

International Conference on Advances in Green, Net-Zero, Innovation - Sustainability


AGNI-S 2025

December 10 - 12, 2025

Organized By

Department of Energy and Environment

National Institute of Technology, Tiruchirappalli



About the Conference

The Advances in Green, Net-Zero Innovation - Sustainability (AGNI-S) conference, organized by the Energy and Environment Department at NIT Trichy, is a platform dedicated to fostering innovation and sustainable development. AGNI-S 2025 focuses on advancing research and technologies that support the transition to a green, net-zero future. The conference brings together researchers, industry experts, and policymakers to address critical challenges in energy efficiency, renewable energy systems, carbon neutrality, and environmental sustainability. Key themes include net-zero strategies, energy storage solutions, green hydrogen technologies, smart grids, climate change mitigation, and sustainable materials. The event features keynote addresses by leading experts, technical sessions, poster presentations, and interactive workshops. AGNI-S 2025 aims to inspire collaboration and innovation, emphasizing actionable solutions for global energy and environmental challenges. With a strong focus on green technologies and sustainability, AGNI-S 2025 represents a vital step toward achieving long-term environmental goals and fostering a resilient, low-carbon future.

The background image shows a modern building with a large, light-colored stone or brick facade. A prominent sign is mounted on the wall, reading "CEE SAT" in large, blue, serif capital letters. Below this, in smaller blue capital letters, it says "CENTRE FOR ENERGY & ENVIRONMENTAL SCIENCE AND TECHNOLOGY". At the bottom of the sign, in even smaller blue capital letters, it says "(UK-INDIA REC'S PROJECT)". The building has a series of vertical columns and a flat roof. In the foreground, there is a paved walkway and some greenery, including bushes and small trees. The sky is blue with some light clouds.

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About the Host Institute

The National Institute of Technology Tiruchirappalli (NIT-T), formerly known as a Regional Engineering College (REC), was established in 1964 through a collaborative effort between the Indian and Tamil Nadu governments. Over the years, it has evolved into a Deemed University and eventually gained the status of an Institution of National Importance in 2007, showcasing its journey towards academic autonomy and excellence. The institute offers a wide array of courses, including undergraduate programs in ten branches, postgraduate courses across twenty-one disciplines in Science, Engineering, and Technology, as well as M.S. (by Research) and Ph.D. programs, NIT-T prides itself on a faculty recruitment process conducted on a national scale, ensuring a diverse and skilled teaching staff. The institute holds the 9th position in the current NIRF ranking and is the only NIT to get into the Top-10.

The Institution stands as a testament to cultural diversity, with students hailing from various states contributing to its vibrant community. Sprawling across an extensive 800 acres campus, the institute is well-equipped with modern facilities housed in the Octagon, including a CAD/CAM Lab, a robust Local Area Network(LAN), high-speed internet, and seminar/conference amenities managed by the Computer Support Group (CSG). Beyond academics, NIT-T emphasizes extracurricular growth, offering opportunities for NCC, NSS, IEEE student chapters, social clubs, and sports activities, nurturing well-rounded student experiences. Its alumni network boasts individuals excelling across diverse fields in leading organisations globally.

About the Department

The Department of Energy and Environment (DEE) at the National Institute of Technology (NIT) Tiruchirappalli, originally established in 1995 as the Centre for Energy and Environmental Science and Technology (CEESAT), focuses on developing sustainable solutions for global energy and environmental challenges. Renamed in 2012, DEE offers an interdisciplinary M.Tech. program in Energy Engineering, which blends principles from energy systems, environmental technologies, and sustainability. The department actively engages in advanced research in areas such as carbon capture using microalgae, solar energy applications, wind energy, energy-efficient building design, and computational fluid dynamics (CFD). DEE's laboratories are ISO 9001:2008 certified and NABL-accredited, enabling both academic research and industrial testing in fields like photovoltaic systems, effluent treatment, and energy system modelling.

In addition to research and education, the department also provides consultancy services including energy audits, photovoltaic system design, water and waste material testing, and environmental monitoring for industries and institutions. DEE has implemented several notable pilot projects such as the Energy Efficient Building, which utilizes passive architectural techniques for minimizing energy consumption, and the Algal Shed, a project demonstrating the use of algae for wastewater treatment and CO₂ sequestration. These projects showcase the department's commitment to innovation in sustainable infrastructure. Through its robust academic offerings, practical research, and real-world application, DEE continues to contribute significantly to energy conservation, environmental protection, and sustainable development. Its interdisciplinary approach positions it as a key player in addressing the pressing global need for clean and efficient energy technologies.

