



The Institution of Engineers (India)

Coimbatore Local Centre

Quarterly Newsletter

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Dr J Pradeep Kumar FIE
Honorary Secretary, IEI CLC

Dr M Senthilkumar FIE
Chairman, IEI CLC



Chairman's Desk

It gives me immense pleasure to present the highlights of the recent activities of the IEI Coimbatore Local Centre. During the quarter, the Centre successfully observed Royal Charter Day and Engineers' Day, besides organising a range of technical programmes covering contemporary areas such as Smart HVAC Systems, Quantum Computing for Medical Imaging, CO₂ Capture and Utilisation, AI in the Textile Industry, Quantum Communication for Healthcare Data Security, Emerging Effluent Treatment Technologies, and Critical Mineral Extraction from Industrial Wastes.

A major highlight was the successful organisation of the 39th National Convention of Metallurgical and Materials Engineers and National Seminar on "Pioneering Materials for Strategic Defence, Nuclear and Space Endeavors", which brought together experts and professionals from the field.

In the coming quarter, the Centre looks forward to observing World Habitat Day, World Standards Day, the Annual General Meeting, and Energy Conservation Day, along with technical programmes focusing on Biotechnology for Agricultural Value Addition, Industry 4.0 and Smart Manufacturing in Aerospace, Additive Manufacturing and Smart Materials for Aerospace, AI-driven Electric Vehicle Technologies, and AI-based Control Systems for Modern Industry and Infrastructure.

I sincerely thank all our members, academic and industry partners, speakers, and volunteers for their continued support and active participation. Together, let us continue to strengthen our technical activities and promote engineering excellence and professional growth.

Dr M Senthilkumar FIE
Chairman, IEI CLC

Royal Charter Day

09.09.2026



IEI Coimbatore Local Centre, in association with the Department of Artificial Intelligence and Data Science, Coimbatore Institute of Technology (CIT), organised a technical lecture on "Quantum Computing: Revolutionizing the Next Generation of Intelligent Systems" as part of the Royal Charter Day Celebration held on 09.09.2026. The lecture was delivered by Dr J Rajeshkumar, Technology Education Specialist, Accenture, Coimbatore.

Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre, delivered the welcome address. Dr Valliappan Raman, Professor & Head, Department of AIDS, CIT delivered the felicitation address. Dr M Prabhavathy, Associate Professor, Department of AIDS, CIT, introduced the guest speaker.

Dr J Rajeshkumar introduced the fundamentals of quantum computing and explained the differences between classical computing and quantum computing using bits and qubits. He elaborated on the key concepts of superposition, entanglement, and interference, along with basic quantum gates such as the X, Hadamard, and CNOT gates, quantum circuits, and measurement.

Finally, Dr N Ramkumar, Assistant Professor, Department of AIDS, CIT, delivered the vote of thanks, formally concluding the technical lecture.

59th Engineers' Day Celebrations

15.09.2026



The 59th Engineers' Day was celebrated in a grand manner by The Institution of Engineers (India), Coimbatore Local Centre on 15.09.2026. IEI observes Engineers' Day on the birth anniversary of Sir M Visvesvaraya, one of India's most distinguished engineers and statesmen. Er M Senthilkumar, Chairman, IEI Coimbatore Local Centre, welcomed the Chief Guest and the gathering. The Chief Guest, Er R Ragavan, Chief Executive Officer, Oriental Plants & Equipment Private Limited, Coimbatore, along with the Chairman & Honorary Secretary, garlanded the portrait of Sir M Visvesvaraya.

Er R Ragavan, Chief Guest, addressed the gathering on the theme "Engineering Excellence for a Sustainable and Technologically Sovereign India". He highlighted the importance of engineering excellence, sustainable development, and technological innovation in shaping India's future. He emphasised the need for engineers to adopt emerging technologies and develop innovative solutions to address societal and industrial challenges.

Outstanding Engineer Awards were presented to Er B Anand, Er S Kanthalakshmi, and Er J Kanchana in recognition of their significant contributions to the engineering profession. Young Achiever Awards were presented to Er S Syed Imran, Er G Jeevarathinam, Er M Prabhavathy, Er S Bharani, Er S Praveen Kumar, Er R Naveen Anthuvan, and Er B Pranesh for their achievements in their respective engineering fields.



The IEI Distinguished Institution Coordinator Award 2026 was presented to Er V T Gopinathan; Seven Student Awards were presented to Mr S Rajendran, Mr S Vishnuvardhan, Mr Veera Sanjay Kumar, Ms Varshaa Mani Venkatesh, Ms M B Nharguna Nangai, Ms E Amulyaa Shri, and Ms N Sofia in recognition of their academic, co-curricular, extracurricular, sports, and social service achievements.

As part of the Diamond Jubilee Celebrations of IEI Coimbatore Local Centre, marking 60 years of service, the Centre organised three mega Project Expos in association with Sri Shakthi Institute of Engineering and Technology, Coimbatore Institute of Technology, and Hindusthan College of Engineering and Technology. The First Project Expo 2026, on "Applications of Artificial Intelligence in Digital Era", showcased nearly 120 projects with around 500 participants. The First, Second and Third Prizes were awarded to student teams from Kongu Engineering College, SRM Madurai College for Engineering and Technology and Sri Shakthi Institute of Engineering and Technology, respectively.

The Second Project Expo 2026 - Building Design Hackathon, on "Building Design Excellence: Integrated Planning, Quantity Take-Off and Project Cost Management", featured nearly 100 innovative solutions with around 300 participants. The prizes were won by student teams from Coimbatore Institute of Technology, SASTRA Deemed University and Kumaraguru College of Technology.

The Third Project Expo 2026, on "Sustainable Development in Industry 4.0 & 5.0", showcased nearly 130 projects with around 600 participants. The First, Second and Third Prizes were awarded to teams from St. Joseph's Institute of Technology, Hindusthan College of Engineering and Technology, and Dhanalakshmi Srinivasan College of Engineering, respectively. Finally, Er J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre, proposed the vote of thanks.

