



THE BREAKTHROUGH BULLETIN

Issue II

June 2026

Message



It is a matter of immense pride and satisfaction to witness the vibrant enthusiasm with which the IEI Student Chapter of our University continues to foster technical excellence and innovation through its activities.

The year witnessed a series of impactful IEI Student Chapter activities, guest lectures, technical workshops, and field visits

Er. Thiru. A.C.S. Arunkumar



**Celebrating success
the Best IEI Student's chapter"**



**"Proud Moment, Prestigious
Recognition."**



**"Together We Celebrate the
Spirit of Womanhood."**



**"Honoured for Outstanding
Performance and Impact"**



**A Chronicle of Excellence,
Released with Pride."**

MEET OUR CORE TEAM



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Thiru A.C.S.Arunkumar-

Chancellor
President

PATRONS

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Dr.M.Ravichandran -
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Addn. Registrar
Joint Registrar(E&A)
Joint Registrar(FYET)
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Chapter

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Mr. Hemanth J.L - Secretary Elect
Mr. Sri Priyan S - Joint Secretary Elect
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Ms. Sangavi - Executive Member
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Ms. Sai swaroopa - Executive Member
Mr. Sribharath - Executive Member
Mr. Vishvajit V - Executive Member
Ms. Fahima - Executive Member
Ms. Mahalakshmi - Executive Member



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Dear Readers,

It gives us great pleasure to present this edition of our newsletter, reflecting the enthusiasm, creativity, and achievements of the First Year Engineering and Technology students. Throughout the academic year 2025–2026, our focus has remained on nurturing innovation, academic excellence, and holistic development among our students.

This edition highlights a variety of engaging activities, technical events, workshops, competitions, and awareness programs that have encouraged students to explore their talents and expand their knowledge beyond the classroom. From technical presentations and project-based learning to cultural performances and sustainability initiatives, our students have demonstrated remarkable dedication, teamwork, and creativity.

Each accomplishment featured in this newsletter is the result of the collective efforts of students, faculty members, and staff who continuously work together to create a dynamic and inspiring learning environment. These experiences not only enhance academic growth but also help students develop leadership, communication, and problem-solving skills essential for their future careers.

We extend our sincere gratitude to our respected President, Honorable Registrar, Dean, faculty members, and coordinators for their constant guidance and support. We also appreciate the enthusiastic participation of our students whose commitment and hard work have made every event a success.

We hope this newsletter serves as a celebration of our shared achievements and inspires everyone to continue learning, innovating, and striving for excellence. Let us move forward together with confidence, determination, and a spirit of continuous growth.

Warm Regards,

Editorial Team

First Year – Engineering & Technology

Dr. M.G.R. Educational and Research Institute

MEMBERSHIP MILESTONE ACHIEVED!

We are proud to announce that 707 First Year E&T students have successfully enrolled as members of the prestigious Institute of Engineers (India) – IEI, marking a significant step toward professional development and engineering excellence.

Additionally, 250 students have joined the SDG IGEN ENSAV Club, strengthening our commitment to sustainability, innovation, and the UN Sustainable Development Goals.

These memberships reflect the enthusiasm of our students to engage beyond the classroom and grow as responsible, future-ready professionals.

INNOVISTA'26



**"INNOVISTA'26 SPARKED INNOVATION, FUELED PASSION AND
IGNITED DISCOVERY!" 10TH NOVEMBER 2026**

Innovista'26 emerged as a vibrant celebration of innovation, enthusiasm, and creative thinking. The event brought together a dynamic community where talent, passion, and a spirit of healthy competition were on full display. Participants showcased originality and imagination across a wide range of activities, demonstrating new approaches to problem-solving and innovation. Dr.S.ARUMUGA PERUMAL INNOVISTA'26 IN MOTION! INAGURATED BY Dr.S.ARUMUGA PERUMAL Past Chairman and Secretary,IEI Kanyakumari Local Centre Innovista'26 emerged as a vibrant celebration of innovation, enthusiasm, and creative thinking. The event brought together a dynamic community where talent, passion, and a spirit of healthy competition were on full display. Participants showcased originality and imagination across a wide range of activities, demonstrating new approaches to problem-solving and innovation. Innovista'26 sparked innovation, fueled passion, and ignited discovery!



ESCAPE LAB - STEM PUZZLES [05 / 12 / 2025]

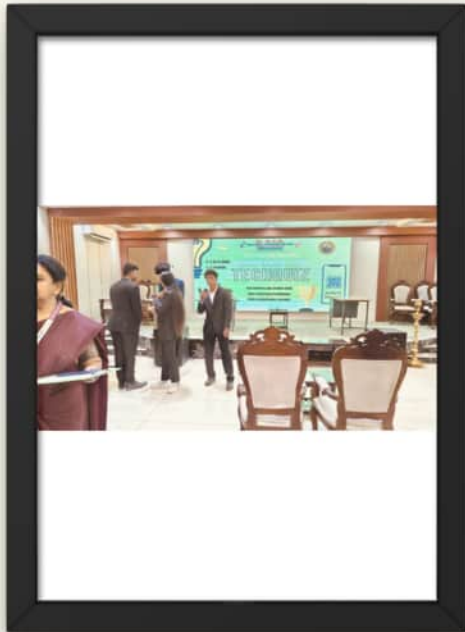
Escape Lab was a highly immersive and intellectually stimulating event that transformed learning into an exciting real-world challenge. Designed around the core idea of learning through problem-solving, the event placed students in a simulated laboratory environment where science, logic, and strategy became the keys to success. Participants were required to think beyond textbooks, apply concepts practically, and work together under time pressure to uncover hidden clues and progress toward escape. The concept of the event focused on integrating STEM knowledge with critical thinking and teamwork. Challenges were built around chemistry, electricity, mathematics, and logical reasoning, encouraging students to connect theoretical concepts with real-life applications. The unpredictable nature of the puzzles kept participants alert and engaged, fostering confidence, quick decision-making, and adaptability. Every task demanded precision, collaboration, and clarity of thought,



“Escape Lab proved that science is more than formulas and facts—it is curiosity under pressure, logic in action, and teamwork turning every challenge into discovery.”



TECH QUIZ [15/12/2025]



Tech Quiz was one of the most vibrant and intellectually charged events of the fest, designed to challenge participants' technical knowledge, speed, and strategic thinking. The event blended traditional quizzing with live buzzers, digital interaction, and real-life problem-solving, creating an atmosphere of excitement and healthy competition. Teams of two competed across three progressive rounds. The Buzzer Challenge tested alertness and coordination through hint-based identification of technical instruments. The Kahoot Tech Blitz brought high-speed digital quizzing, where accuracy and response time determined rankings and shortlisted the top teams. The final round, Finding the Fault, pushed participants to think like engineers by analyzing real-world technical problems and proposing logical solutions. Beyond scoring points, Tech Quiz encouraged teamwork, analytical thinking, and calm decision-making under pressure. The event successfully transformed technical learning into an engaging experience.

EMPOWERING YOUNG TECH MINDS

Impressed by the sharp thinking, quick reflexes, and electrifying energy of the Tech Quiz event? Now it's time to sharpen your technical edge even further!

