cloud-based TV Broadcasting**.' The speaker discussed the various types of modulation techniques, the satellites used for television broadcasting, and the use of artificial intelligence and cloud technology in Doordarshan and television broadcasting. Around 120 ISF students, EC Member students from the departments of ECE and EEE, and faculty attended the seminar. **Dr Ch Kesava Reddy**, Principal, **Shri K Vijaya Kumar**, HoD of ECE, and **Dr M Koti Reddy**, ISF Coordinator of the Universal College of Engineering and Technology, graced the seminar.

YAVATMAL

- IETE Yavatmal Sub-Centre and ISF Jawaharlal Darda Institute of Engineering and Technology, Yavatmal, jointly organized a "Tree Plantation Programme" on 9th Oct 2021, Corp members of IETE planted trees on the JDIET campus. The plantation program drew more than 20 committee, corporate and ISF members.
- The Sub-centre, in collaboration with ISF Jawaharlal Darda Institute of Engineering and Technology, Yavatmal, hosted an online expert lecture on "Energy Conservation and Electrical Safety Measures" by Shri Jitendrakumar H Rathour, Additional Executive Engineer, MSEDCL, TRD, Nashik, on 23rd

Nov 2021. The event drew a crowd of more than 70 students.

- The Sub-Centre and IETE Amravati Centre jointly celebrated **IETE Foundation Day** on 2nd Dec 2021. On this occasion, Chief Guest **Shri G R Kulkarni**, Director, Samsung R&D, Bangalore, delivered a speech on **Emerging Technology for Effective Pandemic Management.** 64 students attended the event.
- On 22nd Dec 2021, the ISF of Jawaharlal Darda Institute of Engineering and Technology, Yavatmal, in collaboration with Sub-Centre, organized a **technical quiz** called "**Techno-Quest.**" Over 350 members took part in the quiz.

IETE Students' Forum (ISF) Activities

- A three-day workshop on "Embedded Systems An Application Driven Approach" from Aug 25-27, 2021 was held at ISF D Y Patil College of Engg (DYPCE), Pune, by AICTE, ST Microelectronics and ARM, Pune. Mrs Usha Jadhav, Asst Prof and ISF coordinator was the winner on Ideathon completion. A national level Hackathon was conducted at ISF Oct 03, 2021 in which Ms Rashi Rawale secured 54th Rank. Also she won a silver medal for athletics in discus throw in SPPU Pune District Zonal Sports Committee inter-college sports on Dec 10, 2021. DYPCE, Pune organized "Awareness of e-waste" event from Sept 27, 2021 to Oct 02, 2021 with the objective of spreading awareness and protecting environment. Dr P Malathi and Dr S M Shiyekar were the dignitaries on this occasion. DYPCE, Pune organized "Salam-e-Gandhi" National Level Quiz on Oct 02, 2021 with an objective to inculcate the principles of truth, wisdom, love for the country & selflessness among the students.
- ISF at Dept of ECE, Anil Neerukonda Institute of Technology and Sciences(ANITS), Visakhapatnam, in association with ACES (ANITS Communication Engineers Society) organized an online guest lecture on "Electrical Modeling & Simulation" on different kind of Solar Cell like Organic, Perovskite, Tandem, Heterojunction Solar Cell & LED using SETFOS Software on Aug 26, 2021. The speaker of the event was Shri Anil Kumar Sharma, Director of Business Development, Impulse Technology, Gurugram, Haryana. The ECE Dept, ANITS ACES organized a one-day Faculty development program on "IOT and its Implementation in Curriculum", in association with Appleton Innovations at ANITS on Oct 22, 2021. Appleton Innovations founder, Shri Bapuji Kanaparthi discussed about implementation of various IOT projects using Raspberry Pi Processor Module. The ISF in association with ACES organized a hands-on workshop on "IOT based Smart Home Atomization", conducted by I&T Labs at ANITS on Nov 15-16, 2021. I&T Labs CEO, Shri Pramodh Kumar Kamichetty instructed students on IOT works such as usage of cloud to control home appliances. Shri V Harish Kumar, Senior Physical Design Engineer, NVIDIA Graphics Pvt Ltd delivered a guest lecture on the topic "Trends in VLSI Industry and Its Career Guidance" on Jan 31, 2022, organized by Dept of ECE in association with ACES & ISF. Vote of thanks was given by Dr A Lakshmi Narayana, Assistant Professor, Dept ECE. A Project Expo titled, "Technovations-2022" was organized on the occasion of National Science Day. The guest of honour was Prof G Raja Rao, HoD, EEE Dept. A total of 30 teams comprising of 156 students participated. The project titled, "Smart City" secured the first prize and the project titled "Digital Voting Machine" was chosen for second prize.
- The ECE Dept of ISF at KCG College of Technology (KCGCT), Chennai, organized a "Palm Seed Sowing" event at the lake side of college road on Oct 8, 2021. Student Counsellor, Ms D Revathy organized a "Mental Wellness Awareness" Campaign at Government High School, Karapakkam on Oct 12, 2021 with 60 participants. On

- Nov 3, 2021, ISF at ECE Dept organized a "Sapota Tree Sapling Distribution" to KCG staff by Dr Jose Anand, ISF Faculty Coordinator. Next, the ISF organized a "Clean Campus Drive" on Mar 22, 2022. On Mar 27, 2022, the ISF organized "A day with Special Children", visit to Prema Vasam, a home for the mentally & physically challenged and less fortunate children at Gerugambakkam, Chennai.
- On Oct 12, 2021, ISF at Sri Sairam Institute of Technology (SSIT), Chennai, ECE Dept organized a workshop on "Antenna Design" by Shri R Kabilan, Application Engr, Elmack Engineering Services Pvt Ltd. ISF at ECE Dept organized a webinar on Ideathon 21 on the topic: "AI & Embedded System" by Ms Lavanya Kumaravel, Embedded Engr, Uniq Technologies on Nov 8, 2021. From Mar 7-15, 2022 ISF at Dept of ECE, organized a one-week workshop on "Mathworks Wireless Series : Transforming the Next Generation of Wireless Communication". On Mar 16, 2022 the ISF organized a "Seminar on Strategies for Facing Questions in Technical Recruitment Exams" with Alumni speaker Shri S Venkatraman, Asst Prof, Dept of ECE, Sri Sairam Institute of Technology, Chennai. ISF on Mar 22, 2022 organized a lecture on "Awareness of Industrial Training for Technical Skill Development" by Shri Ramaprasad Maharana & Shri S Venkatraman. "Value added Training Program on Smart Phone Servicing and Troubleshooting" was organized on Mar 23-24, 2022.
- ISF B K Birla Institute of Engineering and Technology (BKBIET), Pilani, held an online gaming competition, BGMI, on Oct 19, 2021. An online quiz competition on IETE Student's Day, Feb 01, 2022, was arranged by the ISF. The IETE President's message was read out. Winners of the competition included: Shri Ankit Sharma (1st prize), Shri Manoj Kumar (2nd prize) and Shri Devesh K Bairwa (3rd Prize). The PR Head, ISF Shri Akanksha Soni coordinated the competition. Dr Krishna Meel, Faculty Coordinator, ISF-BKBIET, expressed gratitude to Dr Ajay Agarwal, Chairman, IETE Pilani Centre.
- Dept of ECE, Sri Venkateswara College of Engineering (SVCE), Sriperumbudur, organized workshop on "PCB Design" by Ms R Premalatha (Hardware Lead, Zettaone Technologies) on Oct 23, 2021. 50 members were present for Quiz and Treasure Hunt "TECH Mystery" on Oct 24, 2021 which was organized by ISF Coordinator, Ms T J Jeyaprabha and Dr S Muthukumar, Prof & HOD EC, SVCE. On the same day, a "Tug of Word's War" Hunt by Ms T J Jeyaprabha, ISF Coordinator and Dr S Muthukumar, Prof & HOD EC, SVCE was conducted. Shri Gaurav Sundaraman, Senior Analyst, ESPN was chief guest at ECE Dept's "FODSE" programme on Oct 31, 2021. Ms T J Jeyaprabha, Hony Treasurer, IETE Chennai Centre was Chief Guest at workshop on "Linear Data Structures with STL" on Nov 6-7, 2021. ISF at ECE Dept, organized a "How to study masters abroad with minimal investments and scholarships" with Shri Raghavan, Overseas Admissions Expert and Shri George William S, of Jamboree Education

