



The Institution of Engineers (India)

Coimbatore Local Centre

Quarterly Newsletter

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Dr G Madhan Mohan FIE
Honorary Secretary, IEI CLC

Dr J Krishnamoorthi FIE
Chairman, IEI CLC



The Chairman's Desk

A key highlight of IEI's annual activities is Engineer's Day, celebrated with great enthusiasm on the birth anniversary of Bharat Ratna Sir M Visvesvaraya, honoring the pivotal role engineers play in advancing technology, infrastructure, and quality of life. The Engineer's Day 2025 celebration, held on 15.09.2025 on the theme "Deep Tech & Engineering Excellence: Driving India's Techade". During the event, IEI Fellows and members were recognized with awards, and engineering students received endowment scholarships. Another significant occasion, the Royal Charter Day, was observed on 09.09.2025, featuring a significant guest lecture. The last quarter witnessed an exceptional number of activities, with seven one-day seminars, five all-India seminars, and several technical webinars and lectures. The upcoming quarter will feature seminars on emerging topics such as Modeling and Simulation in Material Processing, CAD-Based Textile Product Development, Smart Manufacturing, Aerospace Materials, 3D Printing in Civil Engineering, AI in Healthcare, and Electric Vehicle Hardware Design. As we approach the 60th Annual General Meeting on 24.10.2025, we proudly celebrate six decades of IEI Coimbatore Local Centre, established in 1965 under the visionary leadership of Dr. G. R. Damodaran. This milestone marks sixty years of leadership, learning, and service to the engineering fraternity.

I take this opportunity to convey my heartfelt thanks to all committee members for their unwavering support, and best wishes to the incoming team for 2025 - 2027.

Dr J Krishnamoorthi FIE
Chairman, IEI CLC

Royal Charter Day

09.09.2025

IEI, Coimbatore Local Centre celebrated "Royal Charter Day" on 09.09.2025 with a technical lecture on "Product Development & Value Engineering in Mining and Power Transmission Applications" in association with Department of Metallurgical Engineering, PSG College of Technology (PSGCT), Coimbatore and The Indian Institute of Metals (IIM), Coimbatore Chapter. The lecture was delivered by Er Kannapiran Natarajan, General Manager - Technical (India Operations), Hofmann Engineering Pty Limited, Australia. Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre welcomed the gathering and Dr G Balachandran, Chairman, IIM Coimbatore Chapter felicitated the event. Er Kannapiran Natarajan explained the fundamentals of product development and value engineering, illustrating processes of product identification, design improvement and cost optimization. He also presented product improvement designs such as spindle retainer hubs and internal gears, with detailed analysis of track pads using 3D scanning, 3D welding and microstructure evaluation of weld materials. The event concluded with a vote of thanks by Dr R Sivasankari, Committee Member, IEI Coimbatore Local Centre and Assistant Professor, Department of Metallurgical Engineering, PSGCT.



58th Engineers' Day

15.09.2025

The Institution of Engineers (India), Coimbatore Local Centre, celebrated the 58th Engineers' Day on 15.09.2025 at PSG College of Technology, Coimbatore in a grand manner. Engineers' Day is observed to honor the birth anniversary of Bharat Ratna Sir M Visvesvaraya, one of India's most distinguished engineers and statesmen and to recognize the vital role engineers play in advancing technology, infrastructure and the quality of life.

The celebration commenced with a cordial welcome by Er J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, who highlighted the institution's significant contributions towards promoting engineering excellence and technological innovation. The Chief Guest, Er Abishek Jayaraman, Deputy General Manager - Quality, Precision Engineering and Systems - IC, Larsen & Toubro Limited, Coimbatore along with past chairmen of IEI CLC garlanded the portrait of Sir M. Visvesvaraya. Delivering his address on the theme "Deep Tech & Engineering Excellence: Driving India's Techade", Er Abishek Jayaraman emphasized the importance of deep technologies in driving growth, competitiveness, and sustainability. He encouraged young engineers to embrace innovation and contribute to building a resilient, self-reliant India. His inspiring speech motivated the audience to pursue excellence and innovation in their professional careers.



As part of the celebration, six Outstanding Engineer Awards were presented to: Er V Sreevidya, Professor & Head, Department of Civil Engineering, Sri Krishna College of Engineering and Technology, Er R Balachandran, Former Professor, Adama Science & Technology University, Ethiopia, Er V Lawrance, Former General Manager, Tamil Nadu State Transport Corporation Limited



Er C Natarajan, Principal, Hindusthan Institute of Technology, Er C Shanmugasundaram, Senior Manager - Engineering (Aerospace & Defense Group), CIRCOR Flow Technologies India Private Limited, Er C Sabarinathan, Professor and Head, Department of Automobile Engineering, Hindusthan College of Engineering & Technology.

Five Young Achiever Awards were conferred upon: Er R Navarasam, Assistant Professor, Department of Food Technology, Hindusthan College of Engineering and Technology, Er K Balamurali, Assistant Professor, Department of Civil Engineering, Karunya Institute of Technology & Sciences, Er S Arun Kumar, Assistant Professor, Department of Electronics & Communication Engineering, Kumaraguru College of Technology, Er Jayakrishnan Nampoothiri, Assistant Professor, Department of Production Engineering, PSG College of Technology, Er C Rajaravi, Associate Professor, Department of Agriculture Engineering, Hindusthan College of Engineering & Technology.

In addition, Six Student Awards were presented in recognition of academic excellence, co-curricular and extra-curricular achievements, sports and social service.



The event concluded with a vote of thanks by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre. Nearly 300 participants, including past chairmen, past honorary secretaries, committee members, corporate members, faculty, students and families of awardees, attended the function.

One Day Seminar on “Advances in Modelling and Simulation for Material Processing”

04.07.2025



IEI Coimbatore Local Centre organized an One Day Seminar on “Advances in Modelling and Simulation for Material Processing” (under the aegis of the MMDB, IEI) in collaboration with Department of Metallurgical Engineering, PSG College of Technology (PSGCT), Coimbatore and Centre of Excellence in Welding Engineering and Technology funded by the Ministry of Heavy Industries, Government of India on 04.07.2025.

The inaugural function began with a welcome address by Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, who also briefed the gathering on the activities of IEI. Dr R Sivasankari, Committee Member, IEI Coimbatore Local Centre & Assistant Professor, Department of Metallurgical Engineering, PSG College of Technology provided an overview of the seminar. Dr V Ramaswamy, Former Executive Director, Salem Steel Plant, Steel Authority of India Limited, delivered the chief guest address, elaborating on the importance of laser material processing. The session concluded with a vote of thanks proposed by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre.

The first technical session featured a lecture on “Evaluation of Uncertainty in Material Flow Predictions during Hammer Forging: A Journey towards Digital Twins for Manufacturing” by Dr Chaitanya Paramatmuni, Assistant Professor, Department of Mechanical Engineering, Indian Institutes of Technology Palakkad. He explained a novel calibration approach that derives optimal model parameters accounting for uncertainties arising from microstructural heterogeneity. He also emphasized the combined influence of material and process parameters on the response of steels.

The second session was delivered by Dr K Krishna Kumar, Assistant Professor, Department of Metallurgical Engineering, PSGCT, on the topic “Advancing Materials Science with Phase Field Modeling: Principles and Applications”. He explained phase field modelling as a computational method for simulating and predicting microstructural evolution in materials. He discussed its applications in studying solidification, phase transformations, and fracture, highlighting its role in designing materials with tailored properties.

The third technical session was presented by Mr Vinoth Ammasi, Senior Applicant Engineer - Smart Manufacturing, Design Engineering Software (DES) Vertical, Keysight Technologies India Pvt. Ltd., Bengaluru on “Advancing Weld and Heat Treatment Excellence through Numerical Simulation-Based Approach”. He explained the use of the finite element method (FEM) for predicting temperature distributions, material flow, stress fields, and microstructural changes such as phase proportions and hardness. He introduced the numerical simulation software Sysweld, outlining its benefits in reducing costs, minimizing experimental trials, optimizing welding parameters, and enhancing the performance of welded structures. The fourth session was delivered by Dr R Sivasankari, Assistant Professor, Department of Metallurgical Engineering, PSGCT, on “Physical Simulation for Material Processing Using Gleeble - Thermomechanical Simulator”. She explained the fundamentals of thermo-mechanical simulation and presented welding simulation studies conducted using the Gleeble system. She highlighted how these studies help analyze the impact of heat input and mechanical forces during welding, assisting in weld performance optimization and defect prevention.

The seminar concluded with a valedictory session followed by the distribution of certificates to the participants.



All India Seminar on “CAD Based Design and Development of Value Added Textile and Apparel Products”

16.07.2025 & 17.07.2025

IEI Coimbatore Local Centre organized an All India Seminar on “CAD Based Design and Development of Value Added Textile and Apparel Products” (under the aegis of the TXDB, IEI) in partnership with Department of Textile Technology, PSG Polytechnic College (PSG PTC), Coimbatore on 16.07.2025 & 17.07.2025.