Whether you're a student, tech enthusiast, or aspiring innovator, staying updated and thinking fast under pressure can set you apart in today's competitive world. The Tech Quiz challenged participants to test their technical knowledge, analytical skills, and teamwork in an exciting, high-energy environment.

Stay tuned for more quizzes, hands-on challenges, and tech-driven events designed to boost your problem-solving abilities, expand your technical awareness, and help you face future competitions with confidence and clarity—ready to buzz in and stand out when it matters most.

FUN & FRUSTATION [15/12/2025]



Ifun and Frustration is built on the powerful concept that true intelligence reveals itself not in comfort, but in challenge. The event is designed to push participants beyond routine thinking by placing them in situations that blend enjoyment with mild discomfort, unpredictability, and time pressure. At its core, the concept explores how the human mind performs when fun collides with frustration. Participants are required to observe, analyze, communicate, and decide quickly while managing distractions and unexpected hurdles. Each challenge represents real-world conditions where clarity of thought, emotional control, and teamwork matter more than textbook knowledge. The event transforms frustration into a learning tool—teaching participants to stay composed, adapt instantly, and support their team even when conditions are not ideal. By gamifying pressure, Fun and Frustration encourages resilience, creativity, and confident decision-making. When focus meets fun and pressure meets purpose, performance reaches its peak.

“When fun fuels the challenge and frustration tests the mind, true performance is revealed.”



WHERE MINDS CLASHED AND SPARKS FLEW

The concept revolves around controlled chaos—placing participants in playful yet demanding situations that require sharp observation, instant decision-making, and seamless teamwork. By intentionally introducing distractions, time constraints, and unexpected twists, the event mirrors real-life academic, professional, and social environments where success depends on clarity under stress.

SYNERGY QUEST [06/04/2026]

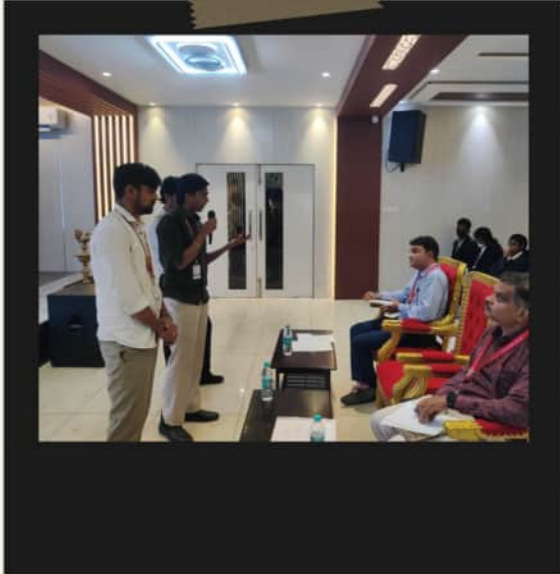


SYNERGY QUEST – Igniting Innovation Through Teamwork

One of the most electrifying events of INNOVISTA'26, SYNERGY QUEST brought together bright minds from different engineering disciplines to compete, collaborate, and create innovative solutions for real-world challenges. The event embodied the true spirit of engineering by encouraging participants to think beyond textbooks and transform ideas into impactful solutions.

The competition began with an exciting Kahoot-based technical challenge, where teams battled against time to identify the odd one out from a series of engineering-related terms. The fast-paced round tested participants' technical knowledge, logical reasoning, and quick-thinking abilities, creating an energetic atmosphere filled with enthusiasm and healthy competition.

SYNERGY QUEST was more than just a competition—it was a celebration of innovation, collaboration, and engineering excellence. The event successfully inspired students to think critically, work together, and develop solutions that have the potential to make a meaningful difference in society. Through this engaging experience, participants truly lived the INNOVISTA'26 motto: “Innovate, Integrate, Inspire.”



SHIPWRECK [07/04/2026]



TSHIPWRECK – TWO SIDES, ONE VISION Pros & Cons Showdown | Switch • Speak • Survive

As part of INNOVISTA'26, the IEI Students Chapter of Dr. M.G.R. Educational and Research Institute successfully organized SHIPWRECK – Two Sides, One Vision, an engaging and intellectually stimulating event held on 7th April 2026 at the RA Auditorium. The event brought together enthusiastic participants to showcase their communication skills, critical thinking, and adaptability in a unique battle of perspectives.

SHIPWRECK challenged participants to defend assigned viewpoints with confidence and conviction. Unlike traditional debates, the event introduced unexpected twists that required speakers to switch positions instantly, compelling them to think on their feet and articulate arguments from multiple perspectives. The competition tested not only fluency and public speaking abilities but also the participants' capacity to adapt under pressure.

One of the most exciting aspects of the event was the "Switch, Speak, Survive" format. Participants were required to present both the advantages and disadvantages of a given topic, demonstrating flexibility, logical reasoning, and presence of mind. The dynamic nature



LUENCY FUELS FLEXIBILITY

SHIPWRECK proved that true communication is not about defending a single opinion but understanding multiple perspectives. By encouraging students to think beyond fixed viewpoints, the event fostered adaptability, empathy, and intellectual growth. Through every argument,

counterargument, and spontaneous switch, participants learned that the strongest minds are those willing to listen, learn, and evolve.

"The best speakers are not those who always win an argument, but those who can understand every side of it."



REBOOT REALITY [27 / 04 / 2026]



The IEI Students' Chapter 2026 successfully organized the event "Reboot Reality" under INNOVISTA'26 on 27 April 2026 at 1:00 PM in the RA Auditorium. The event, a technical quiz and activity-based competition, witnessed enthusiastic participation from 48 teams of first-year IEI member students. Designed to combine technical knowledge with fun and memory-based challenges, the programme provided an engaging platform for students to enhance their teamwork, critical thinking, problem-solving, creativity, and decision-making skills. Participants actively competed in various rounds that tested their technical understanding, observation skills, and presence of mind. The final round, "Screen Sense," was compered by Mr. Vishvajit and Ms. Fahima, where participants recreated a mobile application interface from memory. The event was judged by Ms. K. Jeevitha, who evaluated the teams based on accuracy, creativity, coordination, and overall performance. The programme was highly interactive and energetic, encouraging students to apply their knowledge in a challenging yet enjoyable environment. Overall, the event was informative, engaging, and successful, providing participants with valuable learning experiences while promoting innovation, collaboration, and technical excellence.

THE VALEDICTORY CEREMONY OF INNOVISTA '26



[05/12/2025]

The MGR IEI Student Chapter, Dr. M.G.R. Educational and Research Institute, successfully organized the INNOVISTA'26 Valedictory Ceremony on 26 May 2026 at 10:00 AM in the RA Auditorium. The programme was conducted to celebrate innovation, learning, and the achievements of students who actively participated in various technical and academic events. The event commenced

with the Welcome Address by Dr. N. S. Shubhashree, Joint Registrar – First Year Engineering & Technology, followed by the presentation of the INNOVISTA'26 report by Sriman Narayana Moorthy S and Geethalakshmi A (Chairmen). The programme was hosted by Ms. Mariya Merlina I. E and J. L. Hemanth (Secretary), while the chief guests were introduced by Mr. Alan Paul R (Vice Chairman), Ms. Fahima (Executive Member), and Ms. Ananthika (Executive Member). The distinguished chief guests, Dr. Mani Karthik, Senior Scientist, ARCI, Government of India, Dr. G. P. Ramesh, Honorary Secretary, IEI-TVLC and Head of Innovation and IPR, RMKCET, and Mr. Balaji Pandurangam, Technical Director, Global Information Technology Services Pvt. Ltd., shared valuable insights on Lithium-Ion Battery Technology, Innovation and Intellectual Property Rights, Research in Engineering Education, Prompt Engineering, and Cyber Security. Their sessions enhanced students' understanding of emerging technologies, innovation-driven research, intellectual property awareness, and industry-oriented skills. The programme also included the Badge Distribution Ceremony for IEI Core Members and the Prize Distribution Ceremony recognizing winners of technical events and paper presentations. Overall, the event served as an enriching platform for learning, motivation, and recognition, encouraging students to strengthen their technical competencies, innovative thinking, and professional development while celebrating the successful completion of INNOVISTA'26.