- on Dec 29, 2021. ISF also planned a one-week International Short Term Training Program from Feb 21-26, 2022 on "Emerging Trends and Research Challenges in Deep Learning Applications". From Mar 8-12, 2022, ISF organized a 5 Day National Level FDP on "Recent Trends in Network Security". On Mar 25, 2022, ISF organized a "Make-a-thon 3.0" in association with the Electronics and Communication Engineers Association (ECEA) & Robotics and Artificial Intelligence Club (RAIC), challenging students to think out-of-the-box and offered innovative ideas to build smart applications.
- A webinar on "Antenna Design for Space & Drone Applications" was held on Oct 28, 2021, at RMK Engineering College (RMKEC), Gummidipoondi, Kavaraipettai, Chennai, in association with IETE Chennai Centre. The webinar was organized by Shri T Jayanandan, Founder & CEO, Teslaminds, Chennai. Shri Rajesh S P Lead, Tata Communication Ltd, Chennai spoke at ISF at ECE Dept on Nov 8, 2021 at a webinar on "Gateway to Python-Happy Pythoning". Webinar on Nov 9, 2021 was on "Career Options after Engineering" by Mr Jehan Charle, Area Sales Mgr, Kallog's Tolaram Nigeria Ltd, River's Stage, Nilgeria by ISF at ECE Dept. Then the ECE Dept of ISF organized a webinar on "Placement Tips" on Dec 7, 2021.
- ISF at Jeppiaar Institute of Technology (JIT), Sriperumbudur, Chennai, ECE Dept arranged for a webinar on "How to Enhance Public Speaking Skill" by Dr Neeta Mhatre, Founder Reach Out, Master NLP Practitioner, Certified Trainer and Eduprenur on Oct 30, 2021. From Nov 4-7, 2021, the ISF at the ECE Dept organized a technical event "Quizophile". An event on "Current Scenery" was organized by ISF at ECE Dept during Nov 8 to Nov 14, 2021. Thereafter a technical event was held on the topic "Crack it On" organized by Ms Poovizhi and Ms Raghavi from Nov 10-14, 2021. It was followed by event, "Jumbled Words" on Nov 11, 2021. ISF at ECE Dept organized "SMARTICUS" from Nov 11-15, 2021 on the occasion of National Education Day. From 25 to 30 Nov, 2021, ISF organized "Formula Quiz". On Dec 22, 2021, the ECE Dept organized a national level symposium event as "Technoholix". ISF organized a "Quiz" from Feb 22-24, 2022. ISF on Mar 10, 2022 organized a technical event as "Technical Talk". On Mar 12, 2022 ISF organized a Dream Tech Webinar Series "Webinar on Young Entrepreneur Talk" by Shri Gautham Palaniswamy, Entrepreneur, Periyar University Business Incubation Confederation. On Mar 14, 2022, the ISF organized an Online non-technical fun filled event "Translate Me". On Mar 19, 2022, the ISF organized a "Technocrat'22 (Virtual Paper Presentation) by Shri Gowrison, Asst Prof at Govt College of Engineering, Erode. On Mar 22, 2022 ISF organized a Technical QUIZ by Shri Gowrison. On Mar 26, 2022 ISF organized as an IETE Day celebration Panel Discussion on "How To be Successful as an IETE Member" with the chief guest Dr Tata Sudhakar, Scientist at National Institute of Ocean Technology, Chennai and Ms T Jeyaprabha, Hony Treasurer of IETE Chennai Centre, Assoc Prof at Sri Venkateshwara College of Engineering and Shri Ragul Kannan R, Software Engineer at ATOS India Private Ltd, Chennai.
- DDU-IETE Students' Forum, Ahmedabad, organized a webinar on "Big Data Analysis with Spark & Scala" on Oct 30, 2021, where Shri Parth Champaneria, Bigdata Developer Datametica Solutions, Pune, addressed the participants. On Dec 18, 2021, the ISF organized a webinar on "Project Deployment using Jenkins and Docker" with Shri Devanshu Brahmbhatt, Associate Software Engineer Rakuten as a resource person.
- The '68th IETE Foundation Day' was celebrated on Nov 2, 2021 at College Campus of ISF at ECE Dept of Sri Sairam Engineering College (SSEC), West Tambaram, Chennai.
- ISF at Dept of ECE RAMCO Institute of Technology (RIT), Rajapalayam, organized an online activity "Train your Brain" during Nov 18 - Dec 4, 2021. Dr S Periyanayagi Prof & Head/ECE convener, Ms S A Radhika AP/ECE, the faculty coordinator guided the proceedings and P Madhav & R Sai Siddharth, served as student coordinators. The

