Free of Cost for IETE Members
The Institution of Electronics and Telecommunication Engineers

IETE NEWS LETTER

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From President's Desk

Dear Members,

Wishing you all a Happy New Year with the hope that you will have many blessings in the year to come.

As we go into the year 2022, let's aim to establish a fresh start in which we might make IETE proud and prosper. It's time to rebuild the broken bonds, learn from our prior mistakes, and plan to accomplish new ground-breaking milestones.

In 2022, we should plan to attain economic stability and recovery by expanding our resources and activities, so let's harmonize our abilities and efforts for improvement individually and professionally. Our goals should be highly SMART, embracing growth, better quality of activities, self-reflection, and achievements.

I would like to take the opportunity to recognize the dedication, commitment and hard work of the members that have remarkably contributed to the success of IETE. It was only through the collective efforts of our members, Centres, and G C members that we were able to organize a number of top class events last year. Whether it was IETE's 5th Innovation-Industry Meet, the Institution's 68th Foundation Day, or the Memorial Lectures, the spirit could not be dampened even in the face of a pandemic. We welcomed prominent dignitaries, experts, and speakers from the public, private, and Govt sectors to participate in and grace our events. The topics picked were also extremely appropriate and pertinent, providing us with perspectives from all viewpoints. Additionally, last year's IETE alumni meet was a huge success. Alumni and former IETE staff members, who were in Delhi during the event reconnected and renewed their acquaintances. Additionally, they shared success stories and professional details of their life with the Institution. IETE had wished to host this meet for a long time and we were delighted that it could be done with the help of our Alumni Association members.

This issue provides specifics about the aforementioned events, and I would encourage everyone to peruse them in order to gain a better understanding of the opinions of the professionals who participated.

Members will be pleased to learn that the institution is making strides toward empowering women and student members of our fraternity. Apart from women-focused sessions, we intend to resume our DipIETE and short term courses in emerging technologies in the near future, allowing students interested in diploma level programmes or short term courses to do so. We have already begun to consolidate our Centres and PACs, ISFs, and faculty from our disciplines in order to provide common facilities to address the difficulties. We shall take a more active role in the skill development courses/activities and programmes of government initiatives by sharing IETE resources and thereby adding value through our aims and objectives. Our Centres have a big role to play in this through their network of Organizational Members and Student Forums.

Now that our publications are recognised around the world, they have become a formidable force. All our editors-in-chief deserve credit for their tireless work in leading and propelling our magazines to new heights, including the Editorial Board's seasoned and professional members. The contribution of authors, co-publishers, and expert reviewers can also not be neglected. They have all put their trust in us and contributed intellectually. IETE Publications under the Committee's leadership should also be commended for its constant negotiations with stakeholders in order to increase revenue and improve the organization's reputation, IETE was only able to get the long-awaited RNI certificates as a result of their tireless work. The influx of grants-in-aid shows the importance of IETE journals and is encouraging. I also encourage members, new as well as seasoned, to share their views, experience or expertise by submitting articles related to our profession in IETE Journal of Education and also persuade our members to send news related to their professional achievements, honours, awards for IETE Newsletter to enhance the image of IETE.

Similarly, IETE Membership has been able to grow in recent years as a result of the Membership Committee's & staff dedicated and sustained efforts. It is a source of great pride that IETE has added over 1000 members in the last quarters, including corporate members and students from ISF colleges. I hope that our Centres continue to provide the right services to meet the needs of existing members and to attract and engage new members across their region. ISFs and PACs are already so busy and energetic that their activities highlight the actual technical nature to which we are dedicated. Therefore, every challenge is giving us a new direction and helping us transform into a larger potential via collective wisdom, collaboration, and togetherness.

I am grateful to all of our resource people, including Governing Council members, Centre Chairpersons, and ExeCom 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 two inspirational IETE luminaries in recent months: Prof K L Lakshminarayana, DFIETE on 7th Oct 2021 and Shri Vishva Priye Giridhar, FIETE on 28th Nov 2021. IETE sends its heartfelt condolences to the bereaved families. IETE further expresses condolences for CDS General Bipin Rawat's terrible demise on 8th Dec 2021 in an IAF helicopter mishap in Tamil Nadu's Coonoor, given that he recently graced the Valedictory opening session of IETE's Innovation-Industry Meet on 27th Aug 2021. We all know that Gen Rawat will be remembered for his patriotism and commitment to the country.

As we begin a new year, I wish that we all embrace it with an open heart and move on with trust, hope, and courage. Let's make this year extraordinary by putting what we've learnt in the past into practice.

Happy New Year to you and your family!!

Jai Hind!

Prof (Wg Cdr) P Prabhakar,
Veteran

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News from IETE Headquarters

64th Annual IETE Convention (AIC)

IoT and Block Chain Technology for Smart Cities and Societies

IETE Kolkata Centre hosted **the 64th Annual IETE Convention (AIC)** in virtual mode from Sept 24 to 26, 2021, on the theme **"IoT and Block Chain Technology for Smart Cities and Societies"**, jointly with IETE Hqs. The theme was chosen in light of unprecedented interest of academia and industry in smart cities enabled by the Internet of Things (IoT) in recent years. Smart cities provide a range of smart applications, such as intelligent transportation and smart banking, with the goal of enhancing people' quality of life. However, security is one of the most serious concerns confronting a smart city today. By keeping transactions in a secure, transparent, decentralised, and immutable ledger, it is possible to strengthen the security of smart cities. We all know, blockchain and smart cities are still in their infancy, and their integration will require extensive research. As a result, IETE considered deliberating on this subject and soliciting input from the experts who participated. This year programme was combined with an international conference on the same subject which drew participants from a variety of geographical regions**. Shri Niladri Shekhar Dutta**, Global Director & Head Data Strategy & Execution, BMAS-MS IT & ADM, Ericsson, was the chief guest; **Shri Sandipta Narayan Biswas**, Sr Solution Architect, Ericsson, Kolkata, was the invited speaker for the 53rd Bhaba Memorial lecture; and **Prof Jayadeva,** IIT Delhi, delivered the 44th Ram Lal Wadhwa Award Lecture for the year 2021. The event began with the welcome address of **Prof J K Mandal**, Chairman of the Kolkata Centre, who also provided an overview of the 64th Annual IETE Convention. This was followed by addresses from **Shri Ajay Kumar**, the East Zone's mentor; **Prof M N Hoda**, Chairman of the TPPC. The presidential address was delivered by **Prof (Dr) J W Bakal**, the then-President of IETE.

On this occasion, the chief guest and other dignitaries unveiled the **64th AIC Souvenir 2021**. The souvenir included sixteen abstracts of papers presented during technical sessions, as well as messages and other IETE-related information. This was followed by the announcement of the **IETE Honorary Fellow** for 2020-21, **Shri Natarajan Chandrasekaran**, Chairman of the Tata Group. Regrettably, the recipient was unable to attend the event due to his hectic schedule. **Prof (Dr) Baidyanath Basu** and **Dr V T Ingole** were jointly awarded the **IETE Lifetime Achievement (LTA) Award** for 2020-21. **Smt Smriti Dagur**, IETE's Past President, and **Prof C Murli** have been awarded the prestigious **IETE Distinguished Fellowships (DF)** for 2020-21. The Best Centres Awards were presented to the **IETE Hyderabad Centre (1st prize)** and the **IETE Mumbai Centre (2nd prize**). This was followed by the announcement of the Presidential Election results for the years 2021-22 and the installation of **Prof (Wg Cdr) P Prabhakar** as IETE's new President. **Prof (Wg Cdr) P Prabhakar** addressed the gathering, mentioning the organization's proud history and bright future. He lauded the accomplishments of the previous presidents, forefathers, under whose leadership the organization was steady, assured, pragmatic, and most importantly, had a clear vision for the changes required by the IETE. He continued by stating that IETE will continue to build on its strengths while also exploring new avenues. IETE will maintain its professional development programmes – through education, training, and resources. Furthermore, he said that IETE will uphold its commitment to solidarity by ensuring that its members with limited resources have access to additional opportunities and assistance in developing their skills.

Shri Niladri Shekhar Dutta, chief guest**,** delivering his talk**,** addressed the question, **'Can 5G and IoT act as growth levers for Telcos and ICT companies globally**?' and discussed the concept of 5G growth being accelerated by at least fivefold across markets as Telcos have been facing unprecedented demand for connecting a parallel 'work-from-home' economy across sectors. The speaker said that this rapid growth and increase in demand were long overdue and it has been a while since Telcos attempted to make growth tangible and visible enough to improve profitability and bottom line results, particularly for their shareholders, who were frequently contemplative about future stakes and investments. They were ultimately unsuccessful in depicting this growth story due to the ambiguity of their core strategy and their attempt to be excessively bullish on certain technologies. They quickly realised, however, that the ultimate goal for cracking the digital success story for them would be to transform internally and become service enablers rather than service providers. While their 4G/LTE story has not been a runaway success, they are betting heavily on their 5G strategy, recognising that now is the best time and opportunity to embark on this digital enablement journey by leveraging enterprises across sectors where seamless connectivity and 360-degree customer experience are required for survival. Shri Dutta further added that as the network continues to deliver 8-10 times faster speeds with 5G and becomes increasingly software-centric, the heart of the change will be driven by automation, artificial intelligence, and data, all of which will be backed up by cloud technologies and cloud native developments. Smart devices and large-scale IoT deployments with scalable solutions will be required in the near future and will become a part of the commoditized portfolio used by Telcos to differentiate their offerings for their customers. **Dr (Prof) J W Bakal**, President of IETE, presented the chief guest with a memento, which was followed by a vote of thanks by Dr Shiv Kumar, Honorary Secretary General IETE.

The **53rd Bhaba Memorial lecture** was delivered by **Shri Sandipta Narayan Biswas**, Sr Solution Architect, Ericsson, Kolkata, pointed **5G-A 3rd Generation Partnership Project (3GPP)**. According to the speaker, 3GPP is a collaborative activity between well-established regional standard organisations. The 3rd Generation Partnership Project (3GPP) unites seven telecommunications standard development organizations (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC), known as "Organizational Partners" and provides their members with a stable environment to produce the reports and specifications that define 3GPP technologies. The project covers cellular telecommunications technologies, including radio access, core network and service capabilities, which provide a complete system description for mobile telecommunications. 3GPP only develops and maintains global technical specifications with the goal of ensuring that network equipment and handset manufacturers can develop products that are globally interoperable. He explained that the role of these standardisation bodies was to approve and maintain the 3GPP scope; to maintain the Partnership Project Description; to decide on the creation or discontinuation of Technical Specification Groups: approve their scope and terms of reference; to approve Organizational Partner funding requirements; to allocate human and financial resources to the Project Co-ordination Group; and to act as an appellate body on procedural matters referred to them.. He talked about Operation Support Systems/Business Support Systems (OSS/BSS) that would be heavily impacted with 5G-based application and services, viz, NFV, which enables network operators to manage and expand their network capabilities on demand by utilising virtual, software-based applications in place of physical boxes in the

network architecture. This facilitates load balancing, scaling up and down, and moving functions across distributed hardware resources. With continuous updates, operators can keep their systems running on the most up-to-date software without disrupting their customers. He added that in order to be ready for IoT, 5G, and Industry 4.0, operators must embrace NFV now. He also spoke about network slicing that supports new 5G services; Infrastructure as a service (IaaS) - a form of cloud computing that provides virtualized computing resources over the internet; 5G Network slicing- a network architecture that enables the multiplexing of virtualized and independent logical networks on the same physical network infrastructure.

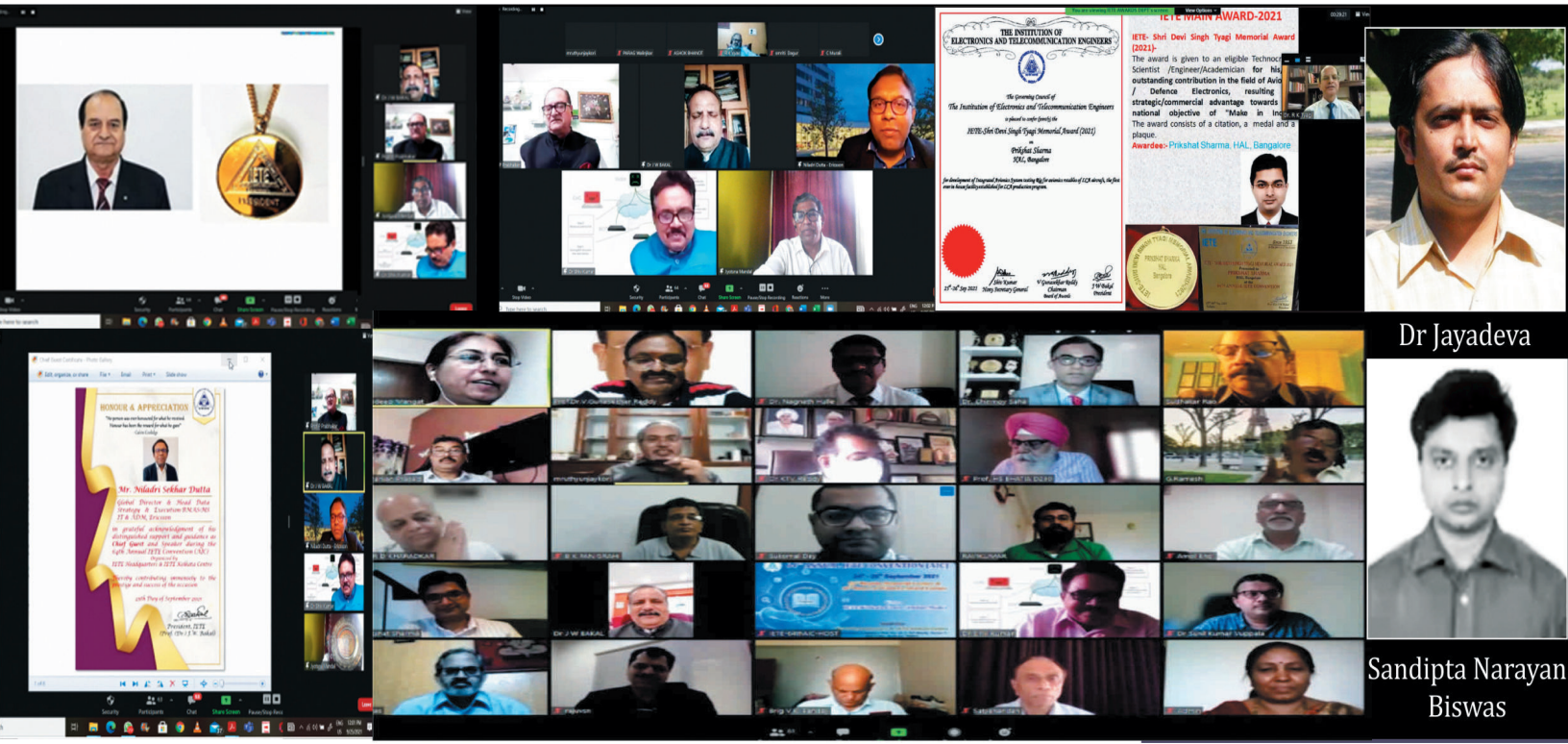
44th Ram Lal Wadhwa Award Lecture, delivered by **Prof Jayadeva,** Institute Chair Professor and Head, EE Department at IIT Delhi, was on the topic **Faster, Smaller, Lighter: The Olympic Goal of Machine Learning**. According to the speaker, as machine learning applications become more prevalent, the need to learn models that are small, computationally light, and faster becomes increasingly important. His presentation outlined theoretical work that aids in the pursuit of those goals. He stated that sparse parsimonious models with a small memory and computing footprint are important for IoT applications as well as embedded platforms with limited resources. The Twin Support Vector Machine, which has over 1200 Google Scholar citations and has been the subject of multiple survey papers, is his notable piece of work. He won best paper awards for two conference papers and one journal paper, and one of his papers was named to Neurocomputing's Top 25 Hotlist. His group was among the first in the world to design and implement an SVM-based A/D converter on chip (2006). Another 2015 chip is the first ant colony optimization algorithm on silicon, to the best of knowledge. His co-authored algorithm for detecting rare cells in Nature Communications (2018) discovered a new cell subtype. The lecture delivered by him was educational and well appreciated by the attendees.

Dr (Prof) J W Bakal presented awards following lunch. This award ceremony was graced by the presence of nearly all of the awardees, who virtually attended. Each awardee was asked to express their thoughts and views about the award they received in a few words.

The technical sessions were spread parallelly in two tracks on the first day with various speakers addressing the topics of **Smart Cities** in Technical Session I/ Track-I and **Computational Intelligence** in Technical Session II /Track-II. The Session I was chaired by **Dr Jyoti Shekhar Bannerjee, Shri Jeet Banerjee, Dr Moutushi Singh,** and **Dr Rajesh De**, while **Dr Abhishek Das, Dr Maifuz Ali, Dr Nilanjan Dutta Roy, and Dr Anirban Das**, chaired the session II.

Following the tea break, **Prof Jemal Abawajy** of Deakin University's School of Information Technology delivered the first keynote address, followed by **Dr Mufti Mahmud** of Nottingham Trent University in the United Kingdom. **Prof (Dr) Celia Shahnaz**, Professor of EEE at BUET in Bangladesh, was one of the other keynote speakers, who spoke on the topic 'Deep Learning for Biomedical and Healthcare Applications.'

On 26th Sept 2021, the webinar began with a keynote address by **Prof Mike Hinchey**, President IFIP, University of Limerick, UK, on the subject **"Is there anything that isn't software?"** Presenting his point with interesting facts, he talked about diffecent industry sectors, which develops software with critical/ necessary skills requirements. He was of the view that software is everwhere, global ICT trends need advanced software capabilities, and software is pervasive, widely used and often invisible, badly structured and poorly maintained. All companies were becoming software companies and there is huge learning challenge. The speaker also hinted at complex physical environment and diverse hardware platforms, insufficient numbers of qualified developers and testers. He said that current techniques do not scale sufficiently and have failed to overcome 50 years of declining quality. He talked about LERO research works and swarm technologies used by NASA. He also outlined a Swarm Formal Method Model, autonomic environment, SPL/ Feature Model, Requirements to Design to Code. Concluding he said that they have proposed a lightweight and efficient MEC architecture to address the dynamic source dynamic destination shortest path problem. Their proposed system leverages the optimization power of ant-colony optimization. Their proposed model is capable to explore multiple pathswith single execution and ensures efficient removal of loops and deadends in the network. In the Technical Session III, several speakers shed light on the subject of **Smart Communication**. In the valedictory session, the chief guest **Dr Gopal Pathak**, Vice Chancellor, Sahara Birla University, Ranchi, was welcomed by President IETE, **Dr (Prof) J W Bakal**. Following that, **Prof M N Hoda**, the TPPC Chairman, presented his report on AIC-2021, followed by the chief guest's address. The programme ended with presentation of a memento to the chief guest by President Dr (Prof) J W Bakal and proposing a vote of thanks.

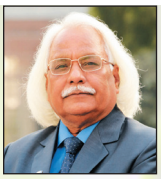


Celebration of 68th IETE Foundation Day

The **IETE 68th Foundation Day** was celebrated on the theme "**Advancing Skill Development to the Next Level: A Paradigm Shift to Amalgamate Skills & Academics with Seamless Transition**" by IETE Hqs on 20th Nov 21 through online mode. The dignitaries on the occasion were **: Dr N S Kalsi, IAS (Retd),** Chairman NCVET**; Prof P B Sharma, Vice Chancellor, Amity University, Gurugram; Dr Ajay Kumar Sharma, Director NIT, Delhi; Shri A K Nayak, Advisor of IIBM Group of Institutions.**The Chairman Technical Programmes & Publicity Committee, **Dr M H Kori** delivered the welcome address and set the tone for the proceedings by bringing up topics of skill development and academic national employability, as well as the NSQF and various other programmes and schemes launched as a part of National Skill Development initiatives. He also mentioned mismatches, engineer shortages, industry's inability to recruit skilled workers, supply and demand imbalances, formal education and skill development, and expressed his belief that a cohesive effort is required to collaborate in a holistic manner. If a person is skilled and wishes to enter formal education, he or she will be able to deliver more desired results than someone who is not skilled and only has formal education. He believed that credit scores should be transferable between universities. He said that IETE pioneered the interdisciplinary approach many years ago and emphasised the importance of re-examining the issue of IETE recognition and then considering the integration of formal education, skill education, and the distributed nature of education dissemination. He added that because the NEP's opportunity, and because IETE has a reach from north to south and east to west, as well as a large number of expert members, and is in a position to promote government initiatives, all that is left now is to structure the need and contribute to government initiatives. **Prof A P Thakare**, Co-Chair of the TPPC, spoke about IETE and its activities during his address. He emphasised the TPPC and SDICC Committees' goals of fostering a vibrant technological environment. Additionally, he read the President's message for the occasion.

Prof Prabhakar, President IETE, expressed his happiness at being a part of the momentous occasion of IETE's 68th Foundation Day alongside everyone else. He stated that such occasions provide an opportunity for everyone to conduct a reality check and, if necessary, make corrections. He reminisced about the glory of IETE's past and the accomplishments of its alumni. He spoke about IETE's mission and vision, as well as how IETE has consistently and selflessly fulfilled its obligations. As part of his speech, he mentioned the IETE Examination and certifications' credibility. According to him, the IETE's extensive infrastructure and resources, which can be converted into 63 "skill towers," are open to collaboration with the government. The senior members of IETE honoured on the occasion were- **Shri Manjeet Singh (F-237086); Brig A K Adlakha (F-102839); Col Ashok Bhanot (F-109703); Col O P Aurora(F-108287).** Each of these senior members addressed the gathering, outlining their connection to the Institution and the positions they currently/previously held.

The chief guest, **Dr N S Kalsi, IAS (Retd),** Chairman NCVET, in his address appreciated the the role of IETE in providing leadership in scientific and technical areas critical to national development and economy. Endorsing the fact of a mismatch and acute shortage of skilled engineers and manpower in the country and a total disconnect between formal and vocational education and training, he said that a paradigm shift is required in order to integrate and transition skills and academics seamlessly, thereby realising Atmanirbhar Bharat and skilling India. This would entail providing world-class vocational education and training to the youth in order to maximise the demographic dividend for a self- sufficient India. He added that in order to accomplish this goal and effectively close existing and future skill gaps associated with global skill needs and workforce demands, skilling must be ensured on a scale and pace never seen before. The mission should be elevated to training and upskilling to the level of aspirational yearning for lifelong learning and a respectable career path. He highlighted the role & responsibilities of the National Skills Qualifications Framework (NSQF), which enables an individual to achieve desired competency levels, enter the market, and, when the time is right, return for the acquisition of additional skills to further enhance their competencies. Additionally, he believed that cross-sector skill qualification, curricula, and training should be redesigned at all levels, along with the need for heritage knowledge, certification in a regional languages, development of training curricula, modules in response to technological advancements. He opined that professional development opportunities should be maximised at PMKPY Centers and underutilised training facilities. He cautioned that all should be prepared for the future by developing higher-order skills and observing megatrends. Today's market is plagued by a lack of fundamental skills that are aligned with industry demand and design. To address the issue, India is selecting surplus polytechnical faculties for each semester and engineering books are currently being translated into eleven Indian languages. The robust framework will enable international recognition. Wherever possible, skill and general education should be integrated with blended modes of learning, such as online and physical, while keeping in mind the cost effectiveness and quality of the books' content. IETE that has the necessary infrastructure and 65 centres located throughout India, as well as experts in various fields of information technology and the experience of teaching graduates and postgraduate engineering professionals, can accurately associate, cooperate, and bridge the divide, thereby establishing an ecosystem capable of facilitating a seamless transition.



The guest of honour **Prof P B Sharma**, Vice Chancellor, Amity University, Gurugram, stated in his address that without integrated professional institutions, it would be impossible to develop professional engineers committed to the profession, the nation, society, and global community, and to the highest standards of professional morals, ethics, and integrity. IETE appears to exist to bridge the gap between college graduates and employers' requirements for professional engineers. Recognizing and restating IETE's roles and responsibilities, he stated that he was with IETE and other professional societies in the country, as all Vice Chancellors must be, at a time when the world looks to the engineering fraternity for momentum contributions across all disciplines, particularly electronics, telecommunications, computer science, and information technology. To double the size of our economy from its current level to $5 trillion by 2025, he stated that the engineering and technology communities require inspired and enterprising minds, minds deeply embedded in higher skills, highly responsible and highly talented minds. He also drew attention to the phenomenal growth and development of activities that have wreaked havoc on the earth and its environs, resulting in widespread suffering. He urged all nations to unite and commit to building a bright green future for humanity and achieving the goal of next-generation zero emissions in the forgeable future, urging the engineering community, particularly those in the electronics, information technology, computer science, cyber security, and artificial intelligence streams, to champion the cause of green engineering and green technology innovations. He envisioned a new role for professional institutions such as IETE in assisting our country's true development through collaboration with neighbouring universities, thereby allowing the entire country to benefit from the 65 Centers located throughout the country. He advised IETE to strengthen its rural presence by fortifying its ties with universities and other professional organisations in order to collaborate and generate the critical manpower required by the country. He urged engineers to use their superior intellects to find solutions for rural India's development. We can promote mass entrepreneurship in information technology, enabling young innovators inspired by rural India to join the IT revolution, bringing with them the green technology and green innovation revolutions and propell India toward its net zero omissions commitment. He emphasised the critical nature of collaboration between industry, professional institutes/societies, colleges and institutions, and the public and private sectors. India is sitting on a gold mine of opportunities, and by leveraging IETE's infrastructure, skill towers could be established at 63 Centres. He was also of the view that each large university should commit to establishing a skill tower to facilitate effective management and integration of skills even within the institution's four walls.

