



BULLETIN



Prof.Dr.D.ELANGO,FIE
Chairman

Dr.J.BALAMURUGAN,FIE
Honorary Secretary

Vol. 24 : No.19

AUGUST 2026

From the Chairman's Desk.....



Dear Fellow Engineers,

Warm greetings to all members of The Institution of Engineers (India), Tamil Nadu State Centre.

The Institution of Engineers (India), Tamil Nadu State Centre, in association with the Department of Electronics and Communication Engineering, SRM Valliammai Engineering College, organized a One-Day Workshop on “Semiconductor-to-Edge Vision: A Workshop on Real-Time Image Processing Accelerators Using FPGA SoCs” on 31st July 2026. Mr. A. Manikandan, Senior Project Engineer, Research and Development, Pantech Solutions, Chennai, was the Chief Guest. The workshop focused on semiconductor technology, FPGA-based system design and real-time image processing.

A One-Day Seminar on “Next Generation 6G Wireless Technologies for Sustainable & Intelligent Communication Systems” was organized in association with Pavendar Bharathidasan College of Engineering and Technology on 3rd August 2026 at the ECE Seminar Hall, Pavendar Bharathidasan Campus. Dr. K. Hariharan, Professor, Department of Electronics and Communication Engineering,

Thiagarajar College of Engineering, Madurai, was the Chief Guest and delivered the inaugural address. The seminar provided insights into emerging advancements and future directions in 6G wireless communication technologies.

In association with SRM Valliammai Engineering College, a One-Day Seminar on “Artificial Intelligence in Manufacturing” was organized on 5th August 2026 at the Admin Block Seminar Hall, SRM VEC, Kattankulathur. Er. S. Vedhanayagam, Deputy General Manager and R&D Design Lead – Air Supply Product Segment, India, ZF CVCS, Chennai, was the Chief Guest. The seminar highlighted the applications and emerging trends of Artificial Intelligence in manufacturing.

IE(I) Tamil Nadu State Centre, in association with IE(I) Kalpakkam Local Centre, organized a Nuclear Talk on “Thorium & H₂ Production” on 8th August 2026 at the IE(I) TNSC Auditorium, Chennai. Dr. Prabhat Kumar, Former CMD, BHAVINI and Former Project Director, ITER France, was the Chief Guest.

A guest lecture on “Technical Textiles Connect to Engineering – Opportunities for Review” was organized under the Textile Engineering Division on 20th August 2026 through Zoom platform. Mr. Sudarsan Rajagopalan, Splendour Medicare Technologies, Business Navigation & Innovation, was the Chief Guest. He explained various categories and emerging applications of technical textiles, including

Hometech, Indutech, Agrotech, Geotech, Sportech, Clothtech, Medtech, Protech, Packtech, Oekotech, Buildtech and Mobiltech, along with emerging areas such as Spacetechnology and smart electronics.

An All India Seminar on “Application of Sustainable Materials in Modular Construction Technology” was organized in association with SRM Valliammai Engineering College on 27th and 28th August 2026 at SRM Valliammai Engineering College, Chennai. MJF. Ln. Dr. Ganesh Jayaraj, FIE, Chief Engineer/Civil, 600 MW ETPS Expansion Project, Ennore (Retd.), TNPDC(L), was the Chief Guest. He emphasized innovative construction practices, efficient resource utilization and the adoption of sustainable materials for environmentally responsible infrastructure development.

A One-Day Workshop on “Smart Sustainable Agriculture: Integrating Bokashi Composting and

Precision Farming” was organized in association with Bio Drops under the Agricultural Engineering Division on 29th August 2026 at the IE(I) TNSC Auditorium, Chennai. Dr. N. Parasuraman, Principal Scientist, M.S. Swaminathan Research Foundation, delivered the inaugural address. The workshop focused on sustainable agricultural practices through Bokashi composting and precision farming.

I would also like to request all Corporate Members to complete the Know Your Membership (KYM) form to enable us to maintain an accurate and updated membership database. Your cooperation is essential for ensuring seamless communication and the effective delivery of member services and benefits. The completed form may be submitted in person at the IE(I) Tamil Nadu State Centre office or sent by email to ieitamilnadu@gmail.com or tnsc@ieindia.org.

With warm regards,

Prof.Dr.D.ELANGO, FIE.,
Chairman

From the Hon. Secretary's Desk.....



Dear Fellow Engineers, Academicians, Industry Leaders, Students and Friends,

Greetings from the Institution of Engineers (India), Tamil Nadu State Centre.

One Engineering Community. One Platform. One Vision for Viksit Bharat 2047 Engineer's Day Greetings

On the occasion of Engineer's Day, I extend my warm greetings to all engineers, engineering professionals, faculty members, students and institutions across Tamil Nadu.

Engineer's Day is not merely a celebration of our profession; it is a reminder of our responsibility to

innovate, solve problems and build a better tomorrow. Inspired by the vision and contributions of Sir M. Visvesvaraya, let us renew our commitment to engineering excellence and nation building.

Connecting Engineering for a Greater Tomorrow

Tamil Nadu possesses an extraordinary strength — its vast engineering talent, institutions, industries, research organisations and young innovators.

Our vision at the Institution of Engineers (India) – Tamil Nadu State Centre is to bring this strength together under one common professional platform – IEI.

Engineering today has no boundaries. Energy, Renewable Energy, Agriculture, Aviation, Marine, Mechanical, Electrical, Civil, Telecommunications, Artificial Intelligence, Networking, Mining, Metallurgy, Textile and emerging technologies such as Robotics, Semiconductors, Space Technology, Green Hydrogen, Energy Storage, Advanced

Manufacturing and Quantum Technologies are increasingly interconnected.