Convention Themes

1. Solar Power Innovations (Perovskite cells, floating solar)
2. Wind Energy Advancements (Offshore wind, high-efficiency turbines)
3. Green Hydrogen and Fuel Cells
4. Geothermal and Tidal Energy
5. Energy Storage & Battery Technologies (Solid-state, flow batteries)
6. Carbon Capture, Utilization, and Storage (CCUS)
7. Direct Air Capture (DAC) Technologies
8. Carbon Offsetting and Trading Mechanisms
9. Industrial Decarbonization Strategies
10. Low-Carbon Manufacturing and Supply Chains
11. Eco-friendly Materials and Biodegradable Alternatives
12. Waste-to-Energy and Waste Management Innovations
13. Circular Economy Business Models (Product life extension, remanufacturing)
14. Sustainable Packaging Solutions
15. Blockchain for Sustainable Supply Chains Energy-Efficient Buildings & Retrofitting
16. Smart Grids and Decentralized Energy Systems
17. Sustainable Urban Mobility (EVs, public transport electrification)
18. Green Roofing & Vertical Forests
19. Water Management & Conservation Technologies
20. Nature-Based Solutions (Reforestation, blue carbon initiatives)
21. Climate Change Adaptation Policies
22. Sustainable Agriculture & Regenerative Farming
23. AI & Big Data for Climate Monitoring
24. Corporate Net-Zero Roadmaps & Sustainability Reporting
25. Green Finance & Sustainable Investing
26. ESG Regulations & Compliance
27. Stakeholder Engagement in Sustainability
28. Sustainable Supply Chain Management
29. UN Sustainable Development Goals (SDGs) & Climate Agreements
30. Green Policy Innovations & Government Incentives
31. Carbon Taxation & Emission Regulations
32. International Collaboration for Climate Action
33. Green Public Procurement Strategies

Organizing Committee

Patron

Prof. G. Aghila

Director, NIT Trichy

Chair Person

Prof. M. Premalatha

Department of Energy and Environment

Co-Chair Person

Prof. K Muthu Kumar

HOD, Department of Energy and Environment

Advisory committee

Dr. G. Swaminathan

Department of civil engineering

Dr. A.K. Bakthavatsalam

HOD, Training & Placement

Dr. S. Suresh

HOD, Department of Mechanical Engineering

Dr. A. Arunagiri

Department of Chemical Engineering

Dr. T. Sivasankar

Department of Chemical Engineering

Dr. P. Raja

Department of Electrical and Electronics Engineering

Dr. M. Venkata Kirthiga

Department of Electrical and Electronics Engineering

Mr. R.Gururaj

Department of Humanities and Social Sciences

Dr. D Kannamma

Department of Architecture

Organizing Secretary

Dr Aditya Kumar

Department of Energy and Environment

Joint Organizing secretaries

Dr Jaganathan VM

Department of Energy and Environment


Dr Siva Krishna Rao K

Department of Energy and Environment

Sponsorship details

Sponsorship Tier	Amount (INR)	Benefits
Platinum Sponsor	₹ 15,00,000/-	<ul style="list-style-type: none">• Prime branding across all conference materials (print, digital, media)• Inaugural session keynote/speaking slot• Premium exhibition booth in central location• 6 complimentary conference passes• Full-page advertisement in conference proceedings• Logo on website, media coverage, social media & press releases• Exclusive mention in opening and closing ceremonies
Diamond Sponsor	₹ 10,00,000/-	<ul style="list-style-type: none">• Prominent branding on banners, website, brochures & digital platforms• Speaking opportunity in technical session or panel discussion• Premium exhibition booth• 5 complimentary conference passes• Full-page advertisement in conference proceedings• Logo on website and social media
Gold Sponsor	₹ 5,00,000/-	<ul style="list-style-type: none">• Branding on digital and print materials• Standard exhibition booth• 3 complimentary conference passes• Half-page advertisement in conference proceedings• Logo on website and banners
Silver Sponsor	₹ 3,00,000/-	<ul style="list-style-type: none">• Logo featured on website and conference banners• 2 complimentary conference passes• Quarter-page advertisement in conference proceedings
Academic/Start-up Partner	₹ 1,00,000/-	<ul style="list-style-type: none">• Recognition as Academic/Start-up Partner• 1 complimentary conference pass• Logo inclusion on website and event schedule