The guest of honour, **Dr Ajay Kumar Sharma**, Director NIT, Delhi, began by praising the topic selection for its alignment with the National Educational Policy 2020. He stated that the government announced this strategy after 34 years, and how we must migrate from education version 1.0 to education version 3.0 before waiting for reform in the higher education system, which he believes would show itself in the development of education 4.0. He covered a few things linked to Education 4.0 and claimed that students should be able to choose from a variety of educational programmes and subjects in order to gain the required stream, diverse subjects, skills, and competencies. During his presentation, he highlighted numerous instructional tactics, academic sports strategies, learning experiences, shifting spirits, and acceptance of online need. According to him, the release of NEP and the Corona pandemic acted as stimulants for the education system. He mentioned numerous courses enabling flexibility, cross-disciplinary learning, credit transfer possibilities, multiple entry points, multiple exit points, vertical/horizontal learning path options for lifelong learners, and NEP is being implemented in IITs, NITs, and institutions. He suggested that IETE, which has this facility available anywhere, at any time, should collaborate with such universities to maximise the use of its infrastructure. As an accepted mode of education, IETE should adopt a distance education system, which was widely accepted during the pandemic. This will increase employability opportunities, resulting in a greater emphasis on skill-based vocational programs/ courses. As a result, IETE should convert its 63 centres into skill towers, and all should work together to revive the family.

In his address, guest of honour **Shri A K Nayak,** Advisor of IIBM Group of Institutions, discussed various skill development schemes, acts, and provisions that were critical for the country's development. According to him, skill development should begin at the micro level and progress to the macro level and then to the lateral level. He emphasised the fact that individuals with natural abilities but no certification can participate in R&D and that formal training can be provided to them with certification, citing the community college concept as an example of how manpower can be skilled through formal training and certification. He discussed skill development at the primary, diploma, and higher educational levels, emphasising the significant divide between theory and practise. According to him, skill development objectives can be met only if our programmes are delivered in the state's regional/official languages, the manner in which training is delivered and its quality is monitored, and certification be provided. To advance skill development to the next level, microlevel monitoring and honesty in evaluation assessment may be factors in enhancing the vitality, vibrancy, and success of skill development education. According to him, IETE is capable of successfully carrying out this responsibility.

The programme ended with a vote of thanks by the Hony Secy General, **Dr Shiv Kumar**.

27th Sir JC Bose Memorial Lecture

To commemorate Sir JC Bose's 163rd birthday, the IETE Kolkata Centre hosted the **27th Sir JC Bose Memorial Lecture** on the topic **'Sir JC Bose and Early Radio Research'** on 30th Nov 2021 via hybrid mode in collaboration with IETE HQs. The dignitaries lit the lamp to begin the programme. Dr Anirban Das, the session's moderator and a representative of IETE Kolkata and IETE New Delhi, introduced the topic by highlighting Sir JC Bose's work, experiments, life, and history, emphasising that his ideas were 60 years ahead of their time and are therefore unfeasible in the modern era. **Prof JK Mandal**, Chairman of the Centre, delivered the welcome address, emphasising Sir JC Bose's pioneering work in multidisciplinary research in the early 1990's. **Dr MH Kori**, Chairman TPPC, began by reflecting on how few Indians have been able to establish a global presence in the modern era and how remarkable it was for Sir J C Bose in the early 1990's to be recognised globally for his multidisciplinary research work. He presented Marcony's injustice; the Nobel laureate who took all the credit and patented Bose's findings in his name. Bose's contribution was later recognised. He concluded by expressing gratitude to the Centre for hosting the memorial talk.

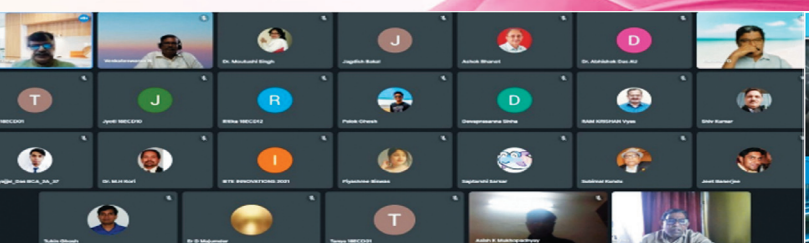
Wg Cdr P Prabhakar, President IETE, highlighted the organization's history and stated that IETE was recognised as a Scientic & Industrial Research Organizaton by DST Govt of India; an institution of national eminence and has a deserving members list. Finally, he suggested that a video discussing Sir JC Bose's works should be created and uploaded to the IETE website. The keynote speaker, **Prof (Dr) Animesh Maitra**, former professor at Calcutta University's Institute of Radio Physics and Electronics, began by his presentation by narrating wireless scenario during 1894, start of Bose's work in Microwaves; emergence of two groups of researchers(optically minded & electrically minded) after Hertz's successful demomnstration of electric waves; birth of Quasi-optics (QO) or microwaves, and its scenario in early days; and Sir JC Bose's work, highlighting his experimemts, investigations & contributions to the radio science activities in the areas of fields and waves, radio communication systems and signal processing, electronics and photonics, wave propagation and remote sensing, ionospheric radio & propogation, and electromagnetic biology & medicine. The speaker also demonstrated the horn antenna that Sir JC Bose invented, and termed "the collecting Funnel", the double prism attenuator, spiral-spring detector, tejometer for detecting microwave, infrared, optical, and ultraviolet radiations, lens, polarizer, absorber, grating, Bose's radiator, and Bose's MM Wave System, where he highlighted his major contributions such as the development of point-contact detector, the Bose's discovery that the wavelength is twice the distance between the radiator's sparking surface. It was informed that Sir Bose received a Doctor of Science degree from London University in 1896 on the initiative of London Rayleigh. Later in the talk, the various evolutions and applications of Sir J C Bose's findings by researchers and Nobel laureates in the nineteenth century were discussed. The latter part of the talk also discussed **Sri Sisir Kumar Mitra's**, (a brilliant student of Sir JC Bose) contributions to physics and science advancement in early radio research. The speaker repeatedly stated that Sir JC Bose's experiments and findings were decades ahead of their time. The same message was repeated to motivate the audience including students to excel in their present and future endeavours by following Sir JC Bose and Sri Sisir Kumar Mitra's lead. The session concluded with thanking remarks to the Honorable Guest Speaker and an opportunity for audience members to ask questions. The lecture received favourable responses from the audience in both virtual and physical modes.

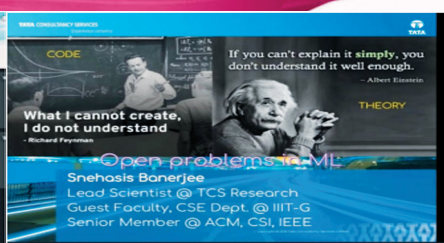
IETE Zonal Seminar (East) and ISF Congress

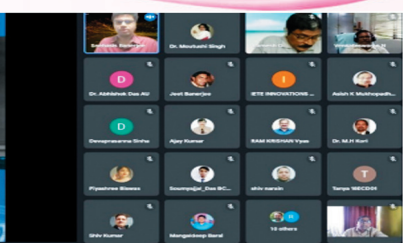
The IETE Kolkata Centre hosted a Zonal Seminar and Students' Convention on the theme "**Application of IoT in Pandemic Situation (IoTPS 2021) its Challenges and Issues**". The presidential address was delivered by **Prof (Dr) J W Bakal**, President of IETE. **Prof (Wg Cdr) P Prabhakar (Retd),** President Elect (2021-2022) & Chairman (BoRIS), addressed the audience on the objectives of the zonal meet. The Guest of Honor was **Shri Ajay Kumar**, the Zonal Mentor, East Zone, GC Member IETE, who addressed the participants with motivational words. **Prof Ashish Kumar Mukhopadhyay**, Vice Chairman of the IETE Kolkata Centre, also spoke to the audience. A slew of GC members, including Dr N Venkateswaran, Dr Ashok Bhanot, Dr Shiv Kumar, Dr G Ramesh, and Dr R K Vyas, were in attendance. **Dr N Venkateswaran, Dr G Ramesh,** and **Dr R K Vyas** were among those who spoke to the participants. **Shri Jeet Banerjee**, Adamas University, proposed a vote of thanks. **Shri Snehasis Banerjee,** Lead Scientist, Innovation Lab, TCS Kolkata, delivered the keynote address on "**Open Problems in ML**".

Twenty research and innovation proposals were presented in three tracks: **IoT Applications**; **Technologies in Pandemic Scenario** and **VLSI, Communication, Sensor Networks, and Blockchain.** The WINAR, a charitable trust, awarded the three most innovative proposals with cash prizes. For the best and second-best papers WINAR gave Rs 2000 and Rs 1000, respectively. Five candidates were chosen from the University of Engineering & Management, Kolkata, namely Saikat Sarkar, Ritam Chatterjee, Souvik Ghosh, Raima Ghosh, and Moubani Kuchlyan for the best in IoT Applications, where the topic was "**Care Free Sole**". Praveen Kispotta, team leader of Tech Future from Cambridge Institute of Technology, Ranchi, won for the best in Technologies in Pandemic Scenario, with the topic "**Home Automation Using PIR Sensor**". For the best in VLSI, Communication, Sensor Networks, and Blockchain,' four candidates were chosen from the team Backline Warriors, namely Deepraj Chowdhury, Soham Banerjee, Ajoy Dey, and Debashis Biswas, for their topic "**A Web app to recommend urgency/prioritize Covid-19 vaccination using Machine learning**".

Suvajit Adak, Anish Pal, Arpan Deria, and Debraj Das received the **best student paper award.** Partha Sarathi Banerjee of Kalyani Government Engineering College in Kalyani, West Bengal, received the award for **Automated Entrance Control System Using Face Mask Detection & Temperature Checking**. Moumita Ghosh and Manisha Barman of Kalyani Government Engineering College, Kalyani, West Bengal, were awarded second place for their paper **Classification of Covid-19 from Chest X-Ray Images.**







Appointment of New Secretary General

Gp Capt Sonpal Singh (Retd) (F-053519) has been appointed Secretary General of The Institution of Electronics and Telecommunication Engineers (IETE) with effect from December 01, 2021. Gp Capt Sonpal Singh was commissioned into the Indian Air Force's Aeronautical Engineering (Electronics) branch on 16 February 1987. He has undergone prestigious long-term courses at the Institute of Armament Technology, Pune and Defence Services Staff College, Wellington. He has been trained on the MIG-27 ML fighter aircraft maintenance. He has held important command and staff appointments, including senior engineering officer of a fighter aircraft squadron, commanding officer of a field unit, project officer of a modernisation programme, production engineer in a Base Repair Depot tasked with aero engine overhaul, Director (NBC), Director SI, and Command Systems Officer. He earned categorization 'A' for professional competence as an Aeronautical Engineer. He has also undergone training abroad on modern communication equipment. He was awarded commendations thrice. He has rich experience in the field evaluation and acceptance test procedures of modern electronics and reconnaissance assets. His credentials include a master's degree in defence and strategic studies, an AMIE (I) in electrical engineering, an AMIETE, a postgraduate diploma in marketing and sales management, an executive course in business management, and a postgraduate engineering special weapons course (IAT Pune). He has delivered talks at prestigious defence institutions on nuclear and space capabilities and implications.

IETE welcomes the new command structure.

IETE Alumni Meets - 2021

- The Governing Council (GC) deputed **Sh R S Chauhan** as Chairman & **Sh G Ramesh** as Co-Chairman for the Alumni Association. The Chairman took a decision and organized first IETE Alumni Reunion on 16 Dec 2021.

The alumni meet commenced with welcome remarks by Chairman IETE Alumni Association, **Shri R S Chauhan**, GC Member and alumnus himself. **Prof P Prabhakar** (Veteran) presides over the event and emphasized that the IETE Alumni Membership should be enhanced and proper directory of Alumni to be prepared including the senior positions held by the Alumni's in various government and other organizations.

Prof A K Saini, Vice President, IETE emphasized on the need for alumni's reconnection and their contributing back to the alma mater. **Lt Gen (Dr) A K S Chandele**, **PVSM, VSM (Retd),** Past President graced the event as Chief Guest. He urged the alumni to think of starting their own start-ups in which they can give chance to their successors and can contribute back one way or other to IETE. **Dr S K Agrawal**, Former Chairman IETE Alumni Association, also joined the programme through online, despite his ailing health and talked about the pragmatic role that Association might play in the success of the Institution.

Other Alumni who were present in the event were **Dr Shiv Kumar, Shri M L Gupta, Sh R K Vyas** etc. The Alumni members shared their experience with IETE and their achievements in life, their promising career and how the Institution had helped on shaping what they are today. All of them were of the view that they were really proud to be a part of IETE and they will always be standing by it. On the occasion, IETE alumnui felicitated some of its retired former employees. Many Alumni who could not attend physically, joined online.

The function was coordinated by **Dr H C Mahendru**, Deputy Secretary, IETE and **Ms Jyoti Arora,** AMIETE passout. IETE congratulated IETE alumni, faculty, and staff members in attendance. It concluded with a vote of thanks from **Gp Capt Sonpal Singh** (Veteran), Secretary General, IETE and an IETE alumnus himself.

- The **IETE Hyderabad Centre** also hosted the **IETE Hyderabad Alumni Meet– 2021** on 25th Dec 2021, in which approximately 30 former students physically met and reconnected. **Shri R S Chauhan**, Chairman, IETE Alumni Association & GC Member, New Delhi, interacted with all IETE AMIETE/DIPETE graduates. The event was attended by members of the Executive Committee and ISF Faculty Coordinators from other ISF Engineering Colleges. The event was also graced by the presence of Centre Chairman **Er K Gnaneshwar Rao** and Hony Secy, **Er Nuli Namassivaya.**

News from IETE Centres /Sub- Centres

AHMEDABAD

- IETE Ahmedabad Centre & IEEE AP/MTT, Gujarat section, jointly organized a webinar for **Engineer's Day** celebration on theme "Engineering for Healthy Planet" on 19th Sep 2021. The expert talks delivered were on "Converting Polluting Factories rooftop into Solar green Energy" by **Shri Rajeshwer Singh Rajpurohit**, Dir, Ultravibrant Solar Energy Pvt Ltd and "Social Enterprise to Sustainable Lifestyle" by **Shri Yash Bhatt,** Founder, Brook and Blooms Sustainable Solution LLP.

- On 3rd Oct 2021, the IETE Ahmedabad Centre celebrated **Centre's Foundation Day** via the Google platform. **Shri Chintan Bhatt**, Retd Scientist SAC/ISRO, delivered an expert lecture on "Artificial Intelligence" in Gujarati, providing comprehensive information on it. He informed how Artificial intelligence (AI) was playing an important role in the fourth industrial revolution. He stated that a distinction must be established between intelligent and smart machines, devices, and sensors. Artificial intelligence (AI) is a computer programme that thinks, learns, and executes tasks in the same way as people do. It necessitates the creation of a big database. For 43 years, scientists/engineers have attempted to construct a computer that is entirely artificial intelligence, but have failed because to technology and human limits, as it relies on a vast database, data accuracy, and correctness, all of which are crucial. If humans input data to machines, it is possible that it will be distorted by human emotions. Today, artificial narrow intelligent machines (ANI) exist. The ultimate goal is to construct an artificially super intelligent machine (ASI). ANI has established a foothold in nearly every facet of human life. ANI exhibited human-like inventiveness. It is capable of writing articles, drawing drawings, and composing music. The integration of artificial intelligence and other technologies has the potential to deliver incredible results. Throughout the COVID-19 outbreak, AI technology aided in the control of the pandemic and aided medical workers. When integrated with wearable gadgets, artificial intelligence becomes more efficient and effective. **Shri Ashish Trambadia**, Director, Heritage Department, AMC, gave an expert talk on "World Heritage City of Ahmedabad". The presentation on Ahmedabad and its heritage was created to raise awareness and interest among IETE members. He informed that Sultan Ahmad Shah founded the once-walled city of Ahmadabad on the eastern bank of the Sabarmati River in 1411 AD. For the next six centuries, it thrived as the capital of the state of Gujarat. Since 2017, UNESCO designated this section of Ahmedabad as a World Heritage Site. To make visual connections with the understanding of historical evolution, physical chronology, architectural elements, and site attributes, a power point slide show was presented.

- The Centre celebrated **68th IETE Foundation Day** on topic "Advancing Skill Development to the Next Level: A Paradigm Shift to Amalgamate Skills & Academics with Seamless Transition" on 21st Nov 2021 by Google platform. Welcome Address was delivered by **Shri Ramji M Makwana**, Centre Chairman and message of President IETE, **Prof (Wg Cdr) P Prabhakar**, was conveyed by **Shri Sanjeev Kulshrestha**, Hony Secretary, IETE Ahmedabad. **Swami Nikhileswarananda**, Adhyaksha, Ramakrishna Ashrama, Rajkot, delivered the theme lecture with examples. He said that in India, skill development is broadly classified into education and vocational training. The Govt of India, recognising the importance of skill development for students, has launched a national skills qualification framework. IETE can contribute significantly to bringing about paradigm shifts that are seamless in their transition. He emphasised the importance of life skills and SI (Spiritual Intelligence) in skill development programmes and stated that, according to Swami Vivekananda, career development and character development should go hand in hand. **Shri Tapan Misra**, Former Dir, SAC (ISRO), addressed the audience as the chief guest. He stated that IETE has been a leader in the development of engineers, technicians, and educators' skills. However, another type of skill development was required today, i.e., developing the ability to form start ups. Today's generation aspires to find their businesses. Additionally, the government provides numerous incentives for start-ups. IETE can facilitate face-to-face meetings between budding entrepreneurs, venture capitalists, angel investors, and certified public accountants. IETE can invite successful start-ups to speak with students and engineers about their experiences. Gujarat has been at the forefront of economic and industrial revolutions. The IETE Ahmedabad chapter can carry on the Gujarati tradition of pioneering in promoting start-ups.

ALIGARH

- The **Executive Committee (EC) meeting** of IETE Aligarh Centre was held on 17th June 2021.

- A **campaign for registering new corporate members** from the younger faculty members was carried out in several departments of AMU at Aligarh during the month of July/Aug/Sept. The membership form and other introductory material were dispatched to faculty members of different departments to start the process of getting registered into IETE.

- The Centre organized the **68th IETE Foundation Day** on 8th Nov 2021 through online mode which was held in line of the theme for this year's Foundation Day. Eminent personalities of the Deptt of Electronics Engg, fellows & members of IETE, delegates from other departments and students of AMU participated in the function. **Dr Md Muzakkir Hussain**, Asstt Prof in Deptt of CSE, SRM University, Amravati, AP, delivered the keynote address on "Self-driving cars in the IoT era" on the occasion. The program started with the welcome address by **Prof Muzaffar A Siddiqi**, wherein he also highlighted the activities of the IETE, Aligarh Centre. **Dr Abdus Samad**, Hony Secretary presented a brief overview of IETE Foundation Day and read the President's message. **Mr Tehzeeb Abbasi**, Hony Treasurer, IETE

Aligarh introduced the speaker. A self-driving car concept was explored by Dr Hussain. A typical architecture for self-driving car autonomy systems were explained, namely Store Compute Actuation Networking and Control. The effects of self-driving cars on urban forms were also explained. Dr Abdus Samad ended the programme with a vote of thanks.

ALLAHABAD

- IETE Allahabad Centre celebrated **Engineer's Day** online on Sept 15, 2021. **Er Ramesh Prasad**, BSNL Prayagraj Gen Mgr, was the chief guest. **Prof R S Yadav**, Centre Chairman, welcomed the participants. **Dr G S Darbari** welcomed the chief guest. **Dr Ashish Khare**, Hony Secretary, spoke about Sir Mokshagundam Vishweshvaraya on the occasion. The chief guest highlighted about Mokshagundam Vishweshvaraya in brief and application of 4G during Covid 19 period. He also briefed about 5G. Prof Rajneesh Kumar Srivasta delivered vote of thanks.

- The Centre organized the **68th IETE Foundation Day** in online mode on 2nd Nov 2021. **Er Ramesh Prasad**, BSNL Prayagraj Gen Mgr, was the chief guest and spoke on the topic "5G Communication Systems". **Prof S G Prakash** was present at this occasion along with **Er M K Singh, Er R N Mishra, E J P Mishra, Er N C Agrawal, Dr Ashish Khare** who got connected online in the programme. **Dr G S Darbari (F-058002)** one of the senior members of the IETE Allahabad Centre, was facilitated at this occasion. Chairman, **Prof R S Yadav** explained the purpose of celebrations of IETE Foundation Day and institution's objectives. He also read out the message of IETE President given for the day on "Advanced skill development to the next level – A paradigm shift to amalgamate skills and academics with seamless transitions". **Er Rajeev Srivastava** proposed vote of thanks at the end. Prominent dignitaries attended the programme were from academia, industry & student community.

AURANGABAD

- The Centre celebrated the **68th IETE Foundation Day** on 13th Nov 2021 by organizing an expert talk on "Digital Transformations for Sustainable Developments" under Centre's Lecture Series programme along with Poster Presentation Competition with the theme "Advancing Skill Development to the next level – A Paradigm Shift to Amalgamate Skills & Academics with Seamless Transitions" via online platform. Around 70 participants attended this event. **Prof R R Deshmukh**, FIETE & Governing Council Member of IETE, was the chief guest on this occasion. **Shri Sudhir Sambrey**, Centre Chairman, presided over the program, along with **Dr C Namrata Mahender**, Centre Hony Secretary. Guests and members appreciated the efforts of the Centre for celebrating this event. The program started with Shri Sudhir Sambrey's address and reading out the message from President IETE. Prof R R Deshmukh expressed his thoughts on the Centre's operations and urged members to step up their efforts and offer more skill-oriented courses, since current educational policies require students to be prepared for industrial skills in order to enter the workforce and discover themselves. He urged all IETE members and Executive Committee members to increase Centre's membership base by adding 4-5 new members each. He also discussed the IETE awards, which are offered in a variety of categories, so that members and students are aware of them and actively participate in these awards and activities. Dr Mallu G, postdoctoral fellow at CEPIA, IIT, Kerala, delivered an expert lecture on "Digital Transformation for Sustainable Development" as part of the IETE Lecture Series event. This was the series' 14th lecture. She articulated objectives that will aid in the long-term growth of digital transformation. She addressed applications of Artificial Intelligence and Natural Intelligence in humans for the purpose of achieving sustainable development. She outlined goals for sustainable development and the role that computer scientists may play in assisting the country's overall social and economic development. On the occasion of the 68th Foundation Day, the Centre held the Poster Presentation. This competition drew a total of 25 students. The result was announced following an invited lecture. **Ms Rutuja Dhaygude** went on to win the first award; **Ms Anita Pagare** took home the second prize; **Ms Shivani Raut** managed to steal the third prize; and **Ms Sneha Undare** took home the consolation prize.

BANGALORE

- On 15th Sept 2021, the IETE Bangalore Centre commemorated **Engineer's Day**. The welcome address was delivered by **Dr Shivaprasad Yadav**, Hony Secretary. **Dr MH Kori**, Vice President IETE and Chairman TPPC, spoke about the organization's mission and activities. He also spoke about the launch of **'IETE Bengaluru Magazine'.** Vice Chairman **Dr CV Ravishankar** talked about Engineers' Day. Vice Chairman **Shri CP Dwivedi** welcomed the chief guest, **Prof KR Venugopal**, Vice Chancellor of Bangalore University. Prof Venugopal expressed his joy at being invited to participate in the events of 'Sir M Visveswaraya's' birth anniversary. He stated that he has spent the previous 47 years at the University Visveswaraya College of Engineering in Bangalore, and Sir MV continues to inspire him and countless others. He announced that the college would be declared a deemed university by the Karnataka government in near future. Dr Ravishankar then introduced the guest of honour, **Ms Leena Bokil**, a NASA Honeywell Space Educator. She discussed her affiliation with IETE and delivered a presentation titled 'The Future of Space Engineering.' She discussed her experiences at NASA as well as the accomplishments of ISRO and the future missions it was preparing, such as Gaganyan and asteroid mining. She elaborated on China's notion of an Artificial Moon, career opportunities for recent graduates in space engineering, business opportunities in the industry, space tourism, and space players. On Engineers' Day, the speaker encouraged children to dream big and think large. The Centre Chairman congratulated **Shri P Radhakrishna,** Director, LRDE Bangalore, on his honorary doctorate from Gitam University. Shri Radhakrishna was presented with garlands and a shawl as well as a memento. He expressed gratitude to IETE Bangalore for the gesture and recounted his association with the institution. **Dr YVS Lakshmi**, of C-DoT Bangalore, spoke on future C-DoT's training initiatives and the proposed MoU with

IETE Bangalore. In his remarks, **Shri Satyanandan**, Chairman of the Centre, stated that it had been a very pleasant evening with the participation of so many notable persons and expressed gratitude to all invitees and participants. The vote of thanks was proposed by the Honorary Secretary.