SHIKSHA SANSKRITI UTTAHANNYAS

13TH DECEMBER 2026 TAMILNADU STATE CENTER , CHEPAUK



An Interdisciplinary Approach to Achieving a Self-Reliant Curriculum and Environmental Sustainability through Education",



DETAILS OF PATENT PUBLISHED 2024 - 2025 BATCH

S.NO.	TITLE OF THE INVENTION	NAME OF THE INVENTORS
1	FIRE-DETECTION, ALERTING, AND VENTILATION CONTROL SYSTEM	1. Hariharan S 2. Dhiwakar B 3. Rohit C 4. Dr. B. Swapna
2	VOICE-INTERACTIVE KITCHEN SYSTEM FOR AUTOMATED RECIPE SUGGESTION AND INGREDIENT MONITORING	1. Arcot Nandha Kumar 2. Srivatsa V 3. M. Naveen Kumar 4. R. Manishwaran 5. B. Sanjay Kumar 6. Dr. N.S. Shubhashree
3	IOT BASED GAS LEAK DETECTION AND CONTROL SYSTEM USING SINGLE SENSOR	1. M. Vignesh 2. R. Lakshna Sumati 3. J. Saara Sabren 4. N. Deva Krishnan 5. Dr. S. Radha
4	SYSTEM AND METHOD FOR CONTINUOUS ENERGY HARVESTING FROM AUTOMOBILE WHEEL ROTATION	1. Srivatsa V 2. Harish P.K 3. S. Syed Muneer 4. Sriranganayagi S 5. Dr. B. Latha
5	A SYSTEM AND METHOD FOR IOT-BASED SMART DOORBELL WITH TELEGRAM-ENABLED ACCESS CONTROL	1. G. Shiji 2. G. Sai Teja 3. B. Lakshmi Narasimham 4. Mr. S. Saravanan

6	A SYSTEM AND A METHOD OF AUTOMATED PET FEEDING AND ENVIRONMENT MONITORING	1. Jancy 2. Jancy 3. Madhumitha 4. Dr. B. Swapna
7	WARDROBE SYSTEM WITH AUTOMATED ACCESS AND SLOT MONITORING	1. Praveen M A 2. Sanjai M 3. Dr. Preetha Mary George
8	AUTONOMOUS EARLY DETECTION AND DRONE ALERT SYSTEM AND METHOD FOR RESTRICTED AREA SURVEILLANCE	1. Narenkarthikeyan R 2. Anbu Selvam MS 3. Dr. Preetha Mary George
9	A SYSTEM AND A METHOD OF SMART ENERGY METERING AND WIRELESS DATA TRANSMISSION	1. V. Muhammed Raiyan 2. Jonnalagadda Rahul 3. Dr. S. Radha
10	SYSTEM AND METHOD OF PORTABLE ELECTROMECHANICAL BRAILLE DISPLAY FOR VISUALLY IMPAIRED USERS	1. Arrhat Nag 2. Mohammed Ashiq Sadhiqbabu 3. Dr. N.S. Shubhashree 4. Mr. E. Bharath
11	OMNIBOT HOME ASSISTANT ROBOT	1. G. Siddhartha Ram 2. P. Ganeswar 3. P. Abhilash 4 T. Sathwik 5. Mr. S. Saravanan

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“Next-Generation Electric Vehicles Cutting-Edge Technologies and Hands – on Innovation”

8th & 9th March, 2026 The Institution of Engineers (India) TELANGANA STATE CENTRE



“Next-Generation Electric Vehicles Cutting-Edge Technologies and Hands – on Innovation”

8th & 9th March, 2026 The Institution of Engineers (India) TELANGANA STATE CENTRE



40 National Convention of Production Engineers and the National Seminar on Sustainable Smart Manufacturing for Circular Economy

19 - 20 June 2026 organized by The Institution of Engineers (India) Coimbatore Local Centre

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ABSTRACT

The rapid advancement of latest industries has increased the demand for intelligent, efficient, and sustainable manufacturing systems. Traditional manufacturing methods often face challenges such as machine failures, production delays, high energy consumption, material wastage, and reduced operational efficiency. To address these issues, Artificial Intelligence (AI) has emerged as a transformative technology in smart manufacturing and industrial automation. This paper focuses on the role of AI-driven process optimization in achieving sustainable smart manufacturing within the framework of Industry 4.0. AI technologies such as Machine Learning, Predictive Maintenance, Computer Vision, Robotics, and Data Analytics enable industries to monitor production activities, analyze real-time data, detect defects, and improve decision-making processes. These technologies help industries increase productivity, minimize human errors, improve product quality, and reduce operational costs. Predictive maintenance systems powered by AI can identify equipment failures before they occur, thereby reducing downtime, maintenance expenses, and production interruptions. The integration of AI with Internet of Things (IoT) sensors, cloud computing, and industrial automation systems creates an intelligent manufacturing environment capable of automated monitoring and control. AI also supports sustainable manufacturing practices by reducing energy consumption, minimizing waste generation, optimizing resource utilization, and promoting environmentally friendly production methods. Furthermore, AI contributes to the implementation of circular economy concepts through efficient recycling, resource management, and sustainable production planning. Several industrial sectors, including automotive, electronics, textile, and heavy manufacturing industries, demonstrate the effectiveness of AI-driven technologies in enhancing operational efficiency and sustainability. The study concludes that AI-based process optimization is a crucial component of future smart manufacturing systems. The adoption of AI technologies not only improves industrial productivity and profitability but also supports long-term environmental sustainability and responsible manufacturing practices for future generations.

KEYWORDS

DIGITAL TWIN TECHNOLOGY FOR SMART MANUFACTURING

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ABSTRACT

Digital Twin Technology is revolutionizing smart manufacturing — transforming static factory floors into intelligent, self-aware production ecosystems. By creating a dynamic virtual replica of physical systems, digital twins harness the power of Artificial Intelligence, IoT, Cloud Computing, and real-time data analytic to deliver unprecedented operational intelligence. From predictive maintenance and zero-defect manufacturing to precision quality control and agile process optimization, digital twins are redefining what modern industries can achieve. Manufacturers can now simulate, stress-test, and refine entire production workflows digitally — slashing costs, eliminating errors, and accelerating time-to-market before a single machine is touched. Beyond efficiency, digital twins champion sustainable manufacturing by minimizing energy waste and driving circular production practices. Fused with Industry 4.0, they give rise to hyper-connected, autonomous factories capable of making data-driven decisions at machine speed. Yet challenges — including data security, interoperability, and deployment costs — demand equal attention. This paper explores the transformative applications, compelling benefits, critical challenges, and exciting future of Digital Twin Technology in building the next generation of resilient, efficient, and sustainable smart manufacturing systems.