Important Dates



Paper submission deadline	9th July, 2025
Acceptance notification	15th August, 2025
Early bird registration and paper submission	8-16 October, 2025
Regular registration and paper submission	23-30 October, 2025
Conference dates	10, 11, 12 December, 2025

Note to the sponsors

- Sponsorship may be made directly to the NITT via RTGS/NEFT/Cheque/Demand Draft.
- No Provisions are made in SBI i-collect.
- For Further information, please contact agnis2025@nitt.edu

Registration Details

For Indians

Particulars of delegate	Early Bird (8-16 October, 2025)	Regular (23-30 October, 2025)
Academic presenter	Rs 10000	Rs 20000
Professional presenter	Rs 8500	Rs 15000
Student presenter	Rs 7500	Rs 10000
Student participant	Rs 5000	Rs 6000

For Foreign delegates

Particulars of delegate	Early Bird (8-16 October, 2025)	Regular (23-30 October, 2025)
Academic presenter	\$250	\$299
Professional presenter	\$225	\$265
Student presenter	\$175	\$222
Student participant	\$100	\$150



Registration Fee includes:

1. Conference Kit
2. Food and Snacks
3. Transportation inside the campus
4. Only One Paper Presentation is Allowed Under One Student Registration.
5. Maximum Two Paper Presentations are allowed under one full Delegate Registration.

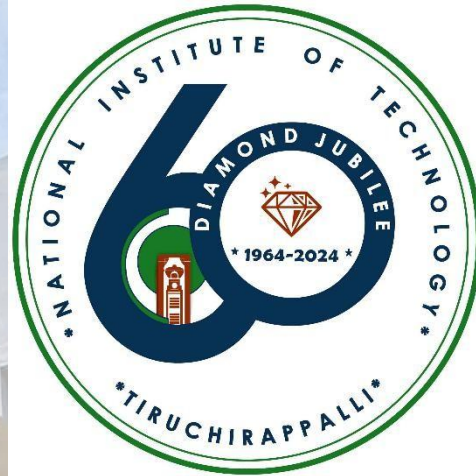
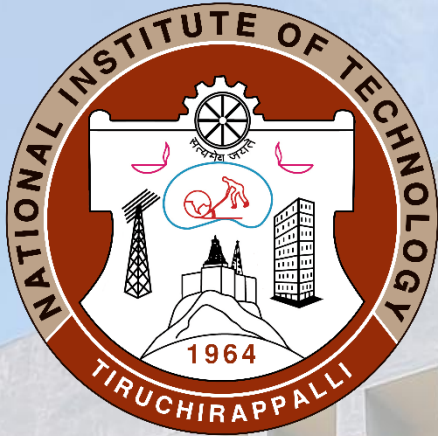
Registration Fee Payment

1. Registration Fee can be made through the following steps to pay through SBI i-collect
2. For Early bird applicants Payment option will be available from 8 Oct 2025- 16 Oct 2025
3. For Regular applicants Payment option will be available from 23 Oct 2025- 30 Oct 2025

Payment Gateway

1. Go to <https://www.onlinesbi.sbi/sbicollect/>
2. Under "Select Category" select " Educational Institution" and the new page <http://www.onlinesbi.sbi/sbicollect/payment/listinstitution.html>
3. In the filter by state' drop down menu, select 'Tamil Nadu' and type 'NIT TRICHY' in the search for education institutions' search box.
4. Select " CONFERENCE AND WORKSHOP NIT TRICHY"
5. In the next screen payment category, select (Scroll down) -> AGNI-S 2025

NIT TRICHY WELCOMES IOG...



Department of ENERGY & ENVIRONMENT

Tanjore Main Road, NH67, near BHEL, Tiruchirappalli, Tamil Nadu 620015

agnis2025@nitt.edu | <https://agnis2025.nitt.edu>

Gold Gopuram, SriRangam



Sri Ranganathswamy Temple



Viralimalai Murugan Temple: Natural Beauty & Avian Haven



Rockfort Temple - A Geological Marvel & Spiritual Ascent



"Trichy – Where Ancient Temples
Meet Modern Marvels!"

