



SERB Sponsored Symposium on

Recent Trends in Renewable Energy Systems

(Energy Enhancement, Energy Storage, Condition Monitoring and Preventive Maintenance)

[RTRES-2023]

Organised by NIT Silchar in sponsorship with SERB & C-DAC

24th -28th July 2023



NIT Silchar



INTRODUCTION

National Institute of Technology (NIT Silchar) cordially invites you to participate and celebrate the **Recent Trends in Renewable Energy Systems**. This is dedicated to the advancement of the theory and practices in **Energy Enhancement, Energy Storage, Condition Monitoring and Preventive Maintenance**. We have a group of world-renowned researchers and experts in the field of **Renewable Energy Systems** who will be presenting their ideas about the current research of Renewable Energy Systems. We would like to create a forum for exchange of information pertaining to the latest outstanding developments in the field of Renewable Energy Systems. **For the exchange of ideas, we invite you to meet researchers and experts in our one-week program.**

About NIT Silchar

National Institute of Technology (NIT) Silchar, an Institute of National Importance under the NIT Act was established in 1967 as Regional Engineering College (REC) Silchar in Assam. In year 2002, it was upgraded to the status of an NIT from REC. NIT Silchar is situated on the banks of river Barak and on a sprawling campus spread over 600 acres of land on the outskirts of Silchar. It is surrounded by beautiful lakes and hillocks. NIT Silchar is a fully residential Institution.

Who Can Attend?

This program is open to Faculty Members, Research Scholars, M.Tech. /M.Sc. and BTech. Students of technical institutions, engineering colleges, polytechnics, Universities and other recognized institutions. The number of participants is limited to **25**.

Objective: To educate about different renewable energy systems, recent trends and challenges in renewable energy systems for energy enhancement and storage.

Themes and Contents

- ❖ Renewable energy systems.
- ❖ Current trends and technology in renewable energy systems.
- ❖ Condition monitoring and fault diagnosis in renewable energy systems.
- ❖ Predictive maintenance in renewable energy systems.
- ❖ Energy storage.
- ❖ Application of Artificial Intelligence and IoT in renewable energy systems.



Registration Details

Brochure and registration form can also be downloaded from the institute website: <http://www.nits.ac.in>.

No Registration fee is required to participate in the symposium.

Submission deadline: Scan copy of Registration Form required to be submitted via email to (sudarsan@ei.nits.ac.in) on or before **12th July, 2023**. The hard copy of original registration form forwarded by the competent authority has to be submitted before the commencement of the workshop at the registration desk.

Address for Communication

Dr. Sudarsan Sahoo (Convener)

Assistant professor, Department of E & I Engineering

NIT Silchar – 788 010

E-mail: sudarsan@ei.nits.ac.in

Contact No.: +91-8761932350



Accommodation and Course Material

All the out-station participants will be provided accommodation on payment basis in the Guest House of the Institute, subject to availability. **Each registered participant will be provided with a set of lecture notes and proceedings.**

Registration Details

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approved Post-Graduate courses. The Department of Electronics & Instrumentation Engineering is established along with the inception of the Institute in 2009. Ever since its establishment the Department has been striving to provide quality technical education. The Department lays special emphasis on research and developmental activities both on the part of the faculty as well as the students.

Eligibility

This program is open to Faculty Members, Research Scholars, M.Tech. /M.Sc. and BTech. Students of technical institutions, engineering colleges, polytechnics, Universities and other recognized institutions. The number of participants is limited to **25**.

Accommodation and Travel

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Address for Communication

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Assistant professor, Department of E & I Engg.
NIT Silchar – 788 010

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Convener:

Dr. Sudarsan Sahoo

Coordinators:

Dr. Jupitara Hazarika

Dr. Shankar K.

Mr. Jitesh Choudhary (C-DAC)



Organised by:

**DEPARTMENT OF E & I Engineering
NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR
SILCHAR-788010, ASSAM-INDIA**

Introduction

Renewable energy often referred to as clean energy, is the energy derived from natural resources or processes that are constantly replenished. Solar, wind, hydro etc. are few such sources that are constantly being replenished. Energy generation using renewable-based sources creates far lower carbon emissions compared to non-renewable fossil fuel-based energy generation techniques. renewable energy can offer energy without negative environment and social impacts. Along with greater emphasis on energy efficiency, it is widely expected that renewables will come to contribute significantly to the world's energy portfolio.

Latest trending technologies can be used to maintain the efficiency and hence to increase the energy enhancement in renewable energy systems. To achieve this objective recent technology can be employed for the condition monitoring, predictive maintenance and increase of storage capability in renewable energy systems.

Course Objectives

To educate about the different renewable energy systems and its operation, recent trends and challenges in renewable energy systems for energy enhancement and storage.

Course Contents

- Basic introduction of different renewable energy systems.
- Current trends and technology in renewable energy systems.
- Condition monitoring and fault diagnosis, Predictive maintenance in renewable energy systems.
- Energy storage.
- Application of Artificial Intelligence and IoT in renewable energy systems.

Course Material

Each registered participant will be provided with a set of lecture notes (soft copy).

Organising Committee

Patron:

Prof. Dilip Kumar Baidya,
Director, NIT Silchar

Chairman:

Dr. Rajdeep Dasgupta
Head, EIE, NIT Silchar

Convener: Dr. Sudarsan Sahoo

Coordinators: Dr. Jupitara Hazarika
Dr. Shankar K.
Mr. Jitesh Choudhary (C-DAC)

Organizing Members:

- Dr. S. H. Laskar
- Dr. Lalu Seban
- Dr. Rajdeep Dasgupta
- Dr. Munmun Khanra
- Dr. Arun K. Sunaniya
- Dr. Manas Bera
- Dr. Ranjay Hazra
- Dr. Shivendra K. Pandey
- Dr. Koena Mukherjee
- Dr. Sudipta Chakraborty
- Dr. Anup K. Sharma
- Dr. Vipin C. Pal
- Dr. Pavin PS.

REGISTRATION FORM

Symposium on

Recent Trends in Renewable Energy Systems (Enhancement, storage, Condition Monitoring and Preventive Maintenance) [RTRES-2023]

(in sponsorship with SERB & C-DAC)

24-28 July 2023

1. Name (block letter): _____

2. Designation: _____

3. Organization: _____

4. Address for communication: _____

_____ Pin code: _____

5. Ph. No.: _____

6. E-mail: _____

7. Educational Qualification: _____

8. Accommodation Required: Yes / No ____

Place:

Date:

**Signature of
the applicant**