



## National Conference

on

**Present scenario and future trend in  
ceramics and allied industries  
and**

# MRITTIKA 2.0

The 2nd session of  
Indian Ceramic Society Student Chapter of  
NIT Rourkela

Jointly Organized by:  
Department of Ceramic Engineering  
&  
InCerS Student Chapter

NIT Rourkela



**6th – 8th April, 2023**



Seminar Hall,  
Department of Ceramic Engineering  
NIT Rourkela

## OBJECTIVE OF MRITTIKA 2.0

The 2nd annual session (MRITTIKA 2.0) of the Indian Ceramic Society, the student chapter of NIT Rourkela, aims to bring together leading professionals from academia and industries, research scholars, students, and exhibitors to share knowledge, and exchange ideas on various aspects of ceramic science & technology. This national-level conference aims to cover recent advances in the field of structural and engineering ceramics, covering a wider gamut of industrial applications with the target audience including professionals and students who wish to pursue a career in research and development or join the industry. The 3-day national conference will provide the right platform for delegates to address the larger audience on multiple thematic areas and ignite the young minds. Eminent faculties & industry experts will enlighten the sessions by sharing their knowledge on the current trend and future aspects of ceramics. Early career professionals are also encouraged to share their work during the conference. The 3-day national conference will also include exciting sessions on entrepreneurship along with a PowerPoint karaoke and quiz competition.

## About Department of Ceramic Engineering

The Ceramic Engineering department at NIT Rourkela came into existence back in 1994 has traversed a long path specializing in the development of traditional and advanced ceramics and nurturing future ceramist. It boasts state-of-the-art high-temperature furnaces and sophisticated analytical instruments like FESEM, XRD, DSC, TGA, BET surface area analyzer, etc. The current research focus of the department includes futuristic materials like solid oxide fuel cells, lithium-ion batteries, piezoelectric energy harvesting devices, graphene-based supercapacitors, nanomaterials for water, energy, and environment, advanced ceramics from polymeric precursors, materials development for tokamak fusion reactors, nanocarriers for drug delivery to name a few as well as improved industrial products like advanced refractories and glass.

## About InCerS & MRITTIKA 1.0

The Indian Ceramic Society (InCerS) incubated the student chapter at the department of ceramic engineering, NIT Rourkela in the year 2017 with the aim to 'calcinat' the ever-evolving raw interest in materials and their properties, and its active members has been bestowed with the best student's chapter for its outstanding contribution during the 86th Annual General Meeting held at Indian Institute of Technology, Varanasi, 8-9 December 2022. The InCerS student chapter at NIT Rourkela has successfully organized the 1st National Conference (MRITTIKA 1.0) in the year 2019, comprising multiple events, including quiz competitions, model presentations, and paper presentation. The session was graced by industry professionals, scientists and eminent personalities from TRL Krosaki, Kerneos aluminate, Aditya Birla Insulators, Tata steel, NALCO, CGCRI and many more. The brainstorming sessions organized by students brought up hefty goodies for exceptionally performing candidates.

## About NIT Rourkela

National Institute of Technology (NIT), Rourkela was founded as Regional Engineering College, Rourkela in 1961. It is a prestigious Institute with a reputation for excellence at both undergraduate and postgraduate levels, fostering the spirit of national integration among the students, a close interaction with industry and a strong emphasis on research, both basic and applied. It's consistently ranked within the TOP 20 engineering institutes for 5 consecutive years as per MOE's NIRF, Govt. of India and has retained a good world ranking among its peer Institutes. The city of Rourkela is a bustling industrial town, cosmopolitan by nature and is well connected to all parts of the country by road, rail & air. It is en route the Howrah-Mumbai main line of the South-Eastern Railway. Nesting amidst greenery on all sides. NIT campus is approximately 7km from Rourkela railway station. The nearest airports are Rourkela, Jharsuguda, Ranchi, Kolkata and Bhubaneswar.