KEYWORDS

Digital Twin, Smart Manufacturing, Industry 4.0, Internet of Things (IoT), Artificial Intelligence (AI), Predictive Maintenance



ALBATRO ENERGY YATRA AWARD



ALBATRO Energy YATRA Award Appreciation for first year Engineering and Technology



ADVANCED WIRELESS POWER TRANSFER AND EV CHARGING TECHNOLOGIES FOR SUSTAINABLE MOBILITY

06th April 2026 KATTANGULATHUR , LOCAL CENTER



DEEKSHARAMBH STUDENT INDUCTION PROGRAMME

[03 / 09 / 2025]



Dr. MGR ERI one of the institutions in higher education holds the massive aspirants of Engineering embraces its budding Engineers into the sprawling campus on 3-9-2025. The tender period of transitioning from school to college was meticulously waded through various familiarization programmes titled Deeksharambh – Student Induction Program 2025. The inclusiveness of campus resources, digital library platforms, demanding engineering fields, skill development platforms, co-curricular and extra-curricular, literary - proficiency skills, prevailing professional bodies in engineering fields, EnSav and other student clubs laid the setting stage for the freshman year to be more memorable. Dr. MGR ERI one of the institutions in higher education holds the massive aspirants of Engineering embraces its budding Engineers into the sprawling campus on 3-9-2025. The tender period of transitioning from school to college was meticulously waded through various familiarization programmes titled Deeksharambh – Student Induction Program 2025. The inclusiveness of campus resources, digital library platforms, demanding engineering fields, skill development platforms, co-curricular and extra-curricular, literary - proficiency skills, prevailing professional bodies in engineering fields, EnSav and other student clubs laid the setting stage for the freshman year to be more memorable. Dr. V Cyril Raj presented a comprehensive overview of the university's academic landscape.



THE BREAKTHROUGH BULLETIN

SDG PULSE 2.0 (SYMPOSIUM)

THE GLOBAL HEART BEAT OF CHANGE [12/12/2025]

A Special Address by Dr. L. Ramesh (JR EPA) highlighted institutional initiatives aligned with sustainable development. The Introduction of the Chief Guest was presented by Jaishri, Joint Secretary of the SDG ENSAV Club. The session was graced by the Inauguratory Address of Er. R. Arun IES, Deputy Chief Engineer, Construction, Madras (Southern Railway), who inspired students by emphasizing the importance of youth participation, innovation, and responsible leadership in achieving sustainability. The session concluded with a Vote of Thanks proposed by Zainab Habib Ezzy, Vice Chairman Elect of the SDG ENSAV Club, followed by the National Anthem. As an integral part of SDG Pulse, a series of well-structured technical and non-technical events were conducted to promote awareness of the Sustainable Development Goals through creativity, innovation, and expression. Each activity encouraged students to connect real-world sustainability challenges with practical ideas and artistic presentation. The Paper Collage event enabled participants to visually represent SDG themes through creative layouts and conceptual clarity. Poetry Slam provided a platform for students to express social, environmental, and global concerns through impactful poetic performances. The Best Out of Waste competition emphasized the importance of recycling and responsible consumption by transforming discarded materials into innovative and useful products aligned with sustainability principles.



AICTE DISTINGUISHED PROFESSIONAL SCHEME (DPS)

CHIEF GUEST : **Dr. Bijan K. Dutta** , FNAE, Institute Chair Professor (HBNI), Former Distinguished Scientist - DAE, Former Head, HRD Division - BARC, Former Dean & Senior Professor - HBNI, and AICTE Distinguished Professional

[18/05/2025]



STUDENT DEVELOPMENT PROGRAM

BEYOND ACADAMICS UNLOCK YOUR POTENTIAL

[13/05/2026 – 15/05/2026]



COMPETITIVE EXAM - FOUNDATION LEVEL



WORKSHOP ON DIGITAL MARKETING [05/12/2025]



As part of the DIGITAL MARKETING, our team worked on creating a project using different AI tools and online platforms. On the first day, we focused on preparing all the required materials for the presentation. We designed an attractive and creative poster using Sora, which helped us present our idea in a visually appealing way. After completing the poster, we prepared the project content and converted it into a clear and natural voice narration using ElevenLabs, a text-to-voice tool.

NATIONAL CONFERENCE AT ST. PETER'S INSTITUTE OF HIGHER EDUCATION AND RESEARCH

BEST PRESENTATION AWARD IS AWARDED FOR

SRIMAN NARAYANA MOORTHY S

AD1-57 FIRST YEAR E & T

DR. MGR EDUCATIONAL AND RESEARCH INSTITUTE

[12/03/2026]



ISR EVENT AWARENESS ON MISSION LIFE ACTIVITIES

[05 / 06 / 2025]



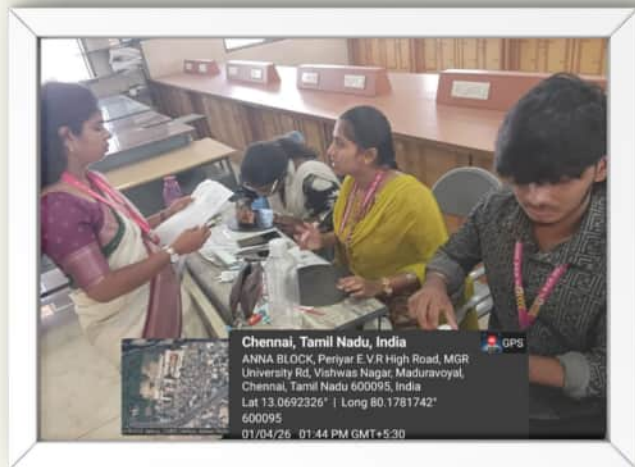
HANDS ON TRAINING ON REMOTE PILOT TRAINING

[08 / 06 / 2026 – 21 / 06 / 2026]



WORKSHOP ON ARTIST IN ME

[01/04/2026]



The Fevicryl Art and Craft Event 2026 was a vibrant and immersive workshop organized by Dr. M.G.R. Educational and Research Institute, aimed at nurturing the creativity and aesthetic skills of engineering students. Held on April 1st and 2nd, 2026, the event brought together 32 enthusiastic first-year students from various Engineering and Technology disciplines, offering them a unique opportunity to explore art under expert guidance. The workshop encouraged innovation, teamwork, creative expression, and hands-on learning through engaging artistic activities and interactive sessions.