- The **68th IETE Foundation Day** was celebrated on 7th Nov 2021. Following the lighting of the inaugural lamp, Hony Secretary **Dr Shivaprasad Yadav** welcomed the audience and notable visitors. **Shri Satyanandan**, Centre Chairman read out Prof (Wg Cdr) P Prabhakar's profile and requested President IETE to deliver his address on the occasion. Addressing the participants, **Prof Prabhakar** stated that IETE's forefathers created a firm foundation for the institution, which has since extended throughout the country and even beyond. He informed about recently concluded IETE-Industry Innovation Meet and reflected on his own career experiences with skill development. He underlined the need for skills development in the modern era, reconnection between academic credentials and job skills and was of the view that IETE could play a significant part in it and reiterated the need for a clear roadmap for IETE. **Dr Ravishankar**, Vice Chairman, then welcomed the distinguished guest, **Shri Vinod Palakkil**, Regional Dir, PTC, Bangalore. Shri Palakkil provided a quick overview of his organization and highlighted its engagement in skill development beginning with ITIs. He emphasized on the importance of digital transformation and said that post Covid, positive development and an increase in FDI occurred, and all of this necessitated a distinct need for increased skill sets. Companies regard India as a profit center and will require a big number of competent engineers and experienced workers and if not acted soon a large number of jobs would go empty. Digital transformation establishes a connection between the physical and digital worlds in order to optimize products, people, processes, and physical locations. He added that the industrial revolution 4.0 is projected to require five types of talents: digital skills, technology and computer skills, programming skills for robotics and automation, working with tool and technology providers, and critical thinking. A wise engineer would need to understand both the current curriculum and the industry's requirements. The chief guest, **Shri Radhakrishna**, Dir LRDE Bangalore, in his address referred to his longstanding relationship with the IETE. He informed LRDE's working with BEL and private industry to indigenize radars, discussed anti-drone solutions, which include industry engagement, requirement of application of mechanical and other disciplines by Radar systems which would demand a large number of qualified workers. **Shri Renukaprasad,** the awardee of Prof NV Gadadhar Memorial Award for his contribution to the creation of vehicle-mounted radar, gave his address on his research work on **'Fire Control Radars.' Shri CP Dwivedi**, Vice Chairman, introduced the distinguished guest of honour, **Shri MV Rajasekhar**, Dir R&D, BEL, who emphasized the need for digital transformation and collaboration between organizations that specialize in specific fields. Later, the citations for the IETE IRSI awards were read out and presented to the recipients of the 'Main and Young Scientist Awards.' The recepients of other IETE Awards, namely-**Shri Sunil Kumar Vuppala, Dr BK Sujatha,** and **Shri Prikshat Sharma,** were also felicitated and presented the citations and medals. **Dr YVS Lakshmi**, Sr Exec in charge of training, C-DoT, spoke about the MoU signed between C-DoT and IETE Bangalore, indicating how it was a significant move that coincided with the Foundation Day theme of Skill Development. He stated that this agreement would enable both organisations to pool their intellectual capital and infrastructure for the purpose of imparting training. Additionally, the Chairman of IETE designated the day as significant for this reason. **Dr M H Kori**, Chairman TPPC, discussed the IETE University and Skill Development proposals in his address. He stated that while the connection between formal education and skill development programmes has been lacking in the past, IETE will now promote this as a primary objective. Dr Kori, Editor in Chief of the IETE Bengaluru Magazine, requested that the chief guest and guests of honour release the 12th edition. Vice Chairman **Dr CV Ravishankar** gave an overview of the Centre's ISF initiatives. He announced the colleges that took part in ISF-sponsored competitions and cultural programmes, as well as the winners. **Prof HS Bhatia**, Immdt Past Chairman, lauded the three senior members of IETE Bangalore who were scheduled to be honoured at the event but were unable to attend. IETE Bangalore expressed its appreciation for their efforts and wished them well. The Centre Chairman expressed his gratitude to everyone and expressed hope that their collaboration with other organisations would bear fruit. **Shri K S Ravi**, a member of the Executive Committee, proposed the vote of thanks.

BHOPAL

- The Centre organized a webinar on "**Introduction to Cloud Migration and Job Opportunities**" by **Shri Anriban Kundu**, Manager, Product Management at Guidewire Software, San Francisco, USA, on 25th July 2021.

- The other webinar on "**Research and Innovation to Support Sustainable Development Goals**" was arranged on 28th Aug 2021 and conducted by **Prof Celia Shahnaz**, Prof, Deptt of EEE, Bangladesh University of Engineering and Technology, Bangladesh.

- IETE Bhopal Centre in association with Innovation & Incubation Cell, Bundelkhand Institute of Engg & Tech, Jhansi and Atal Incubation Centre- EMPI, New Delhi, organised a national level online event **Smart India Project** on 1.0 during 31st Aug-16th Sep 2021. **Prof Pulak M Pandey**, Dir, BIET Jhansi; **Dr Shahanaz Ayub**, Dean R&D, BIET Jhansi; **Shri Vinod Midha**, CEO, AIC EMPI, New Delhi; **Shri M R Ravindra Yadav**, Technical Outreach Officer, AIC EMPI and **Prof P K Singhal**, Centre Chairman, participated.

- The Dept of ECE, LNCT Group of Colleges, Bhopal in association with IETE Bhopal organized a competition, "**Think outside the Trash**" on 15th Sep 2021, in which students were invited to use their creativity to make best out of waste and shoot a video of maximum 2 minutes depicting the whole process. The competition was open for all the LNCT group students

and participated by 10 competitors. They were judged on their creativity, utilization of resources, artistic composition & design, eco-friendly rating, utility of the product and overall presentation. Winner of the competition were: **Md Arslan Khan** (B Pharmacy 3rd Sem LNCTU Bhopal) and 1st Runner-up: **Ms Shriya Tickoo** (BTech 5th Sem, LNCT Bhopal).

- On the occasion of **Engineer's Day**, 15th Sept 2021, an online competition on "**Innovative Ideas & Projects**" for students was held in collaboration with Deptt of EE, MITS Gwalior and ISF, MITS Gwalior. **Dr Laxmi Shrivastava**, Assoc Prof and Head, Electronics Dept, inaugurated the programme in presence of **Dr P K Singhal**, Centre Chairman; **Dr Vandana V Thakare** (Faculty Advisor-ISF); **Prof D K Parsediya** (Event Coordinator); faculty members of the EE Dept, and students. Dr Laxmi Shrivastava briefed students on Engineer's Day and encouraged them to share their innovative ideas during the competition. Dr P K Singhal made an enlightening presentation titled "Life without Engineering." Dr Vandana Vikas Thakare emphasised the day's significance. At the end of the competition, Shri Anmol Soni, a 2nd year EC student, presented the vote of thanks. Out of 87 participants only 14 competed. The winners included **Shri Deepak Bhardwaji** in first place (II Year), **Shri Vikram Singh Dangi** in second place (II Year), and **Shri Shashwat Tripathi, Shri Samyak Jain, and Shri Yogendra Patel** in third place (III year EC students).

- The Centre conducted a webinar on 19th Sept 2021 on **"स्वयं से जुड़े एवं संवाद करें"**, organized by **Shri Sandeep Pradhan**, Preceptor (Trainer), Hearfulness Institute. The program was attended by the members of IETE along with their family. A **meditation session** was organized under Shri Pradhan for members and ISF students on 21st Sept 2021 on the occasion of **World Peace Day.**

- The Deptt of Electronics at Madhav Institute of Technology & Science, Gwalior, conducted a three day workshop on **"Importance of Meditation in Routine Life"** from 29th Sept 2021-1st Oct 2021 in association with Heartfulness Institute.

- The Centre together along with IE (India) Gwalior Centre, organized a one-day International Conference on "**Advances in Electric Vehicle Technology**" on 3rd Oct 2021. Participants were from different region of the world. Fourteen papers were presented at the conference.

- The Centre along with Heartfulness institute organized a three-day course "**Start up Program**" on "A whole person development for freshers students" during 7th-9th Oct 2021. The program was attended by the students and the faculty members of different colleges.

- A short course on utilization of fuzzy rules for "**Determination of Span of Covid-19, Duration of Maximum Severity & Change of Mutation using Astrological Aspects**" was organized on 10th Oct 2021. **Dr A K Wadhwani**, Prof, Deptt of Electrical Engg was the resource person for the program, and it was attended by about 50 IETE members including students.

- IETE Bhopal Centre organized a **blood donation camp** on 12th Oct 2021 in association with Red Cross Society, Bhopal. Members of IETE and students of ISF donated blood.

- IETE Bhopal organised a short course on "**Beam Forming Networks**" on 24th Oct 2021. **Prof Deep Kishore Parsediya**, Dept of Electronics Engg, MITS Gwalior, was the resource person. The course was attended by the faculty members and students from the different part of the country.

- The Centre in association with Bundelkhand Institute of Engineering and Technology (BIET), Jhansi, organized a program under Mission Shakti 3.0, UP Govt, and Deepanjali Mahotsav Jhansi, to commemorate the birth anniversary of Jhansi Queen Maharani Laxmibai, a symbol of empowered women on 19th Nov 2021. The theme of the program was "**Laxmibai: Epitome of Women Empowerment and Valiancy**". **Dr Rekha Thote**, MD Gynecologist, Mumbai, was the chief guest on this occasion. **Prof Shahnaz Ayub,** coordinated for the event. A number of students recited their poetry on this occasion.

- The Centre conducted an online short course on "**RF Power Harvesting**" for students on 21st Nov 2021. **Shri Shailendra Singh Ojha** from ITM University, Gwalior, was the resource person for the same.

- There was a four-day online workshop on **Yoga & Meditation Lab**, jointly organized by Oriental College of Technology, Bhopal and IETE Bhopal Centre during 11th -14th Sep 2021 in four stages, wherein **Dr Shipam Saxena** directed the programme with 150 participants.

- The Bhopal Centre organized **Sir A J C Bose Memorial Lecture** on 5th Dec 2021 in virtual mode. **Dr Ravi Pratap Singh Kushwah**, Principal Manager Projects, Ace Antenna India Pvt Ltd, Hyderabad, was the guest speaker and delivered his talk on "**Mechanical Aspects of Base Station Antenna**".

BURDWAN

- A **workshop on Single Board Computer** (SBC) was organized by IETE Burdwan Sub-Centre on 4th Sept 2021 through virtual mode. The workshop was conducted by **Dr Debabrata Biswas**, Asstt Prof, Bankura University, West Bengal. About 63 participants attended the workshop.

- A national conference on **Material, Devices and Circuits in Communication Technology** (MDCCT) was held on 29th Nov 2021 to 1st Dec 2021 on Google meet under aegis of IETE Burdwan Sub-Centre. The chief guest **Dr M H Kori**, Chairman TPPC, delivered a talk on different engineering disciplines. **Md Hafizur Rahaman**, Scientist, DRDO, delivered talk on **Tera-**

Hertz. The conference was inaugurated by chief guest and dignitaries. Around 28 papers were accepted for publishing in the conference proceeding with an ISBN number. MTech students, paper presenters, research scholars, professors and scientists from different organizations and institutions attended the conference. Approximately 61 attendees participated in the conference.

CHANDIGARH

- The Centre in collaboration with Atal Community Innovation Centres (ACIC) at Dept of RISE, Chandigarh Engineering College (CEC) Landran, Mohali successfully conducted a one-day workshop in the area of **'Drone Technology'** under the Atal Innovation Mission (AIM), Niti Ayog, Govt of India on 12th Oct 2021. The aim was to raise awareness and give in-depth knowledge about design, development, flying and applications of drones and to motivate students / faculty so that they may get the opportunity & possibility to venture into their own start-ups. Additionally, to give appropriate help, guidance and provide suitable space to work in an Incubator set-up at CEC Landran for start-ups. **Dr PK Awasthi**, Hony Secretary of the Centre, delivered the welcome remarks. In his address, the chief guest, **Shri S C Jain,** Chairman, IETE Chandigarh Centre, discussed this engineering marvel – the drone – and its utility in military border surveillance, security, agriculture, and delivery systems. In the manufacturing of the major drone system, he mentioned the use of technologies such as AI, machine learning, embedded systems, sensors systems, and GPS. He then went over the history of the IETE as well as the benefits of IETE membership for students, corporations, and organisations. He also emphasised the importance of IETE in disseminating high-quality information on the latest developments in electronics, telecommunications, information technology, and computer science engineering. He encouraged students and researchers to come up with creative solutions that would help the Indian economy grow. In his address to the audience, **Shri Narinder Singh Jassal**, Principal, Indo Swiss Training Centre, CSIR-CSIO Chandigarh, suggested that ISTC and IETE, in collaboration with CEC Landran, conduct additional such workshops in the future. **Dr Parveen Singla**, HOD and ISF Coordinator, CGC Landran Mohali, shed light on ACIC Rise Association and about various facilities being provided under Atal Innovation Mission (AIM), Niti Ayog, Govt of India. The first awareness session, delivered was on **Scope of Entrepreneurship in Drone Technology** by **Er Gavakshit Verma**, Founder, Against Gravity Solutions. He highlighted the opportunities in Drone sectors for sustainable economic growth and encouraged students, researchers to come up with technological solutions addressing real-world problems. The second session organized was on **Agriculture Drone/Mini Drones**. Several queries and doubts of the students & staff members were cleared by Er Gavakshit Verma. Both sessions were very absorbing, informative and well received by the participants. Around 70 student participants from lndo Swiss Training Centre, staff members, from ISTC, NIELIT Chandigarh & EC Members of IETE Chandigarh Centre, participated. **Shri D S Chhabra,** Hony Treasurer, IETE Chandigarh Centre, delivered the vote of thanks on the occasion.

- On 2nd Nov 2021, the Centre hosted IETE's **68th Foundation Day,** themed "Advancing Skill Development to the Next Level - A Paradigm Shift to Amalgamate Skills and Academics with Seamless Transition," at its auditorium through hybrid mode. **Shri S C Jain**, Centre Chairman, welcomed **Prof S Anantha Ramakrishna**, Dir, CSIR-CSIO Chandigarh. IETE President **Prof P Prabhakar**, prominent GC Members, past Centre Chairmen, IETE Award winners, ExeCom members, senior corporate and student members, and others were present. The Chairman hailed the visionaries who envisioned an alternative low-cost method of education in the field of electronics and telecommunications, which has evolved into IETE today. It has developed in all aspects over the years and now includes 64 Centres, 7 Sub-Centres, and 19 Professional Activities Centres spread across India and internationally, with a total membership of over 1 lakh. He explained that the IETE Chandigarh Centre, founded 44 years ago in 1977, today has three sub-centers in Jammu, Jalandhar, and Shimla, with around 1,000 corporate members, 11 organizational members, 36 ISF chapters, and over 450 ISF student members. He stated that IETE bestows numerous prizes on individuals and institutions that have excelled in their research and pioneered work for the benefit of society and the advancement of science and technology. He added that on this day, IETE honours senior corporate members who have reached the age of 75 and have been affiliated with IETE for at least 25 years. He expressed his joy at the felicitation of three senior colleagues who have made significant contributions to the development of the Chandigarh Centre. On this occasion, **Prof P Prabhakar**, President IETE presented the 68th IETE Foundation Day message via web conferencing. The message was primarily focused on the subject, in which he emphasized his belief that India's skill development ecosystem is broad, and diverse, giving a range of skill levels to an immensely diverse population. In India, skill development is primarily classified as Education and Vocational Training. The goal is to examine how formal, non-formal, and informal learning can be blended to teach workforce skills and how such combinations can be utilized and acknowledged by industry, employers, training providers, and individuals. He called it a perfect opportunity for all IETE Centers to seize the chance provided by the Nation's Skill Development Mission to expand their technological and economic sustainability. He extended his heartfelt greetings on this auspicious occasion and encouraged all Centers to observe this auspicious day with zeal and passion, involving all students, faculty, ISF's, and Corporate Members, and spreading the IETE's mission and objectives in alignment with nation building toward Atmanirbhar Bharat. **Prof S Anantha Ramakrishna,** Dir, CSIR-CSIO Chandigarh, discussed the actions taken by CSIR-CSIO in the area of skill development, including the establishment of a distinct skill development group to assist anyone in developing a new idea. He also coined a new definition for IETE: I- Innovation and Science/Technology resources; E- for Enabling the Workforce (Teaching, Training, and Technical Skill); T- for Technology and Knowledge Transfer to Industry; and E- for Energy the Economy (Production on scale for market competition & penetration). He emphasized the

importance of IETE in improving skill development and country building. **Dr Satish Kumar**, Senior Principal Scientist, CSIR-CSIO Chandigarh, and Hari Ramji Toshniwal awardee, delivered a presentation on his award-winning work "**Automatic Target Recognition".** He said that Automatic Target Recognition (ATR) is a branch of science concerned with the detection, tracking, and classification of objects in signal streams. The Earthquake Warning System (EqWS) was developed to alert regions of an imminent large earthquake. It is a network of seismic sensing nodes (SSN) comprised of seismic sensors, processors, and network communication. For the purpose of generating the alert signal, SSNs is connected with a Central Control Unit (CCU). He informed that the created technology has been tested on one metro and has the potential to be utilized on other metros throughout the country. The identification and recognition of moving targets has a variety of applications spanning from military surveillance to civic monitoring. Monitoring moving cars and people is a vital component of a wide variety of applications, including surveillance, remote sensing, and traffic monitoring, intelligent transportation systems, human identification, robotics, and rescue operations. The participants responded positively to and appreciated the presentation. **Dr Harry Garg**, Principal Scientist, CSIR-CSIO Chandigarh and recipient of the IETE-Flt Lt Tanmaya Singh Dandass Memorial Award, was unable to present his work due to a health problem. Three senior IETE Fellows were recognized at the function: **Dr Basudeo Prasad (F-092654), Col Satish K Vijra, Veteran (F-116413),** and **Dr Ramesh Chandra Garg (F-045547)**. Over 40 IETE corporate members attended in person, while another 40 joined by web conference. A formal vote of thanks was offered by **Shri DS Chhabra**, Honorary Treasurer, IETE Chandigarh Centre.

CHENNAI

- The Centre celebrated **Engineer's Day** on 15th Sep 2021 with **Dr G Kulanthaivel**, Prof & Head, Dept of ECE, NITTTR, Taaramani, Chennai, as the chief guest. **Prof T J Jeyaprabha**, Hony Treasurer, delivered the welcome address. The guest of honour, **Dr N Venkateswaran**, Chairman, IETE Chennai Centre, gave an interesting presentation on the occasion. The highlights of the programme were the IETE ISF Best Centre Award being given and conduct of a paper presentation / project expo competition.

- **68th IETE Foundation Day** was organized on 17th Nov 2021 at the SRM Institute of Science & Technology, C Block, Auditorium, Vadapalani Campus, Chennai, on the theme "Advancing Skill Development to the Next Level-A Paradigm Shift to Amalgamate Skills & Academics with Seamless Transition". The dignitaries gracing the occasion were: D**r CV Jayakumar**, Dean, E&T, SRM IST, Vadapalani Campus, Chennai, the chief guest and **Shri TV Rajasekar**, Dy Dir, National Skill Training Institute, Guindy, Chennai, the guest of honour. The function started with the welcome address by **Dr N Venkateswaran**, Chairman, IETE Chennai Centre. **Dr K H Sakthi Murugan**, Hony Secretary, IETE Chennai Centre, read out the message from President of IETE for the day. Senior veterans **Shri P Ponmudi (F-052206)** (Retd) Engineer, Doordarshan Kendra, Chennai, was honoured with mementoes as part of the celebration. The function came to an end with the vote of thanks by **Prof T J Jeyaprabha**, Hony Treasurer.

COIMBATORE

- IETE Coimbatore Centre in association with ISF and Deptt of ECE KPR Institute of Engineering and Technology, Coimbatore, organized an online webinar on "**Why IETE? An opportunity to know us better**" on 3rd Sep 2021 for the benefit of faculty members and student members. This program was convened by **Dr M Kathirvelu**, HoD / ECE. **Shri S P Cowsigan**, Asstt Prof / ECE co-ordinated this webinar along with ISF office bearers.

- The Centre organized a research webinar **on Behavioral Analysis of Ransomware under theme of Web and Information Security** on 18th Sep 2021. **Dr R Gowtham** highlighted key concepts behind Web and Information security with detailed explanation about the behavioral analysis of Ransomware and possible solutions.

DEHRADUN

- An online talk on **Evolution of Wifi (802.11) and Latest Trends in Wireless LAN** was held on 11th Aug 2021 by **Shri Surendra Tadi**, Sr Staff Manager, Qualcomm India. The talk was attended by about 40 participants.

- The **DEAL** (Defence Electronics Applications Laboratory) **Products** were displayed at DIT Dehradun, by IETE Dehradun Centre on 27th Sep 2021. The notables present were **Shri SK Jaiswal** (Hony Treasurer) and **Shri VS Lakhera** (Member) from the Centre. The talk was attended by about 50 participants.

HYDERABAD

- The IETE Hyderabad Centre hosted a number of Knowledge Sharing Sessions (KSS) / workshops/ technical activities with subject experts during the last quarter for the period 2020-22, which were as follows:

  - **KSS – 32: Webinar – 54** was conducted on 4th July 2021 through online platform, wherein **Sri P Sudhakar**, Officer on Duty to Secretary, Deptt of Atomic Energy (DAE), graced the event as chief guest while **Dr Balaji Rajendran**, Joint Dir, C-DAC, Bangalore, the keynote speaker, delivered a talk on "Digital Signatures and Public Key Infrastructure" in the presence of about 76 participants. **KSS – 33: Webinar – 55** was arranged on 4th July 2021 through online platform, in which **Dr Goverdhan**, Rector, JNTUH, attended the event as the chief guest. The keynote speaker **Dr S Viswanadha Raju**, Prof & Vice Principal, JNTUHCE, Jagtial, delivered his talk on "Implications of National Education Policy 2020 for Higher Education in INDIA". Around 90 participants attended. **KSS – 34: Webinar–56** was arranged on 4th July 2021 with the chief guest **Shri G Ramesh**, GC Member and keynote speaker **Dr T Muthuramalingam**, Assoc Prof,

Deptt of Mechatronics Engg, Kattankulathur Campus, SRM Institute of Science and Technology, Chennai, Tamilnadu. He spoke on "Mechatronics Approach: Basics to Advancement", the event was attended by a total of 90 participants. **KSS – 35: Webinar–57** was organized by the Centre on 25th July 2021 through online platform with the expert speaker **Dr Nalini**, MSc PhD, who chose to speak on "Uses of Oxygen for Improvement in Patients". Total 76 participants attended. In the **KSS – 36, Webinar– 58,** conducted online, **Shri P Narasimha Rao**, Retd Scientist - G, DLRL (DRDO), spoke on "The Art of Reverse Engineering", with about 69 participants in attendance. The speaker for **KSS–38: Webinar– 61,** held on 1st Aug 2021, was **Shri Venkat T**, Project Manager, ViHaVe Innovations Pvt Ltd, Hyderabad, who delivered his talk on "Introduction to Blockchain Technology". Total 75 participants attended the event. The next knowledge sharing session **KSS–37: Webinar– 59** was organized online on 8th Aug 2021 with **Dr DVSS Subrahmanyam**, Prof, Deptt of CSE, Neil Gogte Institute of Technology, who gave his talk on "Efficiency of Machine Learning Algorithms in Solving Complex Problems". A total of 76 participants attended.

- The Centre celebrated **Independence Day & Haritha Haram** on 15th Aug 2021 with around 36 participants. On this occasion, the Centre's Executive Committee felicitated all the webinar speakers with mementos and plants, who delivered the knowledge sharing sessions, workshops, Endowment / Memorial Lectures and other events.
- A **5- day webinar** was organized by the Centre during 15th Aug 2021 to 19th Aug 2021. Prof (**Dr) Chetan Singh Solanki**, Professor, IIT Bombay & Founder Energy Swaraj Foundation, delivered his talk on "Need and Directions towards Energy Independence".
- The **5th Memorial Lecture of Prof CVS Rao** was delivered by **Dr V Srinivasa Rao**, Scientist 'F', Research Centre Imarat, Hyderabad, on the topic "Development of Antenna Products for Defense Applications" on 22nd Aug 2021 via digital platform.
- The Centre organized the **Teachers' Day** online celebrations on 5th Sep 2021 by arranging a talk by **Dr P S Sarma**, Retd Principal Aurora Engg College, Bhuvanagiri, Hyderabad, who spoke on the role of a Teacher in present education system. It was attended by around 65 participants.
- **Prof K K Nair 17th Memorial Lecture: Webinar – 63** was organized on 12th Sep 2021 and delivered by **Dr Sreelatha P**, Scientist/ Engineer SG, Head, HRDD, Vikram Sarabhai Space Centre (VSSC), Trivandrum. The speaker delivered his lecture on "Instrumentation of Scientific Payloads for Atmospheric Studies- A Designer's Journey".
- **Webinar – 64** was conducted online for **Engineer's Day c**elebrations on 15th Sep 2021. **Prof Syeda Sameen Fatima**, Registrar & Head, Deptt of AI, Anurag University, Hyderabad, attended the event as chief guest and addressed gathering on the importance of Engineers' Day. **Col Rajinder Singh Bains** (Retd), Senior DGM, Quality Assurance in leading PSU, the guest of honour, in his address explained about the Quality of Analysis of products from different aspects. Total 62 participants attended.
- **KSS – 38 Webinar– 65** was organized on 19th Sep 2021 wherein **Shri P Venkatesham**, Chairman & Project Dir, Innovator, Mentor, Research Analyst, delivered a talk on "Future Electric Vehicles Manufacturing and Charging Infrastructure". About 75 participants attended. **KSS – 40 Webinar – 66** was conducted on 26th Sep 2021 through digital platform, in which **Dr Kosiganti Srinivasa Rao**, PhD (CSE), Principal Systems Architect, Tech Mahindra, Hyderabad, delivered a talk on "Big Data and Its Characteristics". Total 76 participants attended. **KSS – 41 Webinar– 67** was also held online on 3rd Oct 2021. On the occasion Prof K Venugopala Rao, Dept of CSE, Maturi Venkata Subba Rao (MVSR) Engineering College, Hyderabad, delivered a talk on "Emerging Technologies and their Applications in Artificial Intelligence, Machine Learning, and Artificial Neural Networks". There were 75 participants in all**. KSS – 42 Webinar – 69** arranged on 3rd Oct 2021 witnessed **Shri Kinnera Kiran**, Senior Technical Officer (2), Process Engineering & Technology Transfer Division, CSIR-Indian Institute of Chemical Technology, Hyderabad, delivering a technical talk on "Applied Artificial Intelligence in Bioinformatics & Robotics" in presence of 72 participants.
- A physical **condolence meeting** was held on 22nd Oct 2021, in which IETE Past President Prof S Narayana, Governing Council Members, IETE Executive Committee Members, Sub-Committee Members, corporate members, and other personnel participated and paid tribute to the departed soul, **Prof K Laxminarayana**, DFIETE.
- **Webinar – 70** was conducted on 24th Oct 2021 to commemorate the **18th Memorial Lecture of Late Sri M Madan Mohan** through online platform. **Dr S Satyanarayana**, CEO & Chief Data Scientist, Algo Prof & Prof and HOD (DS, AI & ML), NRIIT, Vijayawada, was the speaker on the occasion, who spoke on "Dynamic Deep Reinforcement Learning Social Algo Trading Strategies". Total 59 participants attended the event.
- The Centre held a physical celebration of its **48th Foundation Day** and **Best ISF Awards Function** on 10th Oct 2021. **Prof (Wg Cdr) P Prabhakar**, President, IETE New Delhi, was the chief guest and **Dr K P Srinivas Rao**, Chairman, Matrusri Education Society, Hyderabad graced it as the guest of honour. The other dignitaries attending the event were: **Dr T Hanuman Chowdary**, Past President & DFIETE; **Prof B L Deekshatulu**, DFIETE; **Prof S Narayana**, Past President

& DFIETE; **Dr V Gunasekhar Reddy**, GC Member; **Dr K Jaya Sankar**, South Zone Mentor; **Dr Niranjan Prasad**, GC Member, **Prof Baswaraj Gadgay**, GC Member; **Dr K Seetha Ram Babu** (GC Member (Org). The Best ISF Award was won by **Vidhya Jyothi Institute of Technology, Hyderabad; Bharat Institute of Engineering and Technology, Hyderabad**, came in second position, while **St Peters Engineering College, Hyderabad**, came in third. **Ms C V Keerthi Latha**, Asst Prof, Stanely College of Engg and Technology for Women; **Y Rakesh Kumar**, Asst Prof, G Narayanamma Institute of Technology & Science for Women; and **Mr N Abid Ali Khan**, Asst Prof Vasavi College of Engg, were the winners of the **Best ISF Coordinators' Award**. A total of 210 people attended.