- ISF organised a webinar on "Role of Embedded Systems in E-Vehicle" on **Dec 08, 2021**. Dr G Sivasankar Assistant Prof, ECE Deptt, Mepco Schlenk Engineering College, Sivakasi was resource person. Dr S Periyanayagi, Prof & Head/ECE convener, Shri B Kannan, AP(SG)/ECE, and Shri L Balaji Vignesh, AP/ECE coordinated the event. Ms N Harshethaa and Ms K Vishnupriya were student coordinators. The Dept of ECE in association with ISF organized a one day event on "Augmentative Presentation" on **Feb 26, 2022** by Dr RajaLakshmi, AP/ECE and Mrs G Subhashini, AP/ECE.
- ISF at ECE Dept of Crescent Institute of Science & Technology (CIST), Chennai, organized a webinar on Nov 20, 2021 on the theme "Introduction to AI" by Dr C Tharini, HOD/ECE. On Nov 22 2021, the ISF at ECE Dept organized a guest lecture on "Opportunities for the Graduates in VLSI Industry" by Shri Kumaran Radhakrishan, R&D Engineer Hitachi Energy India Ltd. ISF also organised a two-day workshop on "Hands-on training in HDL Language constructs" by Shri K Radhakrishan, FPGA Engineer on Nov 22-23, 2021.
- ISF at ECE Dept, SRM Valliammai Engineering College (SRMVEC), Chennai, organized online Faculty Development Program from Nov 22-26, 2021 on "Influence of Electro Magnetics on IoT & Communication. Shri K Nellai Kumar conducted a Webinar on "Ancient Communication Techniques to Undersea Fiber Optic Communication Around the Globe" on Dec 18, 2021 at SRM Valliammai Engg College in Chennai. On Dec 30, 2021, the ISF will hold a talk titled "Holistic Development and Human Values." On Jan 5, 2022, ISF organized an industrial tour to 'Geek Wave Solutions' in Chennai. ISF held an industrial visit to 'Entuple Technologies' in Bengaluru on Jan 8, 2022. Another industrial visit to 'RLT Instrumentation (P) Ltd, Chennai' was planned for Jan 20, 2022. Ms R M Senthil Priya, Asst Prof ECE, RMD Engineering College, Chennai, spoke at an ISF conference on "RF for Future Wireless Communication" on Mar 16, 2022. Dr E Priya, Professor, Sri Sairam Engineering College, spoke at an ISF seminar on "Medical Image Analysis" on Mar 23, 2022.
- On Nov 26, 2021, ISF hosted a webinar on "Role of IPR in Innovation and Technology" at Modern Education Society's College of Engineering (MESCE), Pune. Shri Swapnil M Sanap, Associate Partner (Associate Director) & Head of Pune Office (i.e. Khurana & Khurana), Advocate and IP Attorneys, was the Chief Guest.
- ISF at Easwari Engineering College (EEC), Chennai, ECE Dept, organized a "Q-Fiesta-Basic Engineering "Series of online Quiz on Nov 27, 2021.
- ISF at ECE Dept, Aarupadai Veedu Institute of Technology (AVIT)
 Paiyanoor, Chennai, organized a webinar on "Machine Leaning and
 its Application" on Nov 30, 2021, with Dr L Agilandeeswari, Associate
 Professor and Head of School of Information.
- ISF at Dept of ECE, Nandha Engineering College(NEC), Erode, organized a seminar on **Dec 2, 2021**. Dr S Kavitha, Prof & Dean/ECE, NEC discussed opportunities for students in higher education. The chief guest Shri Thiyagarajan Thirunavukkarasu, Dir, Time Institute, Erode, delivered a seminar on "Higher Education Opportunities". Ms P Kokila and Mr P Premkumar, Assistant Professors / ECE organized the seminar. The ISF in association with IETE Erode Centre organized an online workshop on Dec 4, 2021. Shri Mukul Shandilya, Jr Research Engineer, TechieNest Pvt Ltd, Jaipur, the resource person conducted workshop on "Build IoT Dashboard using Python Django". Another online workshop was held on Dec 8, 2021. Ms Rekhasadhasivam, Junior Engineer, Signalling and Telecommunication Department, Southern Railway, Coimbatore, delivered a technical talk on "Recent Trends in Embedded System for Industrial Applications". Dr P Sukumar and Dr R Murugasami, Assoc Profs / ECE organized the seminar. On Dec 11, 2021 Ms D Chandrika, Technology Analyst, Infosys Limited, Chennai, spoke on "Career Path to IT Field" followed by another online talk on Dec 12, 2021 by Shri V Prasanth, Programmer Analyst, Cognizant



- Technology Solutions, Bengaluru, on "Opportunities and Challenges in Software Industry". An online workshop was held on **Dec 12, 2021 by** Mrs Prasanna Moses, Transformation Coach, Founder, Ennovations, Bengaluru, on "Presentation Skills". Ms TG Dhaarani and Ms V Logeswari Associate Professor / ECE organized the workshop.
- The ISF of ECE Dept at Royal College of Engineering and Technology (RCET), Akkikavu, Thrissur, in association with women's club, ICC and NDLI Questa Club (RCET) conducted a quiz competition on Women Empowerment 'Shakthi' on Dec 04, 2021 in connection with International Day for elimination of violence against women. Ms Surya S Nair, ISF Students' Coordinator delivered the welcome address. The quiz master was Shri Sudev K (Librarian-RCET). The program co-ordinators were Ms Radhika ER (IETE-ISF and Women's Club coordinator), Ms Amrita M Chemmannoor (HoD EEE, ICC Convenor). Winners of the competition were- Ms Nirosha R, Mohammed Nihas and Bovas N Stephen.
- ISF of Kamaraj College of Engineering and Technology (KCET), Virudhunagar, conducted a technical quiz talk competition on Dec 8, 2021. The event was judged by Dr T Pandi Selvi and Dr N M Mary Sindhuja, both Assistant Professors in ECE Department. First three teams were awarded with cash prizes. The ISF also conducted a guest lecture on Mar 29, 2022 on "Recent Trends in Drone Technology" for III year students. Dr K K Nithyanantham, Assoc Prof, Rajalakshmi Engg College, was the resource person.
- ISF at SKN Sinhgad Institute of Technology and Science (SKNSITS), Lonavala, Pune, hosted a webinar on "Career Opportunities after BE" and "General Aptitude-Tips & Tricks" on Dec 9, 2021. Principal Guests included- S Manimohan Trinath and Hemanth J Principal Dr M S Rohokale presented opening statement. Prof Manimohan Trinaths provided helpful GATE and competitive exam advice. Prof Hemnat explained nuances. Vote of thanks was given by Prof R M Thadi The ISF has also scheduled a webinar on "Survival Skills" for Mar 17, 2022. The Chief Guest, Dr Manasi V Shewalkar, informed the students on the intricacies of IT industry-required skill sets and developing technologies.
- ISF at Gandhi Engineering College (GEC), Bhubaneswar, in association with IETE Bhubaneswar Centre conducted a webinar on "Application of Machine Learning in Remote Sensing" on Dec 11, 2021.
 ISF also organized a technical event on Dec 21- 22, 2021, that was inaugurated by Prof A Baradeswaran, Principal, GEC, Bhubaneshwar. This event included an essay writing competition on "Challenges and Opportunities for Engineers during COVID-19" and a programming test on Python Language.
- ISF at Anand International College of Engg, Jaipur, hosted a seminar on "Awareness about the Technical Societies (IEEE, IETE, IE (I), etc.) on Dec 11, 2021, in collaboration with IETE Jaipur and ISF Anand ICE, Jaipur. It also held a five-day FDP on "New Techniques in the Field of Engineering" from Feb 8-12, 2022, in collaboration with ISF, Anand-ICE, Jaipur. Dr Sandeep Singh Sengar, Federal TVET Institute, Addis Ababa, Ethiopia, and Dr Dinesh Yadav, Manipal University, Jaipur, were the presenters for the sessions held on Feb 8, 2022. The following day, Dr Savog Rawat, Manipal University, Jaipur, and Dr Sanjeev Yadav, Govt Women Engg College, Ajmer, were the speakers for two sessions. Prof Praveen K Jain, SKIT, Jaipur, and Prof Surendra K Agarwal, Govt Women's Engineering College, Ajmer, were the next day's speakers. Dr Sanjay Sharma, University Institute of Technology, Himachal Pradesh University, and Dr Ajay Khunteta, Rajasthan Technical University, Kota, graced the fourth day as session speakers. Dr (Mrs) Jayashri Vajpai, MBM Engg College, Jodhpur, and Dr Anil Saroliya, Amity University Tashkent, Uzbekistan, gave presentations on the final day. Shri Gunjan Saxena, DDG, DOT, Rajasthan, and Hon'ble Chairman, IE(India), Rajasthan Science Center, Jaipur, was the Chief Guest at the virtual opening ceremony on Feb 8, 2022. Prof (Dr) Mithilesh Kumar, Rajasthan Technical University, Kota, and Former Principal, Jhalawad