SDG CONCLAVE ' 26

[17 / 04 / 2026]

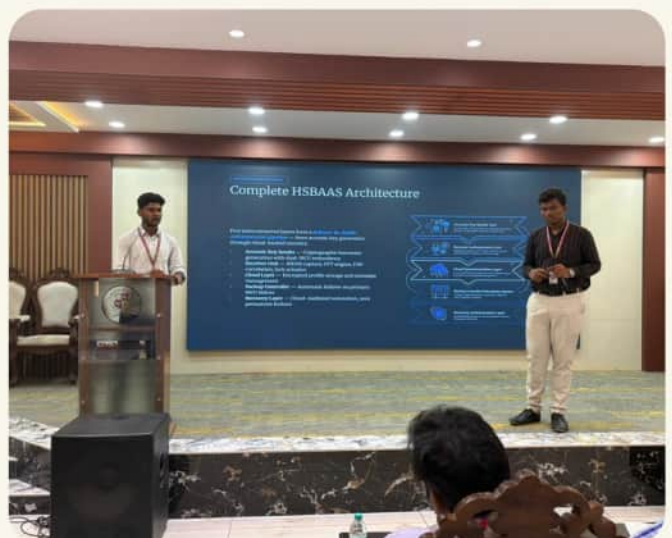


The event commenced with an engaging pre-session debate conducted by the core committee members, creating an energetic atmosphere. The Chief Guest was warmly welcomed and escorted to the auditorium, where he delivered an inspiring address highlighting sustainability, global responsibility, and the vital role of youth in achieving the Sustainable Development Goals (SDGs). His thought-provoking speech encouraged students to actively contribute towards building a greener and more sustainable future.



During the ceremony, the Chief Guest inaugurated the Cycle for Green and iGen Green Circle clubs, presented badges to student leaders, and distributed order letters for four SDG projects. The event also featured SDG-themed group photographs, an interactive panel discussion, and exciting student activities, including Puzzle with a Twist and Emoji Nation. The program successfully combined learning, environmental awareness, collaboration, and student engagement, leaving a memorable and meaningful impact on all participants.

INNOVATION VAULT 2.0 SEED MONEY PROPOSAL



THE BREAKTHROUGH BULLETIN

INNOVATION VAULT 2.0 SEED MONEY PROPOSAL TEAMS



FIRST YEAR E&T (2025-2026)

IEI SPONSORED FUNDING OPPORTUNITY FOR BEST INNOVATION VAULT - VERSION 2.0

S.NO.	Team No	Title of the Project	Team Members	Branch	Register no	Sec/Roll No	Mobile Number
1	1	The Reality Integrity Verification Platform	Geethalakshmi. A	CSE	251061101084	BB1-12	9884633809
2			J.L.Hemanth	CSE	251061101087	BB1-15	9444247495
3	2	Self Healing Smart Air Window	Fahima	ECE	251081101160	BC2-23	7200627606
4			Divya Priya	ECE	251081101155	BC2-18	8056937168
5			Pavithra	ECE	251081101190	BC2-46	9626407358
6			Udaya Chandrika	ECE	251081101167	BC2-27	9701835554
7			Akash	ECE	251081101140	BC2-01	9042663056
8	3	Harmonic Signature Based Acoustic Authentication System (HSBAAS)	S.Sriman Narayana Moorthy	CSE	251061101062	AD1-57	8015803274
9			Alan Paul R	CFIS	251621101001	AF1-33	8925124474
10	4	Artificial Intelligence System for Detecting Manipulated Digital Screenshots	Sai swaroopa j	CSE	251061101056	AD1-53	
11			Sangavi j	CSE	251061101058	AD1-54	
12			Sabarish R	CSE	251061101055	AD1-52	
13			Jaya varsan	CSE	251061101028	AD1-25	
14	5	Predictive thermal management system for Electrical Power System	M. Mathivadhane	ECE	251081101075	AE2-05	8122102818
15			Kollipaka Chaitra Charmi	ECE	251081101063	AE2-03	96525 89063
16			Kevin Andrew	ECE	251081101058	AD2-46	9941209975



17	6	Safe step and AR Smart staircase	Blessy Mole S.R	ECE	251081101015	AD2-14	9841672095
18			Lakshana Mahalakshmi	BME	251241101013	AB1-55	8939677307
19	7	Adaptive AI – IoT based Autonomous Energy Optimization System	Ashwin	CFIS	251621101004	AF1-36	9841305992
20			Sri Bharath	CFIS	251621101029	AF1-58	8124063240
21			Sarathi	CFIS	251621101027	AF1-60	9176424886
22	8	AI-based GPS spoofing detection system	Ananthika	IT	251121101001	AH1-02	944241714
23			Aleema	CFIS	251621101002	AF1-34	9206357144
24			Kalaivani	MECH	251131101022	AH2-17	9791086529
25	9	NEUROSHIELD	Bharani	AI&ML	251261101047	BD2-07	7401273817
26	10	MAP – Mobile Addiction Protector	Vishvajit V	AI&ML	251261101076	BD2-35	8072020406
27			Dharnish	DS&AI	251191101017	AB2-14	9025036409
28			Sri Priyan S	CFIS	251621101030	AF1-61	8778991626
29			Mariya Merlina I E	CFIS	251621101018	AF1-50	8825983447
30			Swathi Nandhana M	BME	251241101023	AB1-65	8754709407
31	11	Advanced Roadway Emergency System	Sripriyan S	CFIS	251621101030	AF1-61	8778991626
32			Mariya Merlina I E	CFIS	251621101018	AF1-50	8825983447
33			Swathi Nandhana M	BME	251241101023	AB1-65	8754709407

JR-FY (E&T)

ISR - LBEAAR Matriculation school

[18 / 11 / 2025]



An awareness program on the United Nations SDGs was organized by the students of Dr. M.G.R. Educational and Research Institute, under the supervision of faculty members, at LBEAAR Matriculation school on Nov18, 2025 between (10.00am-2.00pm).The event was made engaging and easy to follow, using fun activities and simple examples to help the students understand topics like caring for the environment and making thoughtful choices. The event was titled “TO BUILD A SUSTAINABLE FUTURE”



ENERGY CONSERVATION DAY ' 26 [13 / 12 / 2025]



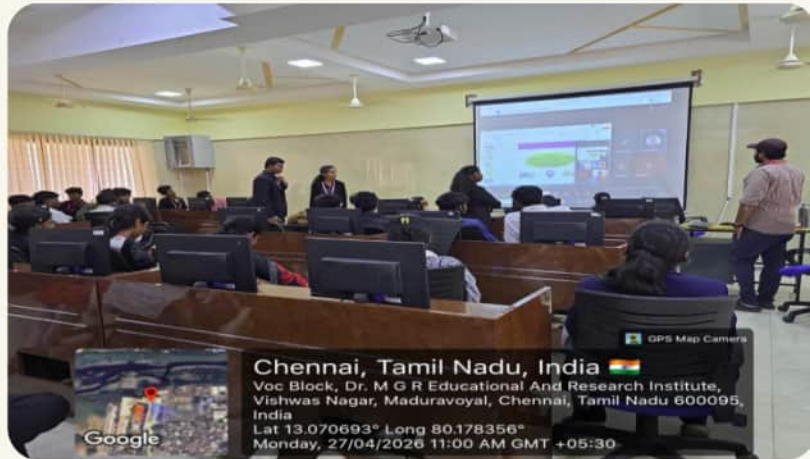
An awareness program on the United Nations SDGs was organized by the students of Dr. M.G.R. Educational and Research Institute, under the supervision of faculty members, at VOC on Dec13, 2025 between (10.00am– 2.00pm).The event was made engaging and easy to follow, using fun activities and simple examples to help the students understand topics like caring for the environment and making thoughtful choices. The event was titled “Energy Conservation Day”