- The Centre observed IETE's **68th Foundation Day** and **Prof S Narayana's** 10th Endowment Lecture on 31st Oct 2021 through hybrid mode at IETE Hyderabad Centre. **Prof K Lal Kishore**, Former Vice Chancellor, JNTUA, Ananthapur, was the chief guest in this event and **Dr PSR Srinivasa Sastry**, Outstanding Scientist & Dir, Directorate of Special Projects, DRDO, Hyderabad was the guest of honour. The event was graced by **Prof B L Deekshatulu**, DFIETE, **Prof S Narayana**, Past President & DFIETE, senior corporate members, students from various engineering colleges and executive committee members of the Centre. The chief guest, guest of honor and some senior corporate members were felicitated along with speakers on the occasion. Around 150 participants attended this event.

- **Dr Avaru Venkataramana**, FIETE, Senior Faculty in ECE, Deptt of Technical Education, Government Polytechnic, Siddipet, Telangana, delivered his talk on "Emerging Techniques for ECG Signal Analysis using MATLAB", during **KSS - 43: Webinar – 72,** held on 7th Nov 2021 through online platform. A total 89 participants attended this event. **KSS - 44: Webinar – 73** was held on 14th Nov 2021, wherein **Er Nuli Namassivaya**, Assoc Prof, ECE, MVSREC, Secretary, IETE and BES (I), Hyderabad, delivered a talk on "GNSS-Focus on NavIC & Emerging Demands". Total 92 participants attended this event. For **Webinar – 74,** the Centre conducted **5th Prof Alladi Prabhakar Memorial Lecture** on 21st Nov 2021 through online platform. **Sri Abhishek Singh Shakya**, Scientist – 'E', DRDL, Hyderabad, delivered lecture on "Smart Sensors & Applcations". Total 88 participants attended this event. **Shri Srinivasu Gorti**, Dir Technical, Akshara Enterprises India Pvt Ltd, delivered a talk on "Secure SDWAN (Software Defined Wide Area Network)" for **KSS - 45: Webinar – 75**. This Platinum Jubilee Webinar was held on 28th Nov 2021 through online platform. On this occasion IETE Bi-Monthly Newsletter was released by chief guest **Prof HS Bhatia**, Immdt Past Chairman, IETE- Bangalore Centre. Total 100 participants attended the event.

KANPUR

- IETE Kanpur Centre jointly with IE (India) Kanpur Local Centre, IEEE – UP Section and MedTech, IIT, Kanpur, organized **Royal Charter Day** on 9th Sep 2021 on the theme "Emerging Technology for Air Pollution Controls- Smog Tower". **Shri Gopal A Gupta**, Prime Minister's Research Fellow Design Programme, IIT Kanpur was the chief guest. **Prof J Ramkumar**, FIE, Chairman, IE (India) Kanpur Local Centre, welcomed the participants. **Prof Narendra Kumar Kohli**, Centre Chairman introduced the guest speaker, Shri Gopal A Gupta, who dwelled on the global warming effects, greenhouse gases, air pollution, air quality index AQI, application-based air pollution control technologies such as cyclone, Electro-Static Precipitator (ESP), venturi scrubber, fabric filter etc. He also talked about the system for purification of large volume of air by using available and newly innovated air pollution controls principle called 'smog tower'. He explained that the smog tower is equipped with multiple layers of filters that trap fine dust particles suspended in the air as it passes through them. Rs The multiple layers purify the polluted air before it is recirculated into the atmosphere. Purification, suction, and monitoring units are the primary components of a smog tower. The 2019 China smog tower was designed to capture polluted air from the ground, move it through a fabric filter powered by solar energy, and finally filter air sent to the atmosphere from the top side. This tower is capable of purifying 41,000 cubic metres of water per hour. He added that the Delhi government spent Rs 20 crore to install a smog tower based on US technology in the Anand Vihar area. This tower is currently in operation and will be capable of purifying 1,000 metre cubes of air per second. The speaker said that their research group is currently working on the design and fabrication of an Indian-based smog tower for Kanpur. The design will be implemented with a variety of objectives in mind, including adaptability to changing seasons and atmospheric conditions, energy efficiency, low maintenance, and low cost. He added that their latest invention will undoubtedly contribute to the cleaning of suspended particles in the atmosphere's air and will help to mitigate their impact on our bodies. The program ended with vote of thanks proposed by Dr Rajat Kumar Khare, Hony Secretary, The Institution of Engineers (India) Kanpur Local Centre to the guest speaker and all participants.

- IETE Kanpur Centre jointly with IE (India) Kanpur Local Centre, IEEE-UP Section and Chatrapati Sahu Ji Maharaj (CSJM) University, Kanpur celebrated **54th Engineers' Day** on 15th Sep 2021. **Prof Vinay Kumar Pathak**, Hon'ble Vice Chancellor, CSJM University, Kanpur was the chief guest and **Prof S N Singh**, Former Vice-Chancellor, Madan Mohan Malviya University of Technology, Gorakhpur and Deptt of EE, IIT Kanpur, was the guest of honour. The programme started with lighting of lamp & garlanding of portrait of Maa Saraswati & Bharat Ratna Sir M Visvesvaraya by the chief guest. **Prof J Ramkumar**, FIE, Chairman, Kanpur Local Centre delivered the welcome remarks. **Prof Narendra Kohli**, Centre Chairman, presented the life-sketch of Bharat Ratna, **Sir M Visvesvaraya**. **Dr Brishti Mitra**, Dir, UIET, CSJMU, Kanpur, introduced the chief guest while **Dr Rashi Agarwal** introduced guest of honour to the participants. Prof Vinay Kumar Pathak delivered his keynote lecture on the theme "Engineers for Skill Development & Employment in Combating COVID". A large number of corporate members, students of CSJM University Kanpur, IIT, Kanpur of IE (I) & IETE Kanpur Chapter and invitees from different organizations were in attendance. The programme ended with vote of thanks by Dr Rajat Kumar Khare, MIE, Hony Secretary, IEI, Kanpur.

- The Centre observed IETE's **68th Foundation Day** on 31st Oct 2021. **Dr Amardeep Singh**, Project Scientist, Deptt of Mechanical Engineering, IIT Kanpur was the guest speaker. **Prof (Dr) Janakrajan Ramkumar**, Centre's Hony Treasurer, read out President's message, while **Er Prashant Kumar**, Hony Secretary, introduced the guest speaker Dr Amardeep Singh and Prof (Dr) Janakarajan Ramkumar, the recipient of IETE- Shri Devi Singh Tyagi Memorial Award -2021, to the audience. **Prof Narendra Kohli**, Chairman IETE, Kanpur Centre delivered the welcome address. **Dr Amardeep Singh,** in his address, emphasised the importance of skill development in addressing poverty reduction by increasing employability and productivity, as well as fostering sustainable enterprise development and inclusive growth. He added that the Govt of India has now launched a number of multi-skill development programmes on an open platform, including the Swayam portal, the NIELIT organisation, and central tool room training centres. These open platforms focus on developing and upgrading skills in a variety of fields, including Industry 4.0, digital and advanced manufacturing, cyber security, and advancements in medical technology. He then discussed the nation's track record in dealing with issues resulting from the rise in unemployment. Within technology-driven industries, the digital revolution is a viable solution for increasing connectivity and collaboration. Internet services are reinventing contemporary work culture as a result of the rise of cloud computing and data sciences. Additionally, the rise of e-commerce and internet businesses has provided local stores, retailers, and producers with an opportunity to leverage trade digitization. Thus, skill development in these areas is a critical step that we must take. Dr Singh concluded by stating that with increased connectivity and remote collaboration, the pandemic's effects on unemployment have been gradually reversed through companies' hiring intentions, and there is now a significant paradigm shift. **Prof (Dr) Janakrajan Ramkumar** presented his award-winning work on metamaterials, which are artificial effective homogeneous electromagnetic structures that exhibit properties not found in naturally occurring materials and are used in a variety of fields, including the design of highly efficient wave absorbers. Microscopically, these absorbers are composed of a resonant unit cell that is responsible for the absorption of the incident wave in a specific frequency band. The absorption frequency is proportional to the dimension of the unit cell, which can be varied to suit the application. The primary objective of this study is to fabricate a metamaterial microwave absorber (MMA). Additionally, an effort has been made to develop cost-effective fabrication techniques for metamaterial infrared absorbers (MIR). These absorbers are especially interesting due to their widespread use in stealth technology. On this occasion, Centre's senior member, **Er B K Karmakar (F-047824)** IETE

Kanpur Centre was felicitated. Vote of thanks was presented by Er Prashant Kumar, Hony Secretary, IETE Kanpur Centre.

KOCHI

- The Centre observed the **68th IETE Foundation Day** via digital platform at the ISF of Christ College of Engineering, Irinjalakuda, on 20th Nov 2021. The welcome address was delivered by Shri Tony C Thomas, ISF staff coordinator. **Shri M N Narayanan**, Vice-Chairman of the Centre, read out the day's message from President IETE. **Fr John Paliakara** CMI, Executive Dir, Christ College of Engineering, delivered the opening remarks, while **Dr Sajeev John**, College Principal, delivered a special address. During the occasion, **Shri S Vijayan Pillai (F-150969)**, senior IETE member and Dir, NPOL-DRDO, Kochi, was felicitated. On behalf of the gathering, **Shri C Krishnakumar**, Centre Chairman, congratulated the senior member. **Shri S Vijayan Pillai** shared memories from his journey as a student, professional, and administrator in his reply speech. He urged students to seize opportunities that come their way as a result of their hard work and perseverance. The chief guest was **Shri Arun Alex**, Coordinator-Industry Attachment Cell, APJ Abdul Kalam Kerala Technical University and he was introduced by Dr Ansiya Eshack, the IETE Kochi Centre's Hony Treasurer. The chief guest in his keynote address on "Taking Skill Development to the Next Level-A Paradigm Shift towards the Integration of Skills and Academics through Seamless Transitions", emphasized on the importance of increasing students' employability and described various ways in which the Kerala Technological University and the industry attachment cell were working to accomplish the goal.Vote of thanks was proposed by **Dr Manju Bhaskar**, Hony Secretary. The programme was streamed live through YouTube. More than 200 participants including IETE Members, ISF Staff, faculty and students attended the programme.

- A **webinar on** "**The First Leap-Success in Learning**" organized by Dept of ECE in association with IETE & IIC, was conducted as a part of improving the presentation skills of students. The session was conducted through zoom platform on 2nd Oct 2021. **Shri Alex Mathew**, Regional Mgr and Chief Trainer, T-Horizon, Kochi, was the resource person. The program was coordinated by **Ms Linu Babu P** & **Ms Bency Varghese A** , Asst Profs, Dept of ECE, IESCE. The program started with welcome address by **Ms Rachana M K**, HOD in charge, ECE Dept, IESCE. Shri Alex Mathew discussed the impact of the engineering sector on society in the current scenario during the session. He inspired students by discussing the opportunities available to engineering graduates in everyday life. He also advised the students to be more active and enthusiastic in their efforts to improve their skills. He stressed the importance of professionalism in life and work, and he offered advice on how to improve their presentation skills in university exams. The session was interactive, with students actively participating. During the closing session, the students expressed their deep appreciation and satisfaction with the event. **Ms Devika Narayanan**, S4 ECE student, proposed the vote of thanks to Shri Alex Mathew and expressed gratitude to the management, Principal, Coordinators, faculty and all participants for their continuous unending support and cooperation in making this event a success. Participants were given the feedback form to fill and return. The entire session was effective, and the students were technically and professionally motivated.

- On 31st Oct 2021, the IEDC Cell, in collaboration with the IETE of IES College of Engineering, hosted **EI-DeX Talks 2.0**, which was led by **Dr Ajay James,** IEDC Nodal Officer, GEC, Thrissur. Keeping current protocols in mind, the session was held on Zoom, with a live stream on YouTube. IEDC Chief Resource Officer **Shri Irene Shajan** opened the session with inspiring words and a silent prayer. **Shri Amal K S**, IEDC Chief Operations Officer, then welcomed the audience. **Dr Brilly S Sangeetha,** Principal of IES College of Engineering, graced the inaugural session by launching the new season of EI-DeX Talks in her address. Following that, the distinguished chief guest, **Dr Ajay James**, a well-known innovator and mentor of the startup ecosystems present in the state's Technical Institutions, was invited to begin the discussion. Dr Ajay James, Asst Prof in the CSE Dept at GEC, Thrissur, also serving as a Nodal Officer and Faculty Coordinator for various cells at GEC, Thrissur. The program's goal was to help students come up with ideas for projects that could later be turned into startups. He asked them to concentrate on project-based rather than research-based ideas. The mainstays of ideation, he pointed were observation, socialising, reading, and surfing the internet. Similarly, design thinking must proceed in the following order: empathise - define - ideate - prototype - test. He also suggested that the daily newspaper is the best place to look for real-world problems. The generation of ideas to break new ground can be accomplished through the use of a novel technique or through the combination of various ideas/products. A user-centered approach to problem solving would be successful as a startup for a long time. Add-on skills in interdisciplinary fields, as well as problem-solving abilities, could improve the ideation process. He briefed the various funding schemes for cutting-edge projects, in addition to providing insights into the various projects carried out by GEC Thrissur students. As the chief guest was friendly and encouraged questions, the volunteers actively participated and interacted. In his vote of thanks, **Mohammed Shammil P**, IEDC Chief Technical Officer, expressed heartfelt gratitude on behalf of the IEDC team. At the end of the session, participants were given a feedback form on which they were asked to share their thoughts on the event.

- An online Workshop for beginners "Creat Your First Electronic Products" was organized at IES College of Engineering on 26 Aug 2021. A welcome address from **Ms Rachana MK**, HOD-Asst Prof, ECE Dept, IESCE, followed by an introduction speech from Principal-**Dr Brilly S Sangeetha**, IESCE. **Ms Rasha Jalaludeen**, an executive student member of the IESCE's ISF, introduced the resource persons who demonstrated how an idea can be transformed into a product. **Ms Devika Narayanan**, an S4 ECE student, proposed the vote of thanks. In the concluding session, participants expressed their deep appreciation and satisfaction with the event. All participants completed an online

attendance form, and E-certificates of participation were issued. The entire session was effective, and both students and faculty members gained technical proficiency.

KOZHIKODE

- On 16th Sep 2021 a webinar was conducted on **Career path in Machine Learning** as a part of **Engineers' Day** organized by AECE MESCE in association with IETE Kozhikode Sub-Centre. The chief guest **Shri Karthik K,** Engineer Mgr, Innovation Incubator Advisory conducted the session. Dr Mredhula L, Hony Secretary, welcomed the gathering. A total of 45 students attend the event.

- A webinar on **Big Data – Spark/Advanced Technologies and Use Cases** was held on 7th Oct 2021. **Mr Karimulla Shaik**, Enterprise Data Architect, TCS, was the chief guest on the occasion. **Dr Sabiq PV**, Chairman of the Sub-Centre, delivered the welcome address. **Dr Thushar** provided a brief overview of Big Data in his address. He discussed Spark, which makes use of cluster computing for both its computational (analytics) and storage capabilities. Finally, he concluded the talk by providing additional examples of how Big Data can be used. The vote of thanks was delivered by **Shri Hemand E P**.

- A webinar on '**Exploring and Establishing Career in Semiconductor'** was organized by the Sub-Centre, jointly with the Association of ECE, MES College of Engineering (MESCE), Kuttippuram on 22nd Oct 2021. **Er David Khanna**, CEO & Founder of a startup in Semiconductor & Embedded Services, delivered a talk. **Dr Mredula Pradeep,** Hony Secretary, IETE Kozhikode Sub-Centre welcomed the chief guest and participants to the session**. Dr Sabiq P V**, Chairman, IETE Kozhikode Sub-Centre addressed the audience. **Shri Hemand E P** delivered the vote of thanks. A total of 45 students attended the event.

- An online workshop on **Design Thinking and Resume Preparation** was organized by IETE Kozhikode Sub-Centre in association with IEEE Malabar Sub-section & KMCT College of Engg for Women, Kozhikode on 23rd Oct 2021. The event was named as **Empower 5.0**. **Dr Sabiq P V**, Chairman Sub-Centre, inaugurated the program, which was conducted in two sessions. The first session was on D**esigning the Future – Design Thinking Simplified**. The resource person for the program was **Shri Rajith Karunakaran**, Design Thinker, Corporate Trainer (Grade A, MEPSC), Regional Mentor of Change (Atal Tinkering Lab), Adobe Creative Educator (Level 2). He started his session by stating the idea of design thinking, advanced design thinking concept. He discussed the qualifications for becoming a human-centered designer. In the afternoon session, the speaker, **Shri Rajith Karunakaran** discussed the A**rt of Creating an Impeccably Written Resume**. He offered advice on how to write a CV for a fresh graduate. He also clarified the distinction between a curriculum vitae and biodata. The program ended with concluding remarks from **Ms Nutan Hegde**, Dean Academics, KMCT College of Engineering for Women. A total of 75 students attended the program.

MHOW

- The IETE Sub-Centre organized talks on "**Low Cost SDRs and their uses**" and "**Swarming: Redefined Air Threat & Challenges to develop Counter Measures**" on the occasion of **Engineers' Day** on 15th Sep 2021. These talks were delivered by **Maj Suresh**, FCC&EW, MCTE and **Capt Mohit Yadav**, AAW, MCTE at lyappa Hall, MCTE, Mhow and attended by students & faculty of MCTE, Mhow.

- The IETE Sub Centre, Mhow organized an address on "**Quantum Info Tech and Its Military Application**" on 18th Oct 2021 by **Lt Col Kuldeep Singh**, FCE, MCTE at lyappa Hall, MCTE, Mhow. This talk was attended by students & faculty of MCTE, Mhow.

- The talk on "**Evolving Nature of Space Operations**" was organized by the Sub-Centre on 16th Nov 2021 and it was delivered by **Maj S K Yadav** at lyappa Hall, MCTE, Mhow. The talk was attended by the students & faculty of MCTE, Mhow.

MUMBAI

- IETE Mumbai Centre celebrated IETE's **68th Foundation Day** on 13th Nov, 2021 at L&T Skill Trainers Academy, Madh. The event began with a welcome address from **Shri P B Walinjkar**, Centre Chairman. **Dr H S Gambhir**, Vice Chairman of the Centre, read out the message from President IETE. **Shri K Ramakrishnan**, the function's chief guest, addressed the gathering on the **importance of skill development of India's 'Make in India' initiative**. He discussed the various schemes initiated by L&T in this domain. The keynote address was delivered by **Shri Bhuvansingh Damahe**, Head, L&T STA, on the topic of **Advancing Skill Development**. He discussed various schemes launched by the Govt of India to assist students in enhancing their skills and becoming industry-ready. The Chairman congratulated the guests. Due to the fact that senior IETE member **Shri SS Vohra** (F- 030754) was unable to attend due to ill health, **Shri Karnani** accepted responsibility for felicitating him at his residence in accordance with HQ guidelines. On this occasion, two women achievers received certificates, and eight ISFs out of thirty received the Best ISF Award. **Shri N K Karnani**, convener of the TPC, presided over the programme. Around 40 participants attended the event, including IETE members, principals, professors, and subject experts. Centre's Hony Secretary, Dr Bhise, proposed the vote of thanks.

NAGPUR

- The Centre celebrated **Engineers' Day** on 24th Sep 2021 via online mode. **Dr SR Chaudhari**, Hon'ble Vice Chancellor, RTMNU, Nagpur and **Dr VT Ingole**, former Principal, PRMITR, Badnera, (F-120682) were felicitated on this occasion. Dr S R Chaudhari represented as the program's chief guest and expressed gratitude to the IETE Nagpur Centre for organising various activities for the benefit of students. He mentioned that the IETE Centre could collaborate with RTMNU and organise activities for the benefit of students. **Dr VT Ingole,** the recipient of the "Lifetime Achievement Award- 2021", was the guest of honour guest. He delivered an expert presentation titled "How to Explore

Innovation in Engineering and Technology". He detailed his career path and his contributions to research and innovation. He stated that as a chief design engineer at Crompton & Greaves, he was responsible for the design of numerous electrical appliances such as ceiling fans, table fans, alternates, and direct current machines. He has filed 35 Indian patents and published 60 articles in peer-reviewed journals on a national and international scale. He is a nature enthusiast and independent ornithologist. IETE recognised his contributions to research and innovation and bestowed upon him a lifetime achievement award. The Centre Chairman, **Dr Sanjay Badjate,** in his introductory speech mentioned about the Centre's activities. **Dr Nilesh Kasat**, IETE West Zone mentor; **Dr J W Bakal**, IETE President; **Dr Ajay Thakare**, newly elected IETE Vice President; **Dr BP Joshi**, IETE Past Chairman; and **Er Ajay Sawatkar**, retired senior GM, BSNL, all attended the event. **Dr Suresh Rangankar**, Hony Secretary; **Prof Harshwardhan Kharpate**, Hony Treasurer; and **Dr Vijay Mankar**, Vice Chairman, IETE Centre Nagpur, all contributed to the program's success. The programme was moderated by **Prof Ashavini Deshmukh. Dr R D Thakare, Dr P R Deshmkh, Dr P M Jawandiya, Dr Milind Khanapurkar, Dr Salankar,** and **Dr Soni Chaturvedi**, as well as members of the executive council and ISF coordinators, joined online for the programme. The programme was coordinated by **Dr Salim Chavan**, Vice Chairman, IETE Centre Nagpur, who also presented the vote of thanks.

NASHIK

During the period under review, the Dept of Electronics & Telecommunication at K K Wagh Institute of Engineering Education & Research (KKWIEER), Nashik, in collaboration with the IETE Nashik Sub-centre, organised the following activities.:-

- A webinar on '**Recent Trends in Cellular Communication**', conducted by **Dr M H Kori**, Vice –President, IETE on 5th July 2021.
- Webinar on "**IoT Applications and Home/Industrial Automation Opportunities**" by **Er Siddarth Kulkarni,** Director Wizzo Smart Solutions Pvt, Ltd, on 31st Aug 2021.
- The Entrepreneurship Development Cell, ET Dept of KKWIEER, Nashik in collaboration with the Sub-Centre organized yet another webinar on "**How to Become an Entrepreneur?**", which was presented by **Er Rohit Bagad**, Founder and CEO of Inuxu Digital Media on 31st Aug 2021.
- On 9th Sept 2021, a workshop was held on "**Troubleshooting and maintenance of Electronic Instruments**" conducted by **Asim Kumar Saha**, Service Mgr, Customer Support (Tech), APLAB ; **Shri Prashant Sawant**, Sr Mgr, APLAB and **Aishwarya R Mhaske**, Service Engr.
- A guidance session on "**How to get placed in IT Company with ease**", given by **Shri Neeraj Ade,** Sr Mgr, Profound Edutech Pvt Ltd, Pune was held on 9th Sept 2021.
- On 15th Sept 2021, **Engineers' Day** was celebrated by hosting a national level webinar on "Creativity and Innovation" by **Dr Nakul Sharedalal**, IP Advocate, Ahmedabad.
- Pravara Rural Engineering College, Loni, hosted a webinar titled "An Insight into Space Science and Technology" presented by **Er Apurva Jakhadi**, Vice Chairman-IETE Nashik Sub-Centre, NASA Space Educator, and Member-UN Space Generation Advisory Council, Austria on 17th Sept 2021.
- On 17th Sept 2021, a webinar for women was organized on "Female Entrepreneurs: Opportunities and Challenges" by **Mrs Sujata Prashant Bachhav**, CEO, Aarya Innovtech Pvt Ltd and Proprietor Aarya Technologies, Nashik.
- The webinar on "**Aptitude Preparations**" was organized by the resource persons **Sagar Nikam & Madhura Shelar,** Directors, Excellence Learning Centre Pvt Ltd, Nashik, on18th Sept 2021.
- Webinar on "**From Sell out to Sail Within**" by **Manali Malpani**, Application Developer with IBM in Dublin, Ireland was organized on 21st Sept 2021.
- Webinar on "**Skill Set Needed for Professional Career**" by **Mrs Meenakshi Kulkarni**, Founder Adept Vision was arranged on 25th Sept 2021.
- Career Development Cell of ET Dept of KKWIEER, Nashik in collaboration with IETE Nashik Sub-Centre organized a webinar on "**Career Prospects after BE & GATE Orientation**" by **Shri K N S Hemanth, a s**ubject expert at OHM, AIR 4 in IES, State 5th in AP TRANSCO, Alumni of BITS, on 29th Sept 2021.

