

SPONSORSHIP / NOMINATION CERTIFICATE

Prof / Dr / Mr / Ms / Mrs.
.....

is an employee of our institute and his / her application is hereby sponsored / nominated. The applicant will be permitted to attend the short-term course **"Thermal Energy Storage in Building Applications"** in Mechanical Engineering Department at NIT Rourkela during **25th-29th** January 2021 if selected.

Our institute is (tick one):

- ☐ CFTI
☐ State Govt. Funded Institution
☐ Other Institutions

Date. _____ Signature of Authority _____
Designation _____

Official Seal

Selected participants will be informed by E-mail. The duly sponsored/Nominated application form should be mailed to:

Organized by
Dr. B. Kiran Naik (Convener)
Prof. S. Murugan (Co-Convener)
Dr. Kishore Singh Patel (Co-Convener)
Department of Mechanical Engineering
National Institute of Technology, Rourkela
Rourkela -769 008, Odhisa

Contact Nos. 9435686059 (Kiran)
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ABOUT NIT ROURKELA

National Institute of Technology Rourkela is an Institute of national importance created under the act of parliament. NIT Rourkela has been ranked as 225 and 29th position in QS Asia University and QS Indian University Ranking 2020, respectively. It has also been ranked in 121st position in QS BRICS category, 2020. Times Higher Education has figured NIT Rourkela in the group of 601-800 in World University Ranking 2020. The institute provides quality education in a diverse and multicultural environment. The mission of the institute is to become an internationally acclaimed institution of higher learning that will serve as a source of knowledge and expertise for the society and be a preferred destination for undergraduate and post graduate studies. The institute is offering undergraduate, post graduate and PhD programme in 21 branches of Engineering. The institute research centres are engaged in consultancy and research activities of several government bodies such as DST, DAE, CSIR, DRODO, BARC, ISRO and private industries.

DEPARTMENT OF MECHANICAL ENGINEERING

The Mechanical Engineering of NIT Rourkela comprises three divisions namely design, manufacturing and thermal engineering. The department is known for research in variety of fields that include mechanical vibration, robotics, heat transfer, CAD/CAM, precision engineering, metal forming, manufacturing, CFD, industrial refrigeration and cryogenics. The academic programmes of the department reflect not only the core areas of Mechanical Engineering; but also the research specialization of the faculty. The department at present has over one hundred research scholars pursuing the research on diverse fields. All the groups are working in close co-operation while retaining individual identities. Many Research and Development projects being pursued by the faculty are sponsored by Government agencies and private industries. The major sponsors among these projects are BRNS, DST, ARDB, BRFST and HBL Power Systems.



A
Karyashala
(High-End Workshop)
on

**Thermal Energy Storage for
Building Applications**

January 25 - 29, 2021
(Through Virtual Mode)

Patron
Prof. Animesh Biswas,
Director, NIT Rourkela

Chairman
Prof. S. K. Sahoo, HOD-ME Dept.

Convener
Dr. B. Kiran Naik, ME Dept.



Department of Mechanical Engineering
National Institute of Technology
Rourkela

Sponsored by



ABOUT THE COURSE

The use of Thermal Energy Storage (TES) in buildings in combination with space heating, domestic hot water and space cooling has recently received much attention. A variety of TES techniques have developed over the past decades, including building thermal mass utilization, Phase Change Materials (PCM), Underground Thermal Energy Storage, and energy storage tanks. In this course, a review of the different concepts for building or on-site integrated TES is carried out. The aim is to provide the basis for development of new intelligent TES possibilities in buildings.

COURSE CONTENT

The course will cover the following major topics;

- Introduction to various energy storage systems
- Thermal energy storage system – types and practical issues
- State of art on thermal energy storage for building heating and cooling
- Indirect storage of electricity generated from solar and wind power stations
- Thermochemical energy storage—Absorption and adsorption systems
- Complex structures for fluid flow across TES
- Building thermal energy storage – concepts and applications
- Renewable energy driven heating and cooling systems

TRAINING SESSION

The training session will cover the following topics;

- Machine learning tools, statistical techniques for developing experimental correlations and CFD simulations on HPC systems based on thermal energy storage systems
- Remote sensing applications to weather forecast
- Communicating Scientific Information to Public

ELIGIBILITY

The course is open to faculty members, research scholars and students from universities and educational institutions, and scientists and engineers from research organizations and industries, respectively. No course fee is charged for PhD and PG students.

IMPORTANT DATES

The last date for the receipt of applications by email: scanned copy is 21/01/21. Intimation of selection: 23/01/21

TARGET AUDIENCE

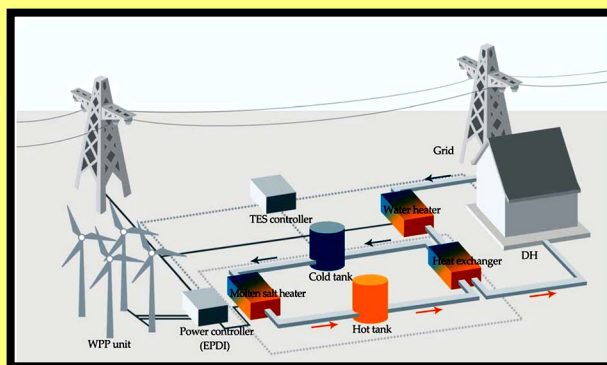
Maximum number of applicants is limited to 25. The selected applicants will be provided a secured meeting code of the web platform one day before the commencement of course.

ADDRESS FOR CORRESPONDENCE:

Dr. B. Kiran Naik
Department of Mechanical Engineering
National Institute of Technology, Rourkela
Rourkela-769 008, Odhisa, India

Contact Nos. 9435686059 (Kiran)

Emails: naikkb@nitrkl.ac.in;
k.bukke@gmail.com



REGISTRATION FORM

1. Name (block letters):

2. Designation:

3. Organisation:

4. Address for communication:

Pin code: Ph. No.:

E-mail:

Fax No.:

Mobile No./ Telephone:

5. Specialisation:

6. Experience:

(a) Teaching: (b) Industrial:

7. ☐ CFTI ☐ State Govt ☐ Other

Please register for the short term course on

“Thermal energy storage in building applications ” to be held at Mechanical Engineering Department, NIT Rourkela.

I am sending herewith the duly signed registration form and the certificate by the authorized signatory of our institution.

Place:

Date:

Signature of the applicant