The inaugural session began with the welcome address by Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre. The felicitation address was delivered by Dr B Giriraj, Principal, PSG PTC. Dr M Senthilkumar, Committee Member, IEI Coimbatore Local Centre and HoD, Department of Textile Technology, PSG PTC briefed the gathering about the seminar and introduced the chief guest. The Chief Guest, Mr L B Thiyagarajan, CEO, ESSDI InfoTech Corporation, Tirupur, emphasized the importance of continuous learning and keeping pace with evolving industrial trends. He stressed that workplace skills extend far beyond the limits of any single academic discipline. The session concluded with the vote of thanks proposed by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre.

Mr L B Thiyagarajan delivered a lecture on “Application of CAD in Garment Construction”. He highlighted the importance of CAD in garment construction and demonstrated processes such as pattern making, marker creation and marker planning. The session was highly interactive, with participants actively creating patterns for shirts, T-shirts and salwar kameez. They also developed markers and practiced marker planning, gaining valuable hands-on experience. Mr Sudharshan Thiagarajan, Director, ESSDI InfoTech Corporation, USA, spoke on “Application of AI and Machine Learning in Garment Industry”. He explained how AI and ML are revolutionizing garment manufacturing, from design to distribution. Topics covered included AI-powered design tools, virtual showrooms, automated production lines, smart factories, logistics, resource management, waste reduction and traceability.

Mr Ravikumar Sankunni, Product Development Manager & Technical Head, SKY International LLP, Tirupur, spoke on “Application of CAD in 3D



Fit Virtual Design and CLO3D”. He demonstrated CLO3D software for 3D garment creation, covering virtual fitting, material visualization, design development and workflow optimization. Mr S Sathyaraj, Fashion Designer, Cube Technologies, Erode, delivered a lecture on “Application of CAD in Fashion Industry”. He demonstrated pattern creation tailored to buyer requirements and explained applications of 2D and 3D modelling.

Mr M Karthikeyan, Founder & Managing Director, Wins Soft Innovations Private Limited, Erode, spoke on “Application of ERP in Textile Industry”. He explained ERP modules covering sales, purchase, manufacturing, production, inventory, finance & approvals and their integration across the textile value chain. Mr A Elango, Business Development Manager, Aspire Textiles LLP, Coimbatore, delivered a lecture on “Application of CAD in New Product Development”. He showcased the creation of woven designs for dobby, jacquard and double-layered fabrics using CAD tools, along with fabric swatch samples.

Ms Mirudula, Director, Softsquare, Coimbatore, spoke on “Application of CAD for Fashion Designer”. She explained constructing design sheets for shirt patterns, creating flat sketches, developing all-over print designs and generating creative concepts. Dr K Chandrasekaran, HoD, Department of Fashion Technology, PSG College of Technology, Coimbatore, delivered a lecture on “Application of Lectra in Garment Construction”. He explained weave creation for fabrics and simulation for striped, checked, dobby and printed designs. Using Lectra Modaris software, he demonstrated pattern creation, grading, marker planning and 3D simulation for women’s shirts, along with fit analysis for precise garment construction. The program concluded with a valedictory session and distribution of participation certificates.

One Day Seminar on “Building the Future: An Introduction to Smart Manufacturing”

18.07.2025

The Institution of Engineers (India), Coimbatore Local Centre in association with Department of Production Engineering, PSG College of Technology (PSGCT), Coimbatore organized an One Day Seminar on “Building the Future: An Introduction to Smart Manufacturing” (under the aegis of the PRDB, IEI) on 18.07.2025.



The inaugural session began with a welcome address by Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, who briefed the gathering on IEI activities. Dr M Senthilkumar, Committee Member, IEI & Professor and Head, Department of Production Engineering, PSGCT, delivered the felicitation address, emphasizing the transformative potential of smart manufacturing technologies. Dr S Jagatheeshkumar, Assistant Professor, Department of Production Engineering, PSG College of Technology, introduced the chief guest. Dr N Manikandan, Innovation Manager, Maxbyte Technologies, Coimbatore, served as the chief guest and addressed the gathering, highlighting the significance of smart manufacturing in Industry 5.0 and the role of IoT in driving operational efficiency, data-driven decision-making, and industrial automation. The session concluded with a vote of thanks by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre.

Dr N Manikandan delivered a lecture on “Recent Advancements Related to IoT in the Manufacturing Industry”. He discussed IoT integration in modern manufacturing, covering predictive maintenance, real-time monitoring, process optimization, sensor-based data acquisition, cloud connectivity and advanced analytics. Examples of successful IoT deployments were presented, emphasizing the need for digital transformation in Indian industries to stay globally competitive.

Ms Naga Dhatshana, R&D Engineer, RobotoAI Technologies, presented “Robotics and Automation in Manufacturing with AI”. She highlighted the impact of robotics and AI on manufacturing efficiency and product quality. Topics included collaborative robots (cobots), autonomous systems, AI-enabled decision-making, adaptive process control, and reduced human intervention. Practical examples demonstrated improvements in flexibility, speed, precision, and scalability of modern manufacturing operations. She also encouraged industries to adopt AI-driven automation to achieve smarter and safer production environments.

Dr B Somasundaram, Director of the Center of Excellence & Chief Digital Officer, NETIX.AI, spoke on “Key Technologies Powering the Industrial Internet of Things (IIoT) & Case Studies”. He elaborated on IIoT architecture, sensor integration, cloud and edge computing, and real-time case studies showcasing productivity gains, reduced downtime and improved decision-making. He emphasized that data-driven decision-making is the cornerstone of successful IIoT implementation.



Dr G R Karpagam, Professor, Department of Computer Science & Engineering, PSG College of Technology, delivered a lecture on “Realize Industry 5.0 through Cousins of AI”. She emphasized the human-centric, sustainable, and collaborative vision of Industry 5.0. Her talk covered AI technologies including Machine Learning, Deep Learning, Explainable AI, emotion-aware computing, federated learning, and neuro-symbolic AI, highlighting their role in enhancing efficiency, adaptability and social responsibility in intelligent manufacturing systems. She concluded by motivating participants to explore interdisciplinary research to advance Industry 5.0 goals.

The seminar concluded with a valedictory session and distribution of certificates to the participants.

All India Seminar on “Applications of Smart Materials in Aerospace & Defence”

24.07.2025 & 25.07.2025



IEI Coimbatore Local Centre in collaboration with Department of Aeronautical Engineering, Kumaraguru College of Technology (KCT), Coimbatore organised an All India Seminar on “Applications of Smart Materials in Aerospace & Defence” (under the aegis of the ASDB, IEI) on 24.07.2025 & 25.07.2025.

The session began with the welcome and presidential address by Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, followed by the felicitation address by Dr K K Anil Kumar, Associate Dean, Centre for Continuing Education, KCT. Dr M Senthil Kumar, Committee Member, IEI Coimbatore Local Centre & HoD, Department of Aeronautical Engineering, KCT, provided an overview of the seminar, highlighting its relevance to emerging aerospace and defense trends. The chief guest, Dr N Sivasubramanian, Former Senior Scientist & Chief General Manager, ISRO, emphasized the significance of smart materials in national aerospace missions. The session concluded with a vote of thanks by Dr S Muthukumar, Assistant Professor, KCT.

Dr N Sivasubramanian, delivered a keynote on “Special & Smart Materials in Aerospace Systems Applications”, discussing thermal protection systems, radar-absorbing composites and adaptive materials, highlighting their role in mission safety, structural efficiency and advancing indigenous aerospace capabilities.

Dr M Yuvaraja, Committee Member, IEI Coimbatore Local Centre and Associate Professor, Department of Mechanical Engineering, PSG College of Technology, spoke on “Application of Smart Materials in Vibration Control”. He emphasizing piezoelectric materials, magnetorheological systems, and smart actuators for vibration damping, noise suppression and structural stability in aerospace structures.

Dr G Venkatesh, Assistant Professor, Department of Metallurgical Engineering, PSG College of Technology, presented “Lightweight Ceramics and Composite Materials for Strategic Defense Applications”, covering advanced ceramics, ceramic matrix composites and carbon fiber-reinforced polymers for aeronautical applications, highlighting their ballistic resistance, thermal endurance and longevity.

Dr R Santhanam, Scientist F, Defence Research and Development Laboratory (DRDL), Hyderabad, delivered a lecture on “Technical Challenges in Characterisation of SMA Springs for Multidisciplinary Applications”, discussing hysteresis behavior, fatigue life, thermal actuation and response accuracy, highlighting their importance in aerospace actuators, robotics and defense systems.