Our opportunity is to create a strong ecosystem where:

Engineering Institutions + IEI + Industry + Government + R&D + Startups + Society work together to convert knowledge into innovation and innovation into implementation.

Engineering for Government & Society

IEI should become a bridge through which engineering institutions and professionals can actively contribute to Government projects, infrastructure development, technology missions, sustainability programmes and social development initiatives.

Our engineers must move beyond classrooms and laboratories — to farms, villages, industries, ports, airports, power systems, cities and digital networks — wherever engineering can improve lives.

Let us transform engineers from job seekers into problem solvers, technology users into technology creators, and professionals into nation builders.

Our Dream – An IEI Engineering Hub

A major aspiration for the future is to establish a world-class IEI Engineering Hub in Tamil Nadu, bringing the entire engineering fraternity under one roof.

The proposed hub could include:

- Modern Auditorium for national and international conferences
- Amphitheatre for public lectures and youth programmes
- Innovation Hub for ideas, prototypes and challenges
- Learning & Skill Development Hub for emerging technologies
- Project Incubation & Startup Centre
- Research & Technology Collaboration Centre
- Industry–Institute Interaction Centre
- Young Engineers & Student Innovation Centre

This should not be merely a physical facility. It should become the living heart of Tamil Nadu's engineering ecosystem.

Connecting Every Institution

Our endeavour is to strengthen the connection of engineering institutions across Tamil Nadu with IEI through Student Chapters, technical programmes, innovation challenges, skill development, industry interaction, research collaboration, entrepreneurship and “Engineer for Society” initiatives.

We aspire to create a culture where:

Every Institution has a place in IEI.
Every Student has an opportunity through IEI.
Every Engineer has a professional home in IEI.
Every Innovation has a pathway to society.

Tamil Nadu Engineering Excellence → Viksit Bharat 2047

Tamil Nadu can play a defining role in India's journey towards Viksit Bharat 2047. Let us channel our engineering excellence towards a future that is technologically advanced, economically strong, environmentally sustainable and socially inclusive.

Let us connect every discipline, empower every institution, nurture every young engineer and participate in every opportunity to serve the nation.

Let us Engineer the Future Together

One Engineering Community.
One Professional Platform.
One Shared Vision.

With IEI – Engineering Tamil Nadu for a Greater Tomorrow.

Together, let us engineer a stronger Tamil Nadu.
Together, let us build a Viksit Bharat 2047.

Happy Engineer's Day to the entire Engineering Fraternity!

Join our WhatsApp Channel for more information
<https://whatsapp.com/channel/0029VbC45KHJpe8iyqJ2Ap0C>

Dr.J.Balamurugan,FIE.,
Honorary Secretary

**One Day Workshop on "Semiconductor-to-Edge Vision:
Real-Time Image Processing Accelerators Using FPGA SoCs"**
31st July 2026

The Institution of Engineers (India) Tamil Nadu State Centre in association with Department of Electronics and Communication Engineering, SRM Valliammai Engineering College organized a One-Day Workshop on "Semiconductor-to-Edge Vision: A Workshop on Real-Time Image Processing Accelerators Using FPGA SoCs" on 31st July 2026. The workshop aimed to provide the knowledge on Semiconductor technology, FPGA-based system design and Real-Time Image Processing.



The programme commenced with the Welcome Address delivered by Prof. Dr. D. Elango, Chairman, IE(I) Tamil Nadu State Centre. The workshop aimed to provide participants with knowledge and practical insights into semiconductor technology, FPGA-based system design, and real-time image processing, with particular emphasis on emerging technologies and career opportunities in the semiconductor industry. Dr. M. Murugan, Convenor & Committee Member, IE(I) TNSC, introduced the theme and highlighted the significance of the workshop. During the inaugural session workshop souvenir was released.



Dr. Komala James, Professor & Head, Department of Electronics and Communication Engineering, SRM Valliammai Engineering College, delivered the

Presidential Address and emphasized the importance of developing industry-relevant technical skills among engineering students.

Dr. S. Ramesh, Professor & Coordinator, Department of Electronics and Communication Engineering, introduced the Chief Guest, Mr. A. Manikandan, Senior Project Engineer, Research and Development, Pantech Solutions, Chennai.

Mr. A. Manikandan delivered the Inaugural Address, highlighting the growing importance of semiconductor technologies, FPGA-based systems, and edge computing in modern engineering applications. The dignitaries were honoured with shawls and mementos.



Dr. J. Balamurugan, Honorary Secretary, IE(I) Tamil Nadu State Centre, delivered the Vote of Thanks. He highlighted the objectives and benefits of the Institution of Engineers (India) and encouraged the students to actively participate in technical activities and become members of the professional engineering body.

Following the inaugural session, the first invited technical session was delivered by Mr. A. Manikandan on the topic "Real-Time Image Processing Accelerators Using FPGA SoCs." He explained the fundamentals of VLSI and the semiconductor ecosystem, including the IC design flow, front-end and back-end VLSI design, Analog and Digital ICs, Microprocessors, Microcontrollers, and System-on-Chip (SoC) architecture. He further elaborated on FPGA architecture, including Configurable Logic Blocks (CLBs), Look-Up Tables (LUTs), Flip-Flops, and Multiplexers, and explained their role in implementing high-performance real-time image-processing applications.

He also highlighted the growing career opportunities in the semiconductor industry and the importance of acquiring specialized skills in FPGA, VLSI, SoC design, and embedded systems.