- Govt Engineering College, Jhalawad (Rajasthan), was the Chief Guest at the valedictory ceremony on Feb 12, 2022.
- On Dec 17, 2021, ISF at Dept of ECE, Narayana Engineering College (NEC), Nellore, conducted "Webinar on Skill Enhancement." It was structured as a Coding Contest and done in two rounds. Dr R Gayathri, as convener, and Shri Bismil Jaffrey, as coordinator, organized the webinar. L Yadhardha, K Mahesh Babu, P Yaswanth, M L N Kartikeya, T Harshavardhan, Y Prashanth, S K Sulaiman, V Narayana, D Bhumekka, D V Hari Manasa, G Harshitha, and I V N S Granasree were all awarded prizes. Coordinator Shri Bismil Jaffrey offered the vote of thanks at the end. On Dec 24, 2021, the ISF hosted an Elocution Competition as part of intercollegiate competition. Dr K Murali, Head of ECE, and Dr R Gayathri, convener of the ISF, congratulated the awardees. The ISF conducted a one-day technical symposium of national level ETRONS 2K21 in conjunction on the same day. Shri S Hiriyanna, Group Head and Senior Scientist (Retired), Geosat Programme, Department of Space, ISRO, Bengaluru, was the Chief Guest and gave a keynote talk at the symposium on the most recent developments in information and communication technologies. He described the application of technology, PCB design, technological advancements in the medical field, ISRO work culture, etc. Dr G Srinivasuslu, Principal of NECN, made the felicitation address. Dr AVS Prasad, Director of Narayana Engineering Colleges and Narayana Pharmacy College, gave the keynote presentation. The Dean/ MBA of NECN, Dr Dhananjaya, presented the felicitation address and winners were felicitated.
- On Dec 18, 2021, Shri C Satyanandan, Chairman, IETE Bengaluru Centre inaugurated ISF chapter at Ramaiah Institute of Technology. Chief Guest, Dr D G Rao, Scientist 'F' and Project Director, LRDE, Bangalore delivered a technical talk on 'Advancement of Radar Technology'. Dr B K Sujatha, Prof & HoD ETE, and Dr S G Shivaprasad Yadav, Assoc Prof, Dept ETE, RIT, attended.
- ISF was established on Dec 22, 2021, at AISSMS College of Engineering in Pune. Dr M H Kori DF, Vice President and TPPC Chairman, was the Chief Guest at a webinar on "Research and Technologies Driving 5G Advanced and Leading to 6G." Dr D S Bormane, Principal of AISSMSCOE Pune and a member of the IETE Governing Council; Dr R D Kharadkar, Chairman of the IETE Pune Centre; Dr D G Bhalke, HOD of the E&TC Department; and Shri S B Dhekale, ISF Coordinator were among those who attended. ISF was introduced by Ms Ashwini Ballal. Other notables included Dr V V Shete, Secretary, IETE Pune Centre, Dr D G Bhalke, HoD E&TC, Shri G Ramesh, and Shri Tara Singh. The program drew about 150 students, faculty members, and professionals. Ms Ashwini Ballal outlined the student forum's objectives, and announced the AISSMS COE IETE Students forum's core committee. HOD E&TC, Dr D G Bhalke, complimented all members of the committee and students. Dr D S Bormane, Principal, AISSMSCOE Pune, congratulated the organizers and wished the ISF well in its future undertakings. The vote of thanks was given by Shri S B Dhekale
- An online guest lecture on 'VoIP Communication Technologies Unified Systems", was conducted at EGS Pillay Engineering College, Nagapattinam, of ECE Dept, sponsored by ISF. The programme was on Dec 26, 2021 through online mode. Dr D Devarajan coordinated and delivered the welcome address. Dr B Padmanaban, HoD delivered the keynote address. Dr S Ramabalan, Principal delivered the inaugural address. Chief Guest Shri D Sathish Kumar, ME, IT Administrator, Technology Skills Telecom & Infotech Dammam, Kingdom of Saudi Arabia, spoke on 'Successful Interview skills needed for Jobs in electronics and communication sectors, Job Market expectations'. Dr D Devarajan AP/ECE, Coordinator summed up the proceedings and co-coordinator Ms S Aadhirai AP/ECE proposed vote of thanks.
- ISF at Dept of ECE, B S Abdur Rahman Crescent Institute of Science and Technology, (BSARCIST), Chennai, organized a webinar on Jan 04, 2022 on "Opportunities in Core Industry" by Shri Anish Kumar,