Dr J Bruce Ralphin Rose, Associate Professor, Department of Mechanical Engineering, Anna University Regional Campus, Tirunelveli, presented “Bio-Inspired Materials and Design for Aerospace Applications”, demonstrating how nature-inspired designs from insect wings, bird bones, fish skin and shark textures influence lightweight, multifunctional and aerodynamically efficient aerospace structures.

The session featured 10 technical presentations on aerospace and defense materials. Ms S Marypriya presented on aerogels and advanced composites for lightweight UAV structures. Mr P Parthiban, Mr R Arravind & Mr K Gokulnath discussed smart materials in agricultural drones. Ms S G Rithika spoke on multifunctional and adaptive smart materials for aerospace systems. Mr P Naveenkumar highlighted the impact of smart materials on the aerospace industry. Mr K Pratik, Ms R Pavithra, & Mr S Mukesh presented a centrifugal governed variable pitch propeller. Ms M Sowmiya, Mr S D Mouthik Dhanvanth & Mr Ma Atheshvarraa Raja discussed hybrid jute-carbon fiber composites. Ms P Archana, Ms A Vaishnavi & Ms T Kiruthika Sundari presented on open-hole composite laminates with metal meshes. Mr N M Kishore spoke on space debris mitigation using multi-layer shielding. Mr S Rithvik, Ms V Rohini, & Ms Jael Teneesera presented CFD evaluation of morphing winglet geometries. The seminar concluded with a valedictory session.

All India Seminar on “3D Printing in Civil Engineering: Advancements, Design and Sustainability”

28.07.2025 & 29.07.2025

The Institution of Engineers (India), Coimbatore Local Centre organized an All India Seminar on “3D Printing in Civil Engineering: Advancements, Design and Sustainability” (under the aegis of the CVDB, IEI) in partnership with Department of Civil Engineering, Sri Krishna College of Engineering and Technology (SKCET), Coimbatore on 28.07.2025 & 29.07.2025.

Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre, delivered the welcome address, followed by the felicitation address by Dr K Porkumaran, Principal, SKCET. Dr V Sreevidya, Professor & Head, Department of Civil Engineering, SKCET, presented an overview of the seminar. Dr S Ramakrishnan, Associate Professor, Department of Civil Engineering, SKCET introduced the Chief Guest, Dr Mallikarjuna, Assistant Professor, Department of Production Engineering, NIT Tiruchirappalli, who highlighted the transformative potential of 3D printing in construction, emphasizing rapid prototyping, customized designs, reduced material wastage and sustainable construction. The session concluded with a vote of thanks by Mr S C Boobalan, Assistant Professor, Department of Civil Engineering, SKCET. During the technical session, Dr Mallikarjuna, delivered an expert talk on “Designing and Building a 3D Printer for Clay Extrusion”. Er Alwar Babuji, Forensic Structural, Stability, and Architectural Engineer, Valuer, and Principal Chairman & Managing Director, Sriinithi Associates, Coimbatore, delivered a lecture on “IIT in 3D - Innovation Insights as Technocrats and Entrepreneurs in 3D Printing”. He discussed the fundamentals and evolution of 3D printing, innovative applications in civil engineering and emerging entrepreneurial opportunities.

Mr K N Gunasekaran, Assistant Professor, Department of Mechanical Engineering, SKCET, delivered a lecture on “3D Printing of Functional Structural Components for Hybrid Engineering Systems”. He explained the concept and architecture of hybrid engineering systems, key design & material considerations for 3D-printed functional components and relevant case studies. Dr M P Muthuraj, Associate Professor, Department of Civil Engineering, Coimbatore

Institute of Technology, Coimbatore, delivered a lecture on “Geopolymer Concrete in 3D Printing”. He provided detailed insights into geopolymer concrete, its compatibility with 3D printing, design and performance characteristics, and sustainability advantages. Er K R N Manoj, Director & Chief Technology Officer, Pumo Technovation India Pvt. Ltd., Coimbatore, delivered a lecture on “Additive Construction Technology”.

Dr R Thenmozhi, Professor and Head, Department of Civil Engineering, Government College of Technology, Coimbatore, presented a seminar on “3D Printing Technologies in Concrete Structures”. She explained the integration of 3D printing in concrete construction, emphasizing enhanced design flexibility, reduced material wastage and accelerated construction timelines.

The afternoon session featured paper presentations, which included: “Green Building Through 3D Printing” by SK Sreejith, M Marshal, K Sathyaprakash, E Prabakaran; “3D Printing in Small Scale Construction” by S Sree Kesav, S Sowbarani, V M Sivarubaa; “Nano-Engineered Cement Composites” by R Ashwini Balakumar, H Logesh, K Thasneem Firthos, B Thavasiraj; “Eco-Friendly Concrete Paver Blocks” by M Veerapathran, S Santhiyashree, S Sreenikhita; “Thermal Characteristics of Earthen Flooring with Hemp Fiber” by Tarunya Shree Shanmugam, P R Sowmiya, Rufus Boban, G Sabarish; “Geopolymer Concrete for Rapid Shelters” by S Rajalakshmi, Siva Siddharth, G P Swathi, D Jennifer Shoba, V Manisha Shree, Nehashree Arun; “Sustainable Materials for Net-Zero 3D Construction” by P Rajadurai, K Akil; “Low-Carbon Earthen Flooring Tiles with Natural Fibres” by A Jesudass, R Nishanthini, S U Vidhyasri. The seminar concluded with a valedictory session and distribution of certificates to all participants.



One Day Seminar on “Decarbonisation Challenges and Research Opportunities in Energy-Intensive Industries”

02.08.2025

IEI Coimbatore Local Centre organized an one day seminar on “Decarbonisation Challenges and Research Opportunities in Energy-Intensive Industries” (under the aegis of the ICC, IEI) in association with Department of Mechanical Engineering, PSG College of Technology (PSGCT), Coimbatore on 02.08.2025.



The seminar commenced with a heartfelt welcome by Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, who emphasized the significance of IE membership and its activities. Dr P Govindaraj, Assistant Professor, Department of Mechanical Engineering, PSGCT, introduced the theme of the seminar, highlighting the importance of decarbonisation in energy-intensive sectors. The chief guest, Er V V Vaidyaraman, Technical Director, Bosch Global Software Technology Private Limited, Coimbatore, addressed the gathering and stressed the urgent need for reducing carbon emissions and adopting sustainable practices across industries. The inaugural session concluded with a vote of thanks proposed by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre.

The first lecture, “Need of Decarbonisation in Future for a Sustainable World”, was delivered by Er V V Vaidyaraman, who highlighted the role of industries, governments and technology leaders in achieving carbon neutrality. He discussed pathways such as renewable energy integration, electrification of mobility, adoption of green hydrogen, energy-efficient practices and the role of digitalisation and smart technologies in enabling decarbonisation. He also emphasized the importance of collaboration and innovation in driving effective and timely decarbonisation efforts.

The second lecture, “Innovations in Sustainable Cement Manufacturing”, was delivered by Dr T Prabu, Managing Director, Vyoog Information Private Limited, Coimbatore. He outlined innovative strategies in the cement industry, including the use of alternative fuels, clinker substitution, waste heat recovery and digital solutions for process optimization. Case studies were presented to demonstrate successful implementation of these strategies to reduce energy consumption and CO₂ emissions. He also emphasized the importance of lifecycle assessment and eco-friendly raw material sourcing in achieving sustainable cement production.

In the afternoon session, Dr R Suresh Kumar, SME - Battery Pack EV, Jayem Automotives Private Limited, Coimbatore, delivered a lecture on “Decarbonisation Challenges and Research Opportunities in Heavy Industries”. He emphasized the role of electric vehicles in decarbonising the automotive sector and presented case studies on battery pack innovations, charging infrastructure and integration of renewable energy. He also highlighted policy-level initiatives supporting EV adoption and sustainable transportation. He highlighted the significance of predictive maintenance and thermal management in enhancing EV battery performance and lifespan.

The final lecture, “Hydrogen and Sustainable Fuels for Aviation”, was delivered by Dr A P Karthikeyan, Professor, Department of Automobile Engineering, PSGCT. He discussed research developments in hydrogen and alternative aviation fuels, addressing technical challenges and practical solutions to reduce carbon emissions in the aviation sector. He underlined the potential of blending hydrogen with conventional jet fuels to achieve a gradual transition toward greener aviation. The seminar concluded with a valedictory session, where certificates were distributed to the participants.



One Day Seminar on “Advanced Strategies for Optimizing UAV Networks and Operational Efficiency”

08.08.2025



The Institution of Engineers (India), Coimbatore Local Centre organized an one day seminar on “Advanced Strategies for Optimizing UAV Networks and Operational Efficiency” (under the aegis of the ASDB, IEI) in collaboration with Department of Aeronautical Engineering, Hindusthan College of Engineering and Technology (HICET), Coimbatore on 08.08.2025.