PALAKKAD

- The Centre organized **68th IETE Foundation Day** on 13th Nov 2021 with **Dr Sukomal Dey**, Asst Prof, IIT Palakkad, winner of **Smt Ranjana Pal Memorial Award 2021** as the chief guest. **Dr C Pradip**, Past Chairman welcomed the participants. **Dr V Devi**, Chairperson IETE Palakkad & Principal of Royal College of Engineering & Technology presided over the function. She explained in detail about IETE and its activities. **Dr N Leena**, EC Member, read out the President's message for the day. **Shri CK Haridas**, Founder Chairman & DFIETE, introduced the chief guest to the audience. **Dr Sukomal Dey** stated in his keynote address that skill development and engineering education should go hand in hand for the development of technologies in the twenty-first century. He went into great detail about the significance of the recent digital transformation in all fields. He also emphasized that the students' "success mantra" is dependent on their mindset throughout the stages of teamwork, thinking on problem and technical arguments rather than financial support. A paradigm shift in the educational system is also required for this digital era of communication, he added. **Dr K Geetha Varma**, Immdt Past Chairperson, delivered the felicitation speech. Shri Beji K Mathew, Hony Secretary proposed vote of thanks. A good number of engineering students from various colleges attended the function.
- The Centre co-hosted a two-day hands-on workshop on IoT with the IEDC, ECE, and EEE departments of Al Ameen

Engineering College, Shoranur, on 6th and 7th Dec 2021. **Prof P Bindhu**, HoD, ECE Dept, inaugurated the workshop. **Prof Nasid K** welcomed the participants, and other speakers included **Prof O Shabab**, HoD, EEE Dept, **Asst Prof Muhammad Niyas**, and **Asst Prof Nufail K**. The resource person was **Shri P Suresh**, Hony Treasurer Palakkad Centre. The workshop drew a total of 40 students. **Dr K Geetha Varma**, Immdt Past Chairperson IETE Palakkad Centre and Principal of the College, inaugurated the valedictory function. **Dr VP Sukumaran Nair**, HoD Mechanical Dept, delivered the felicitation address. The participants commented that the session was extremely beneficial for developing their academic projects and that this type of hands-on session should be conducted on a regular basis to help them improve their skills. The certificates were distributed to the event's attendees.

RAJKOT

- An online national level workshop on "**Remote Sensing and GIS Application**" was organized on 21st Aug 2021 at the Dept of ECE at VVP Engineering College, Rajkot (Org Member) in association with IETE Rajkot Centre, Dept of Science and Technology Govt of Gujarat (DSI), and Gujarat Council on Science and Technology (GUJCOST). The event was sponsored by GUJCOST. Experts for the events were: **Dr Sanjay K Jain**, Scientist G, HoD, Water Research System Div, National Hydrology Project, National Institute of Hydrology Roorkee, Uttarakhand and **Dr Vishal Singh**, Scientist C, Water Resource System Div, National Institute of Hydrology, Roorkee Uttarakhand and Ministry of Jal Shakti Dept of water resource RD & GR. This workshop attracted 152 participants, including 34 faculty members and 115 students from UG, PG, and research scholars from across Gujarat and beyond. **Dr Sanjay Kumar Jain** introduced remote sensing, resolution, image interspersion, image enhancement, lend feature identification, satellite data, digital elevation model, flood forecasting and flood mapping, and snow cover detection in the first phase. **Dr Vishal Singh** discussed the second phase, which included an overview of open data sources, earth exposure, the Alaska satellite facility's web portal, the Indian water resource information system, river basins, and global glacier data. The Managing Trustee VVPEC, the Principal VVPEC, and the Office Bearers of the IETE Rajkot Centre encouraged and commended participants on their participation in this national level workshop. Authorities expressed gratitude to both distinguished scientists for sharing their expertise/knowledge. This online National Workshop was coordinated by **Dr Charmiben Patel**, HOD EC, **Dr Vishal D Nimavat**, Assoc Prof & EC Member IETE Rajkot Centre & **Prof Sheron H Christy**, Deptt of E & C, VVP Engineering College.

- The IETE Rajkot Centre celebrated the **IETE's Foundation Day** on 16th Nov 2021 with a Google meet. The Centre provided necessary publicity and communicated the programme to members, students, local engineering/technical institutions, and interested technical personnel from industries. The dignitaries included **Dr M H Kori**, Vice President & Chairman TPPC IETE, **Shri R M Makwana**, Chairman IETE Ahmedabad Centre. The Office Bearers IETE Rajkot Centre, members & students were among others who attended the meet. It was commemorated with a webinar titled "Advancing Skill Development to the Next Level - A Paradigm Shift to Amalgamate Skills and Academics with Seamless Transition". **Prof (Dr) Nilesh B Kalani**, Director, Internal Quality Assurance Cell (IQAC), R K University Rajkot, delivered the keynote address. The address was educational. **Prof (Dr) Atul M Gonsai**, Chairman IETE Rajkot Centre, opened the programme with a welcome address and a history of IETE up to the present day. **Dr Rahul D Mehta**, IETE Rajkot Centre's Hony Secretary, read out the president's message. Dr Divyesh Keraliya, Hony Treasurer of IETE Rajkot Centre, presented a vote of thanks. The programme was moderated by Er Mohit Parbat, IETE Rajkot's EC Member. IETE members and students in attendance expressed their perspectives on the subject during a group discussion.

SIVAKASI

- The IETE Sivakasi Centre hosted the **First Techno Blaze (2021-2022)**, a lecture and group discussion in the Computing Facilities, Dept ECE, Mepco Schlenk Engineering College, Sivakasi, on 12th July 2021. The function was presided over by **Dr S Syed Ameer Abbas**, Chairman, IETE Sivakasi Centre. **Dr W Sylvia Lilly Jebarani,** Centre Hony Secretary, welcomed the gathering and introduced the day's speaker, **Dr A Sivanantha Raja**, Prof, Dept of ECE, Alagappa Chettiar College of Engineering and Technology, Karaikudi, who delivered a talk on 'Challenges in Wireless Optical Communication' and led a group discussion on the subject. The presentation was attended in person by approximately 35 IETE Corp members from the Centre and Office Bearers. The presentation began with a video demonstration of how wireless optical communication can help prevent highway accidents caused by mist and fog. The speaker sparked a group discussion among corporate members about the advantages and disadvantages of radio frequency communication. He discussed in detail each component of an optical communication system, including state-of-the-art architectures and research challenges. He also discussed his research experience with optical wireless systems during his presentation. He briefed the audience on FSO, (freespace optical communication) and also discussed WLEDs as a possible replacement for LASER. In a nutshell, the audience was treated to an informative session on wireless optical communication, a rapidly growing field of research. The session concluded with a vote of thanks from Dr R Ahila Priyadharshini, Hony Treasurer, IETE Sivakasi Centre.

- The **Second Techno blaze** (2021-2022), a lecture cum group discussion was organized on 9th Aug 2021. The notables present were **Dr S Syed Ameer Abbas**, Chairman, IETE Sivakasi Centre; **Dr W Sylvia Lilly Jebarani**, Hony Secretary of the Centre. **Dr G Athisha**, Prof and HoD of ECE at PSNA College of Engg & Tech, Dindigul, served as the day's resource person, delivering a lecture on the topic 'Wireless Body Area Networks (WBAN) and their Applications' and facilitating group discussion. The presentation was comprehensive and exhaustive, covering the system architecture, cross-layer protocols, user requirements, open research areas, and wireless body area network applications. She

also discussed the need for energy conservation and the mission's energy-efficient protocols. She discussed the frequency bands for WBANs and the EMI filters required for sensor implantation. In a nutshell, the audience was treated to an informative session on WBAN, a rapidly growing field of research. The session concluded with a vote of thanks from Dr R Ahila Priyadharshini, Hony Treasurer, IETE Sivakasi Centre.

- **Shri T Devakumar**, Asstt Prof (Senior Grade), Deptt of ECE, National Engineering College, Kovilpatti, served as the resource person for the **Third Techno blaze** (2021-2022) on 9th Sep 2021. He presented a lecture on 'Essential I/O Interfacing Concepts in Embedded Systems' and led a group discussion on the subject. His discussion began with basic I/O and progressed to port-mapped vs memory-mapped I/O, as well as DMA. He discussed data transfer in character and block modes, as well as I/O subsystems and functions. He presented associating devices with device drivers succinctly.

- On 29th Sept 2021, a three-member team of Angel Investors from STER, Chennai paid a visit to the campus to identify, nurture, and fund innovative student projects, as well as to instil an entrepreneurial culture among stakeholders. **Shri D Ravichandran**, Founder and President of Candor Consultants in Chennai; **Shri Kumar Ekambaram**, Principal Consultant and Chief Executive Coach; and **Shri Raj Prasad**, Entrepreneur in the Automation Domain comprise the members' team. The event took place in the ECE Seminar Hall. This was their second visit to the campus, following their visit on the 26th & 27th of July 2021 to promote an entrepreneurial culture among the campus students. During their visit, the team was assisted in evaluating the ideas by **Dr S Syed Ameer Abbas**, Prof/ECE, and **Dr J Senthil Kumar**, Assoc Prof/ECE. Following the introduction of the guests, progress monitoring of the previously evaluated and assessed four ideas during 26th – 27th July 2021 was initiated. The experts mentored those ideas (Fermented Black Rice Noodles, Bronchalers, Smart Bio Wear, and Pulmonary Imaging with IoT) in one-on-one discussions with the student team, technical, and start-up mentors. Following the one-on-one discussions with those, an online presentation session featuring students from various departments was held. To the visiting team of experts, the students presented their innovative ideas and proofs of concepts. During the presentation, the visiting team was joined by EDC members and mentors of student projects. A total of 25 concepts were presented. After the presentation of other ideas, the experts mentored the first four ideas (Fermented Black Rice Noodles, Bronchalers, Smart Bio Wear, and Pulmonary Imaging Using IoT). They advised students to develop a road map for implementing their ideas successfully. The expert team from STER, Chennai's visit was truly eye-opening for the students and faculty members in terms of identifying the core problem faced by end users, exploring innovative solutions, and building them into a successful end product. They have paved the way for the investigation of financial assistance for the effective prototyping and commercialization of ideas, thereby propelling their careers as successful entrepreneurs. As a next step, the team promised one-on-one interaction with students who presented promising ideas.

- The Centre commemorated the **68th IETE Foundation Day** at the Mepco Schlenk Engineering College campus in Sivakasi on 8th Nov 2021. The gathering was welcomed by **Dr W Sylvia Lilly Jebarani**, Hony Secretary, IETE Sivakasi Centre. The programme drew approximately 50 IETE corporate members. **Dr Syed Ameer Abbas**, Chairman, IETE Sivakasi Centre, read the message from IETE HQ in New Delhi. The message discussed the enormous gaps between industry requirements and engineers' skill levels as a result of insufficient training infrastructures, an ineffective mix of skills and education, and limited industry interfaces. Additionally, the message discussed the importance of combining formal, non-formal, and informal learning to develop workforce skills, as well as the ways in which such combinations can be used and recognized by industry, employers, training providers, and individuals. Additionally, it mentioned the National Skills Qualifications Framework (NSQF), which organizes qualifications into a hierarchy of knowledge, skills, and aptitude levels. These levels, which range from 1 to 10, are defined in terms of learning outcomes that the learner must possess regardless of whether the learning occurred in a formal, non-formal, or informal setting. **Dr S Selva Nithyanandhan**, ISF Coordinator, welcomed the speaker, **Er B Amudhan**, GM, HCL Technologies Ltd, Chennai. Er B Amudhan delivered the Foundation Day special lecture titled "Advancing Skill Development to the Next Level – A Paradigm Shift to Amalgamate Academics and Skills with Seamless Transition". He educated corporate members about Miller's Pyramid, VARK learning styles, Market Absorption styles, and skill half-life. He elaborated on these concepts, which completely justified the theme of the Foundation Day lecture. His explanation was truly enlightening for all those who attended the celebration. He addressed the critical issues / challenges and exhaustively discussed the issues, as well as the role of students, faculty members, and institutions in this process of skill updating. The Achievement Award was given to ISFs that enrolled the greatest number of student members during the academic year 2020 and 2021. **ISF of Mepco Schlenk Engg College, Sivakasi** received the first award with highest number of ISF membership award, having a total of 537 members. The **ISF of Kamaraj College of Engineering and Technology, Virudhunagar** came in second place with a membership of 278. **Dr G Indumathi**, Immediate Past Chairperson, IETE Sivakasi Centre, presented a memento to guest speaker **Er B Amudhan** and presented the ISF membership awards for the highest membership levels. Dr R Ahila Priyadharshini, Hony Treasurer, IETE Sivakasi Centre proposed the vote of thanks. The program ended with the recitation of National Anthem.

TRIVANDRUM

Dr Chinmoy Saha, Associate Professor, Department of Avionics Indian Institute of Space Science and Technology, Ministry of Space, Government of India Thiruvananthapuram, Kerala, was the winner of IETE Prof S N Mitra Memorial Award-2021. He delivered his award lecture on **"Trends, Techniques, and Future Challenges in Antennas Engineering for Ground, Space, and Versatile Applications",** at a function organised by IETE Trivandrum Centre on 11th Dec 2021.

Dr Saha's address took a broad look at recent trends and future challenges in antenna engineering. The growing demand for wireless communications in a variety of sectors, including space, ground, defence, civilian, and industrial, necessitates the redesign of wireless systems to accommodate a very broad spectrum of needs. These systems require small, low-cost antennas capable of operating at multiple frequencies and incorporating a variety of features. His presentation covered all facets of antenna and system design for a range of applications from space to ground. Additionally, his talk highlighted and demonstrated their group's research contributions to the field of applied electromagnetics over the last two decades.

The speaker has already been presented with the IETE S N Mitra Memorial Award during an online Annual IETE Convention in September 2021. Biography of the awardee is available at https://www.iist.ac.in/avionics/chinmoysaha.

VADODARA

- The IETE Vadodara Centre launched a webinar series titled "**Let's Know Our Institutions**". Each session of this series features speakers from various Indian institutions or multinational corporations with a presence in India who introduces their institution and discusses its significance in the field of engineering and technology. This series thus far featured EME, ISRO, NIC and DRDO. **Dr Anil Bhardwaj**, Director, Physical Research Laboratory (PRL), Ahmedabad, introduced Physical Research Laboratory in the fifth session of the aforementioned series. This time it was a one-and-a-half-hour session scheduled on Google Meet for 18th Sept, 2021. Following Hony Secretary **Dr Sorum Kotia's** opening speech, Chairperson **Dr Mamta Padole** extended a formal welcome to the speaker and other guests. Additionally, she gave a brief overview of PRL and introduced the speaker. Dr Anil Bhardwaj began by proudly informing the audience that PRL is currently celebrating its diamond jubilee year. Beginning with PRL's establishment, its scientific decadal milestones, and the most recent research being conducted at PRL in various areas of Physics, the speaker explained why PRL is referred to in India as the "cradle of space science". It was the pleasure to watch videos depicting solar flares and Coronal Mass Ejections, as well as those depicting various PRL lab facilities and observatories. During the webinar, 28 participants were present, including a number of senior-level professionals, EC members, and students. Finally, Dr Sorum Kotia, Hon Secretary, IETE, Vadodara Centre, proposed a vote of thanks.

- As part of the above series, IETE Vadodara Centre organised a **field visit** to **Vadodara Heavy Water Plant** (HWP) on 9th Oct 2021. The HWP, located on the outskirts of Vadodara, was reached by a group of 33 participants. The group included nine members of the EC, including Chairperson **Dr Mamta Padole**, Vice Chairman **Shri Yashpal Goyal**, Hony Secretary **Dr Sorum Kotia**, Hony Treasurer **Shri Priyank Desai**, and **Shri Sunil Patel**; as well as a few faculty members and students from the Faculty of Technology and Engineering at the Maharaja Sayajirao University of Baroda. Veteran **Wg Cdr SR Vasavada**, the group's senior member and past Chairman, participated enthusiastically for the entire four hours. After completing stringent security procedures, everyone was seated in a seminar hall. **Ms Mausumi Shukla**, training in-charge and senior engineer, greeted everyone and introduced the HWP's activities through the use of a short film. Heavy water plant, Baroda is India's first plant to produce heavy water (D_2O) using a mono thermal ammonia-hydrogen isotopic exchange process for the extraction and subsequent enrichment of deuterium isotope to nuclear grade. After tea and refreshments and a briefing on the HWP, the visit to the plant, which is housed in a sprawling campus, began. Everyone learned about the processes involved in the production of heavy water and the evolution of the HWP Vadodara plant over the last 70 years. After a lengthy visit to the plant, everyone gathered in the seminar hall. **Dr Mamta Padole** discussed IETE's activities and encouraged students and HWP professionals to join, and **Dr Sorum Kotia** concluded with a vote of thanks.

VIJAYAWADA

- IETE Vijayawada Centre in association with Dept of Electronics and Instrumentation Engineering, VR Siddhartha Engineering College, Kanuru, jointly celebrated '**Engineer's Day**' on 15th Sep 2021. On this occasion, a webinar was conducted through the online mode. **Dr Umesh Ramakant Kadhane**, Head Dept of Physics, IIST, Trivandrum, delivered a talk on the theme "Building Space Based Sensors and Payloads".

- On 21st Nov 2021, the IETE Vijayawada Centre, in collaboration with the D P Somayaji Memorial Trust, Vijayawada, conducted a **Physics webinar** to commemorate Shri Late D P Somayaji (Retd) Physics Professor's 18th Death Anniversary. **Dr Sree Harsha**, Scientist at the University of Hyderabad, Advanced Centre of Research in High Energy Materials, delivered a talk titled "Introduction to Terahertz Science and Technology: Humanity's Implications". This webinar drew a total of more than 60 participants.

- Under the chairmanship of **Dr K Ramanjaneyulu**, FIETE, the Centre celebrated "**68th IETE Foundation Day**" on 30th Nov 2021, rather than 2nd Nov 2021, with the theme "Advancing Skill Development to the Next Level–A Paradigm Shift to Amalgamate Skills and Academics with Seamless Transitions". On the sameday, the Centre in collaboration with the ISF of Prasad V Potluri Siddhartha Institute of Technology, Kanuru, Vijayawada, jointly hosted a webinar. The speaker was **Shri Purna Chandra Rao Yeluri**, Senior Technical Associate & Trainer, AT&T, Hyderabad. He spoke on "**Being Prepared for Job Market Time**". **Dr K Ramanjaneyulu**, FIETE, Chairman, IETE Vijayawada Centre, read out the keynote address and the IETE President's message. **Er P Kalee Prasad**, MIETE, Hony Secretary, IETE Vijayawada Centre, presented the Secretary's report and vote of thanks. **Dr A Geetha Devi**, MIETE, Hony Treasurer, IETE Vijayawada Centre, introduced the speaker and read out his biographical information. This webinar was attended by past chairmen, executive and corporate members, and ISF student members from the various engineering colleges under the jurisdiction of the IETE Vijayawada Centre (approximately 200 people).

IETE Students' Forum (ISF) Activities

- **ISF at Dept of ECE, Nandha Engineering College (NEC), Erode, Tamil Nadu**, organized an online workshop on "Smart Phone servicing and troubleshooting" on **Apr 24, 2021**. Dr S Kavitha, Prof & HoD, NEC, after her welcome address discussed the importance of smart phone servicing and trouble shooting. Shri B Krishnakumar, MD, New Technology, Coimbatore, conducted the workshop. Dr P Sukumar, Prof/ECE and Dr R Murugasami Assoc Prof / ECE coordinated for the workshop. II year students of ECE attended the programme. The ISF organized another online workshop on **Jul 9, 2021** on Career Opportunities. Prof (Dr) S Kavitha, HOD/ECE, NEC, welcomed the gathering and discussed available opportunities after BE/ BTech. Shri Paba Ramesh, Sr Faculty ACE Engineering Academy EE Engg, Coimbatore, also delivered a lecture on the same topic. Asst Prof V Logeswari, ECE and Asstt Prof P Kokila, ECE organized a motivational programme. IV year students of ECE deptt attended this programme. In another event held on **Sep 23 & 24, 2021,** Prof (Dr) S Kavitha, HOD/ECE, NEC, discussed about the importance of academic research paper writing, after her welcome remarks. Dr Bala Singh Moses, HOD/EEE, Anna University Tirichirapalli, together with professors from various Institutions, conducted the two days workshop on "Academic Research Writing & High Quality Journal Publication". Ms V Logeshwari, Asstt Prof / ECE, and Shri T Jayachandran Asstt Prof / ECE arranged the event. Staff and students from various deptts attended it. On **Oct 7, 2021**, the ISF held an online workshop on the Recent Trends in Image Processing Techniques, wherein Prof (Dr) S Kavitha, HOD/ ECE, NEC, addressed the gathering. Shri K Lokeshwaran, Design Lead, FPGA Division, Tessolve Semiconductor Pvt Ltd, Bangalore, delivered his talk on "Image Processing Techniques with VLSI". Ms S Brindha, Asstt Prof/ ECE, Ms R Monica Asstt Prof/ECE and Ms K Gayathri Devi Asstt Prof/ ECE organized the seminar. Students from III year ECE Dept attended. The workshop on **Oct 9, 2021** was on importance of PCB Design for electronics engineers. Shri M Venkatesha, PCB Design Engineer, SONETONIX, Bangalore, conducted an online workshop on "PCB Design using Altium Designer Tool". Ms S Brindha, Shri N Manikandaprabu and Ms K Gayathri Devi, all Asstt Profs from ECE Dept organized the event for II and III year students. On **Oct 20, 2021,** the topic on the importance of Microcontrollers for IoT applications was taken up by the ISF. Shri M Vignesh, R&D Egr and Shri Maruthupandi Murugan, Project Egr, VI Microsystems Pvt Ltd, Chennai, conducted the hands on training on "Node MCU ESP8266 for IoT Applications". V Parameshwari, Asstt Prof/ECE, T G Dharani, Assoc Prof /ECE and G Rathanasabapathy, Asstt Prof/ECE organized the workshop. Students from III and IV year of ECE Dept attended. The initial welcome address was given by Prof (Dr) S Kavitha, HOD/ECE, NEC.
- **ISF** at **Cummins College of Engineering for Women (CCOEW), Pune,** conducted a six-day online STTP on "Comprehensive Future in Artificial Intelligence" during **Jun 22, 2021** to **Jun 27, 2021**. The ISF organized NAAC sponsored a national level workshop on "Pedagogy Quality Enhancement through Experiential Learning in wake of NEP 2020" during **Jul 22, 2021** & **Jul 23, 2021**.
- **ISF** at **G H Raisoni Institute of Engineering and Technology (GHRIET), Nagpur**, organized an event namely, "Best Click Competition" under Mega Green Tree Planting Initiative on **Jun 25, 2021** to **Jul 15, 2021**.
- **ISF at Dharmsinh Desai University (DDU) Nadiad, Gujarat,** organized a webinar on "AI in E-Commerce and Future of E-Commerce" on **Jul 3, 2021** conducted by Shri Kalarav R, Delivery Mgr, Braivire Infotech Pvt Ltd, with around 63 students of various departments (CE/IT) and faculty members. The participants obtained theoretical and practical knowledge through this informative programme. The topics covered in the webinar included-hype around AI in retail; how AI helps in customer acquisition and retention; data generation and tagging; data driven decision making; and AI product discovery. Another expert webinar held was on "AI using Knowledge Graph" on **Aug 14, 2021**. Shri Ankit Desai, Dir- Data Sc, Locus.sh, Bangalore, delivered the talk where in about 57 students from various departments attended the webinar. The session on 'Explainable AI' helped students from IT/CS domain as they came to know about various tools/ technology/ resources/ websites. Later, another webinar on "Software Version Control Management" was organized on **Sep 24, 2021.** Experts invited from the industry were-Shri Parth Ghinaiya, Software Engr Aubergine Solutions & Shri Sunny Kalola, Software Engr- Crest Data Systems. Around 108 students attended the webinar which helped them to acquire excellent knowledge of Software Version Control in GIT and Git-Hub.
- **The ISF KCG College of Technology, Chennai,** conducted a webinar on **Jul 10, 2021** on "Awareness on Child Abuse" for the students of 8th standard of Kalaimagal Vidyalaya Matriculation HS School, Royapuram, Chennai, where the chief guest invited was Sr Mgr Adv Shanthi Hopper, External Engagement and Campaign, World Vision India**.** Another event organized by the ISF was of a 'tree sapling plantation drive' on **Jul 15, 2021.** An online debate competition with the themes "Humans should invest in technology to explore and colonize other planets" and "Animals shouldn't be used for testing" was held on **Aug 20, 2021.** On **Sep 3, 2021,** an online quiz competition (XQUIZIT) was held, with topics related to general knowledge and technical; using Google meet and Google form with auto-proctor add-ons**.** On **Sep 18, 2021** a "Coastal Cleanup Drive" event at Panaiyur Beach ECR was arranged. The ISF organized an Innovation Challenge 2021, an innovative idea presentation contest (Ideathon) on **Sep 29, 2021.**
- **The Dept of ECE at Vidya Vikas Pratishthan (V V P) Engg College, Rajkot** in association with IETE Rajkot Centre, organized webinar on "PID Controller" for students on **Jul 17, 2021** which was followed by another workshop on "PCB Designing" for students on **Jul 19, 2021**.
- **ISF at Panimalar Institute of Technology, Chennai, ECE Dept,** organized a webinar on "AWS Machine Learning & AI" by Shri Sarathkumar C, Founder & CEO Psitron Technologies Pvt Ltd, on **Jul 19, 2021**.
- **ISF of PSG College of Technology (PSGCT), Coimbatore,** held the recruitment of Office Bearers and Executive Members (2021-2022) online during May/June and final results were announced on **Jul 19, 2021**. On **Aug 7, 2021**, a guest lecture titled "Life at PSG Tech vs Life after PSG Tech" was held, preceded by a brief presidential address by IETE faculty advisor, Assoc Prof Dr P Saravanan, ECE. Shri Vishnu D, Analyst-Data Engg at 'The Math Company,' and Shri Nidhish Krishna, pursuing MTech at Amritha School of Engg, both IETE alumni, shared their college experiences that helped them advance in their careers later on, and the Q&A sessions provided a transparent way to understand the speakers' journey. Then the postings for the members were announced and a video summarizing the events conducted by IETE (2020- 2021) was played. This was followed by a presentation about the events planned for the year 2021- 2022. On the whole, this speech served as a crutch, assisting stumblers in their personal development. Thereafter, two online series were initated from **Sept 2021**. This initiative started on **Sep 21, 2021** with Online Series 1 on "Bits & Bugs" where interesting coding snippets (Like MCQs, True or False, debugging the code and a lot more) were posted every Tuesday. The participants were asked to answer the questions through the instagram story till Wednesday and the answers were published on Thursday. For this, a leaderboard was being maintained to reward the top-performers at the end of the series. Even weekly shout-outs were given for quick and correct answers. The motive behind this series was to help everyone stay in touch with the coding languages. Online Series 2 was on the topic "Celebrating Great Minds" which was published on all social media accounts of IETE. Here the great people who have contributed towards science and technology were remembered on their birthdays; thereby the viewers came to know the amazing work done by many great scientists. ISF Vice-Chairman and Hony Secretary IETE Coimbatore Centre guided Office bearers of ISF at RVS College of Engg and Technology, Ratinam Technical Campus and Dhanlakshmi Srinivasan College of Engg to carry out professional activities for the benefit of members.
- On **Aug 2, 2021**, the **ISF** of **Sri Sairam Engineering College, (SSEC), Chennai, ECE Department,** hosted a webinar titled "Project Management

in Process Automation", which was presided over by Shri Sankar Palani, Dir, Projects Emerson Asia Pacific Pvt Ltd, Singapore. Ms Sunandha, Software Support Engineer at Walmart, presented the next webinar on "Vyakrith" on **Aug 19, 2021**. On **Aug 23, 2021**, another webinar on "Hindrance Faced by Entrepreneurs" was presented by Shri D Rajasekaran, Partner/Chief Operating Head Vivasar and Refabo Engineering Pvt Ltd. Subsequently, on the same day, another webinar was presented by Shri K Bharathwaj, Software Engineer at Cisco; Ms V Manisha, System Engineer at TCS; and Ms Anuja, Assoc Software Engineer at Prodapt. Additionally, the ISF hosted a three-day workshop on "Current Trends in Artificial Intelligence" from **Aug 25 to 27, 2021**, led by Smt Shobana Rani, DGM, Software SBU Bharath Electronics Ltd, Bangalore.