The second invited technical session was delivered by Dr. C. Saravanakumar, Associate Professor, Department of Electronics and Communication Engineering, SRM Valliammai Engineering College, on the topic "Digital Image Processing and FPGA." He explained the fundamentals of digital image processing, including grayscale conversion and edge detection, and elaborated on the role of FPGA technology in real-time image-processing applications. He further highlighted the practical applications of FPGA-based image processing in medical imaging, robotics, surveillance, and industrial automation.

Dr. S. Senthilmurugan, Assistant Professor (Selection Grade), and Dr. A. Pandian, Assistant Professor (Senior Grade), Department of Electronics and Communication Engineering, SRM Valliammai Engineering College, chaired the paper presentation session. A total of 11 student teams presented their papers under the identified sub-themes. The session provided an excellent platform for students to demonstrate their technical knowledge, innovative

ideas, and research skills in emerging areas of semiconductor technology and image processing. The workshop concluded with the Valedictory Function. The welcome address was delivered by Prof. Dr. D. Elango, Chairman, IE(I) TNSC. He appreciated the enthusiastic participation of the students and emphasized the importance of continuous learning, innovation, and professional development in the rapidly evolving semiconductor and embedded systems industries.

Dr. M. Murugan, Principal, SRM Valliammai Engineering College, delivered the Valedictory Address and congratulated the participants for their active involvement in the workshop. Certificates were distributed to all the participants, marking the successful completion of the workshop.

Dr. R. Dhananjeyan, Assistant Professor, Department of Electronics and Communication Engineering, SRM Valliammai Engineering College, delivered the Vote of Thanks, expressing gratitude to the dignitaries, resource persons, organizers, faculty members, and participants for their valuable contributions to the successful conduct of the workshop.

More than 80 participants, including committee members, corporate members, faculties, and students, participated in the workshop.

One Day Seminar on "Next Generation 6G Wireless Technologies for Sustainable & Intelligent Communication Systems"

3rd August 2026

The Institution of Engineers (India), Tamil Nadu State Centre, in association with Pavendar Bharathidasan College of Engineering and Technology successfully organized a One Day Seminar on "Next Generation 6G Wireless Technologies for Sustainable & Intelligent Communication Systems" on 3rd August 2026 at the ECE Seminar Hall, Pavendar Bharathidasan Campus. The seminar aimed to provide a platform for students, faculty members, researchers, and industry professionals to explore the latest advancements and future directions in sixth-generation wireless communication technologies.

The programme commenced with a prayer song followed by lighting of lamp by the dignitaries. Prof. Dr. D. Elango, Chairman, IE(I), Tamil Nadu State Centre delivered the welcome address and he welcomed the Chief Guest, Principal, Vice Principal, Members of IE(I), Heads of various Departments, faculty members, invited speakers, and student participants from different engineering colleges. He highlighted the vision, objectives, and various activities of the Institution of Engineers (India). He explained how IE(I) has been contributing to technological advancement and nation-building by promoting engineering excellence.

During the inaugural session seminar souvenir were released and all the dignitaries were honoured with shawl and memento.



Dr. B. Chidambara Rajan, Director, Bharathidasan Campus, delivered the felicitation address, emphasizing the evolution of wireless communication technologies and the growing importance of 6G communication in building intelligent, sustainable, and highly connected future societies. He encouraged the participants to continuously update their technical knowledge and actively engage in research and innovation to meet future technological challenges.

Dr. T. Karthikeyan, Vice Principal, Bharathidasan Campus addressed the participants and shared valuable insights into the importance of the seminar. He motivated the students to utilize such technical programmes effectively to enhance their knowledge, develop research aptitude, and explore the vast opportunities available in the fields of wireless communication and emerging technologies.

Dr. K. Hariharan, Professor, Department of Electronics and Communication Engineering, Thiagarajar College of Engineering, Madurai was the chief guest and delivered the inaugural address. He highlighted that 6G aims to create ultra-fast, intelligent, secure and energy-efficient communication networks that connect people, devices and systems while supporting a sustainable digital future. Next Generation 6G Wireless Technologies for Sustainable & Intelligent Communication Systems” focuses on the future of wireless communication beyond 5G, where Artificial Intelligence, Terahertz (THz) communication, intelligent networks, massive MIMO, IoT, edge computing and integrated sensing work together to provide faster, smarter and more reliable connectivity. The technical session continues after the inaugural session.

The first invited technical lecture was delivered by Dr. K. Hariharan, Professor, Department of Electronics and Communication Engineering, Thiagarajar College of Engineering, Madurai on the topic 5G Applications for Sustainable Development Goals (SDGs). His lecture provided a comprehensive overview of the evolution of wireless communication technologies from 1G to 6G, covering the characteristics, data rates, network architectures, and applications of each generation. He further explained key concepts such as LTE, 5G NR, MIMO technology, diversity combining techniques, intelligent reflecting surfaces, and AI-native wireless communication systems. The session concluded with a discussion on the vision of 6G as an integrated platform combining communication, sensing, computing, and artificial intelligence to achieve ultra-fast, reliable, secure, and sustainable connectivity.

The second invited technical lecture was delivered by Dr. R. Parthasarathy, Associate Professor /ECE, National Institute of Technology (NIT), Tiruchirappalli on the topic “Design and Challenges of Microwave Antenna design for IOT and 5G mm-wave applications”. He began his presentation with the fundamentals of wireless communication systems and gradually introduced the principles of antenna engineering. His lecture focused on the design and development of antennas for millimeter-wave (mmWave) communication, highlighting their significance in high-frequency wireless systems, particularly for 5G and future 6G applications.