The seminar began with a welcome address by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre, who spoke about the scope and significance of IEI membership and its activities. This was followed by a felicitation address by Dr J Jaya, Principal, HICET. An overview of the seminar was presented by Dr V T Gopinathan, Associate Professor and Head, Department of Aeronautical Engineering, HICET, who outlined its objectives and thematic focus. The inaugural address was delivered by Mr M Yuvaraj, Founder and Chief Executive Officer, Skyrider Aerosolutions, Chennai, who emphasized the importance of UAVs and their wide-ranging applications. The inaugural function concluded with a vote of thanks proposed by Mr V Saravana Kumar, Assistant Professor, Department of Aeronautical Engineering, HICET.

The first lecture on “Unmanned Aerial Vehicles: Fundamentals, Functions & Future” was delivered by Mr M Yuvaraj. He provided an overview of UAV technology, including principles, key components and categories. The second lecture on “Role of AI in Drones” was delivered by Mr Akash Senthilkumar, Associate Python Developer, Adhoc Softwares Private Limited, Coimbatore. He explained how AI is enhancing UAV capabilities through autonomous

flight path planning, real-time object detection, predictive maintenance and intelligent data processing.

The third lecture on “Drone Regulations and Legal Framework in India” was delivered by Mr T Abishek, Founder and Chief Executive Officer (Senior Drone Pilot), Flyers Drone Tech, Mayiladuthurai. His session covered DGCA regulations, Civil Aviation Requirements (CAR), the NPNT (No Permission - No Takeoff) system and the Digital Sky Platform. He explained drone classification, operating zones, safety protocols and penalties, stressing the importance of regulatory compliance for safe and innovative UAV operations.

The afternoon session also featured 16 paper presentations by students and researchers across diverse UAV themes. Selected topics included: “Fish Scale Arrays in Aviation” by B Siva Kumar and G Rishikaran. “Solar Drone” by S Dinesh, A Rahul Raj, T Gayathri and N Athavan. “AI-Based Scout Drone for Survivor Detection in Disaster Zones” by C Dharanish, M Manush Nandhan, D Prakash and K Rubesh Kumar. “ADS-B Based Real-time Aircraft Tracking and Spoofing Detection” by P Arunkumar, K Dinesh, M Kowsick and B Ram Prakash. “Runway Excursion Prevention Using IoT Multi-Sensor Alert System” by Salam Rahees, K G Aron Geevarghese, S Abhiram and P Farhan Mohammed. “AI-Based Autonomous Delivery Drone” by R Thanushmathi, M Angelin Persini, C P Deepika and J Madhumitha. “Applications of Drones in Precision Farming” by S Rathinavel. “Disaster Management Using UAVs” by B Livingston Samuvel, S Sri Ram, V Manikandan & P K Hariharan. These papers reflected innovative research in UAV design, AI applications, safety, agriculture, defense and disaster management.

The seminar concluded with a valedictory session, during which certificates were distributed to all participants.



All India Seminar on “AI-Powered Innovations Shaping the Future of Healthcare”

21.08.2025 & 22.08.2025

IEI Coimbatore Local Centre in partnership with Department of Electronics and Communication Engineering and Department of Artificial Intelligence and Data Science, Coimbatore Institute of Technology (CIT), organized an All India Seminar on “AI-Powered Innovations Shaping the Future of Healthcare” (under the aegis of CPDB, IEI) on 21.08.2025 & 22.08.2025.

The seminar began with the inaugural session in which Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, delivered the welcome and presidential address. Dr A Rajeswari, Principal, CIT, and Dr N R Alamelu, Chief Academic Officer, CIT Institutions, offered felicitations. An overview of the seminar was presented by Dr Valliappan Raman, Professor and Head, Department of Artificial Intelligence and Data Science, CIT. The chief guest, Dr Sylvia Hii, Founder and Chief Executive Officer, DGA Healthcare Group, Malaysia, delivered the inaugural address, emphasizing the global impact of artificial intelligence in transforming healthcare. The inaugural function concluded with a vote of thanks proposed by Dr M Poongothai, Professor and Head, Department of Electronics and Communication Engineering, CIT.

The first lecture was delivered by Dr Sylvia Hii, Founder & CEO, DGA Healthcare Group, Malaysia, on the topic “AI in Healthcare”. She explained the transformative role of Artificial Intelligence in modern healthcare, showing how AI is reshaping patient care, clinical decision-making and healthcare delivery systems worldwide. The next lecture was presented by Dr Amol Gramle, Medical Affairs and Business Lead, DGA Healthcare Group, Malaysia, on “Applications of AI in Modern Medicine”. He highlighted the growing use of AI in diagnosis, treatment and healthcare management.



This was followed by a lecture by Dr Thirumurugan S V Mahadhevan, Assistant Manager - Healthcare, Primaeam Solutions Pvt. Ltd., Chennai, on “The Pulse of AI in Healthcare”. He provided a balanced perspective on real-world applications, opportunities and challenges of AI in the healthcare ecosystem. In the afternoon, Dr Valliappan Raman, Professor & Head, Department of Artificial Intelligence and Data Science, CIT, spoke on “Future of AI in Healthcare – An Optimistic Peek into the Window of Future”. He gave a forward-looking perspective on the evolving role of AI, tracing its journey from early computer-assisted diagnostics to today’s deep learning and predictive models. On the second day, Mr D Anandakumar, Principal AI Scientist, Frontier AI & Research Labs, 5C Network Pvt. Ltd., Bangalore, delivered a lecture on “Beyond the Image – Transforming Radiology with Artificial Intelligence”.

The next lecture was given by Ms. Lekha Sree, AI/ML Developer & Image Processing Engineer, MedevPlus, Bangalore, on “Data Processing and Model Building Techniques for Healthcare AI”. She presented practical comprehensions into supervised and unsupervised learning, deep learning techniques like CNNs and RNNs, and hybrid models, showing how these methods are applied to disease classification, imaging and predictive analytics. In the afternoon session, Dr Niharicka Gopalakrishnan, Business Analyst, iCliniq, Orane Healthcare India Pvt. Ltd., Coimbatore, delivered a lecture on “Beyond Dr. Google – Creating Intelligent Healthcare Companions”.

The final lecture was presented by Mr Shriram Aravinth, AI Developer, iCliniq, Orane Healthcare India Pvt. Ltd., Coimbatore, on “Intelligent Healthcare Companions”. The All India seminar concluded with a valedictory session, followed by the distribution of certificates to the participants.

One Day Seminar on “Low Carbon Building Materials for Sustainable Built Environment”

25.08.2025

The Institution of Engineers (India), Coimbatore Local Centre organized an one day seminar on “Low Carbon Building Materials for Sustainable Built Environment” (under the aegis of the ARDB, IEI) in association with Department of Civil Engineering, Sri Krishna College of Engineering and Technology (SKCET), Coimbatore on 25.08.2025.



The seminar began with a welcome address by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre, highlighting the significance of the seminar. Dr K Porkumaran, Principal, SKCET delivered the felicitation address, followed by Dr V Sreevidya, Professor & Head, Department of Civil Engineering, SKCET, presenting the seminar theme. Dr S Deepika, Assistant Professor, introduced the chief guest, Er L Arun Kumar, Managing Director, Cotton City Concrete, Coimbatore. Er Arun Kumar delivered the inaugural address, providing an overview of civil engineering fundamentals, concrete mix design, and new technologies. The session concluded with a vote of thanks by Dr N K Karthikeyan, Assistant Professor, SKCET.

Er L Arun Kumar delivered a lecture on “Sustainable Concrete Mix Design”, focusing on eco-friendly approaches to concrete production. He discussed environmental challenges in cement manufacturing and explained sustainable mix design using supplementary cementitious materials, recycled aggregates and innovative alternatives like self-compacting and geopolymer concretes. Case studies illustrated economic and environmental benefits, urging engineers to adopt sustainable construction practices.

Er Guru Purushoth, Structural Engineer, CAEROSTRIS, Coimbatore, spoke on “Innovative Low-Carbon Building Materials: Geopolymer and Fibre Glass Composites”.

He emphasized the environmental impact of conventional materials and presented low-carbon alternatives, including geopolymer concrete and fibre glass composites. The session highlighted their strength, durability, reduced carbon footprint and successful applications in structural works.

Dr M J Gopinathan, Managing Director, JPG Housing & Projects Private Limited, Coimbatore, presented “Low Carbon Building Materials in Structural Engineering”. He discussed sustainable alternatives such as geopolymer concrete, fly ash bricks, recycled aggregates and supplementary cementitious materials, explaining their environmental benefits, durability, cost-effectiveness and practical applications in housing and infrastructure projects. Additionally, he emphasized the need for industry-wide adoption and continuous research to promote sustainable construction practices.