- The **ISF** at **Thakur College of Engineering and Technology (TCET), Mumbai,** conducted a debate competition on the topic "Tug of Words War" on **Aug 7, 2021** for students of SE (ELEX & IOT), TE, and BE (ELEX) via online mode. The competition drew a total of 19 participants from SE, TE, and BE, distributed in a total of 8 teams. The competition consisted of two rounds, each with its own set of rules and criteria that all participants were required to obey. The themes for the 1st round were distributed immediately following the close of registration, while the topics for the 2nd round were distributed 10 minutes before to the start of round 2. Round 1 contained sub-rounds such as introduction, discussion, cross-questioning and conclusion for the first two teams. Round 1 for the remaining six teams proceeded similarly. Round 2 was held for the four qualifying teams from Round 1. The guidelines for the second round were similar to those for the first round. The faculty moderators and student moderators determined the winners and qualifiers using predetermined rubrics created specifically for this competition. The winner and runner-up teams were then recognized and rewarded. With the assistance of all teachers, coordinators, and students, the event was a success.
- Er Neelamegan, Petroleum Conservation Research Assoc, Southern Region conducted an Energy Conservation Awareness Programme for final year ECE students of **Kamaraj College of Engineering and Technology (KCET)**, **Tamil Nadu** on **Aug 6, 2021** through online mode. Dr V Jeyalakshmi, AP/ECE, ISF coordinator, organized the event. Dr R Suresh Babu, Prof & Head/ECE welcomed the gathering and introduced the chief guest to the participants. Subsequently ISF at KCET, Tamil Nadu, organized a guest lecture on 'Importance of Electronic Systems and Instruments in Aerospace Vehicles' for III year ECE students on **Aug 7, 2021** through online mode. Shri A Pon Maa Kishan, Asst Prof, Aerospace Engg, Chandigarh University, Mohali, Punjab acted as resource person. Dr V Jeyalakshmi, AP/ECE, ISF coordinator organized the event and introduced the chief guest to the participants.
- The **ISF** at **St Vincent Pallotti College of Engineering and Technology (SVPCET), Nagpur**, conducted Awareness Seminar on "Sales force Training" on **Aug 13, 2021.**
- The **ISF at ECE Dept, SRM Valliammai Engineering College (SRM VEC), Chennai,** arranged a webinar on "Trends and Innovations in Industrial IoT" by Shri Harishankar B, Senior Platform Software Developer, Automotive - Electronic Control Unit, Robert Bosch 80 Engineering and Business Solutions on **Aug 17, 2021**. On **Sep 28, 2021** in a "Mini Project Expo 2K21" students exhibited their projects and demonstrated their skills in providing solutions to the real life problems.
- The **ISF** at **Jawaharlal Darda Institute of Engineering and Technology (JDIET), Yavatmal,** conducted an online expert lecture on "Smart Motor's AI Technology" by Shri Dhiraj Ghodmare, Embedded Firmware Developer & Electronics Executive, RR Global Firmware, Mumbai as on **Aug 24, 2021** attended by 11 students of III & IV year students of ENTC Dept. Later ISF JDIET, Yavatmal organized a 2-day online workshop on 'Android Development' by Shri Shrikant Tambaskar, Senior Android Developer, Percipient Technologies, Nagpur on **Aug 26, 2021 to Aug 27,** where 64 students attended the workshop from III & IV year ENTC and EE Depts.
- An educational institute named- **The Skill Technika, Chennai,** held an online - two credit course on "IoT & Cloud Application" for college students on **Aug 25, 2021** in collaboration with IETE Chennai Centre.
- The **ISF** at **Easwari Engineering College, Chennai**, **ECE Dept**, arranged a webinar on "Technopreneurs in Biomedical Commercialization" by Dr B Madhan, Senior Principal Scientist & Head, Centre for Academic & Research Excellence, Central Leather Research Institute, CSIR, on **Aug 26, 2021.** On **Sep 15, 2021** the ISF organized an online tour of NIOT (National Institute of Ocean Technology) & learnt about the research activities of NIOT by Dr Tata Sudhakar, Scientist-G & Group Head, NIOT, Chennai, & former Chairman, IETE Chennai Centre.
- An online guest lecture on "Automotive Embedded Development" by Shri Siva V Girish, System Analyst, SRM Technologies Pvt Ltd, Chennai, was conducted by **ISF** of **Mepco Schlenk Engineering College (MSEC)**; **Sivakasi** for the II, III and IV ECE students on **Aug 27, 2021**. Dr R Shantha Selvakumari, Prof & HOD, ECE Dept, MSEC, faculty advisor, inaugurated the event. The session was organized by Dr A Kamaraj, Assoc Prof/ECE, and Mrs V Gnanalakshmi, AP/ECE. Ms B Soniya, an ISF member, welcomed everyone, and Shri E K Karthik Vishnu, another ISF member, introduced the guest speaker. Shri Siva V Girish, the speaker, shared his knowledge of 'Automotive Embedded Development' and 'CAN architecture and developing an automotive embedded solution using Automotive Open System Architecture (AUTOSAR) platform'. He discussed the various design methodologies used in Automotive Embedded Development and emphasized the significance of recent developments in the field. Around 300 students benefited from the informative event. Ms S Bala Meenakshi, managing partner, Balsu's Success Academy, Madurai, gave another guest lecture on "Post Covid Career Opportunities for Engineers" on **Oct 9, 2021** for III & IV ECE students in the Mechanical seminar hall. Dr G Indumathi, Prof, Dept of ECE, MSEC, officiated at the event. This session was organized by faculty advisors Dr A Kamaraj, Assoc Prof/ECE, and Mrs V Gnanalakshmi, AP/ECE. Ms J Kanishka Shree and Shri G Sathya Narayanan, both ISF members, welcomed the gathering. The speaker focused on career opportunities following the Covid pandemic and encouraged students to pursue higher education in order to excel in their careers. She also emphasized the significance of competitive exams such as GATE and CAT exams in obtaining jobs. She also provided helpful hints for preparing for those competitive exams. This informative event benefited approximately 350 students.
- The unit at **Dept of ECE, Velalar College of Engineering and Technology (VCET), Erode,** organized IETE sponsored webinar on "How to Tackle the Interview" on **Aug 28, 2021**. Around 150 students registered and participated in total. Dr Nisha Angeline, Prof/HOD, delivered the welcome address (ECE). The webinar was organised by Dr V Gowrishankar Assoc Prof/ECE, Shri S Nachimuthu AP/ECE, and Ms P Nandhini AP/ECE. Shri D Karthe, Senior Solution Architect, Programming Developer, Cognizant Technology Solutions, Coimbatore, spoke eloquently on a variety of topics including resume writing, skill development, and so on. The speaker shared his work experience for the benefit of students' futures, emphasising the "importance of electronics and telecommunications in every sector of life". During the interaction, he shared his ideas and solutions with the students regarding career objectives and goal setting, as well as the required skills by the industry in the field of hardware or software industries.
- The **ISF** at **ECE Dept of Ramco Institute of Technology (RIT)**, **Rajapalayam**, under **Sivakasi,** organized an Event "Ideathon" on **Aug 30, 2021** for II & III year ECE students through Google meet. Ms M Shrinithimeena and Ms S Jeyagomathi, both from III year ECE, organized the event, which was coordinated by Mrs V Srirenga Nachiyar, AP (SG)/ECE. This technical event drew a total of 12 students. Shri B Kannan, AP (SG)/ ECE, presided over as jury. Following that, on **Sep 15, 2021**, ISF hosted an event called "Project EXPO" for II and III year ECE students. The event was organized by Shri M Mohanasudhan and Shri A Nithish Balaji, both of whom are IV year ECE students, and coordinated by Shri LK Balaji Vignesh and Ms S Harini Shriram, both of whom are AP/ECE. Dr B Deepalakshmi and Dr K Karthikeyan evaluated the projects. The students demonstrated their projects with posters. Mahendra Prakash R and Naveen Ajay Kumat T (III year ECE B) won the 1st Prize; Dharshini K, Keerthika B and Dharini A (III year ECE A) won the 2nd Prize; Dhinesh M, Hariprasad N and Karanan K (II year ECE

A) won 3rd prize. Next a technical event "TechMerize" on **Oct 21, 2021** for II & III year ECE students, was held where around 20 students participation. The participants attended quiz in first two rounds and in the third round circuit debugging related to basic electronics was done. E-certificates were provided to all the participants. The winners included: B Keerthika; K Dharini, both from III year ECE and K Aparna, II year ECE. The event was conducted by the student coordinators, namely P Deepak Chakravarthi & S Hariharan of III year ECE and faculty coordinators Mrs R Ramalakshmi, AP/ECE & Shri P Venkatesh, AP/ECE. Another guest lecture on "Advances in Antenna Design for Biomedical Applications" was arranged on **Oct 29, 2021** at ECE Seminar Hall for II, III & IV year ECE students. The chief guest, Shri T Jayanandan, Founder & CEO, Tesla Mind, Chennai, shared his experience and insisted them to learn the basic concepts of the subjects which will help them to get placed in core companies. The students actively participated in the guest lecture by asking various doubts. Dr S Periyanayagi Prof & HOD/ECE convener, Shri D Gopinath & Shri A Rameshbabu both AP/ECE coordinated the event. Student coordinators Ms Deepika gave welcome address and vote of thanks. Finally, students' feedback was collected.

- On **Sep 1, 2021, ISF** at **ECE Dept RMK Engineering College, Gummidipoondi, Chennai,** hosted a webinar titled "All about Skillrack" presented by Shri Surya M, SAP Trainee, Kaar Technologies, Chennai. They then organized a "Yoga Practice" by Shri Chandrakant, Sahaja Yoga Meditation, on **Sep 16, 2021**. On the same day, the ISF hosted Mr Daniel Nareshkumar's "Astronomy Quiz". Later that month on **Sep 17, 2021**, the ISF hosted a guest lecture by Dr V Sumitra, Asstt Prof, Dept of ECE, RMK Engg College, on the topic "What is Possible with Numbers?" On **Sep 18, 2021**, they hosted a competition titled "Orientation Talk on & Preliminary Round–TEDX" involving Shri R Sathya Vignesh, Asst Prof, Dept of ECEC. On the same day, the ISF hosted a guest lecture by Shri M Shyam, Asst Prof, Dept of ECE, R M K Engg College, and a webinar titled "Role of Engineering in Medicine" by Dr Vijaiyalakshimi Praveen, Public Health Specialist, Govt of Tamil Nadu, DMS, Chennai. Following that, a webinar on the "LTI Mentor Program" was conducted by Ms Pavitra M, Grad Er Trainee LTI Alumnus. Finally, a photo exhibition on the theme "Communication Gadgets" was organised by Shri Jagadeesh Babu S, Asst Prof, ECE Dept of the college.
- The **ISF** at **ECE Dept of Sri Sairam Institute of Technology, West Tambaram, Chennai,** organized a guest lecture on "Industrial automation and Robotics" by Shri P Udhay Shankar, Founder, Diya labs, on **Sep 9, 2021**.
- On **Sept 10, 2021**, the **ISF** of **Viswajyothi College of Engineering & Technology, (VJCET), Vazhakulam, Kerala,** in collaboration with the Dept of ECE, scheduled a webinar on "5G Technologies" through Google Meet. The webinar was designed to familiarize students with 5G's new technologies. Dr Siddharth Shelly began his session by explaining the fundamentals of communication, including 2G, 4G, and 5G, as well as their respective advantages and disadvantages. 32 students from S2 ECE and three faculty members participated in this webinar, and all participants received a certificate of participation.
- The **ISF at ITM Vocational University, Vadodara** in collaboration with IETE Vadodara Centre, celebrated Engineer's Day to commemorate the birth of great engineer, Bharat Ratna Sir M Visvesveraya, and to recognise his contribution to India's water resource harnessing on **Sept 15, 2021**. The event's primary goal was to promote self-awareness, effective communication, and team building among the students. The function was inaugurated by all the HODs and the chief guest, Shri Ravi Sharma, an entrepreneur and an engineer in the fields of automation, electronics, and robotics. He is the founder of SR Automation & Robotics and a co-founder of Viral Brain Systems.
- The **ISF** at **Sri Venkateswara College of Engineering (SVCE) in Sriperumbudur, Chennai**, organised the inauguration of the IETE-ISF, ECEA, and Robotics and Artificial Intelligence Club on **Sep 18, 2021**, graced by Dr Josph Gladwin (Technical Mgr, BIGCAT Wireless, IIT Research Park) as the chief guest. It also hosted a one-day workshop on "TECHENTRO- an introduction to Arduino" on the same day. The following day, **Sep 19, 2021**, a one-day workshop on "TECHENTRO" was held. The competition consisted of two rounds: a quiz and circuit debugging. The ISF then organised three additional events. On **Oct 23, 2021**, the first virtual meeting on PCB design—a workshop on an introduction to PCB—was held. The gathering drew a total of 55+ participants. The chief guest began by discussing the fundamentals and preliminary steps involved in designing a printed circuit board and then expanded on the complexity of the process. The layers of a printed circuit board were discussed, as well as the fundamentals of the processors involved. The chief guest designed and demonstrated a practical printed circuit board (PCB) step by step using a software tool (EDA). At the conclusion, a Q&A session was held, during which students actively participated by pitching their questions. Ms T J Jeyaprabha, ECEA, ISF SVCE and RAIC coordinator, presented the chief guest with an e-memento. The following day, **Oct 24, 2021**, the second event held was on "Tech Mystery", consisting of two rounds, the first of which was Technical Quiz. 24 teams actively participated in the quiz. The quiz was administered through the Slido App. Ms Amirta Jyotsna, Ms D Saalini, all executive members of ECEA, and Shri M Kishore, Executive member of ECEA and RAIC, drafted the questionnaire. All teams met virtually and a questionnaire was distributed to all. Following the conclusion of the first round, the top ten finishers on the scoreboard qualified for round 2. The second round was dubbed 'Treasure Hunt,' and 24 teams were selected to compete in this round. The clues were distributed to selected participants via the ECEA's official social media handle, and teams were tasked to resolve the questions. The winner was chosen based on accuracy and promptness. Both rounds were moderated by Ms Amirta Josna and Ms D Saalini, both of whom are ECEA executive members. The third event, "Tug of Word's War", took place on **Oct 24, 2021** and consisted of two rounds. The first round divided participants into batches of two, with each batch consisting of two judges. The participants were paired up and each pair was randomly assigned a different topic. After one-minute preparation period, they were asked to voice out their choice for one minute. Following that, they engaged in a two-minute one-on-one duel. Ten participants were chosen for this round 2. This round featured an impromptu topic. Shri Saurabh Sonawane; Shri S Aditya; Ms Pooja Ramesh; and Ms Fiona Justin, all of whom are in their final year of ECE, judged the rounds. The winners of this game were II-year ECE students- R Aadittya Prassad, S Dhruv, EEE A, and M Adithyan, ECE B. Finally, they held an inaugural ceremony on **Oct 31, 2021**, which was attended by guest Shri Gaurav Sundararaman, an ESPN Senior Analyst. Mrs T J Jeyaprabha, IETE Chennai Centre's Hony Treasurer, introduced the Office Bearers. The keynote segment was followed by an interactive segment titled "11 in swingers with Gaurav Sundararaman", in which Mr Jeffrey Joan, Technical Lead FODSE, posed a series of 11 questions and Shri Gaurav Sundararaman elaborated on them. It was then followed by a live session during which the audience posed numerous questions and he responded by stating the facts and figures, to which the audience responded enthusiastically. On behalf of FODSE, Shri Gaurav Sundararaman was then presented with a momentum. The ceremony concluded with the playing of the national anthem.
- From **Sept 29, 2021** to **Oct 8, 2021**, the teaching faculty of the E&TC Dept at **ISF, Modern Education Society's College of Engineering (MESCOE), Pune,** conducted an online five-day student development programme on "Red Hat Enterprise Linux 8" in collaboration with IETE. Mrs Manjiri Tilak, System Administrator, Pune, was the invited guest of honour. The session's primary objective was to raise industrial software awareness regarding the development of future networking industrial applications. She trained TE and BE E&Tc students on RED HAT Enterprise Linux 8 during her session. Prof B M Narute and Prof U D Dattasamje coordinated the activity.
- A webinar on "Roles and Responsibilities of Software Engineers" was held on **Oct 4, 2021**, at **Sri Ramakrishna Institute of Technology (SRIT), Coimbatore**, in association with IETE. The resource person was Ms Indu S, Head Business Operations, VLAND Best Hub Pvt Ltd, Coimbatore. Dr A N Jayanthi, Assoc Prof/ECE and ISF Coordinator, greeted the group. Shri Ramakrishnan R; AP/ECE introduced the speaker. Ms Indu, the resource person, demonstrated the importance of software engineers' roles and responsibilities through numerous examples. Additionally, she discussed the various positions that a software engineer can hold throughout his or her career. Around 40 members participated in the webinar and benefited. The vote of thanks was proposed by Ms A K Kavitha, AP (Sr.Gr)/ECE. Another webinar titled, "Analog Electronics-Field Effect Transistors" was

organised on **Oct 21, 2021**, by the Dept of ECE at Sri Ramakrishna Institute of Technology in collaboration with the ISF. The resource person was Mr Yair Richter, Research Scholar, Electronics Engineering, Ariel University, Israel. Dr A N Jayanthi, Assoc Prof/ECE and ISF Coordinator, extended a warm welcome to the gathering. Shri Ramakrishnan R; AP/ECE, introduced the resource person. Shri Yair Richter emphasised the critical nature of Field Effect Transistors. He also demonstrated the use of Electronic Circuit Simulator to simulate various circuits. Additionally, he discussed the various applications of FETs. Dr Meir Buskila, Prof at Ariel University in Israel, graced the occasion by participating in the webinar. Around 40 members of the II Year ECE students attended and benefitted from the webinar. The vote of thanks was proposed by Mr S Munaf, AP (Sr Gr)/ECE.

- The **ISF** unit **Vadodara (Gujarat), Charotar University of Science and Technology (CHARUSAT)** and **IETE** collaborated to host a two-day hands-on workshop on "Real-time Applications of Digital System Design on FPGA" on **Oct 8-9, 2021**. The event was attended by 12 students of 5th semester BTech. The workshop's objective was to highlight the importance of FPGAs (field programmable gate arrays), which are popular today and can be used to rapidly generate or implement custom solutions to common problems. Spartan Edge 6 is a widely used academic hardware development board that comes equipped with a plethora of features that make it ideal for use in a laboratory setting. On the first day of the workshop, participants learned about FPGAs and how to initialise them with Xilinx. They also learned how to design BCD to 7 segment displays and how to implement a frequency divider on an FPGA board using Verilog code. The second day covered the design of a digital combination lock and a vending machine, both of which were demonstrated and implemented on FPGA. The workshop concluded with a vote of thanks to all attendees. The workshop was organised with the goal of broadening students' theoretical and practical knowledge in the field of digital system design and, more specifically, FPGA programming through implementations of some real-world applications in Verilog. The workshop was coordinated by Prof Arpita Patel and Prof Dhara Patel.
- The **ISF** of **Goa College of Engineering, Goa,** in association with IETE Goa Sub- Centre organized a two-day Python workshop (Online mode) on **Oct 30, 2021** and **Oct 31, 2021** which received an overwhelming response from over 300 registered participants. Shri Akhil Kushe and Ms Erisha Ferrao, both IETE members, served as resource persons. The first day of the workshop began with an introduction to the IETE organisation and how it assists students in skill development and promotes tech awareness, followed by a brief overview of Python and its importance in the technology industry. Ms Erisha Ferrao began by covering the fundamental concepts and syntax of Python, followed by some visually appealing problems for the audience to solve on their own. Her unique teaching style made it simple for beginners in programming to grasp even the most complex concepts. There were 95 participants in the meet and 1031 views on YouTube. On the second day of the workshop, Shri Akhil Kushe introduced slightly more advanced Python topics in an engaging and easy-to-understand manner. At the conclusion of the session, the speaker shared some practical advice and also provided the audience with a road map outlining the various future paths they could take. The meet drew a total of 67 enthusiastic participants and 184 viewers on YouTube. All active participants received participation certificates and additional resources on advanced topics.
- The **ISF** at **Madhav Institute of Technology & Science (MITS),** IETE Bhopal Centre celebrated IETE Foundation Day on **Nov 2, 2021**. The chief guest for the celebration was Prof G S Tomar, Principal, Rajkiya Engineering College, Sonbadhra. Prof P K Singhal, Chairman, IETE Bhopal, extended a warm welcome to the chief guest and all attendees. He read the President's message from IETE, New Delhi. Prof G S Tomar's address emphasised the importance of students upgrading their skills. Shri Deepak Loada and his team of MITS ISF students made a presentation on the topic of Blockchain technology.
- The Dept of ECE hosted a webinar on "Skill Enhancement" on behalf of **ISF** at **Narayana Engineering College (NEC), Nellore** on **Nov 2, 2021.** This event was attended by all III Year BTech students. ISF conducted the activity in the hope of enhancing students' necessary skills, as in today's competitive world, all employers seek graduates with advanced degrees and additional skills. Dr K Murali, HoD/ECE, extended a warm welcome to the gathering. Dr R Gayathri, ISF Convener, welcomed the resource person, Dr Navin, Senior Software Engineer, Syncfusion P Ltd, Chennai, and invited him to speak on the subject. Dr Navin gave an excellent lecture on how students should choose additional courses to study, the skill sets required by recruiters, the format for preparing resumes, how to conduct interviews, how to develop soft skills, how to attract the interviewer, and how to manage work-life balance, among other topics. All third-year BTech-ECE students actively participated in the session and obtained pertinent information, thereby expanding their knowledge, while the resource person patiently answered the students' posted questions. Dr K Murali, HoD/ECE, concluded the session by praising the students for their active participation in the event, which drew 122 students. The Coordinator, Mr Bismil Jaffrey, presented the vote of thanks.
- The ISF of **RVR & JC College of Engineering** (Dept of ECE), **Guntur, Andhra Pradesh,** held a project competition for BTech ECE students on **Nov 11, 2021**. There were a total of 28 batches, and the judges chose three winners. N Hari Nath, K Venkata, and Satya Sai Kumar were awarded the first prize; A Hema Sivateja and K Uma Venkatesh the second prizes, while B Jaswanth Singh, G Sai Phaneesh, B Divya Sri, and B Harika were awarded third prizes. All winners were from III year and there were 56 students in total.
- The **Depts of ECE and CSE**, **SOET, Adamas University, West Bengal**, and its **ISF** jointly hosted a virtual industrial guest lecture on "Deploying AI in LoT Ecosystems Using 5G" on **Nov 13, 2021**. The expert speakers came from TCS, Ericsson, and other companies with a background in 5G and its use cases. The expert defined six dimensions (User, System, Device, Service Enhancement, Network Management, and Business Requirements) and discussed the significant difference between 4G and 5G networks in terms of network slicing, its importance, and impact. Following that, the speaker discussed the significance of 5G and the Internet of Things in ushering in a new era and future possibilities, as well as the exponential growth of data and its associated requirements. The speaker discussed the parameters for deploying AI on collected data and its network, as well as the necessary software. The session also discussed the importance of edge and fog computing, as well as cloud computing. Additionally, the speaker provided numerical formulations for determining various network parameters such as data rate, latency, and so on. Finally, the guest speaker highlighted internship and job opportunities at Ericsson during the question and answer session. The event received extremely positive and encouraging feedback from both domestic and international participants. Following that, between **Nov 20, 2021** and **Nov 21, 2021**, a two-day International Seminar on 'Innovative Industry Practices & Future Industry Skills for ECE graduates was held. On the first day, 52 participants joined the virtual seminar, and 49 participants joined the seminar the following day. The first session was led by Shri Suman Sinha, Dir, Engg at Qualcomm India Pvt Ltd, Hyderabad, who discussed the evolution of wireless communication from 1G to 5G and beyond, modern wireless technologies such as Wi-Fi, Bluetooth, and 5G network slicing, as well as Qualcomm's role in connecting people, places, and devices. The seminar's second session was delivered by international guest speaker Shri Niladri Shekhar Dutta, Global Dir & Head Data Strategy & Execution, BMAS-MS IT & ADM, Ericsson, Sweden, who discussed the distinction between B2B and B2C perspectives and explained why 5G is a B2B perspective. The speaker discussed the role of service providers, infrastructure providers, system integrators, and handset manufacturers in fully deploying 5G. He also discussed how 5G adoption presents a unique opportunity for India to participate in designing an inclusive and indigenous technology, developing indigenous intellectual property, and manufacturing design-led products. Additionally, the role of infrastructure and data collection, data transfer and analysis and end-application significance in the 5G eco-system were discussed in detail. The speaker emphasised the importance of data monetization by stating that approximately 80% of data in the telco environment is typically underutilised, implying that there is enormous potential to extract value from this data. Shri Sudipta Dutta, Principal Solution Architect, Ericsson-Kolkata, delivered the final session of

the two-day international seminar, where he discussed topics such as "5G as Industry Disruption, 5G architecture and its inherent federation, How is the industry adopting 5G?, What does the 5G triangle mean for the industry?, How do telcos typically monetize?, Prospective 5G P&S Strategy, Next Picks and Challenges". The event feedback reflects participants' achievement of learning outcomes and objectives, as well as their future learning approaches.