The session provided valuable insights into antenna design challenges, propagation characteristics, and future research opportunities in advanced communication systems.



During the valedictory session Prof. Dr. D. Elango, Chairman, IE(I), Tamil Nadu State Centre delivered the welcome address. He thanked the management of Pavendar Bharathidasan College of Engineering and Technology for hosted the seminar in a grand manner and also thanked the invited speakers, organising team and participants from various Engineering Colleges.

Dr. K. S. Balamurugan, Chairman, Technical Committee and Professor and Head, Department of ECE, Pavendar Bharathidasan College of Engineering and Technology, Pavendar Bharathidasan Campus briefed about the summary of the seminar. Dr. R. Parthasarathy, Associate Professor /ECE, National Institute of Technology (NIT), Tiruchirappalli was the chief guest for the valedictory session. He appreciated the enthusiastic participation of the students and encouraged them to continue engaging in research, innovation, and professional development activities.

Participation certificates were distributed to the student participants by the chief guest. Then Dr. G. Haridoss, Associate Professor, Department of Electronics and Communication Engineering, Bharathidasan Campus proposed the Vote of Thanks.

The seminar witnessed an encouraging participation of more than 100 delegates, comprising Corporate Members, Committee Members, students, and faculty members representing various reputed institutions.

The seminar concluded on a patriotic note with the singing of the National Anthem, marking the successful completion of the One Day Seminar. The programme served as an excellent platform for enhancing technical knowledge, promoting academic collaboration, and creating awareness about the transformative potential of next-generation 6G wireless communication technologies among students, researchers, and faculty members.

One Day Seminar on Artificial Intelligence in Manufacturing 5th August 2026

The Institution of Engineers (India), Tamil Nadu State Centre, in association with SRM Valliammai Engineering College organized a One Day Seminar on "Artificial intelligence in Manufacturing" on 5th August 2026 at the Admin block Seminar Hall, SRM VEC, Kattankulathur. The seminar aimed to provide a platform for students, faculty members, researchers, and industry professionals to explore the latest advancements and future directions in Artificial Intelligence in Manufacturing.

The seminar commenced with a invocation followed by lighting of the lamp by the dignitaries. Prof. Dr. D. Elango, Chairman, IE(I), Tamil Nadu State Centre delivered the welcome address and he welcomed the Chief Guest, Vice Principal, Members of IE(I), Head of Mechanical Departments, faculty members, invited speakers, and student participants. He highlighted the vision, objectives, and various activities of IE(I). He explained how IE(I) has been contributing to technological advancement and nation building by promoting engineering excellence. During the inaugural session seminar souvenir was released and all the dignitaries were honored with shawl and a memento.



Dr. S. Visalakshi, Vice Principal, SRM Valliammai Engineering College, delivered the felicitation address. She shared valuable insights into the significance of the seminar and emphasized the importance of such technical programmes in enhancing students' knowledge and skills. She motivated the students to actively utilize these opportunities to broaden their technical knowledge, develop research aptitude, and explore the vast opportunities available in the field of Artificial Intelligence in Manufacturing.

Dr. S. Thirugnanam, Professor & Head, Department of Mechanical Engineering, SRM Valliammai Engineering College, introduced the Chief Guest, Er. S. Vedhanayagam, Deputy General Manager and R&D Design Lead – Air Supply Product Segment, India, ZF CVCS, Chennai.

In his inaugural address, Er. S. Vedhanayagam highlighted the growing significance of Artificial Intelligence (AI) in modern manufacturing and its applications in predictive maintenance, quality inspection, process optimization, robotics, and automation. He emphasized how AI and Industry 4.0 technologies can improve productivity, efficiency, quality, and decision-making in manufacturing.

He encouraged students to strengthen their knowledge of AI, machine learning, data analytics, and emerging technologies, and motivated them to utilize technical programmes to gain industry-oriented knowledge, develop innovative thinking, and explore career opportunities in the evolving manufacturing sector.

Dr. J. Balamurugan, Honorary Secretary, IE(I) Tamil Nadu State Centre, delivered the vote of thanks. He briefly highlighted the history, objectives, and benefits of the Institution of Engineers (India) and emphasized the various opportunities and professional benefits available to engineering students and members through IE(I). He expressed his sincere gratitude to the Chief Guest, speakers, organizers, faculty members, and students for their valuable participation.

The technical sessions commenced immediately following the inaugural session. The first invited technical lecture was delivered by Er. S. Vedhanayagam, Deputy General Manager, R&D Design Lead – Air Supply Product Segment India, ZF CVCS, Chennai, on the topic "Intelligent Brake System". His lecture provided a comprehensive overview of intelligent braking technologies and their importance in improving the safety, reliability, and performance of commercial vehicles. He explained the working principles and key components of modern intelligent brake systems, including electronic control units, sensors, actuators, and electronically controlled braking systems. He further highlighted the integration of advanced technologies such as Artificial Intelligence, sensors, automation, and electronic control systems in modern braking applications. The session also provided valuable insights into advanced braking functions, real-time

monitoring, predictive maintenance, and the future development of intelligent and safer braking systems for commercial vehicles.



The second invited technical lecture was delivered by Er. G. Karunakaran (Automobile Engineer), Senior Manager – ZF Commercial Vehicle Control Systems, Chennai, on the topic "Advanced Driver Assistance System (ADAS)". His lecture provided a comprehensive overview of ADAS technologies and their role in improving vehicle safety, driving comfort, and accident prevention. He explained various ADAS features such as Adaptive Cruise Control, Lane Departure Warning, Automatic Emergency Braking, Blind Spot Detection, and Collision Avoidance Systems. He further highlighted the role of sensors, cameras, radar, artificial intelligence, and automation in enabling vehicles to perceive their surroundings and assist drivers in real-time. The session also provided valuable insights into the future development of intelligent and semi-autonomous vehicles and the importance of ADAS in modern automotive engineering.