39th National Convention of Metallurgical & Materials Engineers and National Seminar on “Pioneering Materials for Strategic Defence, Nuclear and Space Endeavors”

17-18 July 2026



IEI Coimbatore Local Centre, in association with the Department of Metallurgical Engineering, PSG College of Technology, organized the Thirty-Ninth National Convention of Metallurgical & Materials Engineers and National Seminar on “Pioneering Materials for Strategic Defence, Nuclear and Space Endeavors” under the aegis of MMDB, IEI, on 17-18 July 2026.

The inaugural session was chaired by Er Kishore Kumar Mehrotra, Chairman, MMDB, IEI. Dr M Senthilkumar, Chairman, IEI Coimbatore Local Centre, welcomed the gathering, while Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre, presented the theme of the Convention. Dr P R Thyala, Principal (FAC), PSG College of Technology, delivered the Special Address.

The Convention was inaugurated by Padma Shri Dr K Balasubramanian, Distinguished Scientist and Director, Nonferrous Materials Technology Development Centre, Hyderabad. During the inaugural function, eminent Engineers Dr Harish C Barshilia & Dr M Kamaraj were felicitated. The IEI Young Engineer Awards were presented to Ms Isha Apurwa, Dr Manoj Kumar and Dr Shikhar Misra for their contributions to Metallurgical and Materials Engineering. The Convention Souvenir was also released.



The V Subramony Memorial Lecture, delivered by Padma Shri Dr K Balasubramanian, focused on “Critical Materials - Challenges in Scale up of Process Technologies & Way Forward”, covering critical materials, indigenous processing technologies, technology scale-up and national self-reliance.

A series of invited lectures addressed contemporary areas including nanostructured coatings for aerospace applications, β -titanium alloys for aircraft landing gear, lightweight composites, surface engineering, materials testing for space applications and metal 3D printing for military aircraft. Experts included Dr Harish C. Barshilia, Dr Giribaskar Sivaswamy, Mr Suresh Kumar Mishra, Dr Manoj Kumar, Dr G Sudarshan Rao and Dr T Ram Prabhu.



A panel discussion on “Future of Metallurgical and Materials Engineering”, moderated by Dr R Sivasankari, brought together experts from aerospace, defence, academia and industry. Discussions covered advanced materials, critical minerals, additive manufacturing, lightweight alloys, computational materials engineering, surface engineering, sustainability and industry-academia collaboration. The Convention also featured 20 technical paper presentations covering emerging research areas such as advanced alloys, composite materials, additive manufacturing, coatings, welding, radiation shielding, critical materials, CALPHAD-ICME modelling and sustainable materials processing. Researchers, faculty members and students from various institutions participated in the technical sessions.

One Day Seminar on “Smart HVAC Systems: Energy Efficiency, Control and Monitoring”

29.07.2026

The Institution of Engineers (India), Coimbatore Local Centre in association with the Department of Foundry Technology, PSG Polytechnic College, Coimbatore, organized a one-day seminar on “Smart HVAC Systems: Energy Efficiency, Control and Monitoring” under the aegis of the MCDB, IEI, on 29.07.2026. The inaugural session was led by Dr M Senthilkumar, Chairman, IEI Coimbatore Local Centre, who highlighted the importance of energy-efficient HVAC systems in modern infrastructure and the need for appropriate system selection and operation. Dr M Arasu, Head, Department of Foundry Technology, PSG Polytechnic College, outlined the objectives and technical scope of the seminar.

Mr V Pradeep Kumar, President, ISHRAE Coimbatore Local Chapter and Joint Managing Director, Velsons Engineers Private Limited, Coimbatore, delivered the inaugural address and spoke on the growing demand and career opportunities in the HVAC sector. Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre, proposed the vote of thanks.

The technical programme featured four expert sessions. Mr P Bharath, Assistant Manager (Training & Development), Daikin Airconditioning India Private Limited, Chennai, addressed energy-efficient HVAC systems, indoor air quality, thermal comfort, smart controls, automation, sensors, IoT and Building Management Systems. He discussed HVAC energy performance parameters such as COP and SEER, VRF technology, high-efficiency chillers, variable-speed compressors and other advanced systems. He highlighted the importance of adopting intelligent control strategies to optimise energy consumption without compromising occupant comfort. He also explained how smart monitoring and automation can improve the operational efficiency and sustainability of modern HVAC installations.

Mr K Kanagarajan, Chief Executive Officer, Penquin Refrigeration, Coimbatore, presented approaches to real-time monitoring, fault detection, and preventive and predictive maintenance, including the use of AI and data analytics to identify potential equipment failures, reduce downtime and improve system reliability. He explained how condition-based monitoring enables timely identification of performance deviations and maintenance requirements. He also emphasised the role of digital technologies in extending equipment life and improving the overall reliability of refrigeration and HVAC systems.



Dr M Sundaram, Associate Professor, Department of Electrical & Electronics Engineering, PSG College of Technology, discussed green buildings and energy conservation practices, covering IGBC and GRIHA ratings, heat recovery, natural ventilation, efficient refrigerants, renewable energy integration and HVAC optimisation. Case studies illustrated practical approaches to reducing energy consumption in buildings. He highlighted the importance of integrating energy-efficient technologies at the design stage to achieve sustainable building performance. He also emphasised the need for continuous energy monitoring and optimisation to support long-term environmental and economic benefits.



The seminar provided participants with an overview of energy-efficient HVAC technologies, smart monitoring and automation, predictive maintenance and sustainable building practices. The programme concluded with the valedictory session and distribution of certificates to the participants.



One Day Seminar on “From Emissions to Resources: CO₂ Capture, Storage and Utilization”

04.08.2026



IEI Coimbatore Local Centre, in association with the Department of Chemical Engineering, KPR Institute of Engineering and Technology, Coimbatore, organized a One-Day Seminar on “From Emissions to Resources: CO₂ Capture, Storage and Utilization” under the aegis of CHDB, IEI on 04.08.2026.