- Aadhaya Skills Research and Development and Shri Sathish Kumar, Harman Connected Services Corp India Pvt Ltd. On Mar 14, 2022 ISF organized a guest lecture on the topic "Microwave Antenna and Radar: Basics and Applications" by Mr Sulthan Syed Ibrahim HS, Air Traffic Controller, Airports Authority of India, Chennai. On Mar 17, 2022, the ISF organized a guest lecture on "Industrial view on Electronics and Communication Technologies Practical examples" by Dr Vignesh Raja Ramachandran, (Alumni 2008 2012), Scientist, Philips Embedded Research Division, Netherland.
- ISF at Dept of ECE, R M K Engg College, Gummidipoondi, Kavaraipettai, Chennai, organized webinar on Jan 06, 2022 on "Innovative IoT and Embedded System Students Projects and Extensions". On Mar 2, 2022 ISF organized a "Virtual Industrial Visit", online webinar based tour of the facilities and interaction with industry representatives of "Crion Technologies". On Mar 04, 2022 ISF organized a Virtual Industrial Visit, an online webinar based tour of the facilities and interaction with industry representatives of "Enthu Technology Solutions India Pvt Ltd". On Mar 11, 2022 ISF organized a Guest Lecture on "Opportunities for Graduates in VLSI Industry" by Shri R Kumaran, Senior RTL Design Engineer, Smortsoc Solutions Pvt Ltd.
- ISF at JCEI's Jaihind College of Engineering, Kuran, Junnar, Pune, organised a workshop on AI & ML with Python Programming on Jan 10-19, 2022 with resource persons Shri Tushar B Kute and Mrs Rasmi Thorave; a webinar on Know Everything About GATE and Career Opportunities Special by Shri D Negi on Jan 15, 2022; an event on poster and quiz competition conducted by Mrs Arote PJ on Mar 08, 2022, followed by a webinar on Cloud Infrastructure Services by the resource person Shri Akshay Neharkar on Mar 14, 2022.
- On Jan 19-22, 2022, ISF at Charotar University of Science and Technology (CHARUSAT), Faculty of Technology (FTE), Vadodara, in collaboration with IETE Vadodara Centre, organised a four-day online workshop on "Java Programming." Dr Trushit Upadhyaya and Dr Hardik Modi coordinated. ISF at CHARUSAT, FTE, in collaboration with the Centre, hosted seminar on "Patenting and Its Drafting Process" on Feb 3, 2022. Dr Trushit Upadhyay, Dr Hardik Modi, and Prof Rikin Nayak coordinated.
- ISF at JSPM'S Bhivrabia Sawant Institute of Technology, (JBSIT) Wagholi, Pune in association with Indian Patent and Trademarks Office Mumbai and R&D cell of BSIOTR and ESTA, under Spring Lecture Series organized a national level programme on "Awareness on Intellectual Property Rights (IPR)" on Jan 25, 2022. Dr Y S Angal, Vice Chairman of the Centre delivered the welcome address. Dr R D Kharadkar, the chief guest, praised the ISF team and spoke about numerous activities carried out by the IETE Pune section. The speaker, Shri Prateek Hendre, then illuminated the comprehensive method and value of intellectual property rights for every individual in India. He also demonstrated how to file an IP right such as a trademark, copyright, or patent. He went over the various formats, costs, and time frames for registering intellectual property rights. Dr T K Nagaraj, Principal, congratulated Dr Angal and the department.
- ISF at Haldia Institute of Technology, Haldia, West Bengal, hosted "Quiz-Pod," an online quiz challenge on Jan 29, 2022. Prof Surajit Mukherjee served as the faculty coordinator. The competition included MCQ-based questions on areas including DBMS and coding language problems in Java/Python. The challenge focused on the upcoming placement examinations, which helped them improve their skills. Sayed Rajibul Islam (ME Dept, II year), Tasneem Ahmed Ansari (ECE Dept, III yr), and Supriya Kumari (CE Dept, III yr) took the first, second, and third places, respectively. Under the leadership of faculty coordinator Prof Surajit Mukherjee, IETE HIT SF hosted a three-day course on "ROBOTRIX," which provided hands-on experience with semi-autonomous and autonomous robotics, as well as a C++ workshop on

- Apr 08-10, 2022. Students created and programmed their own robots with great success. Pragati Kumari, Shubham Kumar, Shreyan Gautam, and Piyush Singh were all core team members from third-year. Prof Surajit Mukherjee, Mr Akash Das, Mr Bhusan Yadav, Mr Suraj Kumar, Mr Anurag Raj, Dept of ECE, HIT, Haldia, were the course coordinators.
- On Jan 31, 2022, Dr C Balasubramanian, Associate Prof, Kalasalingam Academic and Research Education, hosted a "Hands on Training with IoT using Arduino" at the Dept of ECE, Kings Engg College, Irungattukottai (KEC), Chennai. On Mar 01-02, 2022, ISF hosted an International Virtual Conference on Research Innovation in Science, Engineering, and Technology IVVRISET 2022, with Dr Huang Sunan, Senior Research Scientist Temasek Laboratories, National University of Singapore, as the resource person.
- ISF at Thakur College of Engineering & Technology, Mumbai, on Feb 04, 2022 held a virtual seminar on the topic of Research Paper Writing. This session was held specifically for all SE, TE, and BE departments. This seminar had a total of 169 students in attendance. Ms Pritika Gharat, a TE electronics student, went on to explain the importance of producing a research paper before going into the structure of a research paper. She sparked interest in the research paper's details. In scientific writing, the speaker emphasised the need of citations. The session was then concluded with a vote of thanks to the speaker for providing such an excellent presentation, as well as to all faculty members and students for their enthusiastic involvement. The session's feedback and attendance were collected by sending a Google form link to all attendees.
- ISF at Anand International College of Engg, Jaipur, organized FDP on "New Techniques in the Field of Engg" from Feb 08-12, 2022. Speakers graced the event included: Dr Sandeep Singh Sengar from Federal TVET Institute, Addis Ababa, Ethiopia; Dr Dinesh Yadav from Manipal University, Jaipur; Dr Sayog Rawat from Manipal University, Jaipur; Dr Sanjeev Yadav from Govt Women Engg College, Ajmer; Prof Praveen K Jain from SKIT Jaipur; Prof Surendra K Agarwal from Govt Women Engg College, Ajmer; Dr Sanjay Sharma from University Institute of Technology, Himachal Pradesh University; Dr Ajay Khunteta from RTU Kota; Dr (Mrs) Jayashri Vajpai from MBM Engg College, Jodhpur; Dr Anil Saroliya from Amity University Tashkent, Uzbekistan; Vice-Chairperson of Institute Ms Monika Mittal; Principal Prof Vijay K Sharma & Vice-Principal Prof Praveen Agarwal. Shri Gunjan Saxena, Dy Director General, Dept of Telecom, Rajasthan & Hon'ble Chairman, IE (India), RSC Jaipur was Chief Guest on Feb 8, 2022. The chief guest at the valedictory ceremony on Feb 12, 2022 was Prof (Dr) Mithilesh Kumar, Prof, Rajasthan Technical University Kota & Former Principal, Jhalawad Govt. Engg College, Jhalawad (Rajasthan). The program was conducted under guidance of Shri Vivek Bhaojak, HOD, ECE & Adviser Institution of Engineers (IE) India Students' Chapter Anand-ICE, Jaipur. Shri Vineet Chhabra & Ms Raksha, coordinated.
- ISF at Dept of ECE, Chaitanya Bharathi Institute of Technology (CBIT), Hyderabad organised a webinar on "5G Wireless Networks - A Detailed Survey" on Feb 9 2022. It was hosted by Yashmitha Jain, a student coordinator of ISF. Prof C Murali, DFIETE and Former Vice President of IETE, delivered the talk. IETE ISF website was launched with the HoD, ECE, CBIT. The coordinators of the webinar were-Shri T Sridhar, Asst Prof and Shri P Ranjith, Asst Professor. On Mar 07, 2022 ISF organized an Industrial Visit to NRSC, Jeedimetla, Hyderabad. Shri Prasad, SC-G, NRSC, Jeedimetla facilitated the things at NRSC. On Mar 23, 2022 ISF organized a Web designing Contest for the students of engineering colleges under the SYNAPSE 2022 Annual Technical Fest. Prizes were won by Team- Krishna, Pandugula Vanshi Krishna; Team- Sai Charan, Ganagani Sai Charan; Team- Siri, Siri Paramesh and Shruti Upadhyaya. On Mar 24, 2022 ISF organized Technical Quiz for students of Engg College under the SYNAPSE 2022 Annual Technical Fest. Feedback comments were taken from Dr N V Koteswara Rao (Director-IQAC). Prizes were won by Vineela Singam, M Vidya and G

