

**NATIONAL CONFERENCE
ON
WASTE TO ENERGY,
CARBON CAPTURE, UTILIZATION
AND STORAGE
[NCWECCUS - 2023]**

22-24 DECEMBER 2023

REGISTRATION FORM

Name :
Designation :
Institute/Organization :
Mailing Address :
Phone/Mobile No:
Whatsapp No (if available):
Email :
DD No &Date :
Bank and Branch Code :
UPI Reference No :
Accommodation required: *Yes / No
(a)South Block Guest House:
(b)North Block Guest House
(c)Student Hostel

*Tariff for accommodation is given in the Brochure.

Date:

Signature:

Signature of Head of Department/
Institute with Seal

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Dr. Sudip Sen, NIT Rourkela
Dr. K.K. Paul, NIT Rourkela
Dr. P. Balasubramanian, NIT Rourkela

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PATRON

Prof. K. Umamaheshwar Rao
Director, NIT Rourkela

CHAIRMAN

Prof. S. K. Patel
Head
Mechanical Engineering Department

CONVENER

Dr. S. Murugan

CO-CONVENERS

Dr. Sushil Kumar Rathore
&
Dr. Jnana Ranjan Senapati

TREASURER

Dr. Sumit Kumar



Organized By

**Department of Mechanical Engineering
National Institute of Technology Rourkela
Odisha - 769 008**

ABOUT THE INSTITUTION

National Institute of Technology Rourkela (NIT Rourkela) is an institute of national importance created under the act of parliament. Times World Rankings has figured NIT Rourkela in the list of 601-800 universities in the world for the year 2016-17. NIT Rourkela is the only NIT to appear in the top 980 universities in the world. BRICS 2016 figured NIT Rourkela in the list of 111-120 top universities in Brazil, Russia, India, China and South Africa in 2016-17. NIT Rourkela provides quality education in a diverse and multi-cultural 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 society and be a preferred destination for undergraduate and graduate studies. The institute offers Ph.D., Post Graduate and Undergraduate programmes in 21 branches of Engineering and Science. The institute's research centers are engaged in consultancy, research and developmental activities for several bodies such as DST, DBT, DAE, CSIR, DRDO, BARC, ISRO and other private industries.

ABOUT THE CONFERENCE

Globally, organic wastes are available in the form of municipal, industrial, and agricultural wastes, and are largely disposed of every year. Accumulation of different organic wastes on land, sea and air increases anthropogenic gases which lead to an increase in global warming potential (GWP). Waste-to-energy (WtE) or energy-from-waste (EfW) is one of the methods to reduce the emissions of anthropogenic gases resulting from the accumulation of organic wastes. It is the process of generating energy in the form of electricity and/or heat from the primary treatment of waste. Most WtE processes produce electricity and/or heat directly through combustion or produce a variety of combustible fuels.

On the other hand, carbon dioxide (CO₂) is generated largely from the combustion of fossil fuels which also causes an increase in GWP. CO₂ from various sources can be mitigated by carbon capture, utilization and storage [CCUS]. CCUS involves the capture of CO₂, generally from large point sources like power generation or industrial facilities that use either fossil fuels or biomass as fuel. If not being used on-site, the captured CO₂ is compressed and transported by pipeline, ship, rail or truck to be used in a range of applications, or injected into deep geological formations such as depleted oil and gas reservoirs or saline aquifers. A lot more to be done to expand the application of CCUS in fossil fuel-based power plants, oil refineries, steel industries, cement industries and biogas purification. Considering these emerging issues, this conference is intended to provide a platform for faculty, research scholars and students from educational institutions, industry, and research organizations to disseminate their knowledge/views on the subject in the disciplines of Biotechnology, Civil Engineering, Chemical Engineering, Earth and Atmospheric Science, Environmental Engineering, Food Technology, Life Sciences, Mechanical Engineering, and Mining Engineering.



WASTE TO ENERGY

CCUS

CALL FOR PAPERS

- Original and unpublished research works/practices on any one or more of the themes indicated above are invited from practicing engineers, academicians, R&D personnel, consultants and manufacturers. The paper should strictly conform to the following:
- The official language of the conference will be English for all purposes. All correspondence and the papers will be entertained only in English.
- Abstract of the paper must be typed in single space within 300 words. The full text of the paper must not exceed 6 pages of A4 size in single space using a new Times Roman font of size 12 including abstracts, appendices, tables, illustrations, and photographs.
- High quality papers will be recommended for publication in reputed peer-reviewed book series.

CONFERENCE THEMES

- The conference will focus on the following topics, but not limited to;
- The conference will focus on the following topics, but not limited to;
- Anthropogenic gas sources and control, Solid waste management for greenhouse gas reduction, Energy and fuels from organic wastes
- Pre and post combustion technologies for CO₂ mitigation and Oxy-fuel combustion for CO₂ mitigation, Other carbon capture technologies
- Conversion of CO₂ into energy and fuels, Process integration and intensification
- Biological and geological CO₂ sequestration, Mineral carbonation, Sequestration in oceans
- Environmental, social and political analysis of carbon capture technologies, Materials- and chemistry-related carbon capture science, Assessment of CO₂ control devices

ABSTRACT AND PAPER SUBMISSION

Submit the abstracts and manuscripts in the following Easy Chair Link:
<https://easychair.org/cfp/NCWECCUS-2023>

REGISTRATION FEES

Faculties from academic institutions	:Rs. 2000/-
Participants from industries	:Rs. 3000/-
Research Scholars / Students	:Rs. 1500/-

PAYMENT

All payments should be made through A/c payee Demand Draft in favor of "CONFERENCE NIT ROURKELA", payable at SBI NIT Campus Branch, Rourkela (IFSC Code: SBIN0002109) or through NEFT transfer to A/c No. 36734418111. You can also visit www.nitrkl.ac.in for downloading the registration form and other information.

IMPORTANT DATES

Last date for abstract submission	22-09-2023
Intimation on selection of abstract by mail	22-10-2023
Commencement of camera-ready paper submission	22-11-2023
Registration for conference presentation	22-12-2023

TRAVEL

Rourkela is on the Howrah (Kolkata)–Mumbai main line of South Eastern Railway. The railway station and intrastate bus stand are 6 KM and 2 KM from NIT Rourkela campus respectively. The airports near to Rourkela are Ranchi, Bhubaneswar and Kolkata. Rourkela is well connected to these cities by rail and train frequency is very good. The participants will have to make their own arrangements for travel. Subject to the funds received from the funding agencies, participants will be paid to and fro fare via shortest route (strictly on the production of ticket) and provided free boarding and lodging as per Government norms.

ACCOMMODATION

Boarding and lodging can be arranged on payment basis in the guest house at NIT Rourkela based upon prior request and availability. There are also many good hotels in Rourkela; the same can be booked on request and prior payment.

Three types of accommodation shall be arranged (inside NIT Rourkela campus) which are given below;
(a)South Block Guest House (b)North Block Guest House
(c)Student Hostel

The tariff for the south block and north block guest houses shall be found in the following web site:
<https://guesthouse.nitrkl.ac.in/Users/Tariff.aspx>

For accommodation in the students' hostel Rs. 230/- per person per day will be charged by the Chief Warden Office. An extra charge of approximately Rs. 200/- will be required for blanket, mattress and pillow based on the requirement of the participant.

ORGANIZING COMMITTEE

All faculty members of the Mechanical Engineering Department.

CONVENER

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