A total of 10 student teams presented their papers under the identified sub-themes.

The third invited technical lecture was delivered by Dr. K. Venkatesan, Assistant Professor Mechanical Department from SRM Valliammai Engineering College, on the topic "Intelligent Systems in Production: Overcoming Modern Manufacturing Challenges with Artificial Intelligence." His lecture provided a comprehensive overview of how artificial intelligence is being deployed to tackle critical pain points in modern industrial production. He explored the transition from legacy automation to intelligent systems, detailing how AI algorithms can mitigate common bottlenecks such as unexpected machine downtime, complex workforce resource allocation, and fluctuating production variables. He further explained key framework methodologies for integrating data-driven decision-making onto the

factory floor, demonstrating how academic research translates into scalable, real-world solutions that significantly boost manufacturing efficiency, product quality, and operational agility.

During the valedictory session Prof. Dr. D. Elango, Chairman, IE(I), Tamil Nadu State Centre delivered the welcome address. He thanked the management of SRM Valliammai Engineering College for hosting the seminar in a grand manner and also thanked the invited speakers, organizing team and participants.

Mr.G.Ananth, Technical Session Chairperson, Asst. Professor, SRM Valliammai Engineering College presented the summary of the seminar.

Dr. K. Venkatesan, Assistant Professor Mechanical Department from SRM Valliammai Engineering College delivered the valedictory address. He appreciated the enthusiastic participation of the students and encouraged them to continue engaging in research, innovation, and professional development activities.

Participation certificates were distributed to the students. The seminar concluded with the Vote of Thanks delivered by Dr. J. Balamurugan, Honorary Secretary, IE(I), TNSC.

More than 90 participants participated in the seminar. Committee Members - 4, Corporate members - 8, Faculties – 12 and Students - 66 were participated in the seminar.

Nuclear Talk on Thorium & H2 Productions 8th August 2026

The Institution of Engineers (India) Tamil Nadu State Centre in association with IE(I) Kalpakkam Local Centre organized Nuclear Talk on Thorium & H2 Productions on 8th August 2026 at IE(I) TNSC Auditorium, Chennai.



The programme commenced with invocation and lighting of the lamp by the dignitaries. Dr. K. Viswanathan, Chairman, IE(I) Kalpakkam Local Centre delivered the welcome address. Er. Sitangshu Sekhar Biswas, Honorary Secretary, IE(I) Kalpakkam Local Centre, introduced the Chief Guest, Dr. Prabhat Kumar, Former CMD, BHAVINI and PD, ITER France.



Dr. Prabhat Kumar highlighted the importance of nuclear energy in achieving India's long-term energy security and sustainable development objectives. He explained the key challenges of mega project management, including project integration, cost and schedule control, risk management, quality assurance, regulatory compliance and stakeholder confidence. It focused particularly on nuclear projects and fast breeder reactors, with emphasis on lessons from PFBR, BHAVINI and ITER. The presentation stressed the importance of safety, skilled human resources, resilient supply chains and effective project management for India's future nuclear programme.

The Chief Guest was honoured with a shawl and memento. Dr. J. Balamurugan, Honorary Secretary, IE(I) TNSC, delivered the vote of thanks.

Following the inaugural session, the technical invited talk was delivered by Dr. P. Chellapandi, Former CMD BHAVINI on the topic “Advancements in Structural Mechanics to support of Fast Reactor Programme”. He highlighted the importance of structural mechanics in the development of Sodium-cooled Fast Reactors (SFRs). It covered research on material behaviour, thermo-mechanical ratcheting, structural defects, buckling, fluid–structure interaction and stability, supported by numerical simulations and experimental studies. These developments have contributed to the PFBR’s 60-year design life, improved manufacturing and erection practices, assessment of structural integrity under various seismic conditions, and safer reactor operation. The talk also emphasized the role of IGCAR, academic institutions, research laboratories and Indian industries in advancing SFR technology. The presentation concluded by stressing the need for indigenous Indian Design and Construction Codes for SFRs and the rapid development of future fast reactor programmes beyond PFBR.

The second invited talk was delivered by Dr. Kallol Roy, Former CMD, BHAVINI and Adjunct Professor, NIAS on the topic “Kalman Filter Applications in System Diagnostics, Fault Detection and Condition Monitoring”. He highlighted the Kalman Filter as a Bayesian estimation technique for estimating the true state of dynamic systems from noisy and uncertain measurements. It explained its two key stages—prediction and correction—which combine mathematical models and sensor data to provide reliable real-time state estimates. The presentation also discussed applications in system diagnostics, fault detection and condition monitoring, where deviations between predicted and measured behaviour can help identify equipment faults and degradation. The Kalman Filter was highlighted as a useful tool for early fault detection and predictive maintenance, particularly in complex and safety-critical systems such as nuclear power plants, aerospace and advanced energy systems.

The third invited talk was delivered by Dr. R. Dorairaj, Former PD, VSSC on the topic “The Evolution of India’s Space and Launch Vehicle Programme”. He gave an overview of the evolution of India’s space programme, explaining the basic principles of rocket operation and the challenges of overcoming Earth’s gravity. It traced India’s journey from the early Thumba launches in the 1960 s through SLV-3, ASLV, PSLV, GSLV and LVM3, along with the parallel growth of the satellite programme. It also highlighted India’s development of advanced space technology in the civilian sector and the challenges associated with human space missions.