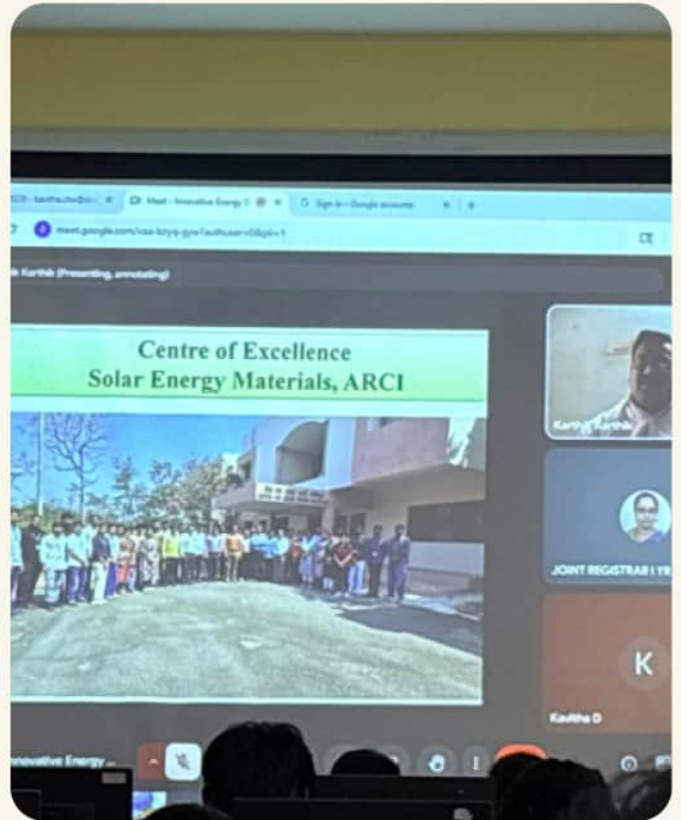
THE BREAKTHROUGH BULLETIN

SEMINOR ON INNOVATIVE ENERGY STORAGE MATERIALS: ACCELERATING PROTOTYPE DEVELOPMENT AND DEMONSTRATION

[27 / 04 / 2026]



The First Year Engineering and Technology department organised a seminar on “Innovative Energy Storage Materials: Accelerating Lab-to-Prototype Development and Demonstration” on 27th April 2026. The seminar was delivered by Dr. Mani Karthik, Senior Scientist at the Centre for Solar Energy Materials, International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), under the Department of Science and Technology (DST), Government of India, Balapur, Hyderabad, Telangana.



Enhance understanding of innovative energy storage materials. Encourage the development of sustainable and cost-effective solutions. Bridge the gap between academic research and industrial applications in the field of energy storage technologies.



MGRERI STUDENTS SHINE AT RYLA 59.0 ENTREPRENEURSHIP CAMP



Our student delegation participated in the prestigious RYLA 59.0 – "Be an Entrepreneur" residential camp held at Madurai from 22–24 May 2026, jointly organized by the Rotary Club of Virudhunagar and Punch Gurukulam.

🏆 Our Achievers: Reshma Parveen secured a Top 5 position with a trophy, medal, and certificates. Mohammed Izhaan N and Roshni T reached the Top 12. Luqmaan Ahmed Sayeed and Kalaivani R successfully completed the entrepreneurial training program with distinction.



SUSTAINOTRON 2026

SUSTAINOTRON 2026

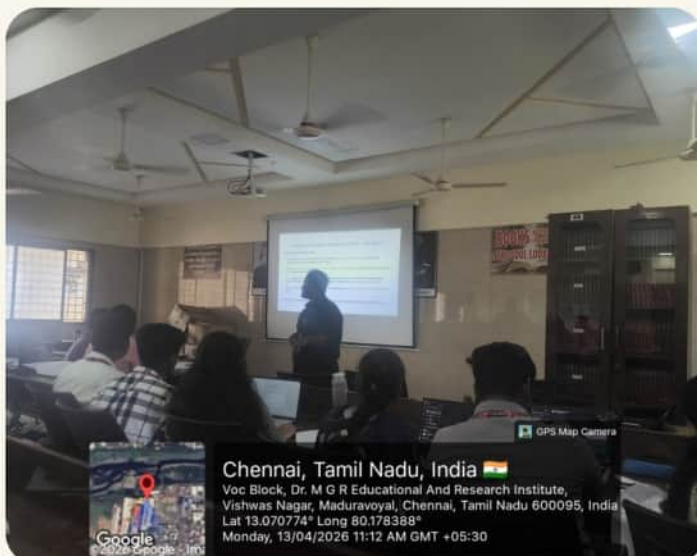
Inauguration of SUSTAINOTRON 2026

The inauguration ceremony of SUSTAINOTRON 2026 was successfully conducted on 03 June 2026 in connection with the celebration of World Environment Day. The event was jointly organized by the ENSAV SDG Club and the iGen Green Circle Club with the objective of promoting sustainability, environmental awareness, and responsible action among students and the community.



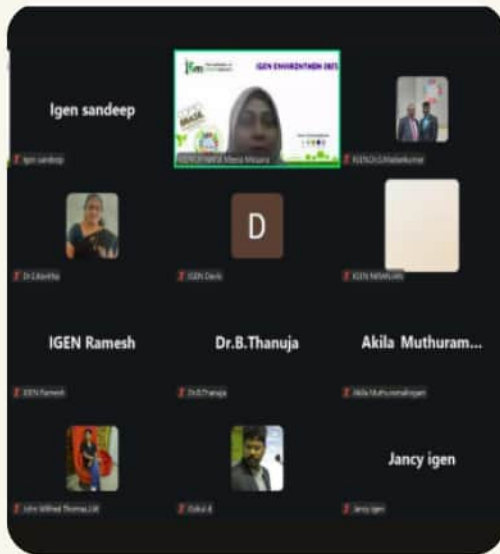
SKILL DEVELOPMENT PROGRAM ON GEN AI AND IMAGE PROCESSING

[13/04/2026 – 18/04/2026]

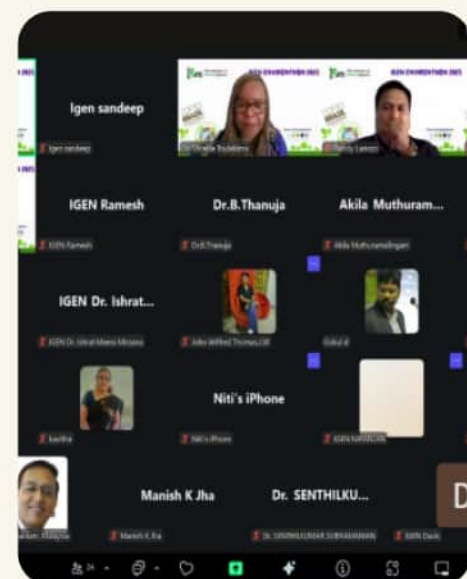


IGEN ENVIRONTHON ' 26

[14 / 09 / 2025]



The IGEN Environthon 2025 under the theme Air Element successfully hosted the academic panel discussion titled “Vayu – From Ecology to Wellbeing: Academic Perspectives” on 14th September 2025 at 12:00 Noon. The event, presided over by Er. D. Gokul, Director IGEN, commenced with the opening remarks by Dr. Senthil Kumar, Director IGEN, who emphasized the importance of air quality in sustaining ecological balance and human wellbeing.