The inaugural session was welcomed by Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre. Ms L Dharani, Assistant Professor II, Department of Chemical Engineering, KPR Institute of Engineering and Technology, presented the objectives and technical scope of the seminar. Er G James Solomon, Managing Partner, Jaas Tekhnologiya, Coimbatore, delivered the inaugural address and emphasized the importance of connecting academic knowledge with industrial practices, innovation and practical problem-solving. Dr M Laxmi Deepak Bhatlu, Assistant Professor III, Department of Chemical Engineering, KPR Institute of Engineering and Technology, proposed the vote of thanks.

The first invited lecture was delivered by Er James Solomon, he presented an insightful lecture on “Carbon Capture Technologies and Processes”. The speaker discussed various innovative approaches to carbon capture, with particular emphasis on indoor carbon dioxide capture systems designed to improve indoor air quality in residential, commercial, and industrial environments. He explained the principles and applications of advanced adsorption materials and carbon capture devices that can effectively remove excess carbon dioxide from enclosed spaces, thereby creating healthier and more sustainable indoor environments.

The second invited lecture was delivered by Dr B Uma Maheswari, Associate Professor, Department of Chemical Engineering, Coimbatore Institute of Technology, Coimbatore, on the topic “Carbon Capture Beyond Mitigation: Resource Recovery and Utilization”. She presented an insightful lecture on innovative approaches to carbon dioxide capture that extend beyond emission reduction and focus on the effective utilization of captured carbon as a valuable resource. The speaker shared the research activities carried out in her laboratory, explaining the techniques employed to capture carbon dioxide from various sources and its subsequent conversion into useful products.

The third invited lecture was delivered by Dr S Mothil, Associate Professor, Department of Chemical Engineering, Kongu Engineering College, Erode, on the topic “CO₂ Utilization in Industrial Applications”. He provided a comprehensive overview of the various industrial pathways for utilizing captured carbon dioxide as a valuable raw material rather than treating it as a waste product. The speaker discussed the conversion of carbon dioxide into value-added chemicals, synthetic fuels, polymers, and construction materials through advanced chemical and biological processes.



The lecture on “Carbon to Chemicals: Emerging Opportunities for Future Chemical Engineers” was delivered by Dr S Balasubramanian, Professor, Department of Chemical Engineering, KPR Institute of Engineering and Technology. He explained catalytic, electrochemical, thermochemical and biological routes for converting CO₂ into products such as methanol, formic acid, urea, dimethyl carbonate and methane, and highlighted emerging opportunities for chemical engineers in carbon capture, green hydrogen, catalyst development, sustainable manufacturing and industrial decarbonization.

The seminar provided participants with a broad perspective on carbon capture, utilization, resource recovery and carbon-to-chemical technologies, while highlighting their relevance to sustainable industrial development and future engineering applications.

One Day Seminar on “Future Trends of AI in the Textile Industry”

12.08.2026

The Institution of Engineers (India), Coimbatore Local Centre, under the aegis of the Textile Engineering Division Board, IEI, in association with the Department of Textile Technology, PSG Polytechnic College, Coimbatore, organized a One Day Seminar on “Future Trends of AI in the Textile Industry” under the aegis of TXDB, IEI on 12.08.2026.

The inaugural session was presided over by Dr M Senthilkumar, Chairman, IEI Coimbatore Local Centre, who welcomed the gathering and highlighted the significance of the seminar. Dr B Giriraj, Principal, PSG Polytechnic College, delivered the felicitation address. Dr M Senthilkumar, Head, Department of Textile Technology, PSG PTC, presented the opening remarks. Mr S Anandhakumar, Vice President - Exports, Sieger Spintech Equipments Private Limited, Coimbatore, was the Chief Guest and delivered the keynote address on emerging AI trends in the textile industry. The session concluded with the vote of thanks by Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre.



The first technical session was on the topic “AI for Intralogistics & Storage in the Textile Value Chain” and was handled by Mr S Anandhakumar, Vice President - Exports, Sieger Spintech Equipments Private Limited, Coimbatore. He discussed how AI can improve material movement, storage, inventory management, and decision-making. Applications such as AS/RS, AMR/AGV, WMS, RFID, vision systems, and dynamic routing were highlighted. The session focused on the importance of digitisation and automation in improving textile operations. The integration of AI with textile processes was presented as a new approach to improving productivity and competitiveness.



The second technical session was on the topic “AI for Textile Business Excellence from Data to Decisions” by Mr A T Kumar, Chief Executive Officer, Aladdin365, Coimbatore. He explained the fundamentals of AI and its applications in the textile industry, including common misconceptions about AI, such as its autonomy, accuracy, and impact on human jobs. The session focused on developing a clear understanding of AI concepts and their practical relevance to textile education and industry. The different branches of AI were introduced, along with their role in supporting learning and future applications.

The third technical session was on the topic “AI Driven Improvements in the Spinning Industry” by Mr N Selvakumar, General Manager, Jat Techno Spintex Mill, Karur. He explained the role of AI in improving quality, productivity, and sustainability in the spinning industry, including production monitoring, quality improvement, predictive maintenance, and energy management. The use of real-time monitoring, automated reports, alerts, and digital dashboards for better decision-making was highlighted. The session also covered AI-based quality inspection and machine monitoring to reduce production losses and downtime.

The fourth technical session on the topic “Agentic Industry 5.0: The Future of Intelligent Manufacturing” by Dr S Lovelyn Rose, Chief Executive Officer & Chief AI Officer, Lysarq Solutions, Coimbatore. She explained the concept of Agentic Industry 5.0 and its role in the future of intelligent manufacturing. The session focused on AI-driven decision-making, automation, and human-machine collaboration. The integration of intelligent technologies in manufacturing processes was highlighted to improve productivity and flexibility.