The afternoon sessions continued with invited talk by Dr. G. Vaidanathan, Former Group Director, IGCAR on the topic “Simulation of Nuclear Reactors”. He highlighted the importance of dynamic thermal-hydraulic simulation of the entire reactor system for design development, safety analysis and licensing. It helps determine thermal loads, safety parameters, instrument response times and operating limits. The study of plant transients also enables appropriate automatic safety actions to keep temperatures and pressures within permissible limits. It emphasized assessing the cumulative effects of all transients, including creep and fatigue, on structural components throughout the reactor’s design life.

Following his talk, Shri P. V. Anil Kumar, Section Head – ROD, RFG delivered on the topic “Copper–Chlorine (Cu–Cl) Thermochemical Cycle for Nuclear Hydrogen Production”. He highlighted the Copper–Chlorine (Cu–Cl) thermochemical cycle as a promising method for large-scale hydrogen production using nuclear heat. The process combines chemical and electrochemical steps to reduce electricity

requirements and utilize high-temperature nuclear heat efficiently. It discussed the potential of nuclear-hydrogen integration for clean hydrogen production, particularly for energy storage, industrial applications and transportation fuels. Key challenges include developing suitable materials, heat exchangers, corrosion-resistant components, process control and efficient product separation for large-scale deployment.



During the valedictory session, Dr. K. Viswanathan, Chairman, IE(I) Kalpakkam Local Centre, delivered the welcome address and presented a brief summary of the technical sessions. Dr. J. Balamurugan, Honorary Secretary, IE(I) TNSC, proposed the vote of thanks, followed by the National Anthem.

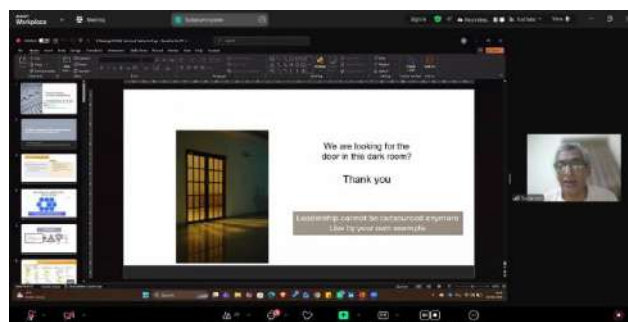
More than 100 participants, including committee members, corporate members, non-members, and students, participated in the programme.

Guest Lecture on “Technical Textiles connect to Engineering - Opportunities for Review” 20th August 2026

The Institution of Engineers (India), Tamil Nadu State Centre, organized a guest lecture on the topic “Technical Textiles Connect to Engineering – Opportunities for Review” under the Textile Engineering Division on 20th August 2026 at 6.00 p.m. through an online Zoom meeting.

Dr. J. Balamurugan, Honorary Secretary, IE(I) TNSC, delivered the welcome address. Er. G. Balakrishnan, Committee Member, Textile Engineering Division, IE(I) TNSC, introduced the Chief Guest, Mr. Sudarsan Rajagopalan, Splendour Medicare Technologies, Business Navigation & Innovation.

Mr. Sudarsan Rajagopalan highlighted the growing role of Technical Textiles in engineering applications, emphasizing their functional properties such as flexibility, elasticity, strength, absorbency, composites, coatings and laminations. He explained various categories of technical textiles, including Hometech, Indutech, Agrotech, Geotech, Sportech, Clothtech, Medtech, Protech, Packtech, Oekotech, Buildtech and Mobiltech, with emerging applications in Spacetechnology and smart electronics.



The talk also covered applications in medical technology, agriculture and protective technology, including hygiene products, monitoring devices, biotechnology applications, thermal and flame protection, mechanical and ballistic shielding, chemical and biological barriers, and electrical and anti-static protection. The role of advanced materials and textile-based composites in engineering applications was also highlighted.

Dr. J. Balamurugan, Honorary Secretary, IE(I) TNSC, delivered the vote of thanks. More than 60 participants, including council members, committee members, corporate members, non-members and students, participated in the programme.

All India Seminar on “Application of Sustainable Materials in Modular Construction Technology”
27th & 28th August 2026

The Institution of Engineers (India) Tamil Nadu State Centre in association with SRM Valliammai Engineering College organized All India Seminar on “Application of Sustainable Materials in Modular Construction Technology” on 27th and 28th August 2026 at SRM Valliammai Engineering College, Chennai.

The programme commenced with an invocation, followed by the welcome address delivered by Prof. Dr. D. Elango, FIE, Chairman, The Institution of Engineers (India), Tamil Nadu State Centre. Dr. A. Leema Rose, FIE, Professor and Head, Department of Civil Engineering, SRM Valliammai Engineering College delivered about the theme of the seminar. The Presidential Address was delivered by Dr. Vijayan, Associate Dean Research, SRM Groups. Souvenir was released by the dignitaries and they were honoured with shawl and memento.



The inaugural ceremony concluded with a Vote of Thanks delivered by Dr. S. Suresh Babu, AMIE, Co Convenor, Associate Professor, SRMVEC.



Mr. A. Sattainathan Sharma, AMIE, Assistant Professor, SRM Valliammai Engineering College introduced the chief guest MJF. Ln. Dr. Ganesh Jayaraj, B.E., M.Tech., Ph.D., FIE, Chief Engineer/Civil, 600 MW ETPS Expansion Project, Ennore (Retd.), TNPDC(L).

Dr. Ganesh Jayaraj delivered the inaugural address on the importance of sustainable approaches in the construction sector and the growing relevance of modular construction technology. His address highlighted the need for innovative construction practices, efficient utilization of resources and adoption of sustainable materials to achieve environmentally responsible and efficient infrastructure development.