The afternoon session featured seven paper presentations covering various themes: “Experimental Study on Subgrade Pavement Improvement with Jarosite and Vermiculite Sand” by G Ajai, “Experimental Investigation of Engineered Geopolymer Composite with Various Fine Aggregate” by S Sivaranjani, “Experimental Study on Hybrid Fibre Concrete Incorporating LC3 and Nano-silica” by M Kaviyanjali, “Plastic-coated Recycled Concrete Aggregate Immersed in Epoxy Resin within a Geopolymer Concrete Matrix” by E Poovarasan, “Effect of Different Web Opening Profiles on Web Crippling Capacity of Cold-Formed Steel Sections at Elevated Temperatures” by Periyannan Vaithilingam et al., “Utilization of Plastic Waste in Roadway Construction” by V Karvendhan, and “Experimental Study on Thermo Mechanically Treated Aggregate in Concrete” by R Akilan.

The program concluded with a valedictory session and distribution of certificates to all participants.

One Day Seminar on “Data-Driven Lean: Leveraging Smart Manufacturing for Continuous Improvement”

29.08.2025

IEI Coimbatore Local Centre organized an one day seminar on “Data-Driven Lean: Leveraging Smart Manufacturing for Continuous Improvement” (under the aegis of the MCDB, IEI) in collaboration with Department of Mechanical Engineering, PSG College of Technology (PSGCT), Coimbatore on 29.08.2025.

The seminar commenced with the inaugural session, where Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, welcomed the participants and highlighted the significance of IE membership and its activities. Dr R Jayachitra, Associate Professor, Department of Mechanical Engineering, PSGCT, presented the theme of the seminar and Dr M Gomathi Prabha, Assistant Professor, Department of Mechanical Engineering, PSG College of Technology introduced the chief guest. The chief guest, Er P Guhapranav, Senior Associate Consultant, Infosys Technologies Limited, Bangalore. Er Guhapranav addressed the gathering on the importance of data-driven lean approaches in modern industries. The inaugural session concluded with a vote of thanks by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre.



The first invited lecture, “AI and Leveraging AI for Automation,” was delivered by Er P Guhapranav. He discussed how artificial intelligence extends beyond rule-based tasks to create intelligent systems capable of learning, adapting, and decision-making. Key techniques such as machine learning, deep learning, natural language processing, and computer vision were illustrated with practical examples and industry case studies from Foxconn, Flex Ltd., Coca-Cola Icecek, and Schneider Electric, demonstrating AI’s role in demand forecasting, process optimization and enterprise automation.



The second invited lecture, “Modern Supply Chain” was delivered by Er Nikku Rakesh, Procurement Buyer, Alstom Transport India Limited, Chennai. He explored the evolution of supply chains from barter systems to digital platforms, emphasizing connectivity, trust and data. Case studies highlighted the impact of global events on supply networks, while lean, agile and data-driven strategies were discussed. He stressed the importance of sustainability, resilience and AI in shaping future supply chains. He also highlighted the role of collaboration across suppliers and technology partners in building resilient supply chains.

In the afternoon session, the third invited lecture, “Lean Digitalization for Future Factory,” was delivered by Er D Gogul, Engineer - Digital Manufacturing and Sourcing, L&T Technology Services, Chennai. He emphasized integrating lean principles with Industry 4.0 technologies such as AI, IoT, robotics, digital twins & predictive analytics to create efficient, agile and resilient factories. Case studies, including BMW, showcased AI-enhanced lean systems improving defect detection, scheduling and continuous improvement. He underscored the importance of continuous employee training to fully leverage digital manufacturing technologies.

The fourth invited lecture, “Industrial Engineering in the Digital Era: Lean + Smart Manufacturing,” was delivered by Er A K Ezhilan, Senior Project Engineer, ABB Global Industries and Services Private Limited, Bangalore. He highlighted the integration of lean manufacturing with smart manufacturing tools to enable real-time monitoring, predictive maintenance and optimized production systems. Through practical examples, he demonstrated how organizations can enhance productivity, reduce costs and maintain flexibility in today’s industrial landscape. The seminar concluded with a valedictory session.

One Day Workshop on “Essentials of Electric Vehicle Hardware Design”

12.09.2025



The Institution of Engineers (India), Coimbatore Local Centre organized an one day workshop on “Essentials of Electric Vehicle Hardware Design” (under the aegis of the ELDB, IEI) in partnership with Department of Electrical and Electronics Engineering and Department of Mechanical Engineering, Sri Ramakrishna Engineering College (SREC), Coimbatore on 12.09.2025.

The workshop began with the inaugural session, where Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre, welcomed the participants and highlighted the significance of IE membership and its activities. This was followed by the felicitation address by Dr P Karuppuswamy, Professor & Head, Department of Mechanical Engineering, SREC. Dr S Allirani, Professor & Head, Department of Electrical and Electronics Engineering, SREC, provided an overview of the workshop objectives. Dr N Gunasekar, Associate Professor, Department of Mechanical Engineering, SREC, introduced the chief guest. The Chief Guest, Er A Sasikumar, General Manager - Internal Combustion Vehicles & Electric Vehicle Powertrain Validation and Testing, Jayem Automotives Private Limited, Coimbatore, explained the fundamentals of electric vehicle design and highlighted the latest advancements in electric mobility. The session concluded with a vote of thanks proposed by Dr R Krishnakumar, Assistant Professor, Department of Electrical and Electronics Engineering, SREC.

The first lecture, “Industry Trends and Career Opportunities in Electric Vehicle Technology”, was delivered by Er A Sasikumar. He discussed the rapid growth of the EV sector, highlighting innovations in battery efficiency, charging infrastructure and smart mobility solutions.

He emphasized career opportunities in powertrain design, energy storage, vehicle connectivity and encouraged developing expertise in electronics, software & sustainable technologies.

The second lecture, “Battery Pack Design: Cell Selection, Configurations, Battery and Thermal Management”, was delivered by Mr Jinesh Vinayachandran, Senior Technical Trainer, Devise Electronics Private Limited, Pune. He explained the selection of suitable battery cells based on energy density, cycle life and safety requirements, along with series-parallel configurations to achieve desired voltage and capacity. He also covered Battery Management Systems (BMS) and advanced thermal management techniques to ensure safety and efficiency in EV applications.

The third lecture, “Practical Insights into EV Hardware Design”, was conducted by Dr R Krishnakumar, Assistant Professor, Department of Electrical and Electronics Engineering, SREC. The hands-on session focused on battery management systems, vehicle control units and a cell demonstrator kit at the Centre of Excellence for E-Mobility, providing participants practical exposure to real-time EV applications. He also highlighted current trends in electric vehicle technology, including fast-charging solutions, power electronics advancements and integration with renewable energy sources.

The fourth lecture, “Power Electronics in EVs and Motor Control Strategies”, was delivered by Mr Pranav Singanapalli, Founder & CEO, Emote Electric, Coimbatore. He highlighted the role of converters and inverters in managing power flow between the battery & motor and explained modern motor control strategies such as vector control and direct torque control, emphasizing their importance in enhancing efficiency, responsiveness and driving performance. The workshop concluded with a valedictory session and certificate distribution.



All India Seminar on "A Comprehensive Insights into Vibration-Based Condition Monitoring: Theory, Techniques, Applications, and Case Studies for Mechanical Systems"

19.09.2025 & 20.09.2025

IEI Coimbatore Local Centre, in association with Department of Mechanical Engineering, PSG College of Technology, Coimbatore, organized an All India Seminar on "A Comprehensive Insights into Vibration-Based Condition Monitoring: Theory, Techniques, Applications, and Case Studies for Mechanical Systems" (under the aegis of the MCDB, IEI) on 19-20 September 2025.



In the inaugural session, Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, delivered the welcome address and briefed on the activities of IEI. Dr S Syath Abuthakeer, Associate Professor, Department of Mechanical Engineering, PSG College of Technology, provided an overview of the seminar. Mr J Tamilvendhan, Lead Technologist - R&D (NVH), ZF Wind Power Coimbatore Private Limited, Coimbatore delivered the inaugural address, elaborating on the significance of machinery vibration monitoring and control. Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre, proposed the vote of thanks.

Mr J Tamilvendhan delivered the first invited lecture on "Why Wind Turbines Sing: Understanding Tonal Noise". He explained that tonal noise in wind turbines arises mainly from gear train and aerodynamic sources. Er A Gomathinayagam, Deputy General Manager, Product Design & Analysis, PAI Machines, Coimbatore, delivered a lecture on "Operator Comfort in Earth Moving Equipment". He discussed design principles for ensuring operator safety and comfort, emphasizing the application of ISO 2631 and ISO 5007 standards.

Dr A Selvakumar, Professor, Department of Mechanical Engineering, Government Engineering College, Thrissur, presented a lecture on "Dynamic Analysis of Mineral Cast Lathe Bed". He explained the benefits of mineral castings over traditional cast iron, including higher damping and lower weight.

