



ABOUT NITT

National Institute of Technology, Tiruchirappalli (NIT Trichy) is one of the India's top engineering institutions, renowned for academic excellence and cutting-edge research. Established in 1964, it is an Institute of National Importance and offers undergraduate, postgraduate, and doctoral programs in various disciplines of engineering, science, and management. NIT Trichy is celebrated for its vibrant campus life, innovative research culture, and strong industry collaborations.

ABOUT THE DEPARTMENT

The Department of Mechanical Engineering is one among the first three departments established in 1964. With a team of highly qualified faculty members, the department consistently strives to be a globally renowned Department in Mechanical Engineering where the best of teaching, learning and research synergize to fulfil the requirements of industry and society. As a feather in its cap, the department has been ranked between 300 – 450 consecutively for the past three years in the QS world ranking which makes the department unique among all NITs in the country.

ELIGIBILITY

- ❖ Faculty members from Engineering and Science Institutions.
- ❖ Number of participants is limited to 25.
- ❖ Selection of the participants will be based on a first come first serve basis and based on their area of research work. The coordinator's decision will be final in the selection of participants.

GENERAL INFORMATION

- ☐ No registration fee for participants.
- ☐ No accommodation will be provided
- ☐ No TA/DA will be provided

DETAILS OF REGISTRATION

Google Form Link

<https://forms.gle/iP5ctcAgvaMFovY58>

Scan for
Registration



Organized by

Department of Mechanical Engineering

**National Institute of Technology,
Tiruchirappalli**

Thanjavur Road, Tiruchirappalli - 620015



COORDINATOR

Dr. Anand Ramanathan

Professor

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ABOUT THE WORKSHOP

This workshop is being organized as part of the Scientific Social Responsibility (SSR) initiative under the DST–ANRF (SERB) sponsored project “Sustainable Energy-Efficient Green Ammonia Production by Plasma-Water Interface.” The primary aim is to disseminate knowledge, foster awareness, and build a research culture among faculty members from various institutions. In line with SSR objectives, the workshop highlights the emerging role of green hydrogen as a clean energy carrier and its integration into sustainable energy systems. Participants will gain exposure to the latest advancements, challenges, and opportunities in green hydrogen technologies, with emphasis on its role in achieving a carbon-free energy future. The workshop further seeks to strengthen the academic and research community through knowledge sharing, public outreach, and capacity building, enabling participants to guide students, initiate collaborations, and contribute to India’s clean energy mission.

COURSE OBJECTIVES

- Introduce fundamentals of green hydrogen and its role in clean energy
- Advances in Waste-to-Hydrogen Technologies
- Explore waste-to-hydrogen and renewable energy integration pathways
- Provide hands-on exposure through lab visits and demonstrations
- Discuss techno-economic, environmental, and policy perspectives
- Promote research culture, collaboration, and knowledge sharing



Venue: Mechanical Department,
New Building – Seminar Hall



Workshop Schedule



09:30 – 09:45 AM

Inauguration



09:45 – 10:45 AM

Session 1: Introduction to Green Hydrogen and Clean Energy Pathways



10:45 – 11:00 AM

Tea Break



11:00 AM – 12:00 Noon

Session 2: Advances in Waste-to-Hydrogen Technologies



12:00 – 01:00 PM

Session 3: Renewable Energy Integration for Hydrogen Production



01:00 – 02:00 PM

Lunch



02:00 – 03:00 PM

Session 4: Lab Visit and NTP-Based Green Ammonia Production Demonstration



03:00 – 04:00 PM

Session 5: Green Hydrogen: Challenges, Opportunities, and Way Forward



04:00 – 04:30 PM

Valedictory Session

Resource Persons

Dr. Anand Ramanathan

**Professor
Mechanical Engineering
NIT Tiruchirappalli**



Dr. R. Karvembu

**Professor
Chemistry
NIT Tiruchirappalli**

Dr. N. Samsudeen

**Associate Professor
Chemical Engineering
NIT Tiruchirappalli**



Dr. Sarthak Mandal

**Assistant Professor,
Chemistry,
NIT Tiruchirappalli**