SERB and C-DAC sponsored
Symposium on

Recent Trends in Renewable Energy Systems

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

[RTRES-2023]

Organised by NIT Silchar

24th -28th July 2023

INTRODUCTION

National Institute of Technology (NIT Silchar) cordially invites you to participate and celebrate the symposium on **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. **We invite you to meet researchers and experts in our one-week program and exchange your ideas.**

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. The campus has many beautiful lakes and is surrounded by 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 B.Tech. Students of technical institutions, engineering colleges, polytechnics, Universities and other research organizations. 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 attend the symposium.

Submission deadline: Scanned copy of Registration Form is required to be submitted via email to (sudarsan@ei.nits.ac.in) on or before **17th 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.

Registration Details

The Program is sponsored by SERB and C-DAC Silchar.

No registration fee is required.
Brochure and registration form can also be downloaded from the institute website: http://www.nits.ac.in.

Submission deadline: Scanned copy of Registration Form is required to be submitted via email to (sudarsan@ei.nits.ac.in) on or before **30th June, 2023**. The hard copy of original registration from forwarded by the competent authority has to be submitted before the commencement of the workshop at the registration desk.

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. The campus has many beautiful lakes inside and surrounded with hillocks. NIT Silchar is a fully residential Institution. At present it offers six undergraduate courses in Civil Engineering, Mechanical Engineering, Electrical Engineering, Electronics and Telecommunication Engineering, Computer Science and Engineering and Electronics & Instrumentation Engineering and some AICTE 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

All the out-station participants will be provided accommodation on payment basis in the Guest House of the Institute, subject to availability. No TA and DA will be paid to the participants.

Address for Communication

Dr. Sudarsan Sahoo,
Assistant Professor, Department of E & I Engg.
NIT Silchar – 788 010
E-mail: sudarsan@ei.nits.ac.in
Contact No.: +91-8761932350

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Convener:
Dr. Sudarsan Sahoo

Coordinators:
Dr. Jupitara Hazarika
Dr. Shankar K.
Mr. Jitesh Choudhary

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, Dept. of EIE, NIT Silchar

Convener: Dr. Sudarsan Sahoo

Coordinators: Dr. Jupitara Hazarika
Dr. Shankar K.
Mr. Jitesh Choudhary

Organizing Members:

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

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