The technical sessions commenced immediately following the inaugural session. The first invited talk was delivered by Er. B. Angayarkanni, Assistant Engineer, Water Resources Department (WRD), Government of Tamil Nadu on the topic “Water Efficient Construction Techniques”. She highlighted the importance of water conservation and efficient utilization of water resources in construction activities. The resource person explained the need for minimizing water wastage at construction sites and adopting appropriate techniques for efficient water utilization. The session emphasized sustainable water management practices and the importance of integrating water conservation measures into construction planning and execution. The participants gained practical knowledge on the significance of water efficiency and responsible management of water resources in the construction industry.

The second invited talk was delivered by Ms. K. Tharini, Assistant Professor, SRM Valliammai Engineering College on the topic “Prefabrication and Modular Construction.” The session introduced the participants to the fundamental concepts and applications of prefabricated and modular construction systems. She discussed off-site manufacturing, modular coordination, transportation, assembly, and erection of prefabricated building components. The advantages

of these systems, such as faster construction, improved quality control, reduced material wastage, efficient resource utilization, and enhanced productivity, were highlighted. The session also emphasized how prefabrication and modular construction can support sustainable construction by reducing construction waste and improving resource efficiency.

The third invited talk was delivered by Er. Duraisami. M, CEng, FIE, Consultant – Plant Engineering, Vertical – L&T Technology Services Ltd., on the topic “Prefabrication and Modularization: Accelerating Sustainable Construction”. He briefed that an industry-oriented perspective on the role of prefabrication and modularization in accelerating construction activities while achieving sustainability objectives. He explained how modularization can improve project delivery through standardized components, controlled manufacturing environments, improved quality, and efficient assembly. The session highlighted the importance of integrating engineering design, manufacturing, logistics, and site assembly to achieve successful modular construction. The participants gained valuable insights into industrial practices and the potential of modular construction for improving construction productivity and sustainability.

The fourth invited talk was delivered by Dr. M. Kirithika, Assistant Professor, Bharath Institute of Higher Education and Research, Chennai on the topic “Bio-Based and Energy Efficient Materials.” The session focused on the development and application of environmentally friendly construction materials derived from renewable and bio-based resources. She discussed the importance of reducing the environmental impact of construction materials and improving the energy efficiency of buildings. The session highlighted the potential of bio-based materials in reducing embodied energy and supporting sustainable construction. Participants gained awareness of alternative material solutions and their potential contribution to low-carbon and energy-efficient buildings.

On day 2, 28th August 2026 the technical session started with fifth invited talk delivered by Er. S. Anand, Senior Manager, Project and Development Services, Cushman & Wakefield on the topic “Sustainable Construction Management”. The session emphasized the importance of incorporating sustainability principles throughout the project life cycle, from planning and design to construction and

operation. He discussed effective management of materials, energy, water, waste, time, and other construction resources. The session highlighted the importance of proper planning, monitoring, quality management, waste reduction, and efficient resource utilization for achieving sustainable project outcomes. Participants gained insights into professional construction management practices and the role of sustainability in successful project delivery.

The sixth invited talk was delivered by Er. P. Elangovan, Proprietor, Edifice Structures, Chennai on the topic “Sustainable Construction Management”. The session introduced participants to innovative construction materials that can provide enhanced performance, durability, functionality, and sustainability. He discussed the growing importance of advanced materials in modern construction and their applications in improving structural and building performance. The session emphasized the role of smart materials in addressing contemporary construction challenges and achieving improved efficiency and durability. The participants gained knowledge about the potential applications of innovative construction materials in future construction practices.

The seventh invited talk was delivered by Mr. A. Sattainathan Sharma, Assistant Professor, SRM Valliammai Engineering College on the topic “Bio-Based and Energy-Efficient Materials”. The session focused on sustainable alternatives to conventional construction materials and the importance of energy efficiency in building construction. He discussed the potential of bio-based materials and energy-efficient solutions to reduce environmental impact and improve the sustainability of buildings. The session reinforced the importance of selecting materials based on their environmental performance, energy consumption, durability, and suitability for specific construction applications.

The eighth invited talk was delivered by Mr. G. R. Iyappan, Assistant Professor, SRM Valliammai Engineering College on the topic “Climate-Resilient and Smart Infrastructure”. The session highlighted the increasing need to develop infrastructure capable of responding effectively to climate change, extreme weather events, and other environmental challenges. He discussed the importance of resilience oriented planning, smart technologies, sustainable infrastructure systems, and appropriate engineering solutions for enhancing the

reliability and adaptability of infrastructure. The session emphasized the integration of technology, sustainability, and resilience in infrastructure development to meet future societal and environmental requirements.

A total of 10 student teams presented their papers under the identified sub-themes.

The Seminar concluded with the Valedictory Function. The welcome address was delivered by Prof. Dr. D. Elango, FIE Chairman, IE(I) TNSC. He appreciated the enthusiastic participation of the students and emphasized the importance of continuous learning, innovation, and professional development in construction industries.

Dr. A. Leema Rose, FIE, Professor and Head, SRM Valliammai Engineering College, delivered the Valedictory Address and congratulated the participants for their active involvement in the Seminar. Certificates were distributed to all the participants, marking the successful completion of the Seminar.

Mr. A. Sattainathan Sharma, AMIE, Assistant Professor, SRM Valliammai Engineering College, delivered the Vote of Thanks, expressing gratitude to the dignitaries, resource persons, organizers, faculty

members, and participants for their valuable contributions to the successful conduct of the Seminar.