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

All India Seminar on “Error-Resilient Quantum Communication for Healthcare Data Security”

20-21 August 2026



IEI Coimbatore Local Centre, in association with the Department of Electronics and Communication Engineering, Coimbatore Institute of Technology, organized an All India Seminar on “Error-Resilient Quantum Communication for Healthcare Data Security” under the aegis of the ETDB, IEI, on 20-21 August 2026.

The inaugural session began with the welcome and presidential address by Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre. Dr A Rajeswari, Principal, Coimbatore Institute of Technology, delivered the felicitation address. Dr M Poongothai, Professor & Head, Department of ECE CIT, presented the seminar overview, followed by the programme schedule by Dr B Bhuvaneshwari, Assistant Professor, Department of ECE, CIT. Dr Paventhan Arumugam, Senior Director (R&D) & Scientist-G, ERNET India, IIT Madras Research Park, was the Chief Guest and addressed the gathering on quantum technologies and ongoing projects. The session concluded with the vote of thanks by Ms V Gowri Priyaa, Assistant Professor, Department of ECE, CIT.

The technical sessions commenced with Dr Paventhan Arumugam, who presented “QKD Overview and Testbed Activities,” covering Quantum Key Distribution (QKD), key protocols, secure key generation, transmission, testbed implementation and performance evaluation. Smt Forum P Shingala, Scientist-C, Society for Electronic Transactions and Security, Chennai, addressed “Quantum Error Correcting Codes,” explaining error detection and correction techniques for mitigating noise and decoherence and supporting fault-tolerant quantum communication. In the afternoon, Dr Jayakumar Vaithiyashankar, CEO & Founder, Anuthantra Private Limited, Bengaluru spoke on “Quantum -

-Safe Healthcare: Securing Medical IoT, Telemedicine and Electronic Health Records,” focusing on post-quantum security for Medical IoT, telemedicine and EHRs. Smt C Selvagangai, Scientist-C, Society for Electronic Transactions and Security, Chennai, presented “Quantum Key Distribution,” covering quantum principles, secure key generation and distribution, and quantum-secure cryptography.

The second day featured four technical lectures. Dr J Chandra Priya, Assistant Professor, Department of Computer Science and Engineering, National Institute of Technology Tiruchirappalli, presented “Quantum Key Distribution and Fault-Tolerant Data Transmission for Healthcare Systems,” addressing QKD-based protection of healthcare information and reliable data transmission.



Dr Dhinesh Balasubramanian, Head, Industry Consulting Group & Associate Professor – Research, Centre for Sustainable Energy Technologies, SRM Institute of Science and Technology, Tiruchirappalli, discussed “Next-Generation Electric Vehicles: Quantum-Enabled Security for Connected, Intelligent and Resilient EV Systems,” focusing on quantum-enabled security for connected EVs, communication systems, data protection and infrastructure resilience.

Dr Sathyaprakash Palaniyappan, Chief Operating Officer, Anuthantra Private Limited, Bengaluru, delivered “Quantum Inspired Machine Learning for Health Care Application,” covering quantum-inspired machine learning for healthcare data analysis, prediction and intelligent decision-making. The final lecture, “Health Care Data Security,” was delivered by Dr Amalan Joseph Antony, Assistant Professor, Department of Computer Science and Engineering, Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, addressing healthcare data privacy, secure storage, cybersecurity and the confidentiality, integrity and availability of sensitive information.

All India Seminar on “Cost Effective and Emerging Effluent Treatment Technologies”

21-22 September 2026



IEI Coimbatore Local Centre in association with the Division of Biotechnology and Water Institute - A Centre of Excellence, Karunya Institute of Technology and Sciences (KITS), Coimbatore, organised an All India Seminar on “Cost Effective and Emerging Effluent Treatment Technologies” under the aegis of ENDB, IEI, on 21-22 September 2026.

The inaugural session was presided over by Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre, who highlighted the importance of sustainable effluent treatment technologies. Dr Xavier N Fernando, Dean, School of Engineering and Technology, KITS, delivered the felicitation address, while Dr Sneha Gautam, Professor (Research) and Head, Water Institute - A Centre of Excellence, KITS, provided an overview of the seminar. Dr S Hema, Professor, Department of Civil Engineering, Sri Ramakrishna Engineering College, Coimbatore, delivered the Chief Guest Address. The session concluded with the vote of thanks, proposed by Dr A K Priya, Committee Member, IEI Coimbatore Local Centre and Professor (Research), Division of Biotechnology, Water Institute - A Centre of Excellence, KITS.

The first invited lecture was delivered by Dr S Hema, on “ETP to ZLD: Cost-Effective Strategies for Sustainable Wastewater Management”. She discussed the transition from conventional ETPs to Zero Liquid Discharge systems, focusing on water recovery, pretreatment, membrane performance, energy efficiency and retrofit-based approaches for reducing treatment costs. The second invited lecture was delivered by Dr Bairi Levi Rakshith, Assistant Professor, Division of Mechanical Engineering, KITS, on “Microplastics in Wastewater: An Emerging Challenge for Effluent Treatment”.

The third lecture was delivered by Dr J Jeyanthi, Professor, Department of Civil Engineering, GCT, Coimbatore, on “Sustainable Solutions for Industrial Waste Management”. She discussed waste minimisation, source segregation, cleaner production, recycling and resource recovery, highlighting integrated waste-management practices based on circular-economy principles. The fourth lecture was delivered by Mr G Rajthilak, Project Manager, Kovai Kulangal Padhukappu Amaippu, Coimbatore, on “Wastewater, People and Planet: Towards a Sustainable Water Future”.

On the second day, the fifth lecture was delivered by Dr P Jegathambal, Professor, Water Institute, School of Agriculture Sciences, KITS, on “From Textile Dye Effluent to Reusable Water: Conventional and Digital Twin-Optimized Electrocoagulation. The sixth lecture was delivered by Dr K Akil, Committee Member, IEI Coimbatore Local Centre and Professor & HoD of Civil Engineering, Hindusthan College of Engineering and Technology, Coimbatore on “Cost-Effective and Nature-Based Approaches for Effluent Treatment”. She discussed constructed wetlands, phytoremediation, microbial systems and algal-bacterial treatment, highlighting their potential for economical and decentralised effluent management. The seventh lecture was delivered by Dr Biswanath Mahanty, Professor, Division of Biotechnology, KITS, on “Integrating Explainable Machine Learning and Process Optimization in Effluent Treatment Technologies”.