SUBJECT LECTURE ON SUSTAINABLE WATER CHEMISTRY AND GREEN TECHNOLOGIES [26 / 03 / 2026]



MGR SDG ENSAV CLUB INAUGURATION ' 26

[15 / 10 / 2025]



The Sustainable Development Goals (SDGs) are a set of 17 interconnected global objectives established by the United Nations in 2015. These goals aim to address pressing global challenges, such as poverty, inequality, climate change, and social injustice, by 2030. The SDGs provide a framework for countries, organizations, and individuals to work together towards a more sustainable, equitable, and prosperous future for all. In view of this MGR SDG ENSAV CLUB Inauguration was organized by First Year E & T on October 15, 2025 between 10.00am – 01.00 pm at the RA Block University Auditorium Main Campus.



Chennai, Tamil Nadu, India
359h+h37, Poonamallee High Rd, Vishwas Nagar, Madhavayal,
Chennai, Tamil Nadu 600095, India
Lat 13.068794° Long 80.177688°



WORLD TELECOMMUNICATION DAY CELEBRATION

[15 / 10 / 2025]



We are glad to share that An interdisciplinary lecture on "Exploring Amateur Radio(HAM)" was successfully conducted on 18/05/2026 at Dr. MGR ERI. The session covered the vital role of Amateur Radio (HAM) in Electronics and communication and it's essential and advantages in real life with safety measures.Guided by Dr. N.S. Shubhashree, Joint Registrar, the program inspired enthusiastic participation and highlighted the importance of Amateur Radio in driving future growth.

Special thanks to our resource persons Dr. S.Deborah and all the enthusiastic participants from first year E &T for making the event a great success!

EXPLORICA 25

[08 / 11 / 2025]



The Department of First Year Engineering & Technology organized a Skill Development Program titled EXPLORICA 25 on 8th November 2025* for school students to promote scientific curiosity and experiential learning. Path towards Visionary Thoughts for Nobel Prize The program provided a valuable platform for experiential learning, encouraging school students to connect theoretical knowledge with practical applications. It also fostered a spirit of inquiry and innovation, motivating them to pursue scientific research along with their academic studies. The event concluded by vote of Thanks by Dr. B. Swapna Dean Admin FYE&T).

NATIONAL MARITIME DAY 2026

NATIONAL MARITIME DAY 2026

[07 / 04 / 2026]

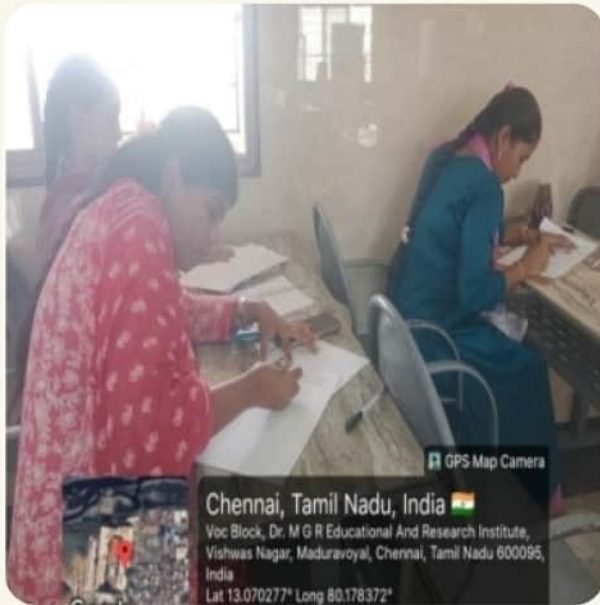
Essay Writing Competition

The First Year Engineering & Technology Department, in association with The Institution of Engineers (India), organized an Essay Writing Competition on 7th April 2026 to commemorate National Maritime Day 2026. The event was conducted from 10:00 AM to 12:00 PM under the theme "From Policy to Practice: Powering Maritime Excellence."

The competition aimed to create awareness among students about the significance of the maritime sector, sustainable development, and the practical implementation of maritime policies. Students enthusiastically participated, demonstrating their knowledge, creativity, and analytical thinking through well-structured essays on maritime excellence, environmental sustainability, global trade, and technological advancements.

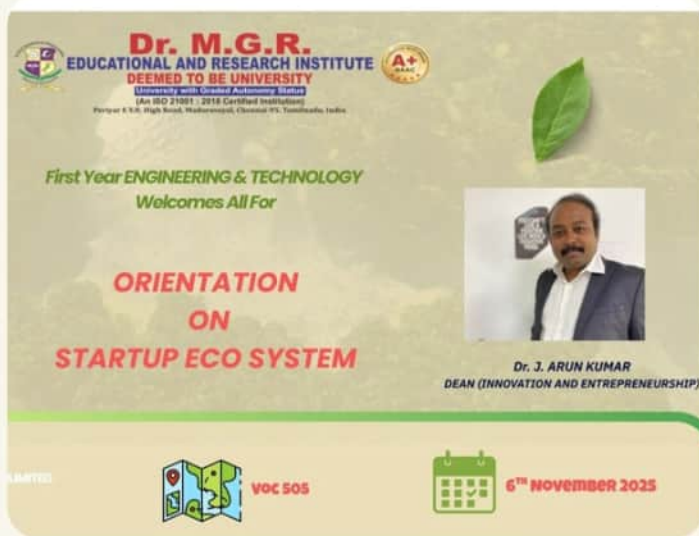
Dr. N. S. Shubhashree, Joint Registrar, I Year E&T, briefed the participants on the competition guidelines and motivated them to present their ideas effectively.

The department expresses its heartfelt gratitude to Honorable President Er. A. C. S. Arunkumar for his constant encouragement and unwavering support in nurturing students' academic excellence, creativity, and innovative thinking.



ORIENTATION LECTURE ON STARTUP ECOSYSTEM

[06 / 11 / 2025]



ORIENTATION ON STARTUP ECOSYSTEM

Orientation Programme

The Department of First Year Engineering and Technology organized an Orientation on Startup Ecosystem on 6th November 2025 exclusively for first-year students. The session aimed to introduce students to the fundamentals of entrepreneurship, innovation, and the startup ecosystem.

The programme was led by Dr. J. Arunkumar, Dean (Innovation & Entrepreneurship), who provided valuable insights into startup development, innovation-driven thinking, and the various initiatives of the Dr. APJ Abdul Kalam Centre of Excellence in Innovation and Research. He also explained the distinction between innovation and discovery and emphasized the importance of collaboration in transforming ideas into successful ventures.

The orientation helped students understand the startup ecosystem, the roles of various stakeholders, and the stages of startup growth. It inspired young minds to explore entrepreneurial opportunities and develop innovative solutions for real-world challenges.



WORLD STANDARD DAY

[14 / 10 / 2025]



The Department of First Year Engineering and Technology organized an Elocution Competition on 14th October 2025 to commemorate World Standards Day 2025. The event aimed to create awareness among students about the importance of international standards and encourage them to develop their communication and critical thinking skills.