- The Institution's Innovation Council (IIC) of the ISF at Sri Ramakrishna Institute of Technology (SRIT), Coimbatore. organized a workshop on "Entrepreneurship Skills, Attitude and Behaviour Development" on Feb 18, 2022. Dr KV Manju, Assistant Professor, Faculty of Management Studies, Karpagam College of Engineering, Coimbatore, was the resource person. Dr A N Jayanthi, Associate Prof/ECE and ISF coordinator presented the welcome remarks. Ms R Kanmani AP(Sr.Gr)/ECE introduced the Chief guest to the audience. Dr Jayanthi proposed vote of thanks.
- ISF of Vivekanandha College of Technology for Women, Tiruchengode, organized a webinar on "Industrial Expectation 4.0" on Feb 23, 2022. The chief guest was Ms Vandhana Pillareddy, Senior Systems Executive, Cognizant Technology Services Bangalore. She spoke on industrial traits and the expectations from the upcoming students. Earlier Prof Dr C Venkataramanan, HOD/ECE welcomed the participants. Dr M Devi, College Principal was felicitated, Ms A Priyadharshini AP/ECE proposed vote of thanks. The IETE ISF coordinator Mrs N Porchelvi, AP/ECE thanked Prof Dr M Karunanithi, Chairman & Secretary, Vivekanandha Educational Institutions, Prof Dr S Kuppuswami Executive Director, Principal, staffs and IETE Student Forum members for successful conduct.
- ISF at Dept of ECE, Velammal Engg College, (VEC), Chennai, in association with Entrepreneurship Cell organized a virtual seminar on Feb 24, 2022 on Innovation, IEDC Project proposal, IPR, Entrepreneurship by Shri P Vinayagami, Entrepreneurship Cell Coordinator, ECE, Velammal Engg College. On Feb 25-26, 2022, the ISF organized a faculty development program on "Fields exposure on AI for Industrial IoT with Hands on training" by Shri Salai Deva, Thirumani, Technical Architect, Aidel Tecz, Chennai. ISF in association with Entrepreneurship cell organized a "Innovative Idea Competition on Feb 26, 2022. On Mar 11, 2022 ISF organized a two- day student development program on "Innovation Development on Artificial Intelligence for Industrial IoT with Hands on training" by Shri Salai Deva Thirumani.
- ISF at Dept of ECE from Vignan's Institute of Engineering for Women, Visakhapatnam, conducted a workshop on "Python Programming" with industrial experts under "Pantech E-learning" on Feb 25-26, 2022.
- ISF at Dept of ECE, Amrita College of Engineering and Technology, Erachakulam, Nagercoil, celebrated Students' Day on Feb 25, 2022. The welcome address was delivered by Ms A Kanjana. Mrs Anusooya V, Asst Prof, Dept of ECE, gave an introduction about IETE, ISF, and the importance of IETE Student's Day. Dr R Sampath Kumar, Principal, ACET addressed the importance of professional societies in students' life. The resource person Dr A Ramachandran, Lead Consultant, HCL Technologies, Chennai, spoke on "Applications of Photonic Crystal Fibers". Program was hosted by Ms T Lekshmisruthi. Mr Allan J Wilson, Assistant Professor, Department of ECE proposed vote of thanks.

- On Mar 10- 11, 2022, the ECE Dept of Sree Venkateswara College of Engineering, Nellore, hosted a two-day workshop on "PCB Design" as part of the IETE Students Forum. Principal Dr P Kumar Babu, HoD Shri P Rajesh, a team of SV Technologies resource persons, HOD's from various departments, employees, and students all participated. All of the students were separated into two groups. Software session for Group A students and a hardware session for Group B students on the first day. The groups were switched on the second day. During the hardware session, the students learned of PCB Making Process.
- On Mar 21, 2022 a new ISF batch was inaugurated by Dr N Venkateswaran, Prof Dept of ECE, Dept SSNCE & Chairman IETE Chennai Centre at Vel Tech High Tech Dr Rangarajan, Dr Sakunthala Engg College, Chennai.
- ISF at Dept of ETE of Guru Gobind Singh Polytechnic, Nashik in collaboration with IETE Nashik Sub-Centre on occasion of National Science Day, organized a two-day workshop on "IoT and Basics of Python Programming" by Prof R S Taday, lecturer, GGSP, Nashik on Mar 3-4, 2022.
- On Mar 23, 2022 another new ISF was inaugurated by Dr N Venkateswaran, Prof Dept of ECE, Dept SSNCE & Chairman IETE Chennai Centre at St Joseph's College of Engg, Chennai. The Chief Guest delivered a technical talk on , "Fundamentals of wireless Communications."
- At Adamas University in Kolkata, the departments of EEE, CSE, and the IETE Students' Forum collaborated to host a Guest Lecture on "IoT Analytics," on Apr 01, 2022. It was attended by 201 persons (191 students and 10 faculty members). The expert explained the value and necessity of IoT in today's homes and businesses (Industrial IoT) and discussed AI/Data Scientist ethics, the importance of sensors in capturing data in an IoT enabled setting, and gave some real-life instances. He also touched upon three fundamental laws of IoT (Moore's Law, Kryder's Law, and Nielsen's Law, during interactive session. He also discussed the importance of IoT in manufacturing and data analytics in IoT for current and future sectors.
- ISF at Rajalakshmi Institute of Technology in Chennai was launched on Apr 9, 2022. Dr Anand Lakshmanan, FIETE, COO, Centre of Excellence for Road Safety, was the chief guest. Dr N Venkateswaran, Chairman of IETE Chennai Centre, Dr PK Nagarajan, Principal of RIT, and Dr S Manjula, HoDECE, were the guests of honour. The dignitaries were introduced by Ms Nami Susan Kurian, the Professional Society Coordinator at RIT, and Shri A Balaji, the AP/ECE. Dr Anand Lakshmanan and Dr N Venkateswaran gave a special talk about how important it is to learn the basics of electronics. They also talked about the importance of IETE and how to get involved in IETE events. Ms S Sheela, Coordinator of IETE-ISF at Rajalakshmi Institute, gave the vote of thanks.