The eighth lecture was delivered by Mrs Roshini, Assistant Professor, Division of Civil Engineering, KITS, on “From Waste to Worth: Emerging & Economical Solutions for Effluent Management”. She highlighted waste minimisation, water and resource recovery, recycling, reuse and modular treatment systems for developing economical and environmentally sustainable effluent-management solutions. The programme concluded with a valedictory session and distribution of certificates to the participants.



One Day "Extraction of Critical Minerals / Metals from Industrial Wastes"

29.09.2026



The Institution of Engineers (India), Coimbatore Local Centre organized a One Day Seminar on "Extraction of Critical Minerals / Metals from Industrial Wastes" in association with Department of Metallurgical Engineering, PSG College of Technology, Coimbatore under the aegis of MMDB, IEI on 29.09.2026.

In the inaugural function, Dr J Krishnamoorthi, Immediate Past Chairman, IEI Coimbatore Local Centre and Council Member MMDB, IEI Kolkata presented the welcome address. Dr Deepak Kumar Satapathy, Assistant Professor, Department of Metallurgical Engineering, PSG College of Technology gave an overview of the One Day Seminar. Dr S R Sankaranarayanan, Professor, Department of Metallurgical and Materials Engineering, National Institute of Technology Tiruchirappalli, delivered the inaugural address, highlighting the importance of recovering critical minerals and metals from industrial wastes for resource conservation, sustainable development, and a circular economy. Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre proposed the vote of thanks.

The first lecture on "Synthesis of Industrial Chemicals from Metallurgical Wastes" was delivered by Dr S Raman Sankaranarayanan. The session focussed on the wastes generated from industries with special focus on Steel Industry. A comparative analysis of energy consumption in processing of various metals was done followed by the amount of waste each of these processes generate. Special attention was given to recycling of these solid wastes for recovering precious metals and reusing the remaining waste in various other applications such as roads, building materials, etc.

The second session on "Resources and Technologies in Critical Minerals (with a focus on Lithium and Rare earth Extraction)" was delivered by Dr G Balachandran, Former Scientist, Defence Metallurgical Research Laboratory, Hyderabad. The lecture contained extensive amount of information on the critical minerals and their applications. The Speaker discussed about the metallurgical practises adopted by the scientists during his time at DRDO which was highly enlightening. The speaker highlighted India's position in the field of critical mineral processing in comparison with China and other global powers, providing eye-opening insights for the audience.

The third session focused on "Bioleaching Assisted Electrochemical Reclamation of Titanium from Redmud" was delivered by Dr R Selvakumar, Professor and Head, Department of Biotechnology and Nanobiotechnology PSG Institute of Advanced Studies, Coimbatore. The Speaker discussed how certain bacteria and plants can absorb heavy metals from the industrial wastes which in this case was red mud supplied by NALCO Damanjodi. The speaker utilised native bacteria strains and plants (vetiver) to absorb the heavy metals from the red mud thus preventing their transfer to the ground water table.



The fourth session discussed on "Extraction of Metals from Industrial Wastes and E-waste" was delivered by Mr N Jayaprakash, Director - Tech and Business Development Jacsgreen Recycling Private Limited, Tiruvannamalai. The speaker highlighted the current scenario on the recycling of electronic wastes in India. The speaker mentioned how there are many grades of electronic wastes and a lack of regulation in controlling the unchecked burning of toxic electronic wastes. The speaker explained the processes involved in extraction of precious metals such as Gold, Silver, Copper, etc.

The programme ended with a valedictory session and distribution of certificates to the participants.

IEI Technical Webinar on “Quantum Computing for Medical Imaging”

31.07.2026

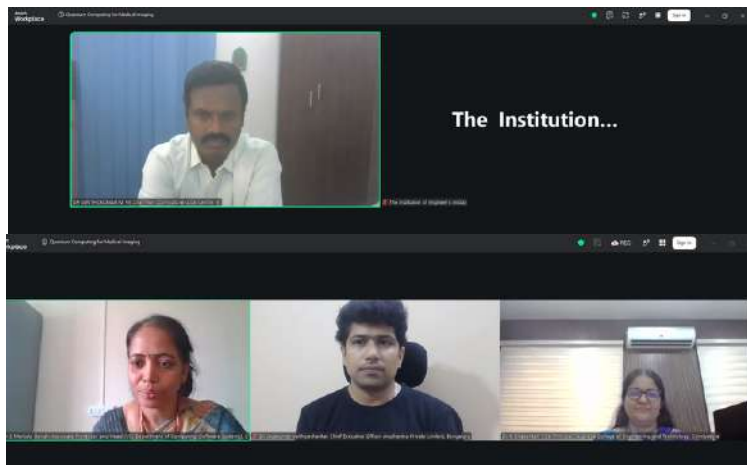
The Institution of Engineers (India), Coimbatore Local Centre, in association with the Department of Electronics and Communication Engineering, Akshaya College of Engineering and Technology, Coimbatore, organized a technical webinar on “Quantum Computing for Medical Imaging” under the aegis of ETDB, IEI on 31.07.2026.

Dr M Senthilkumar, Chairman, IEI Coimbatore Local Centre, delivered the presidential address and highlighted the significance of emerging technologies for sustainable and next-generation infrastructure.

Dr S Manjula Gandhi, Professor and Head, Department of Computing (Software Systems), Coimbatore Institute of Technology, Coimbatore, explained the fundamentals of quantum computing, including qubits, superposition, entanglement, quantum gates and measurement. She discussed their applications in medical imaging, image reconstruction, pattern recognition and machine learning, and demonstrated the IBM Quantum Platform and Qiskit for quantum circuit development and simulation.