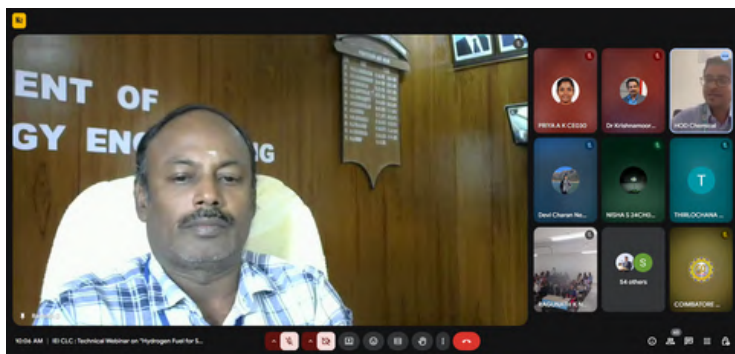
Dr R Surendran, Associate Professor, Department of Mechanical Engineering, Government College of Technology, Coimbatore, spoke on "Application of Vibration-Based Condition Monitoring". He elaborated on techniques like FFT and Wavelet Transform for fault diagnosis and stressed the role of predictive maintenance and ISO 10816 standards in improving machinery reliability. Dr B Santhosh, Associate Professor, Department of Mechanical Engineering, Amrita School of Engineering, Coimbatore, delivered a lecture on "Nonlinearity: A Boon or Bane in Vibrations?". He explained different types of nonlinearities geometric, material and contact and their effects on mechanical systems.

Dr M Saimurugan, Associate Professor, Department of Mechanical Engineering, Amrita School of Engineering, Coimbatore, shared his expertise on "Proficiency of Physics-Based Features in Machine Learning-Based Fault Diagnosis and Remaining Useful Life Estimation of Bearings". He discussed the integration of machine learning with physics-informed models for predictive maintenance. Dr S Mohanraj, Software Engineer - Advanced, Siemens Digital Industries Software, Pune, presented a lecture on "Experimental Modal Analysis". He described mathematical modeling of vibrating systems and demonstrated vibration measurement techniques. Dr S Syath Abuthakeer, Associate Professor, Department of Mechanical Engineering, PSG College of Technology, delivered the final lecture on "Development of Alternate Materials for Conventional Lathe". He explained the principles of material selection, testing and validation for vibration control.

The seminar concluded with a valedictory session, during which participation certificates were distributed. The two-day program provided an excellent platform for participants to explore advanced vibration-based monitoring techniques, share research findings, and foster collaboration among academia and industry professionals.

Technical Webinar on “Hydrogen Fuel for Sustainable India: Challenges and Opportunities”

25.07.2025



The Institution of Engineers (India), Coimbatore Local Centre in collaboration with Department of Chemical Engineering, KPR Institute of Engineering and Technology (KPRIET), Coimbatore organized a technical webinar on “Hydrogen Fuel for Sustainable India: Challenges and Opportunities” on 25.07.2025.

Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, delivered the welcome address, highlighting the significance of hydrogen fuel in India’s energy roadmap. Dr S Balasubramanian, Professor & Head, Department of Chemical Engineering, KPRIET, acknowledged the efforts of the organizers and emphasized the relevance of the topic in the current energy scenario. Lt Dr A K Priya, Committee Member, IEI Coimbatore Local Centre and Professor, Department of Chemical Engineering, KPRIET, introduced the distinguished speaker.

The keynote address was delivered by Dr D Ramesh, Professor and Head, Department of Renewable Energy Engineering, Agricultural Engineering College & Research Institute, Tamil Nadu Agricultural University. He elaborated on the potential of hydrogen fuel, production technologies, storage and distribution challenges, and India’s roadmap for a hydrogen-based economy. Dr Ramesh explained the classification of hydrogen-grey, blue and green-based on production methods and emphasized the importance of green hydrogen produced via electrolysis using renewable energy. He detailed current technologies including steam methane reforming, biomass gasification and water electrolysis, as well as emerging photobiological techniques.

The session concluded with the vote of thanks proposed by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre.

Technical Webinar on “Impacts of Climate Change on Water Resources”

31.07.2025

IEI Coimbatore Local Centre organized a technical webinar on “Impacts of Climate Change on Water Resources” in partnership with Department of Civil Engineering, Hindusthan College of Engineering and Technology, Coimbatore on 31.07.2025. The lecture was delivered by Dr C Mayilswami, Adjunct Professor, Water Institute, Karunya Institute of Technology and Sciences, Coimbatore, and Former Professor of Soil and Water Conservation Engineering, Tamil Nadu Agricultural University, Coimbatore.

Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, delivered the welcome and presidential address. Dr K Akil, Committee Member, IEI Coimbatore Local Centre and Professor & Head, Department of Civil Engineering, Hindusthan College of Engineering & Technology, introduced the guest speaker.



Dr C Mayilswami delivered a lecture on the multifaceted impacts of climate change on water resources. He highlighted alarming trends in temperature rise and erratic rainfall, and their direct effects on surface and groundwater availability. The talk emphasized how climate change intensifies water scarcity, particularly in agricultural regions. Specific challenges faced in Tamil Nadu, such as declining reservoir levels and reduced groundwater recharge, were discussed in detail. Dr Mayilswami also outlined policy interventions and stressed the importance of community participation in addressing the water crisis. He further encouraged educational institutions to actively promote awareness on water conservation. He concluded by emphasizing the need for collaborative efforts between government, industry and communities to ensure sustainable water management for the future.

The session concluded with a vote of thanks proposed by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre.

Technical Lecture on “Industrial Control Systems”

01.08.2025

The Institution of Engineers (India), Coimbatore Local Centre in association with Department of Electronics and Communication Engineering, PSG Polytechnic College, Coimbatore, organized a technical lecture on “Industrial Control Systems” on 01.08.2025. The lecture was delivered by Mr P Senthil Kumar, Proprietor of Genmech Services, Coimbatore.

Dr J Krishnamoorthi, Chairman of IEI Coimbatore Local Centre, delivered the welcome address and presided over the session. Dr B Giriraj, Principal of PSG Polytechnic College, felicitated the event, and Ms D Jayasree, Head of the Department (In-charge), Department of Electronics and Communication Engineering, PSG Polytechnic College, introduced the guest speaker.



Mr P Senthil Kumar presented a detailed session on the role of advanced control systems in modern industries. He covered key technologies such as SCADA, PLC and HMI (Human-Machine Interface), explaining how they enable real-time monitoring, process automation and improved operational safety across industrial sectors. He highlighted how these systems optimize performance, reduce downtime and ensure efficient control of electrical processes. Towards the end of the session, he discussed the importance of protection devices in both industrial and domestic settings, explaining the functioning of MCBs, which safeguard household wiring from overloads and short circuits and ELCBs (Earth Leakage Circuit Breakers), which prevent electric shocks by detecting leakage currents.

The session provided valuable understanding of automation and protection systems for industrial and domestic applications. The program concluded with a vote of thanks delivered by Mr N Sridhar, Lecturer, Department of Electronics and Communication Engineering, PSG Polytechnic College.

Technical Lecture on “Exploring the Cutting Edge Developments in Wireless and Quantum Circuits”

06.08.2025

IEI Coimbatore Local Centre in collaboration with Department of Electronics and Communication Engineering, Karpagam Institute of Technology, Coimbatore, organized a technical lecture on “Exploring the Cutting Edge Developments in Wireless and Quantum Circuits” on 06.08.2025. The lecture was delivered by Dr K S Tamilselvan, Professor & Head, Department of Biomedical Engineering, KPR Institute of Engineering and Technology, Coimbatore.

Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre, welcomed the gathering and highlighted the significance of IE membership and its activities. Dr D Baskar, Head of the Department, Department of Electronics and Communication Engineering, Karpagam Institute of Technology, felicitated the event.

Dr K S Tamilselvan presented a comprehensive overview of recent advancements in wireless and quantum circuits. He discussed key wireless technologies, including miniaturization, power efficiency and IoT integration, explaining how these developments enable ultra-low-power sensors and high-speed data transfer in healthcare and industrial applications. He also explained core quantum concepts such as superposition and entanglement, their role in advanced computation & signal processing and addressed breakthroughs in qubit design, error correction and scalability challenges. The lecture emphasized the synergy between wireless and quantum technologies and concluded by underlining the importance of interdisciplinary collaboration in driving innovation. The session concluded with a vote of thanks proposed by Dr C Gokul, Professor, Department of Electronics and Communication Engineering, Karpagam Institute of Technology, Coimbatore.



Technical Lecture on “Drone Technology”

08.08.2025

The Institution of Engineers (India), Coimbatore Local Centre organized a technical lecture on “Drone Technology” in partnership with Department of Aeronautical Engineering, Hindusthan Institute of Technology (HITECH), Coimbatore, on 08.08.2025. The lecture was delivered by Er M Vinod Kumar, Chief Operating Officer & Partner, Unitos Aero Drone Solution, Salem.

Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre, delivered the welcome and presidential address. Dr C Natarajan, Principal, HITECH, felicitated the event, and Dr R Thirumalai, Professor & Head, Department of Aeronautical Engineering, HITECH, introduced the guest speaker. Mr M Vinod Kumar began his lecture by explaining the components of a drone, including the airframe, propulsion system, flight controller, GPS module, sensors and communication systems. He discussed fixed-wing, rotary-wing and hybrid UAV designs, highlighting their operational advantages and limitations. The lecture covered a wide range of applications such as precision agriculture, aerial mapping & surveying, industrial inspection, disaster management and rescue operations, defense and surveillance and package delivery systems. He also discussed emerging trends such as AI-based autonomous navigation, swarm drones, beyond visual line of sight (BVLOS) operations and integration with GIS and IoT platforms. The lecture concluded with guidance on academic projects, start-up opportunities, and government initiatives supporting UAV technology.

The session ended with a vote of thanks proposed by Mr M Moses Devaprasanna, Assistant Professor, Department of Aeronautical Engineering, HITECH.



Technical Lecture on “Futuristic Technology in Carbon Capture”

09.08.2025



IEI Coimbatore Local Centre in association with Department of Chemical Engineering, KPR Institute of Engineering and Technology (KPRIET), organized a technical lecture on “Futuristic Technology in Carbon Capture” on 09.08.2025.

Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, delivered the welcome and presidential address, emphasizing the importance of carbon capture technologies in achieving India’s sustainable development goals. Dr S Balasubramanian, Professor and Head, Department of Chemical Engineering, KPRIET, felicitated the event and highlighted the value of knowledge sharing between industry experts and academic institutions for fostering innovation. Lt Dr A K Priya, Committee Member, IEI Coimbatore Local Centre and Professor, Department of Chemical Engineering, KPRIET, introduced the guest speaker.

Er G James Solomon, General Manager - Sustainability, Summits Group of Companies, Coimbatore, delivered a comprehensive lecture on current and emerging carbon capture technologies. Using case studies from both global and Indian contexts, he provided practical insights for engineers and researchers. He also discussed emerging approaches to capture atmospheric CO₂ using advanced sorbents and filters, integrated with renewable-powered systems, alongside strategies such as algae cultivation, biochar production and afforestation to store carbon in natural sinks.

Lt Dr A K Priya proposed the vote of thanks, expressing gratitude to the speaker and participants for making the session informative and engaging.

Technical Lecture on “The Roles and Responsibilities of Production Engineers in Project Management”

12.08.2025

The Institution of Engineers (India), Coimbatore Local Centre in collaboration with Department of Production Engineering, PSG College of Technology, Coimbatore organized a technical lecture on “The Roles and Responsibilities of Production Engineers in Project Management” on 12.08.2025. The session was delivered by Er Sowmiya Ponnusamy, Business Process Architect, CISCO, San Francisco, USA.

Dr M Senthilkumar, Past Honorary Secretary, IEI Coimbatore Local Centre and Professor and Head, Department of Production Engineering, PSG College of Technology, delivered the welcome address and presided over the session. Dr R Rajesh, Assistant Professor, Department of Production Engineering, PSG College of Technology, introduced the chief guest.



Er Sowmiya Ponnusamy presented a detailed session on the role of production engineers in project management, covering key areas such as project planning, process optimization, quality control, cost management, coordination with cross-functional teams, risk management, problem-solving, technology integration and documentation. She also emphasized the importance of effective communication and leadership skills in ensuring successful project execution. She emphasized how production engineers ensure projects are completed on time, within budget and meet quality standards, highlighting their critical role in bridging the gap between engineering design and actual manufacturing.

Finally, Dr J Pradeep Kumar, Committee Member, IEI Coimbatore Local Centre and Associate Professor, Department of Production Engineering, PSG College of Technology, delivered the vote of thanks.

Technical Visit on “PSG GRD Museum of Science and Technology”

23.08.2025



IEI Coimbatore Local Centre organized a technical visit to “PSG GRD Museum of Science and Technology, Neelambur, Coimbatore” on 23.08.2025. The museum has many galleries showing India’s progress in science and technology. In the Energy Gallery, members saw different ways of producing electricity, including solar and renewable energy. The Mobility Gallery displayed the history of vehicles, from old cars to modern electric and driverless vehicles.

The Simulator Gallery offered hands-on experiences like crash test simulations and medical tool demonstrations. In the Science Gallery, visitors tried simple experiments in chemistry, physics, and biology. The Space Gallery showed India’s space achievements, from Aryabhata to Chandrayaan and Mangalyaan missions. Members also visited the Industry X.O, AR-VR, Mini Theater, Observatory and EV Lab, gaining insights into robotics, virtual reality, telescopes, and electric vehicles.

Overall, the experience was highly informative and inspiring, equipping members with valuable knowledge about emerging technologies and fostering interest in sustainable and innovative solutions for the future.



Technical Webinar on “Nano-Structured Textile Materials: Process Integration for Enhanced Sustainability and Performance”

04.09.2025



IEI Coimbatore Local Centre in partnership with Department of Chemical Engineering, KPR Institute of Engineering and Technology (KPRIET), Coimbatore, organized a technical webinar on “Nano-Structured Textile Materials: Process Integration for Enhanced Sustainability and Performance” on 04.09.2025. Lt Dr A K Priya, Committee Member, IEI Coimbatore Local Centre and Professor, Department of Chemical Engineering, KPR Institute of Engineering and Technology, delivered the welcome address.

Dr S Balasubramanian, Professor and Head, Department of Chemical Engineering, KPR Institute of Engineering and Technology, acknowledged the efforts of the organizers and highlighted the relevance of the topic in the current energy and sustainability scenario. Dr G Surendran, Associate Professor, Department of Chemical Engineering, KPR Institute of Engineering and Technology, introduced the distinguished speaker.

Dr Reddy Prasad delivered a detailed talk on advancements in nano-structured textile materials, emphasizing process integration for enhanced sustainability and performance. He highlighted how nanotechnology improves material properties, reduces environmental impact and enables new functionalities in textiles. He also discussed recent innovations in antimicrobial, self-cleaning and energy-efficient fabrics & shared examples of industrial applications that enhance product longevity and user comfort. The session emphasized the importance of combining material science with sustainable practices to meet modern textile industry demands.

The session concluded with a vote of thanks proposed by Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre.

Technical Lecture on “Innovative Approaches to Indoor Saffron Cultivation”

24.09.2025

The Institution of Engineers (India), Coimbatore Local Centre in association with Department of Chemical Engineering, KPR Institute of Engineering and Technology (KPRIET), organized a technical lecture on “Innovative Approaches to Indoor Saffron Cultivation” on 24.09.2025.

Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre, delivered the welcome and presidential address. Dr S Balasubramanian, Professor & Head, Department of Chemical Engineering, KPR Institute of Engineering and Technology felicitated the event. Lt Dr A K Priya, Committee Member, IEI Coimbatore Local Centre and Professor, Department of Chemical Engineering, KPR Institute of Engineering and Technology introduced the guest speaker.

The guest lecture was delivered by Ms Refana Shahul, Founder and Director, Mycoblooms Mushroomery Private Limited, Coimbatore. She presented an engaging session on innovative methods of indoor saffron cultivation, highlighting advanced technologies, climate controlled environments and sustainable practices to improve saffron productivity. She also discussed the challenges faced in indoor farming of high-value crops and outlined future prospects for integrating modern agri-technologies in saffron cultivation. She also shared practical experiences from her entrepreneurial journey, encouraging participants to think beyond conventional farming methods.

Finally, Lt Dr A K Priya expressed gratitude to the speaker, dignitaries, organizing team and participants for making the event a success.



Technical Lecture on “Sustainability Management in Apparel Industry”

24.09.2025

The Institution of Engineers (India), Coimbatore Local Centre in collaboration with Department of Fashion Technology, PSG College of Technology, Coimbatore, organized a technical lecture on “Sustainability Management in Apparel Industry” on 24.09.2025. The lecture was delivered by the guest speaker Mr Vignesh Amalraj, Country Manager, OETI - Institute for Ecology and Innovation, Tiruppur.

Dr J Krishnamoorthi, Chairman, IEI Coimbatore Local Centre, delivered the welcome address and presided over the session. Dr K Chandrasekaran, Associate Professor and Head (I/c), Department of Fashion Technology, PSG College of Technology, delivered the felicitation address. Dr M Parthiban, Assistant Professor, Department of Fashion Technology, PSG College of Technology, introduced the chief guest to the audience.

Mr Vignesh Amalraj delivered an informative session on sustainability management in the apparel industry. He covered key areas including environmental management, quality management and chemical management, highlighting their significant impact on overall sustainability practices. He emphasized a comprehensive strategy incorporating eco-friendly materials, resource-efficient production processes, ethical labor practices, responsible supply chain management and a circular economy approach focused on reducing, reusing and recycling.