For the Seminar 3 Council members, 5 Committee members, 10 corporate members, 85 participants and experts from government departments, academic institutions, consultancy services, and industry enriched the technical value of the seminar. The programme provided participants with both academic knowledge and practical insights into the rapidly evolving field of sustainable and modular construction.

One Day Workshop on Smart Sustainable Agriculture: Integrating Bokashi Composting and Precision Farming 29th August 2026

The Institution of Engineers (India), Tamil Nadu State Centre, in association with Bio Drops, organised a One Day Workshop on “Smart Sustainable Agriculture: Integrating Bokashi Composting and Precision Farming” on 29th August 2026 at IE(I) TNSC Auditorium, Chennai.

The programme commenced with the Tamil Thaivazhthu followed by lighting of the Kuthuvilakku by the dignitaries. Prof. Dr. D. Elango, Chairman, IE(I), TNSC, delivered the Welcome Address. Er. P. Dhivya, Convenor and Committee Member, IE(I), TNSC, delivered about the theme of the workshop. The guests were honoured with shawl and memento. Souvenir was released during the workshop.



The inaugural address was delivered by Dr. N. Parasuraman, Principal Scientist, M.S. Swaminathan Research Foundation. He highlighted the importance of adopting sustainable agricultural practices by integrating Bokashi composting with precision farming technologies to

improve soil health, enhance resource-use efficiency, reduce environmental impact, and increase farm productivity. The inaugural session concluded with the Vote of Thanks proposed by Dr. J. Balamurugan, Honorary Secretary, IE(I), TNSC.

Following the inaugural session the first technical invited lecture was delivered by Dr. Udhayakumar Thiyagarajan, Functional Architect, Cognizant on the topic “Environmental Sustainability & Carbon Reduction”. He highlighted Bokashi composting, soil health, precision nutrient management and climate-smart farming as key approaches to sustainable agriculture. He also emphasized efficient use of water and farm inputs, carbon conservation, and gradual adoption of sustainable practices to improve productivity and climate resilience.



A total of 6 student teams presented their papers under the identified sub-themes. Poster presentations were also made by the students.

The second invited talk was delivered by Mr. P. Annadasan, Chairman, ARD BIOTECH LLP, Polur on the topic “Empowering Tamil Nadu’s Farmers through Circular Economy and Crop Protection”. He highlighted the importance of sustainable agriculture and the application of circular economy principles in addressing agricultural and environmental challenges. He presented innovative approaches for converting chicken feathers, human hair and coconut coir into organic liquid fertilizer, thereby promoting waste-to-resource practices. He also introduced Farm Fort, a non-toxic organic repellent designed to protect crops from wild pigs, rats and rabbits. The talk emphasized the potential of such solutions to improve soil health, reduce crop losses and support the livelihood of farmers in Tamil Nadu.

The third invited talk was delivered by Dr.V.S. Sriraja Balaguru, Joint Secretary & Committee Member, IE(I) TNSC on the topic “An IoT based Smart Farming &

Green Energy”. He highlighted the use of IoT, sensors, automation, cloud monitoring and solar energy in modern agriculture. The speaker explained the role of soil moisture, pH, NPK and temperature sensors in enabling precision irrigation and fertilizer management. The session also covered ESP32-based automation, cloud connectivity, agricultural drones and wireless telemetry for real-time monitoring and efficient farm management. The presentation concluded with an overview of solar-powered agricultural systems and the KUSUM scheme, emphasizing the potential of renewable energy in sustainable farming.



Dr. T. Udhayakumar, Functional Architect, Cognizant, and Er. P. G. Kamalakannan, CEO, Konstrakt Infratech, served as Chairpersons for the technical sessions.

During the valedictory session, Prof. Dr. D. Elango, Chairman, IE(I), TNSC, delivered the welcome address and highlighted the importance of sustainable engineering practices and agricultural innovations.



Dr. T. Udhayakumar, Functional Architect, Cognizant and Technical Committee Member, presented a summary of the workshop, highlighting the key technical sessions, expert inputs, and major takeaways from the workshop.

Mr. Magesh Mahadevan M. R., CEO, Biodrops Environmental Solutions Pvt. Ltd., explained the Bokashi Bucket, its method of use, and its applications in sustainable waste management and organic composting.

Er. M. Sivagurunathan, Vice President / OEG, delivered the valedictory address, highlighting the key outcomes of the workshop and emphasizing the importance of practical knowledge, innovation, and sustainable engineering practices.

Certificates were distributed to the participating students. The workshop concluded with the Vote of Thanks by Dr. J. Balamurugan, Honorary Secretary, IE(I), TNSC, who expressed appreciation to the speakers, participants, committee members, and organizing team.

A total of 80 participants, comprising 5 Committee Members, 5 Corporate Members, 10 Non-Members, and 60 Students, participated in the workshop.

KNOW YOUR MEMBERSHIP

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We look forward to your prompt support and cooperation.

The KYM form is available on the IE(I) website: www.ieindia.org.

FORTHCOMING EVENTS

Date	Title	Venue
3 rd October 2026	Guest Lecture on "Fundamentals of Membrane Separation Processes: Principles and Industrial Applications"	Online Zoom Meeting

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Posted on 25th September 2026 : Posted at Egmore RMS (Patrika)
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Printed by Dr.J.Balamurugan, Honorary Secretary and Published on behalf of The Institution of Engineers (India) Tamil Nadu State Centre, 19,Swami Sivananda Salai, Chepauk, Chennai-600005 and printed at Sunitha Printers,193,Peters Road, Chennai 600014.