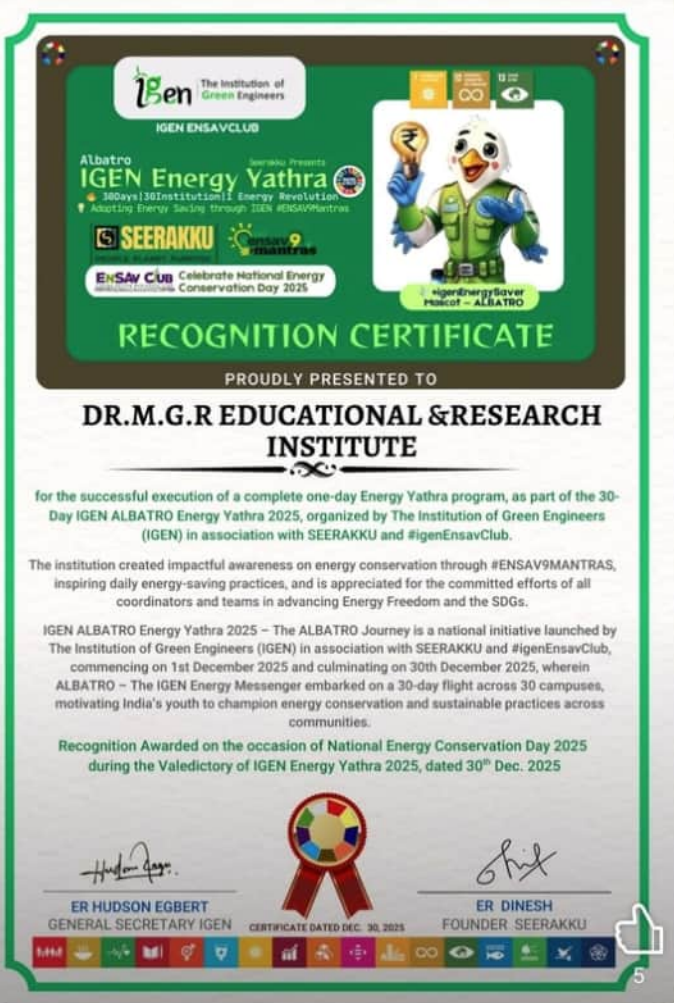
The programme was inaugurated by Dr. N. S. Shubhashree, Joint Registrar, First Year Engineering & Technology, who motivated students to actively participate and enhance their academic and creative abilities.



REETING ON HONOURABLE PRESIDENT'S BIRTHDAY



For the successful execution of a complete one-day Energy Yathra program, as part of the 30- Day IGEN ALBATRO Energy Yathra 2025, organized by The Institution of Green Engineers (IGEN) in association with SEERAKKU and #igenEnsavClub.



GIFT OF GIVING – CELEBRATING A LIFE OF SERVICE

[29 / 06 / 2026]



As a heartfelt Celebration to the birthday of our Hon'ble President, Er. A.C.S. Arun Kumar, the First Year Engineering & Technology students and staff organized a noble outreach initiative titled "Gift of Giving – Celebrating a Life of Service" on 29 June 2026.

Students and faculty members came together to donate essential items such as groceries, notebooks, stationery, soaps, towels, blankets, and other daily necessities to support the residents of the Sarada Sakthi Peedam, Perungalathur, Chennai. The initiative reflected our Hon'ble President's vision of compassion, social responsibility, and service to humanity.

The programme reinforced the values of empathy, kindness, and community engagement among students while contributing towards the United Nations Sustainable Development Goals (SDGs):

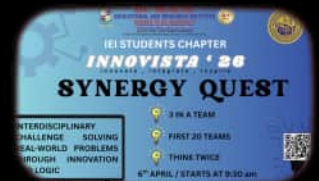
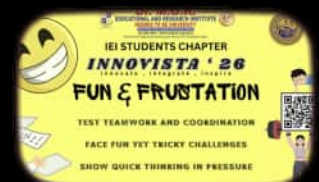
- ✓ SDG 1 – No Poverty
- ✓ SDG 2 – Zero Hunger
- ✓ SDG 3 – Good Health and Well-being
- ✓ SDG 4 – Quality Education

"A small act of kindness can change a life forever."

THE TEAM THAT MADE THIS HAPPEN



Team spirit is the foundation of every successful group. It encourages individuals to work together, support one another, and strive toward a common goal. When team members trust and respect each other, they can overcome challenges more effectively and achieve greater success than they could alone. A strong team spirit creates a positive environment where everyone feels valued and motivated to contribute their best.





The academic year 2025–2026 at Dr. M.G.R. Educational and Research Institute reflected the department's commitment to academic excellence, innovation, and holistic student development. Under the leadership of Chief Patrons Thiru A.C. Shunmugam (Chancellor) and Thiru A.C.S. Arunkumar (President), along with Vice Chancellor Dr. S. Geethalakshmi and Joint Registrar Dr. N.S. Shubhashree, the Department of First Year Engineering and Technology provided freshmen with opportunities for technical, professional, and social growth. During the year, 707 first-year students became members of the Institution of Engineers (India) (IEI), while 250 students joined the SDG IGEN ENSAV Club, strengthening their engagement with professional engineering and sustainable development.

The academic journey began with the Deeksharambh Student Induction Program on September 3, 2025, introducing students to academic resources, digital platforms, and campus facilities. This was followed by IGEN Environthon '26 on September 14, where the theme "Air Element" highlighted environmental awareness through the panel discussion "Vayu – From Ecology to Wellbeing." World Standards Day on October 14 featured an Elocution Competition promoting awareness of international engineering standards, while the MGR SDG ENSAV Club Inauguration on October 15 encouraged participation in sustainability initiatives aligned with the UN Sustainable Development Goals.

On November 6, students attended an Orientation on the Startup Ecosystem, led by Dr. J. Arunkumar, introducing entrepreneurship and innovation pathways. Two days later, EXPLORICA 25 enabled first-year students to mentor visiting school students through laboratory demonstrations. Community engagement continued with the SDG Awareness Campaign at LBEAAR Matriculation School on November 18, where students promoted environmental responsibility. National Energy Conservation Day on December 13 further extended these efforts through public awareness activities at the VOC Community Centre.

The second semester focused on creativity and technical excellence. The Fevicyrl Art and Craft Event 2026 (April 1–2) engaged 32 first-year students in creative design and modelling activities. On April 7, students participated in the National Maritime Day Essay Competition organized with the IEI on sustainable maritime development.

The department's flagship technical festival, INNOVISTA '26, held during April–May 2026, showcased student talent through events such as SHIPWRECK – Two Sides, One Vision, Reboot Reality, Escape Lab, and the Tech Quiz, encouraging communication, problem-solving, teamwork, and technical knowledge. On April 27, students also attended a seminar on Innovative Energy Storage Materials by Dr. Mani Karthik from ARCI.

The academic year concluded with the INNOVISTA '26 Valedictory Ceremony on May 26, 2026, under the theme "Innovate, Integrate, Inspire." Distinguished speakers, including Dr. Mani Karthik, Dr. G.P. Ramesh, and Mr. Balaji Pandurangam, delivered sessions on Lithium-Ion Battery Technology, Prompt Engineering, Cyber Security, and Intellectual Property Rights. The ceremony concluded with the IEI Executive Badge Distribution, recognizing student achievements and marking a successful end to a year of learning, innovation, leadership, and community engagement.

AUTHOR & EDITOR

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