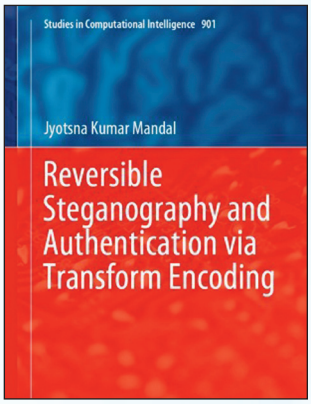
- The IETE Bhopal Centre along with **IES University ISF**, **Bhopal** organized a short course on **Nov 18, 2021**. The course was titled "Space Intelligence for National Defense", and Ms Suman Agarwal, Scientist F, Directorate of Special Projects, Defense Research and Development Organization (DRDO), Hyderabad, served as the program's resource person. Over 150 students, faculty members, and scientists attended the programme.
- The **ISF at Atharva College of Engineering (ACE), Mumbai,** in association with ETE Dept, hosted a webinar on "VLSI Technology" on **Nov 25, 2021**. The event began with a welcome address by student representative Amitesh Sangla SE EXTC, who invited I/c HOD-EXTC Prof Mahalaxmi Palinje to speak to the group about the importance of the webinar topic. The speaker discussed VLSI technology in detail, providing insight into FPGAs and Hardware Description Languages through the implementation of mini projects in the VLSI field, and answering students' questions following the session. Ms Simran Singh, SE EXTC, presented the vote of thanks. Around 84 participants attended the event, including SE EXTC students and faculty members from the EXTC department. Another Webinar on "Fundamentals of Embedded System with Journey of Microcontrollers" was organized through online platform on **Nov 30, 2021,** addressed by student representative Ms Simran Singh, where she invited I/c HOD-EXTC Prof Mahalaxmi Palinje who explained in detail about the embedded system, insights on various components and microcontrollers used for embedded system and also discussed Arduino Simulation using Tinker Cad. Around 70 participants attended the event, including SE EXTC students and faculty members from the EXTC department, and Shri Amitesh Sangla, a SE EXTC student, presented the vote of thanks.
- A workshop on 'Introduction to IOT' was conducted as part of **ISF** at **KMEA Engineering College, Kochi**, in the presence of Prof Smitha K M, HOD, ECE Deptt, and faculty and technical staff, ECE, on **Nov 30, 2021**. The programme began with a silent prayer and was followed by an overview of the ISF. ISF students shared their most memorable moments and experiences at the ISF. Sharan K S, S5 ECE's resource person, led the introduction to IOT workshop. The workshop's objective was to provide an overview of the Internet of Things and the embedded system's role in the modern world.

Awards & Achievements

Shri Sunil (F-224760), Additional Director General (Global Outreach), Prasar Bharati; President of the Broadcast Engineering Society (BES) for the term 2021-2023; and Honorary Treasurer of the Institution of Electronics and Telecommunications Engineers (IETE), was recently elected **Vice Chair of the Technical Bureau of the world's largest Broadcasting Union, ABU,** in the Nov 16, 2021 elections. Cheers! You've just added yet another feature to your cap!

Dr N Venkateswaran (F-234388) is a member of the IETE's Governing Council and the Chairman of the IETE Chennai Centre. He and his team became the **winners of the ITU's** (International Telecommunication Union) "**AI/ML in 5G Grand Challenge 2021"** Finale in the "Location Estimation" Category for their problem statement and solution titled "**Location Estimation Using RSSI of Wireless LAN".** This was done as part of the ITU's 2021 "AI for Good" Program Challenge. Furthermore, another team he coached won a trophy in a different category. The fraternity applauds and congratulates him on his accomplishments!

Dr Jyotsna Kumar Mandal (F-232495) Professor of Computer Science and Engineering at Kalyani University in West Bengal; Chairman, IETE Kolkata Centre (2020-2022); and Former Secretary, IETE (2018-2020), has recently published a book titled, "***Reversible Steganography and Authentication via Transform Encoding"*** with Springer Nature. Publication Link: https://link.springer.com/book/10.1007/978-981-15-4397-5

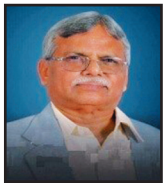


This book discusses reversible steganography and authentication via transform encoding. The reversibility of six transformation techniques is carefully computed in this section. DFT, DCT, Wavelets, Z, Binomial, and Grouplet are some of them. Additionally, the chaos-based authentication is described in detail here. The algorithmic approaches based on all transformations are discussed, as well as the implementation details and results. This book also discusses embedding and extraction into the spatial domain, tuning using a GA-based approach, and embedding into the imaginary coefficients of the Z domain. Encryption algorithms in detail and a detailed overview of all techniques are included. The embedding technique for all transform-based Steganographic processes is detailed for each transformation. Adjustment of pixel values after embedding is also done for all techniques. For each transform computation, numerical examples of reversible computations are provided. When Chaos-based authentication is used, the generator's quality is further evaluated using the Monobit, Serial, and Poker tests. Chapter 11 details the NIST-recommended fifteen test cases and includes implementations of all fifteen tests on six evolutionary algorithms for Neural Cryptographic systems in the context of wireless computing. Congratulations on his well-deserved success!

Ayan Karmakar (F-236530) from IETE Chandigarh subsection recently authored one technical book named **'Si-RF Technology**' from Springer Publication (2019), Singapore and co-authored one book chapter titled **'Silicon micromachining for sub-mmW and THz applications'** in a CRC Press book in 2021. The book covers holistically the design, fabrication, and testing strategies of various MIC-based circuits on silicon substrate along with RF-MEMS derived circuitries. The specified chapter deals with the design and development of various passive components of communication receiver and high gain antenna using silicon micro-machining technology for Terahertz applications. IETE extends its congratulations to him!

Manish Kumar (SG-192566), a 2012 IETE graduate (Electronics and Telecommunications stream) and an MTech from Ambedkar Institute of Advanced Communication Technologies and Research, Geeta Colony, Delhi, now known as NSUT (East Campus) in 2014-16, has been **selected to pursue a PhD in the Department of Centre for Rural Development and Technology (CRDT),** which is one of renowned academic units of IIT Delhi. His PhD topic will be on **Energy and Rural Development** under the project named, "Development of intetgrated route map for suggested infrastructure to meet SATAT mandate in India". Maintain your diligence....Keep up the good efforts!!

In Memoriam



Prof K Lakshminarayana (DF-062796) departed on Oct 7, 2021, and his funeral was held at Bansilalpet crematorium the next day. He has been an active member of IETE for the last 30 years, serving in various capacities ranging from EC Member to Chairman of the IETE Hyderabad Centre. As a member of the IETE Governing Council (2005–08), (2009–12), & (2013–16), and Vice President (2014–15), he chaired nearly all important Committees. He was instrumental in establishing Sub-Centres in Tirupathi, Warangal, Raipur, Salem, and Sivakasi, as well as in acquiring Centre buildings in Imphal, Warangal, Bhopal, Mumbai, and Amravati. He painstakingly updated the Rules and Regulations (Blue Book) and Standard Operating Procedures (SOP) for IETE Centers (Red Book). He chaired the Committee that oversaw the implementation of electronic voting at IETE. As Honorary Secretary (1991-92) and Chairman (1999- 2000) of the IETE Hyderabad Centre, he received Best Centre Awards for the Centre.

Prof K Laxminarayana had earned a bachelor's degree in telecommunications from Osmania University in Hyderabad and a master's degree in electrical engineering from IISc in Bangalore. He retired from DRDO in 2002 as a Project Director after 37 years of R&D in communications and electronic warfare systems. From 2003 until 2016, he served as Professor and Head of the ECE Department at a JNTU (H) affiliated Engineering College in Hyderabad. As a member of the IEEE Forum for Science and Engineering Exhibits, he was in charge of the development and installation of IEEE-sponsored exhibits at the BM Birla Science Centre in Hyderabad. He was also instrumental in the development of Sir JC Bose and Sir CV Raman's early working experiments. On the invitation of IEEE, he gave lectures on Cost-effective Engineering & Science Exhibits at Pretoria University in South Africa and Kenyatta University in Nairobi, Kenya.

His death is a great loss for the IETE Fraternity. He will be remembered for his firm and forthright advice offered in the service of IETE.

Shri Vishva Priye Giridhar (F-033668L) passed away on Nov 28, 2021, at the age of 73. A longtime member of the IETE Chandigarh Centre, he served as Honorary Treasurer from 1999 to 2000, Honorary Secretary from 2000 to 2001 and then from 2008 to 2010 and Chairman from 2010 to 2012. He retired as Scientist 'G' (Additional Director) after 30 years of service at CSIR-CSIO Chandigarh in various capacities. He had extensive R&D experience in the fields of electronic instrumentation, high voltage, and high vacuum systems. He also worked in the "Oriental Science Apparatus Workshops" (OSAW) in Ambala Cantt for seven and a half years as an electronics engineer.

IETE is very saddened by the demise of Shri Giridhar and prays to the Almighty God for his eternal rest and to give strength to endure this loss for his family, friends and loved ones.

THE INSTITUTION OF ELECTRONICS & TELECOMMUNICATION ENGINEERS (IETE)

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Inspiring IETE Women Achievers

Dr Jyoti Singhai (F-133870) is a prominent academician and researcher and has been teaching UG and PG electronics engineering students at MANIT (an Institute of National Importance) since 1994 as Professor and has supervised 14 PhD scholars, 57 MTech projects, and 27 UG Major Projects. She had published 55 articles in a variety of prestigious national/ international journals and 85 papers in national/ international conferences. Her accomplishments include two patents on Antenna Design for Wireless Networks, a "Young Scientist Award" from the M P Council of Science and Technology, the State of M P in 2002-03, a "Career Award for Young Teachers-08" from the AICTE, India, and a BOYSCAST Fellowship from the DST for academic research at Loughborough University in the United Kingdom in 2010. She was invited to present her work at the Indo-German Symposium "Smart Cities: Challenges and Opportunities" in Berlin, Germany, from 27th to 29th April 2016, which was entirely supported by IGSTC. Additionally, she was awarded the 2018 IETE – Smt Triveni Devi Gupta Memorial Award for motivating engineering students to pursue research and development in the field of electronics

and communication. She was selected for the MHRD, Government of India's "LEAP-Leadership for Academician Program" for training at TISS Mumbai in January 2020 and the University of Pennsylvania in the United States of America in December 2021. As a pioneer in establishing an Image Processing Lab at the Institute with a government grant of more than 70 lakhs and an Incubation Center with a government grant of `145 lakhs under the scheme "TIDE", she maintains academic ties with various technical institutions in MP, assisting them in achieving their academic goals. Dr Jyoti is a member of the Board of Studies of the Electronics Department at Maulana Azad National Institute of Technology (MANIT), MITS Gwalior, and GSITS Indore. She has worked as a subject expert for a number of national and international institutes, including ESSIE Paris, Alzaytonah University Jordan, NIT Jaipur, NIT Warangal, NIT Allahabad, IIITDM Jabalpur, IIIT Gwalior Additionally, she has a MoU as Principle Investigator with Larsen & Tubro. Apart from academics, she has held administrative positions such as Controller of Examinations, Acting Registrar, Nodal Officer of IIIT Bhopal, Advisor to the Chairman, and Warden of the Girls Hostel. She is currently the Dean Faculty Welfare at MANIT, where she encourages students to engage with the community through various social services. Under her mentorship, the ISTE Student Chapter MANIT received the Best Chapter award for three consecutive years (2016–2018), and the IEEE Student Chapter MANIT received the Darel Chang's International Gold Award in 2019.

Message:

"Education is incomplete if knowledge earned from education is not utilized for humanity and betterment of society".

Dr Jolly Dhar (F-134022) earned BTech, MTech, and PhD degrees in Radio Physics and Electronics from Calcutta University in 1989, 1992, and 2013, respectively, became responsible for the design and development of space-borne state-of-the-art technologies such as GaN-based pulsed and continuous wave solid state power amplifiers, LTCC-based high power transmit modules and high power receiver modules, since her 1990 appointment at ISRO's Space Applications Centre.

She is currently leading a team of microwave engineers in the design and development of receivers, frequency generators, and transreceive modules for space-borne microwave remote sensing payloads such as the RISAT-1/1A/2B series, Chandrayaan-II/III, Scatterometer, and Altimeter, and NASA ISRO Synthetic Aperture Radar (NISAR). She was assigned to the International Space University in France for the 2010 Space Study Program. She has supervised numerous ME/MTech/PhD students, served as a reviewer for numerous IEEE conferences, and published over 50 papers in national and international conference proceedings and journals. Two of her three patents have been approved, while the third is still pending. She has delivered numerous lectures at national and international forums and has received numerous awards, including the best woman scientist award from the Astronautical Society of India in 2006, the best paper award from IMaRc-IEEE-MTT2015, and the ISRO Team award for the realisation of the RISAT-1 payload. She is a senior member of IEEE, a life member of ISRS, ASI, and ISSE, and a Fellow of IETE. She previously served as Executive Council Members of ASI.

Message:

Students, the future leaders, should be encouraged to pursue higher education, particularly in niche space applications, and must have the conviction to overcome obstacles in order to demonstrate that they are unmatched in any field through their discoveries and path-breaking ideas.

Prof (Dr) Neena Gupta (F-166137) is currently the Head of the Dept of Electronics and Communication Engineering at Punjab Engineering College (PEC) (Deemed to be University), Chandigarh. She has been a top student throughout, a university position holder, a recipient of numerous scholarships, has 33 years of expertise in teaching and research at PEC and has extensive managerial and administrative experience.

Optical communication, photonics, and nanotechnology are among her primary scientific interests. She has published around 150 research papers in a variety of national and international journals and conferences, including IEEE Transactions and SCI, Elsevier, and Springer, among others. She has supervised nine PhD theses and currently has approximately 11 students enrolled with her. She has supervised approximately 60 ME/MTech theses. She has authored three book chapters. She has executed and sponsored research projects totaling 4.5 crores in the ECE Department, PEC, including those from the Department of Electronics and Information Technology and the Department of Science and Technology, Government of India, among others. She established and created several labs and research facilities in the ECE Dept, such as the Photonics and Nanoelectronics labs. Additionally, a clean room facility has been established in the department for device level fabrication. She was elected Chairperson of the IEEE Chandigarh sub-section, where she is a senior member and an IETE Fellow and Life Member. She regularly attended and organised numerous national and international conferences, workshops, seminars, and expert lectures delivered by eminent international and national academicians and industrialists, and chaired technical sessions at various conferences in India and abroad, where she also delivered a large number of expert lectures in various organisations, academic institutions, and universities. As a nominated member of the reconstituted National Working Group-12 (NWG-12) corresponding to ITU-T Study Group-12 by the Telecommunication Engineering Centre (TEC), Ministry of Communications and Information Technology, Department of Telecommunications, Government of India, she contributed to ITU activities in the interest of Indian Telecommunications and was actively involved in various student activities as a student counsellor of IETE, ISTE, and officer-in-charge of IETE. Her persistent efforts have resulted in the establishment of numerous MoUs for the ECE dept, PEC with industry and organisations such as SCL Mohali, Videocon (QTL), Raman Research Institute Bangalore, and the National University of Singapore. Additionally, she has held different administrative posts such as coordinator–Internal Quality Assurance Cell (IQAC) at PEC, Head Centre for Continuing Education, Associate Dean Student Affairs at PEC, Officer on Special Duty (OSD) & Dean Academics at CCET, Chandigarh, and others.

Message:

Hard work is the only key to success.

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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.

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Tech Corner

There is an apparent shift toward making technology more accessible to all people. People now have access to advanced technology that doesn't require a high level of specialist knowledge. Not a single technology, but the convergence of numerous technologies, is what makes this possible. Some of the features and services making technology more accessible are: natural language processing, low-code platforms, and robotic process automation (RPA). A machine's inventive power can be brought into the hands of humans in many ways, but they all have unique applications. It's not just about giving people access to new tools; companies must actively teach their people to think like technologists. This doesn't mean making everyone an engineer, but rather enabling anyone to use technology to address challenges.

New Technology Trends

Artificial Intelligence (AI)

- It is a computerized system built to mimic human behavior and intelligence to perform tasks such as image recognition, speech with decision making and finding patterns. AI can do these more accurately and faster than humans.
- Machine learning or ML is a central element of Artificial Intelligence, but there are many divisions in the world of machine learning, including graphic models, natural language processing (NLP) and deep learning.
- ML is capable of turning a vision of self-driving cars into reality. Machine learning has already proven to be revolutionary for the transportation industry. Even the most conventional and traditional businesses such as the supply chain have been able to transform to a turbo speed with the help of machine learning.
- This technology trend is also helping people to lead safer lives by carrying out jobs that could be extremely dangerous like drones and robots powered by ML have taken over highly risky tasks like bomb-defusing and testing gas pipelines.

5G and Enhanced connectivity

- 5G refers to networks that use cutting-edge technology, including augmented reality and virtual reality. They also threaten to render cable and fiber-based networks obsolete by requiring us to be tethered to a specific location.
- 5G and other advanced high-speed networks allow all of the other trends to be accessed anywhere at any time complex machine learning applications that require real-time access to Big Data sources can be automated and run in the field.
- 5G Technology is the next generation of cellular networks and services. It is expected to provide at least 20GBPS downlink and 10GBPS uplink, which will make the 5G network to be at least 40 times faster than current 4G LTE. This will open doors for new services network operations and customer experience for telecom operators.
- The next technology trend that follows the IoT is 5G. It is expected to be used in factories. HD cameras that help improve safety and traffic management smart grid control and smart retail too.

Everything-as-a Service (XaaS)

- It is a cloud computing term for the extensive variety of services and applications emerging for users to access on demand over the internet as opposed to bring utilized via on premises means. It gives you the flexibility to customize your computing environments to craft the experiences desired all on demand XaaS has expanded to incorporate many services such as :
  - ✓ Function-as-a-Service
  - ✓ IT-as-a-Service
  - ✓ Infrastructure-as-a-Service
  - ✓ Security-as-a-Service
  - ✓ Database-as-a-Service
- As these applications become even more portable, compute cycles easier to procure in real-time data integration platforms streamline connectivity and vendors form cross-platform alliances that multi-cloud trend might start looking more like an Omni-cloud one in the near future.

Robotic Process Automation (RPA)

- RPA is the use of software to automate business processes such as interpreting applications processing transactions dealing with data and even replying to emails. RPA automates repetitive tasks that people used to do. Robotic Process Automation is basically the idea that *"Anything that can be automated should be automated"*.

Internet of Behaviors (IoB)

- The Internet of Things (IoT) is concerned with using data and insights to influence behavior IoT devices are possible as massive databases for internet of Behavior (IoB) paradigms.
- Businesses will be able to follow customer behavior and use IoB to benefit their respective channels with the aid of IoB.

Augmented Reality and Virtual Reality

- Virtual Reality (VR) is concerned with creating a realistic environment of the physical world using computer technologies while Augmented Reality (AR) is concerned with enhancing the environment using computer generated elements.
- They operate in various field including gaming transportation, education, healthcare and many others. For example Ed-Tech platforms are increasingly favoring Augmented Reality and Virtual Reality to improve students' learning experiences.

IETE Organizational Member Meet at IETE Hyderabad

The **Maturi Venkata Subba Rao (MVSR) Engineering College**, which is also an **IETE Organizational Member (G00248),** organised a two-day technical symposium on the theme **"Latest Trends in Technologies of Electronics and Communication Engineering"** on 7th and 8th of January 2022, respectively, at MVSR Engineering College and then at IETE, Hyderabad Centre. During the first day's inaugural ceremony, Chief Guest **Dr Dasrath Ram Yadav**, Director, DRDL, Hyderabad, emphasized the need for students to have a diverse skill set in order to create new and innovative technologies. He discussed various new technologies and how they simplify life in the modern era. He has urged students to concentrate on research in order to ensure that the future of technology is bright and promising.

The guest of honour, **Prof Dr E Govind Rajan,** Chairman of the Pentagram Group of Companies in India, the United States of America, and Canada, provided an overview of India's current state of defence technology, which he asserted is comparable to that of the Super Powers. He recalled numerous government defence projects initiated by defence laboratories, and as such, he was involved in a number of these initiatives. The following Guest of honour, **Er K Gnaneshwar Rao**, Faculty at OU and Chairman, IETE, Hyderabad Center, briefed the audience on IETE's vision and mission, as well as the organization's recognition as a SIRO by the Government of India. He encouraged students to write and read articles in existing IETE journals in order to improve their research capabilities and to compete for IETE's annual awards. He mentioned various activities that their centre conducts on a regular basis and mentioned how the IETE Hyderabad Centre won the Best Center Award for 2020-2021. Prof & HoD, ECE Dept, MVSR Engineering College, **Dr SP VenuMadhav Rao**, also the convenor, provided an overview of the college, the technical event, theme and the benefits to participants. The next guest of honour, **Dr K Seetha Ram Babu**, IETE Organizational Member Representative in the Governing Council, gave the details of the ORG members, benefits, role, future activities. He expressed his gratitude to the members of the Governing Council, in particular President IETE, for allowing their unit to host the event. According to Dr K Seetha Ram Babu, IETE ORG's first event and many more to come with the help of Governing Council and ORG Representatives. The event concluded with the vote of thanks from **Er N Namassivaya**, Hony Secy Hyderabad Centre and also Co-Convenor of the 2 day technical symposium.

Prof Dr E Govind Rajan, a recipient of the prestigious Dr APJ Abdul Kalam Gold Medal for lifetime achievement in teaching, research, industrial development, and corporate social responsibility, addressed the gathering during **Session I** on the topic **"Off-Line Analysis and Estimation of Radar Signal Parameters for creating Electronic Order of Battle Records".** He focused on state-of-the-art upgraded techniques related to 'Electronic Intelligence' and 'Electronic Order of Battle,' where Electronic Intelligence (ELINT) provides both the direction of arrival and signal parameters of intercepted radar signals, as well as immediate warning of threats, activating surveillance, fire control, targeting, and missile guidance systems. Additionally, mention was made of the radar and its signals being intercepted by an ELINT receiver even from across the border, where analysis of such signals instantaneously alerts authorities to a threat, allowing countermeasures to be activated. In **Session II**, Shri **K Vijay Kumar Gupta**, CEO of Kwality Photonics & LED Chip Indus P Ltd, addressed the audience on the **topic "Emerging Applications of LED,"** highlighting his product, RAYPURE that creates a sterile room environment by eradicating viruses, bacteria, and fungi, including the COVID VIRUS, with the help of the Anti-Microbial Spectrum embedded in the white illumination lighting. He stated that Raypure is a proven safe non-UV, non-IR lighting source that does not require room evacuation, as Ultra Violet lights do, and thus creates an infection-free zone in hospitals, schools, offices, and homes. It will function just as well as a light source 24 hours a day. **Prof KSR Murthy**, former Technology Director, Instrumentation Division, DRDO, Hyderabad, addressed the gathering in **Session-III** on the topic **"Advanced Missile Instrumentation,"** providing an overview of the parameter measurement requirements for flight vehicle applications in the missile field. He maintained that a wide variety of signals must be captured using novel setups to satisfy a one-time requirement for testing flight vehicle subsystems. Multiple recording systems with redundant instrumentation were used to meet these specific requirements. Additionally, a few subsystems were demonstrated during the presentation to illustrate the concepts.

The 2nd day, **Session 1,** began with a presentation by **Dr M B Srinivas**, Dean & Professor BITS Pilani, Hyderabad, on **"Technology and Climate Change,"** in which he discussed climate change and its impact on the earth, as well as what countries should do to achieve net zero emissions. He used India's efforts to reduce carbon emissions as a case study. He spoke to the students about future opportunities and their course of action, highlighting solar photovoltaics, electric vehicles, battery storage, and renewable energy. **Dr PSR Srinivasa Sastry**, Outstanding Scientist and Director for Special Projects at the Defence Research and Development Organization (DRDO), Hyderabad, addressed the gathering during **Session–II** on the topic **"Satellite Technologies and New National Initiatives."** He discussed the classification of orbits, the various orbits, satellite applications and their application in the field of defence, the importance of space situational awareness, and a few national space initiatives aimed at promoting space technology**. Dr B Yegnanarayana**, INSA Senior Scientist at IIIT Hyderabad and former faculty at IISC and IIT, addressed the event in **Session III** on the topic **"Communication Engineering: Techniques to Technology."** In his talk, he traced the evolution of communication engineering over several decades, culminating in today's Technology-Driven Society. He discussed Shannon's Mathematical Theory of Communication and its derivatives, which resulted in the development of various concepts. The presentation demonstrated how recent advances in data-driven Artificial Intelligence, Machine Learning and Deep Learning technologies have shifted the emphasis away from techniques and toward technology. From a communication engineering perspective, we discussed some of the advantages and disadvantages of these deep learning-based AI applications.