Dr Jayakumar Vaithiyashankar, Chief Executive Officer, Anuthantra Private Limited, Bengaluru, presented the fundamentals and computational principles of quantum computing. His presentation covered quantum states, quantum logic, processor architecture, algorithms, error correction, decoherence and scalability, along with recent developments and potential applications across various sectors.

Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre, proposed the vote of thanks, bringing the webinar to a close.



Technical Lecture on “Metrology for Precision Manufacturing”

16.07.2026



The Institution of Engineers (India), Coimbatore Local Centre, in association with the Department of Production Engineering, PSG College of Technology, Coimbatore, organized a technical lecture on “Metrology for Precision Manufacturing” on 16.07.2026. The technical lecture was delivered by Mr R Kamalakannan, Head - Metrology, Roots Industries India Limited, Coimbatore.

Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre, delivered the welcome address and presided over the session. Dr R Rajamani, Assistant Professor, Department of Production Engineering, PSG College of Technology, introduced the resource person.

In the technical session Mr R Kamalakannan shared his extensive industrial experience in precision measurement and quality assurance. The session covered the significance of metrology in achieving product quality, process capability, dimensional accuracy, calibration practices, measurement uncertainty, traceability, and the application of advanced metrology systems in precision manufacturing.

The speaker also discussed current industrial practices, challenges in maintaining measurement accuracy, and the evolving role of digital metrology in smart manufacturing environments.

The lecture effectively bridged the gap between academic learning and industrial practice by presenting real-world case studies and practical examples from the manufacturing sector.

Dr M R Pratheesh Kumar, Associate Professor, Department of Production Engineering, PSG College of Technology, proposed the vote of thanks.

Technical Lecture on “System on Chip: From Concept to Silicon”

14.08.2026

The Institution of Engineers (India), Coimbatore Local Centre organized a technical lecture on “System on Chip: From Concept to Silicon” in association with Department of Information Technology, Nehru Institute of Technology, Coimbatore on 14.08.2026. The lecture was delivered by Dr P Saravanan, Associate Professor, Department of Electronics and Communication Engineering, PSG College of Technology, Coimbatore

Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre welcomed the guest speakers and the participants. Dr M Sivaraja, Principal, Nehru Institute of Technology felicitated the event. Dr P Karthik Kumar, Associate Professor, Department of Information Technology, Nehru Institute of Technology introduced the chief guest to audience.

Dr P Saravanan explained the various stages involved in the development of an SoC, beginning with the conceptualization and architectural design and progressing through hardware and software integration, verification, fabrication, and finally, silicon implementation. The session helped participants understand how multiple functional components can be integrated into a single chip to develop efficient and high-performance electronic systems. The lecture also highlighted the growing importance of SoC technology in modern applications such as smart devices, embedded systems, Internet of Things (IoT), automotive electronics, artificial intelligence, and high-performance computing. The practical insights shared by the resource person helped students connect their academic knowledge with real-world semiconductor industry practices.



Finally, the vote of thanks was proposed by Dr P Shanthakumar, Professor and Head, Department of Information Technology, Nehru Institute of Technology, Coimbatore.

Technical Lecture on “AI-Enabled Biological Interpretation: Accelerating Innovation in Life Sciences”

19.08.2026



IEI Coimbatore Local Centre, in association with the Department of Information Technology, PSG College of Technology, organized a technical lecture on “AI-Enabled Biological Interpretation: Accelerating Innovation in Life Sciences” on 19.08.2026. The programme featured Dr V P Brintha, Senior Bioinformatician & Computational Biology Lead, Genoll Precision Oncology Research Company, Coimbatore, as the resource person.

Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre, welcomed the gathering. Dr B Vinoth Kumar, Committee Member, IEI Coimbatore Local Centre and Professor & Head, Department of Information Technology, PSG College of Technology, delivered the felicitation address. Dr R Rekha, Associate Professor, Department of Information Technology, PSG College of Technology, introduced the resource person.

Dr V P Brintha explained the use of artificial intelligence, machine learning, bioinformatics and computational biology for analysing complex genomic, molecular and biomedical data. The presentation covered emerging applications in precision medicine, disease research, drug discovery and personalised healthcare, along with the potential of AI-assisted methods to support faster scientific research and data-driven healthcare decisions.

The programme gave students an interdisciplinary perspective on the convergence of AI and life sciences, including emerging research areas and career opportunities.

Dr S Prabhakaran, Joint Honorary Secretary, IEI Coimbatore Local Centre, proposed the vote of thanks.

Project Expo on “Applications of Artificial Intelligence in Digital Era”

21.08.2026



The Institution of Engineers (India), Coimbatore Local Centre, in association with Department of Computer Science and Engineering, Sri Shakthi Institute of Engineering and Technology, Coimbatore, organized a Project Expo on “Applications of Artificial Intelligence in Digital Era” for the Computer Engineering domain on 21.08.2026 on the occasion of the “Diamond Jubilee Celebrations of The Institution of Engineers (India), Coimbatore Local Centre (1965-2025)”.

The Project Expo was formally inaugurated by Dr M Senthilkumar, Chairman, IEI Coimbatore Local Centre, and the Chief Guest, Mr Goutham Sridhar, Lead DevOps Engineer, Coforge, Bengaluru, through a ceremonial ribbon-cutting ceremony.

Nearly 100 projects were exhibited, with around 500 participants from various institutions across Tamil Nadu. The awardees were selected based on their performance, innovation, technical excellence, and overall quality of the projects presented.