PAC News

The IETE Professional Activity Centre at Pravara Rural Engineering College (PREC), Loni, was established on May 15, 2021, and has since hosted 21 webinars. A seminar on "Engineering in Brain Diagnosis" was held on Sept 4, 2021, with Dr Prashant V Ingole, Prof and Head, Dept of IT, Prof Ram Meghe Institute of Technology & Research, Badnera, Amravati, as the speaker and Dr Yogesh Y Pundlik, Prof and HOD Dept of EEE, Kamala Institute of Technology and Science Singapur, Karimnagar Telanga State, as the Chief Guest. Dr Manish N Tibdewal, Prof, Dept of ETE, Shri Sant Gajanan Maharaj College of Engg, Shegaon, was the speaker for a webinar on "Role of Signal & Image Processing in Medical Applications" on Sept 11, 2021. On this occasion, Dr Mamta C Padole, Associate Prof, CS Dept, The Maharaja Sayajirao University of Baroda, Vadodara, was the Chief Guest. On Sept 17, 2021, a webinar entitled "An insight into Space Science and Technology" was held with Er Apurva Jakhadi, NASA-Space Educator, Member-UN Space Generation Advisory Council, Austria as the speaker and Prof Pramod Kumar Singhal, Prof, Dept of Electronics, Madhav Institute Technology & Science, Gwalior as the Chief Guest. Dr Rajesh M Bodade, Prof. MCTE, Mhow, and Dr S S Pathak, Ex Prof E&ECE Dept IIT Kharagpur, spoke in a webinar on "A Journey in System Design: Concepts to Deployable in the Field... A Practical Case Study" on Sept 25, 2021. On Oct 2, 2021, PAC hosted a webinar with Shri Ajay R Sawatkar, ITS (Retd), Principal Gen Mgr (Retd) Dept of Telecom/BSNL as the speaker and Shri Sunil ADG, Ministry of I&B (Prasar Bharati), Global out reach, Distribution, Marketing, Central Archieves, External Service AIR as the Chief Guest on "Telecomm: A Saviour for Survival During Pandemic." On Oct 9, 2021, another webinar was held on "A super permanent magnets: Technical problems, prospects, and developments for Electrical Vehicles in the Twenty-First Century." The speaker was Dr R S Shinde, Outstanding Scientist & Head, Magnet Technology Division, DAE, Govt of India, and the Chief Guest was **Dr A A Ghatol**, Former VC. Dr Batu, Lonere, Ex-Director COE Pune.

Awards & Achievements



Dr D S Bormane, (F-189076) Governing Council Member of IETE, New Delhi, and Principal of AISSMSCOE Pune, has been awarded the Best Principal Award for the year 2021-22 by Savitribai Phule Pune University in the category of Professional Institutes in Urban Areas.

Dr D S Bormane can be seen at extreme right, accepting the award from Dr Nitin Karmalkar, Vice Chancellor SPPU, Pune; Dr Prafulla Pawar, Registrar, SPPU Pune, and Dr N S Umarani, Pro-VC, SPPU Pune and Hony Joint Secretary Shri Suresh Shinde on the occasion at the SPPU University on 10th Feb 2022.



Dr D S Bormane has also been elected as a Member to the Governing Body of DELNET (Developing Library Network) for the biennial term 2022-24. DELNET was formed with the primary objective of promoting resource sharing amongst libraries through the establishment of a network of libraries. Its goals include the collection, storage,

and transmission of information, as well as the provision of computerized

services to users, the coordination of efforts toward suitable collection development, and the reduction of duplication whenever possible. We congratulate Dr D S Bormane on this extraordinary achievement.

Shri C K Haridas (DF-005141) is seen receiving a memento Natakamithra Puraskaram for his

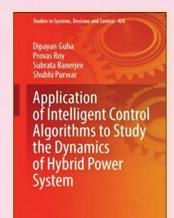
works for the cultural activities in Palakkad.











About the Book: "Application of Intelligent Control Algorithms to Study the Dynamics of Hybrid Power System" by Dr. Dipayan Guha, Motilal Nehru National Institute of Technology Allahabad; Prof. Provas Kumar Roy, Kalyani Government Engineering College, Kalyani, India; Prof. Subrata Banerjee (F-501471), National Institute of Technology Durgapur, and Prof. Shubhi Purwar, Motilal Nehru National Institute of Technology Allahabad.

This book aims to systematically review

and design different intelligent control algorithms for the small-signal stability assessment of HPS. With the growing consciousness of global warming and the fast depletion of natural power generation resources, the existing power system is on the verge of transitions to a "hybrid power system (HPS)" integrated with distributed energy resources. The recent results and requirements for the developments of intelligent control algorithms have motivated the authors to introduce this book for extensively analyzing the performance of HPS against unknown/uncertain disturbances. This book introduces fractional-order resilient control methodologies for arresting small-signal instability of HPS. The prospective investigation has been performed on the MATLAB platform. This book is helpful for undergraduate, postgraduate students, and research scholars working in power system stability, control applications, and soft computing in particular.

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I, Gp Capt Sonpal Singh (Retd) hereby declare that the particulars given above are true to the best of my knowledge and belief.

Dated: 28 March 2022

Sd/-Gp Capt Sonpal Singh (Retd) Signature of Publisher

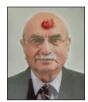
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In Memoriam



Brigadier Lakshman Singh, VSM (Retd), (DF 043034) left for heavenly abode on the morning of May 6, 2022, in his Greater Noida house. He was 91 years old.

He was commissioned, post independence, from IMA Dehradun in June 1955. As a technical graduate competing with ex-NDA and direct entry countrymen, he did well to overcome the many problems he faced during training and later in service. In the military, he worked for a long time at DRDO and then at R&AW. After that, he worked as the Defense Advisor for a PSU called ECIL. He stayed involved with the IETE Noida Centre after he retired and served on the IETE Governing Body. He led the IETE Distant Learning

initiative and set up the studio and network facility to connect some of the regional IETE Centres, including Noida.

A soldier of the 1962 conflict who served as a sparrow with the 7th Battalion under Brig Dalvi. Formerly served in ARDE, Pashan. Commanded the 9th Infantry Division Signal Regiment, taught Communication Engineering at MCTE, and was the founder DDG of Army Headquarters' project 'Suraj' for Electronic Warfare.