During the valedictory ceremony, chief guest **Dr K P Srinivas Rao**, Chairman, Matrusri Education Society, highlighted the college's accomplishments over the years. He expressed gratitude to the IETE for its role in organizing the technical event and thanked all stakeholders for their contributions to the event's success. The Guest of honour **Dr Bayya Yegnanarayana,** INSA Senior Scientist, IIIT, Hyderabad, and advisor to the MVSR Engineering College, expressed gratitude to both the MVSR College and IETE for co-hosting the technical event for the benefit of the students and encouraged both entities to host similar events in the future. The event concluded with **Er N Namassivaya**, Honorary Secretary, Hyderabad Centre, delivering a vote of thanks.

THE INSTITUTION OF ELECTRONICS AND TELECOMMUNICATION ENGINEERS

IETE CHENCON 2022

International Conference on Power of Artificial Intelligence and Machine Learning for Human Empowerment

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Hybrid Mode

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About IETE

Founded in 1953, the Institution of Electronics and Telecommunication Engineers (IETE) is a leading professional society. Its vision is to reach the unreached and empower the youth through Technical Education and Skill development with a Mission for Advancement of Electronics, Telecommunication, Information Technology & other related disciplines; to contribute in Nation's Human Resource & Infrastructure Development through our Engineers & Scientists. The Government of India, Ministry of Science and Technology, Department of Scientific & Industrial Research has recognized IETE as a Scientific and Industrial Research Organization (SIRO).

Scope of The Conference

Recently, the use of AI/ML technology has been exponentially increasing in our daily lives. AI/ML applications represent an important evolution in computer science and data processing that is quickly transforming a vast array of domains. IETE CHENCON 2022 provides vibrant opportunities for the delegates to exchange new ideas, applications, practical challenges encountered and to leverage AI and ML technologies. The technical program of the conference will consist of invited key note talks and paper presentations. IETE CHENCON 2022 accepts technical paper presentation from research scholars, faculty, students and industry professionals in emerging areas of AI and ML applications but not limited to:

Track - 1: AI Enabled Technologies

- Advanced Robotics
- Intelligent Drones and UAVs
- Natural Language processing
- Speech Recognition
- Image Processing
- Conversational systems
- Image analysis
- Computer vision
- Face and Gesture Recognition
- Object recognition
- Document analysis
- Earth observation and Visualization
- Weather and Climate prediction
- Localization Techniques
- Ethical and Responsible AI

Track - 2: AI/ML Infrastructure

- Enhanced data visualization
- Data preparation
- Data labeling
- Big data
- Edge devices
- Cloud ML platform
- Digital health and well being
- Prediction/Detection of diseases
- AI for Effective treatment/therapy
- 3D imaging and sensing
- ML/AI for autonomous systems
- AI and ML for Healthcare
- AI and ML Pandemic tracking
- AI and ML for Virtual learning
- Physics inspired ML

Track - 3: Emerging Applications of AI in Communication

- AI/ML in the PHY Layer
- AI and machine learning for 5G
- Propagation at mm Waves and THertz
- Beyond 5G & 6G communications
- New modulation and coding techniques
- Antenna array processing
- AI/ML for wireless/optical/satellite networks
- Reconfigurable Intelligent Surfaces
- Detection, Localization
- Radio Network Traffic Prediction
- Mobility Analytics
- Smart Communications
- MIMO and Multi antenna Beamforming
- Microwaves and Antenna
- THz Sensing and Spectrum

Track - 4: Industry Applications of AI

- Factory automation
- Autonomous driving and V2X
- Internet of Things Analytics
- Cryptography
- Energy Management and Analytics
- Smart farming environments
- Quantum Computing
- Cybersecurity
- Cryptocurrencies
- Smart Cities Based on IoT and AI
- Industry 4.0
- Underwater Technologies
- 6G, Augmented /Virtual Reality
- VLSI designs of AI implementations
- AI/ML Chipsets

Submission Guidelines

Prospective authors are invited to submit full papers describing original, previously unpublished, complete work in four pages in A4 IEEE double column conference template, including figure, results and references. Submitted papers will be reviewed by two to three technical committee or reviewers. Accepted and registered papers of IETE CHENCON 2022 will be published in the conference proceedings. Extended versions of the accepted and presented papers will be recommended for publication in IETE Journals, SCOPUS, SCI and other indexed journals. Authors must submit the papers through their Easy chair account using the following link: https://easychair.org/conferences/?conf=ietechencon2022

Registration Fee & Details

At least one author for each paper should register for the conference. If an author has more than one accepted paper, registration fee has to be paid for each Paper ID.

IETE members including ISF	: Rs. 1500 + GST
Non-IETE members	: Rs. 2500 + GST
International Participants	: $50

Important Dates

Last date for paper Submission:	22.03.2022
Notification of Acceptance:	05.04.2022
Registration on or before:	10.04.2022
Conference Dates:	22.04.2022 & 23.04.2022

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242	228054	F	Kulkarni,Shubha
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267	237807	F	Tripathy,Pravash Ranjan,Dr
268	237809	F	Khalandhar Basha,D
269	238019	F	Prathiba Reddy,B,Dr
270	238057	F	Patel,Manoj Kumar
271	238102	F	Shingrakhia,Hansa J
272	500224	F	Shakthi Murugan,K H,Dr
273	500252	F	Kumutha,N
274	500523	F	Gade,Mary Swarnalatha
275	500882	F	Mondal,Koushik,Dr
276	500891	F	Dubbudu,Ramakrishna Reddy,Dr
277	501240	F	Banerjee,Jyoti Sekhar,Dr
278	501445	F	Tanweer,Safdar,Dr
279	501447	F	Nafis,Md Tabrez,Dr
280	501454	F	Malik,Hasmat,Dr
281	501468	F	Kumar,Nishant,Dr
282	501512	F	Joshi,Jonathan Rajendra,Dr
283	501612	F	Bulusu S S K Chaitanya,Dr
284	501676	F	Bhattacharya,Somak,Dr
285	502091	F	Belamgi,Sharanbasappa B
286	502092	F	Patil,Bhimrao
287	502093	F	Kalyane,Sangshetty B,Dr
288	502094	F	Sangame,Sunikumar K
289	502095	F	Patil,Nagraj Chandrappa
290	502096	F	Biradar,Nagashetteppa,Dr
291	502097	F	Gandge,Yogesh V
292	502098	F	Bhuyar,Devendra Laxman
293	502099	F	Kasar,Smita Lalit,Dr
294	502100	F	Dharmadhikari,Dipa D
295	502101	F	Savant,Shubhashree Shantaram
296	502102	F	Rawate,Amit Madhav,Dr
297	502103	F	Jadhavpatil,Vandana L,Dr
298	502104	F	Ghodke,Ajit Shivajirao,Dr
299	502105	F	Akurathi,Veerabhadra Rao
300	502106	F	Dube,Lalbahadur
301	502107	F	Patel,Neeraj Kumar
302	502108	F	Debashis,De,Dr
303	502109	F	Ghosh,Indrajit,Dr
304	502110	F	Sen,Soumya,Dr
305	502111	F	Majumder,Koushik,Dr
306	502112	F	Venkata Krishna Prasad,A,Dr
307	502113	F	Sen,Shibaprasad,Dr
308	502114	F	Khope,Sarika Rajendra
309	502115	F	Chandra Sekhar,V,Dr
310	502116	F	Niranjan Reddy,K,Dr
311	502117	F	Mishra,Deepak
312	502118	F	Jaiswal,Nishant
313	502119	F	Bansal,Prateek
314	502120	F	Saxena,Payal
315	502121	F	Ghose,Subhankar
316	502122	F	Pati,Umesh Chandra
317	502123	F	Sudha,G
318	502124	F	Manoj Kumar,G V
319	502125	F	Shankar,Prakriya,Dr
320	502126	F	Vaghela,Ramesh P
321	502127	F	Anantha Ramakrishna,S,Dr
322	502128	F	Chatterjee,Vijay,Dr
323	502129	F	Tripathy,Susanta Kumar,Dr
324	502130	F	Gaidhani,Yashika Anand,Dr
325	502131	F	Patil,Sumangala,Dr
326	502132	F	Pattanayak,Prabina,Dr
327	502133	F	Padmavathi,K,Dr
328	502134	F	Balasubramaniam,N,Dr
329	502135	F	Niranjan,A,Dr
330	502136	F	Nishad,Nirendra Kumar
331	502137	F	Keote,R S,Dr
332	502138	F	Rakesh Kumar,Y
333	502139	F	Vijaya Lakshmi,T R,Dr
334	502140	F	Chouhan,Arun Singh,Dr
335	502141	F	Srinivasan,R
336	502142	F	Raut,Pravin Wasudeorao,Dr
337	502143	F	Satya Savithri,T,Dr
338	502144	F	Gayathri,R,Dr
339	502145	F	Bharti Y,Masram,Dr
340	502146	F	Chitriv,Yogita U,Dr
341	502147	F	Borole,Yogini Dilip,Dr
342	502149	F	Dhanasu,M,Dr
343	502150	F	Rawat,Sanyog,Dr
344	502151	F	Sahu,Anil Kumar,Dr

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S.N.	MEM	CAT	Name
345	502152	F	Sripalreddy,P
346	502153	F	Masiul Islam,Sk.,Dr.
347	502154	F	Chowdhary,Sadhana
348	502155	F	Nimbarte,Nita M,Dr
349	502156	F	Milind,Sharadchandra N,Dr
350	502157	F	Kishore,Rajeev Kamal
351	502158	F	Roy,Abhishek Kumar
352	502159	F	Kanaje,Kashinath G,Dr
353	502160	F	Ghosh,Ankush,Dr
354	502161	F	Patil,Shivaleela S,Dr
355	502162	F	Patil,Shivaganga B
356	502163	F	Kalbande,Monica N,Dr
357	502164	F	Panse,Tejaswini G,Dr
358	502165	F	Sujith,S
359	502166	F	Pandey,Jai Gopal,Dr
360	502167	F	Chawhan,Manish D,Dr
361	502168	F	Sharma,Rishi,Dr
362	502169	F	Shaji,P R
363	502170	F	Vijaya Kishore,V,Dr
364	502171	F	Kosalai Raman P,Gp Capt
365	502172	F	Pandit,Soumya,Dr
366	502173	F	Dorle,Megha S,Dr
367	502174	F	Appaji M,Bongale,Dr
368	502175	F	Roy,Kaushik,Dr
369	502176	F	Bhoyar,Dinesh B,Dr
370	502177	F	Banerjee,Soumen,Dr
371	502178	F	Prasad,Mahanth,Dr
372	502180	F	Ramanathan,V
373	502181	F	Banerjee,Rahul,Dr
374	502182	F	Mukhiya,Ravindra,Dr
375	502183	F	Bansal,Deepak,Dr
376	502184	F	Sagarkumar,B
377	502185	F	Gaikwad,Chandrakant J,Dr
378	502255	F	Khalid,Faisal
379	502256	F	Ibrahim Febi
380	502308	F	Mohan J,Dr
381	502309	F	Soni,Sanjay Kumar,Dr
382	502318	F	Usha Bhanu,N,Dr
383	502325	F	Nagrale,Vismita D
384	502329	F	Bhosale,Sudhir P
385	502333	F	Gawai,Vipin B
386	502358	F	Nawgaje,Devesh D,Dr
387	502359	F	Patil,Rajashekhargouda C,Dr
388	502360	F	Khandekar Prasad D,Dr
389	502361	F	Mohan D,Dr
390	502362	F	Arya,Yogendra,Dr
391	502363	F	Vijaya Bhaskar S Ch
392	502364	F	Gupta,Rajendra Kumar
393	502365	F	Vijayalakshmi C,Dr
394	502366	F	Hati,Ananda Shankar,Dr
395	502367	F	Kadam Anilkumar J
396	502368	F	Gaikwad D P,Dr
397	502369	F	Prachi P Vast,Dr
398	502370	F	Mawale,Nitin P
399	502371	F	Dhekale,Santosh B
400	502372	F	Singh,Kishan,Dr
401	502373	F	Bakhar Mohammed,Dr
402	502374	F	Sreepathi B,Dr
403	502375	F	Sheela B P
404	502376	F	Nagaraj Gowda H
405	502377	F	Mahantesh H M
406	502378	F	Hanumantha Rao A
407	502379	F	Elia Sundaram H M
408	502380	F	Linganagouda R
409	502381	F	Vinay Kumar H
410	502382	F	Gayathri J
411	502383	F	Dalal,Shiva Kumar
412	502384	F	Savita S,Dr
413	502385	F	Prabhavathi S,Dr
414	502386	F	Zakirhulla M Md
415	502387	F	Surendranath H
416	502388	F	Patil,Rakhee
417	502389	F	Khaja Moinuddin
418	502390	F	Girija Vani G
419	502391	F	Patil,Suvarna S
420	502392	F	Lokesh K S
421	502393	F	Bilagi,Shridhar S
422	502394	F	Phanindra Reddy K
423	502395	F	Srikantha N
424	502396	F	Prashanth K
425	502397	F	Vinay A
426	502398	F	Hanumantha Reddy T,Dr
427	502399	F	Girisha H,Dr
428	502400	F	Suresh K
429	502401	F	Chidananda H,Dr
430	502402	F	Veeragangadhara Swamy T M,Dr
431	502403	F	Sai Madhavi D,Dr
432	502404	F	Kulkarni,Sapna B,Dr
433	502405	F	Sunitha S
434	502406	F	Kavitha Juliet

S.N.	MEM	CAT	Name
435	502407	F	Shiva Kumar V
436	502408	F	Rajeswari R P
437	502409	F	Aparna K S
438	502410	F	Venkata Swetha Ramana D
439	502411	F	Raghu Kumar K S
440	502412	F	Sampath Kumar R
441	502413	F	Vinutha P
442	502414	F	Anuradha G,Dr
443	502415	F	Sridevi M
444	502416	F	Shivaprasad K M
445	502417	F	Naveen Kumar B
446	502418	F	Prasanna Kumar S S
447	502419	F	Choupiri Shivakeshi
448	502420	F	Patil,Manjula
449	502421	F	Gururaj K K
450	502422	F	Nagaraj M
451	502423	F	Anitha A
452	502424	F	Shriram K Vasudevan,Dr
453	502448	F	Swetha A,Dr
454	502449	F	Shukla,Sidharth,Dr
455	502450	F	Prashanth N A,Dr
456	502451	F	Kumar,Ashutosh
457	502452	F	Mahesh Kuamr N,Dr
458	502453	F	Muralidhar P,Dr
459	502454	F	Sen,Debrati,Dr
460	502455	F	Ananth Krishna R
461	502456	F	Trikey,Preeti
462	502457	F	Aggarwal,Varsha
463	502458	F	Vijayakumar N,Dr
464	502459	F	Ramana Reddy V V
465	502460	F	Revathi A R,Dr
466	502461	F	Sahoo,Sudarsan,Dr
467	502462	F	Goswami,Mrinal
468	502463	F	Srinivasa Rao S,Dr
469	502464	F	Kumar,Dinesh,Dr
470	502465	F	Dwivedi,Smrity,Dr
471	502466	F	Sneha S Revankar
472	502467	F	Chauhan,Bhavesh Kumar,Dr
473	502468	F	Raj Reddy P,Dr
474	502469	F	Lekshmi S,Dr
475	502470	F	Stalin Es
476	502471	F	Das,Abhijit,Dr
477	502472	F	Singh,Pan
478	502473	F	Phadikar,Santanu,Dr
479	502474	F	Dutta,Papiya,Dr
480	502475	F	Jain,Ashish Kumar,Dr
481	502476	F	Subba Ramaiah V,Dr
482	502477	F	Raghu K
483	502479	F	Rohitha U M,Dr
484	502480	F	Satheesha, T Y,Dr.
485	502481	F	Shrilakshmi N S
486	502482	F	Anila S
487	502483	F	Narayan S P
488	502484	F	Haratheesh H A
489	502485	F	Allirani K
490	502506	F	Satish Kumar G
491	502507	F	Subbarao B V
492	502508	F	Pant,Reena,Dr
493	502509	F	Rajendra Kumar T
494	502510	F	Sah,Umesh Prasad
495	502512	F	Obaidullah Md,Sk,Dr
496	502513	F	Singh,Brijesh,Dr
497	502514	F	Mandal,Pratap Chandra
498	502515	F	Shah,Prashant Kanubhai
499	502516	F	Purushothaman,S
500	502517	F	Renjith V Ravi,Dr
501	502518	F	Sunil Rupdas H,Dr
502	502519	F	Murugan R,Dr
503	502520	F	Raveen Kumar K
504	502521	F	Palem,Venkataramana
505	502522	F	Vijayasankar N R
506	502523	F	Grahadurai G
507	502524	F	Sampath Kumar S Ch
508	502525	F	Guha,Koushik,Dr
509	502526	F	Bapu S Bindhumadhava
510	502527	F	Ramesh Krishnan R
511	502528	F	Keshavamurthy,Dr
512	502558	F	Krishna Kumar A
513	502559	F	Alivelu Manga N,Dr
514	502560	F	Pradeep Kumar G V
515	502561	F	Sridher T
516	502562	F	Sathish P,Dr
517	502563	F	Vani A,Dr
518	502564	F	Vinodh Kumar,M,Dr
519	502565	F	Merlin Livingston,L M,Dr
520	502566	F	Aravinda Babu T
521	502567	F	Chandra Sekhar P
522	502568	F	Ramaneeswari T
523	502569	F	Kulkarni,Rajendrakumar Digamba
524	502570	F	Chaudhuri,Saptarshi,Dr

S.N.	MEM	CAT	Name
525	502571	F	Jiji,C V,Dr
526	502572	F	Subbarao,Boddu,Dr
527	502573	F	Koiloth Srs Jyothsna
528	502574	F	Palle,Kowstubha,Dr
529	502575	F	Supraja Reddy A,Dr
530	502576	F	Sastry,Panyam Narahari
531	502581	F	Shah,Ambika Prasad,Dr
532	502582	F	Kumar,Subindu,Dr
533	502583	F	Manoj,B S,Dr
534	502585	F	Kumar,Duraisamy
535	502586	F	Anandaraj,J
536	502587	F	Shrivastav,Kamayani,Dr
537	502588	F	Vijay Kumar,K,Dr
538	502589	F	Senthil Kumar,K,Dr
539	502591	F	Roopa,B
540	502593	F	Mallikharjuna Rao,G
541	502594	F	Samuel Jigme Harrison
542	502596	F	Tatiraju V Rajanikanth
543	502598	F	Laskar,Rabul Hussain,Dr
544	502599	F	Chaterjee,Subhajit,Dr
545	502600	F	Kumar,Jitendra,Dr
546	502601	F	Mukhopadhyay,Debajyoti,Dr
547	502603	F	Vaidyan,Koshy P,Dr
548	502604	F	Bhowmik,Partha Sarathee,Dr
549	502605	F	Singh,Chaturi,Dr
550	502606	F	Mukherji,Prachi,Dr
551	502607	F	Khairnar,Dilip Gopichand,Dr
552	502608	F	Kumar,Rajneesh
553	502609	F	Sujithkumar V
554	502610	F	Kumar,Virender
555	502611	F	Lakshmanan,Anand,Dr
556	502612	F	Singh,Paramjeet,Lt Col
557	502613	F	Bagadi,Kesava Rao
558	502614	F	Govardhan,A,Dr
559	502615	F	Bapayya,K
560	502637	F	Mishra,Rajan,Dr
561	502638	F	Singh,Gurinder Pal,Dr
562	502639	F	Mishra,Shailesh,Dr
563	502640	F	Pothirajan,R,Lt Col
564	502641	F	Sahoo,Sarat Kumar,Dr
565	502642	F	Harsha Vardhini,P A,Dr
566	502643	F	Swapna A
567	502644	F	Balasubramanian,P
568	502645	F	Nageswararao,A V,Dr
569	502646	F	Muduli,Arjuna,Dr
570	502647	F	Sabharwal,Munish,Dr
571	502648	F	Mulla,Mahmadasraf Abdulhamid,D
572	502665	F	Srinivas Reddy,G
573	502666	F	Patel,Dipesh Maheshbhai,Dr
574	502667	F	Deka,Sanjib Kumar,Dr
575	502668	F	Ogale,Jyotsna Viendra,Dr
576	502669	F	Ramesh B R
577	502670	F	Bandyopadhyay,Soma
578	502671	F	Tiwari,Rakesh Chandra
579	502672	F	Kumar,Dilip,Dr
580	502673	F	Anil Kumar,B,Dr
581	502674	F	Srinivas,Yerram,Dr
582	502675	F	Saxena,Saurabh,Lt Col
583	502676	F	Ratna Kamala P,Dr
584	502677	F	Bharathi,R
585	502678	F	Das,Madan Kumar
586	502679	F	Bhagya R,Dr
587	502680	F	Soundar Rajan,Pm
588	502681	F	Deepa,V P
589	502682	F	Nagaraju,T A
590	502683	F	Aerpul,Ajay R
591	502684	F	Gopala Sharma,A
592	502685	F	Ganesh R
593	502686	F	Manjunath,L
594	502687	F	Lalithendra K,Dr
595	502688	F	Karrar,Hussain
596	502689	F	Jyotsna,K A
597	502690	F	Dhruva,Rinku R
598	502691	F	Tunga,Satish,Dr
599	502692	F	Tripathi,Rohit,Dr
600	502693	F	Gopinath,P G,Dr
601	502694	F	Madhusudan,Dr
602	502695	F	Pavan Kumar,B
603	502696	F	Kuppusamy,P G,Dr
604	502697	F	Chandra Shekhar,Azad,Dr
605	502698	F	Ranjani,G,Dr
606	502699	F	Kumar,Arvind
607	502700	F	Myla,Ramudu Sathiraju
608	502701	F	Swetha Rani L
609	502702	F	Aruna R,Dr
610	502703	F	Kavitha T,Dr
611	502704	F	Amutha N,Dr
612	502705	F	Pawar,Jayant P
613	502706	F	Prathibha S
614	502707	F	Iqsaam-Ul-Mukhtar

S.N.	MEM	CAT	Name
615	502708	F	Rohit S,Dr
616	502709	F	Sumithra C V
617	502710	F	Harish S
618	502711	F	Bose S,Dr
619	502742	F	Arumugam,K S
620	502776	F	Bedi,Navjot Singh,Brig(Dr)
621	502777	F	Nagendrappa H,Dr
622	502778	F	Venkatesaperumal B,Dr
623	502779	F	Singh,Vimlesh,Dr
624	502780	F	Shobha,K R,Dr
625	502781	F	Remya,V
626	502782	F	Humbe,Vikas Tukaram,Dr
627	502783	F	Gawande,Gopal Sukdeo,Dr
628	502784	F	Nayak,Deepak Kumar,Dr
629	502785	F	Madana Mohana,R,Dr
630	502786	F	Selvi R
631	502787	F	Rana,Kanwar Pal Singh,Dr
632	502788	F	Passi,Abhiruchi,Dr
633	502789	F	Gupta,Anand,Dr
634	502790	F	Das,B K,Dr
635	502791	F	Humbe,Vikas Tukaram,Dr
636	502792	F	Rajalakshmi S
637	502793	F	Lakshmi D,Dr
638	502794	F	Selvan,Shirley,Dr
639	502797	F	Kumar,Ashwani,Dr
640	502806	F	Puram,Venkatesham
641	502807	F	Namburi,Dhana Lakshmi
642	502808	F	Senbagavalli,G
643	502809	F	Arora,Tajinder Singh,Dr
644	502810	F	Saravanakumar U,Dr
645	502811	F	Gopal Krishna G S S
646	502812	F	Chawla,Vimal
647	502813	F	Panigarhi,Goutam,Dr
648	502819	F	Suresh T,Dr
649	502820	F	Vijayalakshmi P,Dr
650	502821	F	Meena M,Dr
651	502822	F	Vijayalakshmi A,Dr
652	502826	F	Indrani,K S
653	502827	F	Swathi,Sriramoju
654	502828	F	Naresh,B
655	502829	F	Ajijtha,G
656	502830	F	Bindusree,V
657	502831	F	China Venkateswarlu S,Dr
658	502832	F	Padmanabha Reddy V,Dr
659	502833	F	Munaswamy P,Dr
660	502834	F	Siva Nagaraju,V,Dr
661	502835	F	Ashok Babu,P,Dr
662	502836	F	Sukhi,Y,Dr
663	502837	F	Blesslin Sheeba,T,Dr
664	502838	F	Debarati,Dey Roy,Dr
665	502839	F	Chalavadi,Krishna Mohan,Dr
666	502840	F	Ranade,Sulabha Ratnakar,Dr
667	502841	F	Mallick,Anup Kumar
668	502842	F	Rajendra Prasad,M
669	502843	F	Parameshwar,G
670	502844	F	Shaik,Maznu
671	502845	F	Mohammad Akram Ahmed
672	502846	F	Sridevi,J
673	502847	F	Vasanth,K,Dr
674	502848	F	Ganesan P,Dr
675	502849	F	Sivakumar,V G,Dr
676	502850	F	Vadivel M,Dr
677	502862	F	Singh,Sonpal,Gp Capt
678	502863	F	Dubey,Amarish,Dr
679	502864	F	Kota,Nageswara Sastry
680	502865	F	Kameswara Rao,B
681	502866	F	Borisagar,Komal R,Dr
682	502867	F	Pal,Pankaj Kumar,Dr
683	502868	F	Kubakaddi,Sanjeevakumar,Dr
684	502869	F	Medicherla,Nani
685	139963	M	Dhaked,Dinesh Chand
686	225108	M	Madhusudhana Reddy,B,Dr
687	227389	M	Sajeevan P R
688	229975	M	Mhase,Sandip Bhagwan
689	235857	M	Arun Raj,V
690	235863	M	Kamala Devi,R
691	238039	M	Vivekananda,G N,Dr
692	238058	M	Sujith K
693	500617	M	Palniladevi P
694	500620	M	Kirubakaran,G
695	500933	M	Usman,Adil,Dr
696	502047	M	Jadhav,Akshay Tukaram
697	502051	M	Mulla,Zaheer Ahamed
698	502054	M	Venkatesh,M,Dr
699	502055	M	Jha,Ravindra,Dr
700	502056	M	Rahul,Prajesh,Dr
701	502057	M	Maurya,Ranjan Kumar
702	502058	M	Yadav,Vikas
703	502059	M	Rastogi,Sandeep
704	502060	M	Arun,M

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