The First Prize was awarded to Mr Vishal M, Mr Thumilesh R, Mr Sanjeevkumar A, and Mr Shanjay V, Second Year B.E. students of Mechatronics Engineering, Kongu Engineering College, Perundurai, for “AI and IoT-Based Predictive Maintenance System for CNC Machines”. The Second Prize was awarded to Mr Kamalesh M, Mr Vasudevan T S, Mr Krithik Prabhu V S, and Mr Priya Rahul S, Third Year B.E. students of Mechanical Engineering, SRM Madurai College for Engineering and Technology, Sivagangai, for “Agriexplorer”. The Third Prize was awarded to Mr Nithinprabu V, Mr Naveenkumar S, and Mr Sakthi Prasanth S, Third Year B.E. students of Computer Science and Engineering, Sri Shakthi Institute of Engineering and Technology, Coimbatore, for “Vision Gate - AI-Powered Multi-Factor Attendance and Presence Verification”.

Project Expo on “Building Design Excellence: Integrated Planning, Quantity Take-Off and Project Cost Management”

27.08.2026

IEI Coimbatore Local Centre, in association with Department of Civil Engineering, Coimbatore Institute of Technology, organized a Project Expo on “Building Design Excellence: Integrated Planning, Quantity Take-Off and Project Cost Management” for the Civil Engineering domain on 27.08.2026 on the occasion of the “Diamond Jubilee Celebrations of The Institution of Engineers (India), Coimbatore Local Centre (1965-2025)”.

The Project Expo was formally inaugurated by Dr M Senthilkumar, Chairman, Dr J Pradeep Kumar, Honorary Secretary of IEI Coimbatore Local Centre, and the Chief Guest, Mr S Jagadesh Kannan, Structural Engineer and Managing Director, Archetype, Coimbatore, through a formal inaugural session.

Nearly 100 students from various institutions across Tamil Nadu participated in the event. The projects were evaluated based on integrated planning, structural and design excellence, accuracy in quantity take-off, cost estimation, resource optimization, and effective project cost management.

The First Prize was awarded to Mr Vijay C, Mr Anjey Kissore V M, Mr Mohamed Simakh A F, and Mr Logeshwaran S, Final Year B.E. students of Civil Engineering, Coimbatore Institute of Technology, Coimbatore. The Second Prize was awarded to Mr Ramanuja C S and Ms Sowmiya S, Final Year B.Tech. students of Civil Engineering, SASTRA Deemed University, Thanjavur. The Third Prize was awarded to Mr Ragesh Kumar G, Mr Rohith Kannan R, Mr Vetrivel M, and Mr Sugadev T, Final Year B.E. students of Civil Engineering, Kumaraguru College of Technology, Coimbatore.



Technical Webinar on “Recent Trends in Factory Automation”

29.08.2026



The Institution of Engineers (India), Coimbatore Local Centre, in association with Department of Mechatronics Engineering, Hindusthan College of Engineering and Technology, Coimbatore, organized a technical webinar on “Recent Trends in Factory Automation” on 29.08.2026. The programme was addressed by Er S Sathyanarayanan, Manager, J K Automation, Chennai.

Dr J Krishnamoorthi, Immediate Past Chairman, IEI Coimbatore Local Centre, delivered the welcome and presidential address. Dr Pradeep Johnson, Professor & Head, Department of Mechatronics Engineering, Hindusthan College of Engineering and Technology, introduced the resource person.

Mr Sathyanarayanan S delivered a webinar focusing on the role of factory automation, use of control systems, computers, sensors, robots, and information technologies to operate manufacturing processes with minimum human intervention. He explained how automation has become an important part of modern manufacturing because industries need higher productivity, better quality, reduced production time, improved safety, and greater flexibility. He highlighted the need of automation emphasizing the use of fixed machines, programmable logic controllers (PLCs), hydraulic and pneumatic systems, and conventional industrial robots. Today, factories are moving towards smart, connected and intelligent automation, where machines can communicate with each other, collect data, analyse operating conditions and support real-time decision-making.

Mr T Prabhu, Assistant Professor, Department of Mechatronics Engineering, Hindusthan College of Engineering and Technology, proposed the vote of thanks.

Project Expo on “Sustainable Development in Industry 4.0 and 5.0”

02.09.2026

IEI Coimbatore Local Centre, in association with Department of Automobile Engineering, Hindusthan College of Engineering and Technology, Coimbatore, organized a Project Expo on “Sustainable Development in Industry 4.0 and 5.0” for the Mechanical Engineering domain on 02.09.2026 on the occasion of the “Diamond Jubilee Celebrations of The Institution of Engineers (India), Coimbatore Local Centre (1965-2025)”. The Project Expo was formally inaugurated by Dr M Senthilkumar, Chairman, Dr J Pradeep Kumar, Honorary Secretary of IEI Coimbatore Local Centre, and the Chief Guest, Mr Sidd Ahamed, Founder and CEO, VDart Group, Georgia, USA, through a ceremonial ribbon-cutting ceremony.



Nearly 120 projects were exhibited, with around 500 participants from various institutions across Tamil Nadu. The awardees were selected based on their performance, innovation, technical excellence and overall quality of the projects presented.

The First Prize was awarded to Mr Anburaj S, Mr Chidambaram M, and Mr Sabarish M, Final Year B.E. students of Mechanical Engineering, St. Joseph's Institute of Technology, Chennai, for their project titled “Smart Seed Sowing and Soil & Crop Health Monitoring”. The Second Prize was awarded to Mr. Abishek M, Third Year B.E. student of Automobile Engineering, and Ms. Harini Dharshini Raju, Second Year B.E. student of Electronics & Instrumentation Engineering, Hindusthan College of Engineering and Technology, Coimbatore, for their project titled “Borewell Baby Recover System”. The Third Prize was awarded to Mr Nidhish J, Mr Mohamed S, and Mr Gowtham Krishna G, Third Year B.E. students of Computer Science and Engineering, Dhanalakshmi Srinivasan College of Engineering, Coimbatore, for their project titled “Lost Found”.

Technical Lecture on “Regulatory Compliance in Medical Device Manufacturing”

16.09.2026

The Institution of Engineers (India), Coimbatore Local Centre, in association with the Department of Biomedical Engineering, PSG College of Technology, Coimbatore, organized a technical lecture on “Regulatory Compliance in Medical Device Manufacturing” on 16.09.2026. Mr G Venkat Saravanan, Business Unit Head, Lakshmi Life Sciences Private Limited, Coimbatore, was the resource person.