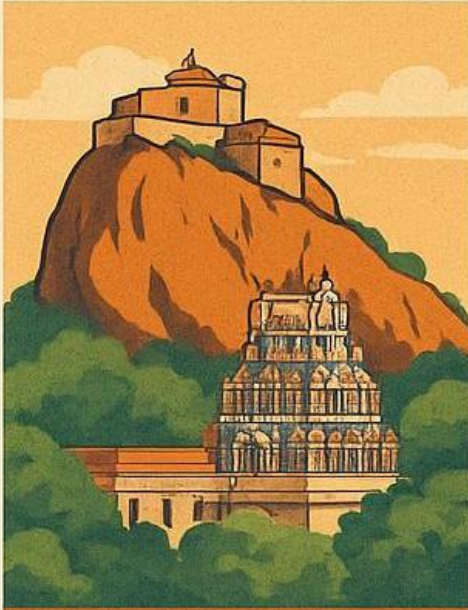


VRUISES AND ENJOYABLE OPPORTUNITIES
IN CHENNAI NAD PONDICHERRY

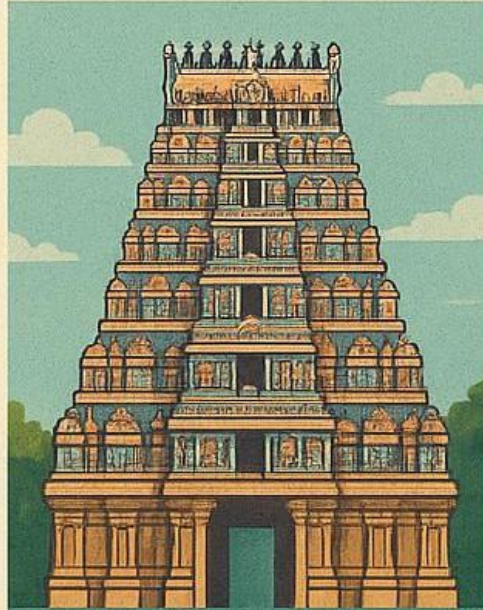
Anna Science Centre, Planetarium



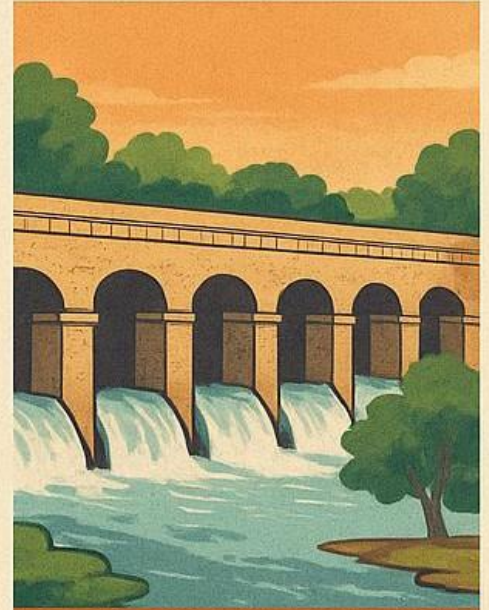
PLACES TO EXPLORE AROUND TRICHY



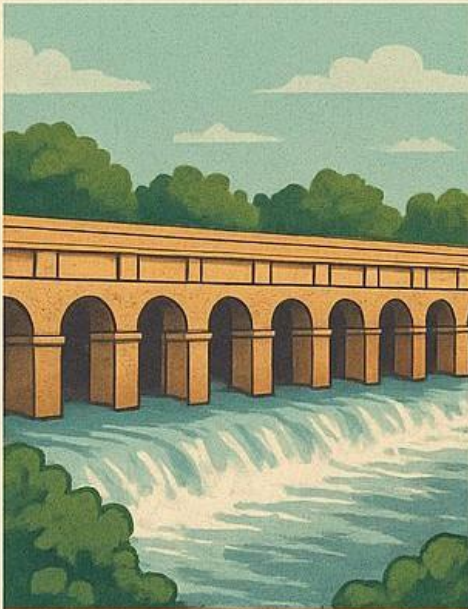
**TRICHY'S
ANCIENT
LANDMARK**



**SRIRANGAM-
SRI RANGANATHSAW-
HINDU TEMPLE**



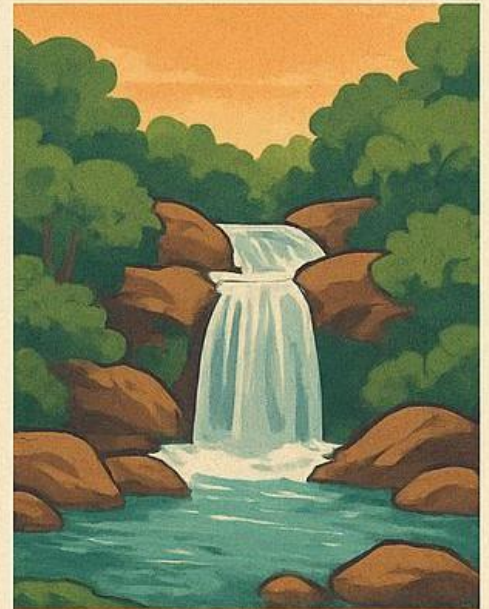
**MUKKOMBU
A SCENIC
PICNIC SPOT**



**KALLANAI
ENGINEERING
MARVEL**



**THANJAVUR
BRIHADEESWARAR