The session concluded with an interactive question-and-answer segment, during which participants discussed challenges, future trends, and potential avenues for sustainability management in the apparel industry. Finally, Dr M Parthiban, Assistant Professor, Department of Fashion Technology, PSG College of Technology, delivered the vote of thanks.

Forthcoming Activities

World Habitat Day 2025 Technical Lecture on “Urban Crisis Response - Through the Lens of a Civil Engineer” in association with Department of Civil Engineering, PSG College of Technology during October 2025.

World Standards Day 2025 Technical Lecture on “Building a Resilient, Inclusive, and Sustainable Future Together” in collaboration with Department of Electronic and Communication Engineering, Coimbatore Institute of Technology during October 2025.

60th Annual General Meeting of the Institution of Engineers (India), Coimbatore Local Centre is scheduled on 24th October 2025.

One Day Seminar on “Urban Flood Management: Strategies for Resilient Cities” (under the aegis of CVDB) in partnership with Department of Civil Engineering, PSG Institute of Technology and Applied Research on 25th October 2025.

All India Seminar on “The Role of Advanced Machinery in Post-Harvest Management: From Farm to Market Efficiency” (under the aegis of AGDB) in association with Department of Food Technology and Department of Mechanical Engineering, SNS College of Technology, on 06 - 07 November 2025.

All India Workshop on “Advanced Wireless Sensor Network-Based Transforming Smart Agricultural Systems: Leveraging Artificial Intelligence (AI) and Machine Learning (ML) Applications” (under the aegis of ETDB) in collaboration with Department of Electronics and Communication Engineering, Hindusthan Institute of Technology on 26 - 27 November 2025.

Upgradation of Membership

Members of The Institution of Engineers (India) who meet the prescribed eligibility criteria are encouraged to apply for upgradation of their membership as follows:

Associate Members (AMIE) who fulfill the required experience and qualifications may apply for upgradation to the Member (MIE) or Fellow (FIE) grade, as applicable.

Members (MIE) who satisfy the requisite professional standing and contributions are invited to apply for elevation to the prestigious grade of Fellow (FIE).

For detailed eligibility criteria and application procedures, please contact:

Deputy Director (Membership)
The Institution of Engineers (India)
8 Gokhale Road, Kolkata 700020
✉ dd.membership@ieindia.org

The Institution of Engineers (India)

(Established 1920, Incorporated by Royal Charter 1935)

COIMBATORE LOCAL CENTRE

PSG Tech Campus, Peelamedu, Coimbatore - 641 004

Dr J Krishnamoorthi FIE
Chairman

Dr G Madhan Mohan FIE
Honorary Secretary



Phone : 0422 - 2580733

E-mail : coimbatorelc@ieindia.org
ieicoimbatore@gmail.com

Website : ieicoimbatore.org

"A Century of Service to the Nation"

Ref: CLC/60th AGM/2024-25

Date: 09th October 2025

To
All Corporate Members
The Institution of Engineers (India)
Coimbatore Local Centre

Sir / Madam,

Sub: The Institution of Engineers (India), Coimbatore Local Centre -
60th Annual General Meeting - Reg.

60th Annual General Meeting of the Institution of Engineers (India), Coimbatore Local Centre is scheduled on **24th October 2025 (Friday)** at **05.15 PM** at **D Block Conference Hall (Ground Floor), PSG Tech Campus**. The agenda of the AGM will be sent soon by email.

The soft copy of the annual report and audited accounts for the year 2024 - 2025 are attached herewith.

Thanking you.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'G. Madhan Mohan', is written over a light blue circular stamp.

Dr G Madhan Mohan
Honorary Secretary

IEI HEADQUARTERS

8, Gokhale Road, Kolkata - 700 020, India

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IEI AWARDS

The Coal India Ltd (CIL) had instituted an Award to perpetuate the memory of **Late J G Kumaramangalam**, its first Chairman to be awarded every year during the Indian Engineering Congress to author/s of the articles adjudged best on a selected topic. The topic for the year 2025 is given below.

COAL INDIA (J G KUMARAMANGALAM MEMORIAL) AWARD

"Energy Efficiency"

The articles preferably restricting to 3000 words along with good quality photographs may be submitted along with a Declaration Form to award@ieindia.org within **October 30, 2025**.

The template of the paper and the Declaration Form are available under the following link: <https://shorturl.at/vGxdc>

Intending contributors are requested to send the soft copy of the paper by email to award@ieindia.org (with subject heading Paper for Coal Award) and submit four nos. printed copies of their articles to :

Deputy Director (Technical)
The Institution of Engineers (India)
8 Gokhale Road, Kolkata 700 020

Be Proud to be a Certified International Professional Engineers (IntPE) by IEI

Who can apply for International Professional Engineers?

Basic Requirements for certification as International Professional Engineer

- Bachelor's Degree in Engineering or equivalent recognised by Statutory Authority or Government of India;
- Experience of 7 years in engineering practice. Out of 7 years of experience 2 years in a responsible position of significant engineering activity.

How to apply for International Professional Engineers?

For details
please visit the link:
<https://shorturl.at/j36fo>
or
scan the code →



Why become an International Professional Engineer??

International Professional Engineer (IntPE) Certification enables engineering professionals to advance their career aspiration in wide ranging ways.

- The International Professional Engineers, registered with IEI, may receive credit when seeking registration or licensure in the jurisdiction of another member i.e this will facilitate an engineer in mobility across member jurisdictions;
- Empowered by International Professional Engineers Agreement (IPEA), IEI maintains the register of the International Professional Engineers (IntPE) in India;
- Enhances an engineering professional's stature and gives confidence to employer/ prospective employer about competency of Certified Engineer;
- IntPE Certificate facilitates an engineer in Professional Mobility.

For any query and assistance, please send email to: pe@ieindia.org or contact (033) 40106220

Professional Engineers (PE) Certification by IEI — A Pathway towards Success

Get the **Professional Engineers Certification** by IEI to enhance your knowledge, skill and competency and also elevate your career by becoming a member of an elite group of engineers.

Who can be a Professional Engineer —

- Having Bachelor's Degree in Engineering or equivalent recognized by Statutory Authority or Government of India;
- Having experience of at least 5 years in engineering practice.

Why become a Professional Engineer (PE) —

- Improved career prospects and employability;
- Makes you suitable to attain higher levels of authority and responsibility;
- It is envisaged that in future, only a professional engineer would be empowered to prepare, sign, seal and submit engineering plans and drawings to a public authority for approval, or to seal engineering work for public and private clients;
- With growing economy and large scale expansion of infrastructure, the demand of PE certified engineers is expected to be much higher.

How to apply for Professional Engineers?

The details are available on IEI Website
<https://shorturl.at/mRIYu>
or
scan the code



For any query and assistance, please send email to: pe@ieindia.org or contact (033) 40106275



The Institution of Engineers (India) IEI Industry Excellence Award 2025 Request for Participation

The IEI Industry Excellence Award has been instituted to recognize industry leaders for their innovation, excellence in engineering operations and thereby, to lead their industry in competitive manner. The benchmarks created by the industries in India have included productivity, quality, safety and performance assurance thereby giving India the rightful place in the global markets. Realizing that such industries can provide the leadership to a large number of other industries in the country, it has been considered appropriate by the IEI Council to institute the IEI Industry Excellence Awards in the year 2008.

Applications in specified format (visit link: <https://www.ieindia.org/webui/IEI-Activities.aspx#industry-excellence-award>) are invited from prospective applicants for IEI Industry Excellence Award 2025. The last date of receipt of application for the Award 2025 is **30 October 2025**. Interested applicants are requested to send their applications (Two hard copies & One soft copy in Pendrive/CD) to the below mentioned address.

Deputy Director (Technical)
The Institution of Engineers (India)
8 Gokhale Road, Kolkata 700 020



The Institution of Engineers (India) IEI Engineering Education Excellence Award 2025 Request for Participation

The IEI Engineering Education Excellence Award has been instituted to recognize leading Engineering Educational Institutions and encourage for better and more effective engineering education across the country. The engineering education sector has witnessed significant development, setting benchmarks for others to follow. Universities and institutions have expanded their scope beyond pedagogy and now engage in R&D activities, consultancy, patents, publications, skill development programs, industry interface, and the implementation of the New Education Policy (NEP), contributing to India's global prominence. Recognizing that such institutions can lead and inspire numerous others in the country, the IEI Council has decided to establish the IEI Engineering Education Excellence Awards.

Prospective applicants are invited to submit their applications in the specified format

(visit link: <https://www.ieindia.org/webui/IEI-Activities.aspx#engineering-education-excellence-award>) for the IEI Engineering Education Excellence Award 2025. The deadline for submitting of applications for the Award 2025 is **30 October 2025**. Interested applicants are requested to submit their applications (Four hard copies & One soft copy in Pendrive/CD) to the below mentioned address.

Deputy Director (Technical)
The Institution of Engineers (India)
8 Gokhale Road, Kolkata 700 020

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