Dr J Pradeep Kumar, Honorary Secretary, IEI Coimbatore Local Centre, welcomed the gathering, while Dr R Vidhyapriya, Professor & Head, Department of Biomedical Engineering, PSG College of Technology, delivered the felicitation address.



The technical session was delivered by Mr G Venkat Saravanan, a seasoned manufacturing professional with over 25 years of experience in precision machining, product development and medical device manufacturing. The speaker then presented the nuances of precision manufacturing, especially in the field of biomedical devices. The lecture highlighted the role of global certifications such as ISO 13485:2016, GMP, CE, US FDA. The speaker also presented the functions of Central Drugs Standard Control Organization (CDSCO) in India, such as New drug approval, regulating clinical trials, import registration and licencing, grant of test licences and market surveillance. The session emphasized on studying the characteristics of engineering polymers such as PEEK, PLA etc. The technical lecture effectively bridged the gap between academic learning and regulatory requirements by providing participants case studies pertaining to repeatability, reproducibility and risk management of medical devices.

Dr B Banu Rekha, Associate Professor, Department of Biomedical Engineering, PSG College of Technology, proposed the vote of thanks.

Forthcoming Activities

World Habitat Day 2026 on the theme “Adequate Housing for All” with a technical webinar on “Housing for All: An Urban Planning Perspective” in association with the Department of Civil Engineering, Hindusthan College of Engineering and Technology, Coimbatore on 05th October 2026.

World Standards Day 2026 on the theme “Shared Vision for a Better World: Spotlight on SDG 7- Affordable and Clean Energy” will be observed in association with Department of Civil Engineering, Coimbatore Institute of Technology on 14th October 2026.

Technical Lecture on “Industry 4.0 and Smart Manufacturing in Aerospace Engineering” in association with Department of Aeronautical Engineering, Kumaraguru College of Technology, Coimbatore on 15th October 2026.

All India Seminar on “Biotechnology Approaches for Value Addition of Agricultural Produce” (under the aegis of CHDB, IEI), in association with the Division of Biotechnology, Karunya Institute of Technology and Sciences, Coimbatore during 22-23 October 2026.

IEI Technical Webinar on “Additive Manufacturing, Composites & Smart Materials for Aerospace Applications” (under the aegis of ASDB) in association with the Department of Aerospace Engineering, Kumaraguru College of Technology, Coimbatore on 05th November 2026.

One Day Seminar on “AI-Driven Electric Vehicle Technologies and Intelligent IT Systems for Smart and Sustainable Mobility” (under the aegis of ELDB, IEI) in association with Department of Electrical and Electronics Engineering, SNS College of Technology, Coimbatore on 06th November 2026.

All India Seminar on “Automate to Accelerate: AI Control Systems in Modern Industry and Infrastructure” (under the aegis of ICC, IEI) in association with Department of Mechatronics, PSG Polytechnic College, Coimbatore on 26-27 November 2026



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For detailed eligibility criteria and application procedures, please contact:



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The Institution of Engineers (India)
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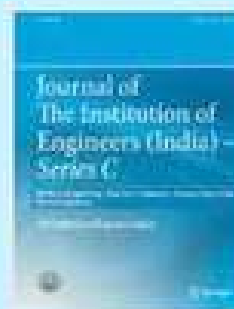
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The Institution of Engineers (India)

Notification for R&D Grant-in-Aid



For the session 2026-27

To promote appropriate technology, assist in building up design & research talents and, most importantly, to help in nurturing potential R&D venture amongst engineering students pursuing Diploma/UG/PG/PhD courses, The Institution of Engineers (India) had instituted the R&D Grant-in-Aid program way back in 2001.

Like every year, the Institution invites applications for the **session 2026-27** for funding industry-oriented R&D projects and research initiatives aimed at improving the life-style of common people from engineering students pursuing full time Diploma/UG/PG/PhD engineering program in AICTE/UGC/NAAC approved Institutions/Colleges/Universities. The application form and guidelines are available in our website <https://www.ieindia.org>. The projects should be carried out under the guidance of faculty members who are Corporate Members of IEI. Membership criteria for student investigator(s), guide(s) and Institution(s) are as follows:

Project Category	Student/Applicant Membership	Guide(s) Membership	Institutional Membership	Quantum of Grant (INR)
1 Diploma	Exempted [Membership of Student Chapter is desirable]	AMIE/MIE/FIE Not Mandatory	Applicant's Institute should preferably be an Institutional Member with NBA / NAAC Accreditation	Not exceeding ₹15,000/- for a single project
2 UG (BE/BTech/AMIE/Equivalent)	SMIE	AMIE/MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA / NAAC Accreditation	Not exceeding ₹50,000/- for a single project
3 PG (ME/MTech/Equivalent)	AMIE/MIE/FIE	MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA / NAAC Accreditation	Not exceeding ₹1,00,000/- for a single project
4 PhD	AMIE/MIE/FIE	MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA / NAAC Accreditation	Not exceeding ₹1,50,000/- for a single project

The soft copy of the duly filled-up applications (in editable format), as per the pro-forma available in our website www.ieindia.org, should be sent through email to research@ieindia.org and one printed copy of the same should reach to:

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

Please go through the guidelines carefully before filling up the application.
<https://sf1nk.com/bkyl5f7>

Applications received in format other than that available on our website **will not be accepted.**

Application should be forwarded through the Guide, Head of the Department or Head of the Institution. Please

Please note that **preference** will be given to project proposals received from Institutions who are Members of The Institution of Engineers (India) and with **NBA / NAAC Accreditation.**

The grant is not intended for the faculty members / working individuals who have access to other avenues of research funding.

Proposals received will be scrutinized and the recipients of **R&D Grant** will be informed accordingly.



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