Brigadier Lakshman wrote a memoir "A Soldier's Journey through Life with Two Wives." In it, he talked about the mental anguish he went through because the needs and demands of his two wives were at odds with each other. One wife, his love, was both loving and demanding, while the other virtual wife, the "Army," was only demanding. This book is not just a love story. It also tells in detail how Twang fell during the Sino-Indian conflict in 1962 and how he escaped to Bhutan as a Captain with a few jawans of the brigade signal company to avoid being captured by the Chinese. They walked for days through rough terrain and thick forests, living off of plants and roots. His family back home was shocked when he was reported MIA (missing in action). When he went home to see his family again, that was a miracle. This book also talks about how unhappy he was that he couldn't save his wife from cancer and how hard it was for him to live with the regret, pain, and guilt of living without her. After he retired, he spent his time painting, writing, and sometimes talking to Management and IT students about soft skills, which was his area of interest.

This immaculately dressed gentleman with hats & caps, who selflessly contributed to the progress of the students' community, will be remembered by IETE forever. His demise is a huge loss for the IETE community. May the deceased's soul rest in peace.



Dr (Prof) S Shreenivas R Jog (F- 174692) suffered a heart attack on **Jan 26, 2021**. An accomplished Professor with a track record of success in the education management industry, he excelled in analytical skills, mobile communications, radio frequency (RF), curriculum development, and public speaking. He was an experienced professor with a Doctor of Philosophy (PhD) in Electronics and Telecommunications Engineering, from College of Engineering Pune, with specialization in GPS, EMI/EMC, environmental and dynamic evaluation, and ruggedization of strategic communication systems.

The IETE community mourns Prof S R Jog's untimely passing. He was an active IETEian and served as Chairman of the IETE Pune Centre from 2012 to 2014. The expansion of the IETE Pune centre under his direction is well known. He made significant contributions to the IETE National Journal of Innovation & Research at the IETE Pune Centre, organized the IETE National Technical Paper Contest (NTPC), and was always eager to take on more tasks in organizing IETE activities. His exceptional contribution to IETE's advancement will always be recognized. May the soul of the deceased rest in peace.

Dr Maganty Srinagesh (F-125943), the senior Fellow Member of IETE passed away on **Jan 9, 2022**. He served on the IETE Vijayawada Centre's Executive Committee from 2016 to 2018 and as Vice-Chairman from 2018 to 2020. We mourn Dr Srinagesh's untimely passing.



Shri Anoop Chand Katoch, a dedicated employee at IETE headquarters, passed away due to kidney failure on **Feb 6, 2022.** He joined IETE in 1990 and spent the most of his service in the Administration and Accounts divisions. Mr Anoop was a dependable employee who performed his duties honestly and efficiently. His pleasant temperament was a significant asset to the Institution. He managed the Accounts section in the absence of the Accounts Officer and never let the work stop. His enthusiasm for his work profile was evident in his work. His superiors were always pleased with his efforts. He is survived by his wife, one daughter and two sons. IETE mourns his early demise and prays that his family will be able to bear this irreparable loss.

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IETE Journal of Education is a leading journal that publishes topics and related to electronics & computer engineering education which are of general interest to diploma and undergraduate students, research Scholars and teachers. Subjects covered by the journal include: Electrical & Electronic Engineering; Communication & Information Processing; Telecommunications; Computer & Software Engineering; Systems & Control Engineering; Engineering & Technology, Engineering Education.

Though this journal has been tremendous growth and several changes in the manner it is administered and published in the recent past but IETE aims for ranking and categorizing of this journal.

You're invited to submit overview articles and case studies for publication in the IETE Journal of Education so that your insights can be seen and appreciated by peers.

Inspiring IETE Women Achievers

Message:

When good intentions are supported

by hard work, success follows.



Prof (Dr) Bhagyashree SR (F-208765) is now the Dean Research and Professor of the Department of Electronics and Communication Engineering at ATME College of Engineering in Mysuru. She holds a BE in electronics and communication engineering, an MTech in VLSI and embedded systems, and a PhD in electrical engineering from the University of Mysore. She is the first Indian to

use machine learning algorithms for 10/66 for the LMIC setting.

Has 30 years of teaching and industry experience. She was the founder HoD of the Telecommunication Engineering Department, GSSSIETW, as well as the ECE Department, ATMECE, and a Governing Council member of the ATME College of Engineering, Mysore's Governing Council. Also a member of Sadvidya Educational Institutions' Management Committee in Mysuru. She has three

patents and has published papers in international peer-reviewed journals. One textbook and a few book chapters, including three Springer book chapters, have been written by her.

She has reviewed for numerous journals, including Elsevier, BMC Neurology, and others. She also serves as a reviewer for IEEE and Springer Conferences. She has presided over numerous national and international conferences. She serves on the Academic and Editorial Boards of numerous international periodicals. Workshops, Faculty Development programmes, Webinars, and National and International Conferences have all been organized.

Earlier, served as member of the Advisory board of VTU e-Shikshana and BOE member of NIE, Mysore. She is the resource person for Universal

Human Values. She is the convener of UHV and SIP for the years 2018-19 & 2019-20. Some of her proposals are funded by AICTE.

She is an IETE and IEI Fellow. She was Treasurer, Secretary of the IETE Mysore Centre, and Joint Secretary of the ARDSI Mysore Chapter. She is a Senior Member of IEEE and the Vice-Chairperson of the IETE Mysore Center. She is

also an ISTE and KRVP Life Member.



Nagini Madhuranthakam (F-224756) is an information technology professional with 28 years of experience in the banking, financial services, retail, insurance, telecommunications, logistics, transportation, media

& entertainment, healthcare, payment cards, and e-government industries.

She is expert in software product management, requirement analysis, software project management, computerized information systems audit, cyber forensics & cyber security. Developed a Security Assurance Framework that is applicable to all industries. She is a Director IT - Cyber Security & Cyber Forensics at Vision India. Vision India and its business associates are engaged in R&D and Consultancy Services, which they provide to their various industry clients, as well as working on future and sophisticated technologies. She initiated, architected, designed, deployed, and delivered

several end-to-end software products for various industries and worked on technologies such as Java, Microsoft, IBM, Oracle, Embedded, Web, and Network. She holds the following degrees: BE in information technology;

Post Graduate Diploma in business and administrative management; Advanced Diploma in total quality management; Advanced Diploma in export and import management; Advanced Diploma in international business management; MTech in cyber security & cyber forensics. She also holds

certifications such as certified information systems auditor, certified network architect, requirement analysis & management, cyber forensics & cyber security, intellectual property rights, disaster recovery & business continuity planning, and iso 17799, project management in cortex way. Expert in Business Process Reengineering (BPR), Enterprise Resource Planning (ERP), Data Warehousing & Data Mining (DW & DM), Agile Framework & DevOps. Adept in designing Storage Area Network (SAN), Network Operating Centres (NOC), Security Operation Centres (SOC), Network Attached Storage (NAS), Disaster Recovery & Business Continuity (DR & BC),

IT Security, Proof of Concept Centres, Centres of Excellence, Call Centers, Service Delivery Centres, Microsoft Solutions Framework (MSF), and User Acceptance Testing.

































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