TEMPLE
A COLOSSAL
CHOLA ERA TEMPLE**



**PULIYANCHOLAI
TRANQUILITY
IN THE HILLS**

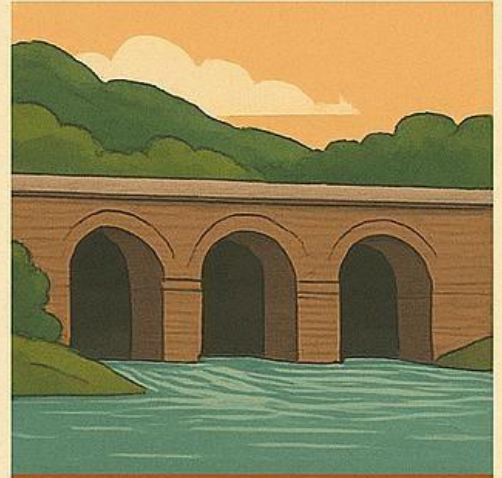
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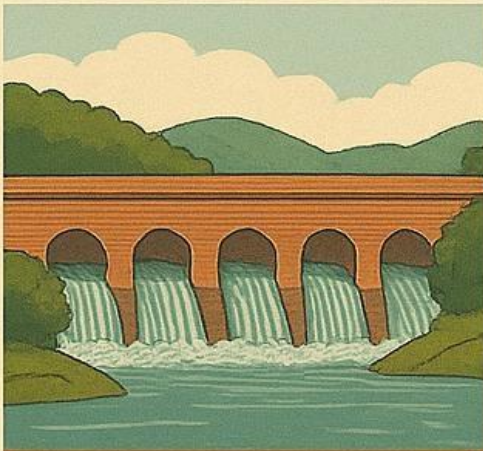
**ARULMIGU
MARIAMMAN
TEMPLE**



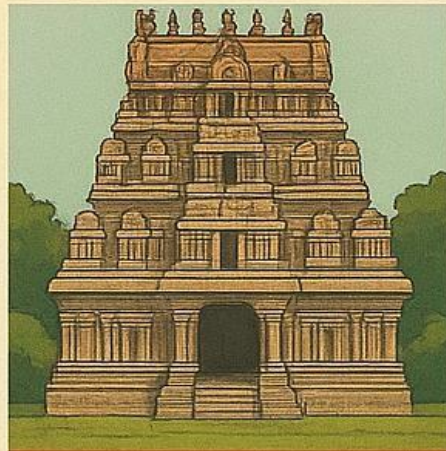
KOLLI HILLS
UNSPOILED NATURE



**STANDS
THE TEST
OF TIME**



**OLDEST DAM
IN WORLD**
OLDEST DAM
IN THE WORLD



**JAMBUKESWARAR
TEMPLE**
ONE OF THE
PANCHA BHOOTAS
STHALAS



**BIODIVERSE
AND SERENE**
BIODIVERSE SCENE