## THEMATIC AREAS

- Current Status and Future Trends in the Manufacturing of Refractories.
- Diversified Application of Refractories in Ferrous and Non-Ferrous Industries.
- Advancements in Glass Science and Technology.
- Sensors and Actuators
- Ceramic Membranes and Porous Materials for Desalination, Water Treatment & Purification for Industrial Waste Disposal.
- BioCeramics
- Ceramics for energy applications (Batteries, Supercapacitors, SOFC, Thermoelectric, Electrocatalyst, Photocatalysts, Solar Cell)
- Industry 4.0 & Lean Manufacturing concept in Ceramic Industry
- Reduction of Carbon Footprint and Emergence of Green Manufacturing
- Recent Advancements in Whiteware Industries
- Magnetics and Dielectric Ceramics
- Ceramics for building materials
- Additive Manufacturing in Ceramics

## CALL FOR PAPERS

The technical sessions will include oral/poster presentations broadly covering the thematic areas as mentioned above. Those who would like to present their work are requested to send the title, and 200 words abstract along with the name, affiliation, email address, and phone number via:

Google form link: <https://forms.gle/5ppuNFeJiPuUFsQr7>

The abstracts will be subjected to primary screening by technical experts in their fields. The decision regarding the acceptance of the abstract will be communicated to the respective author via email in due course of time. Accepted abstracts will be published in full-scale paper form after peer reviewing in Scopus index proceedings. The accepted abstracts will also be printed in the souvenir.

## TECHNICAL SESSION

### 1. PLENARY LECTURES/INVITED LECTURES

Industry professionals/ eminent academic experts who are established in their field and have nationwide recognition will be invited to share their knowledge on the current affairs and futuristic trends of ceramic and allied industry for a maximum duration of 1 hour. Delegates who would be invited to give plenary talks must Register for the conference in the suitable category.

### 2. CONTRIBUTORY LECTURES

Industry professionals/academic experts who only wish to present their work are welcome to give a contributory talk to the conference with a theme relevant to the ceramic and allied industry for a maximum duration of 45 min. Delegates who would like to give a contributory talk must Register for the conference in the suitable category.

### 3. PANEL DISCUSSIONS

Experts from industry and academia are cordially welcomed to be a part of a panel discussion comprising tentatively five panelists (liable to change depending on registrations) for a two-hour window during the conference. The agenda may include industry-relevant topics from basic (refractory, glass, etc.) and advanced ceramics (nanoceramics, electroceramics, energy materials, etc.) or any other topics at the discretion of the conference committees.

### 4. POSTER PRESENTATIONS (OPEN TO ALL CATEGORIES)

Industry delegates/academicians/research scholars/students can present their work in the form of a poster (poster size and format will be notified later). The poster presenter must Register for the conference and must be physically present during Q&A session to explain the merits of their work to a panel of judges. The best poster in different categories will be awarded.

## STUDENT'S SESSION

### 1. POWERPOINT KARAOKE

A fun PowerPoint Karaoke event to challenge both the author of the slide and the presenter to improve their communication skills.

Submit or Present a Slide (or Both!)

- Create a PowerPoint slide with a contribution to your research or a materials science-related topic.
- Don't be too serious! Popular science topics aren't the point; we're looking for the funniest story or best design!
- Topics can range from your actual research to something silly, such as the use of rubber ducks. Be sure to keep it simple so that anyone can present, and keep it clean—inappropriate content will not be accepted.

During the event, presenters will be assigned a random slide out of the pool of the submitted slides by the authors. Presenters will have five minutes to prepare a two-minute (maximum) presentation. Winners will be selected by anonymous audience voting. Goodies will be awarded to the best three authors and presenters.

### 2. QUIZ (FUN EVENTS) (Mega Hunt Game)

The quiz will involve some sort of gameplay where there will be different levels and each level will first begin with a storyline which will be conveyed to the participants through an audio-visual clip prepared by us followed by a series of situational-based questions. The decision whether you proceed to the next level will be determined by your performance in the former level. So basically, every story will have a situation of let's say a combat or a clash where winning or losing will ultimately depend upon their exposure to external factors like extreme temperature, acidic/basic environment, etc. The winners will be judged on how accurately they chose, which will decide finally whether they survived all the levels or vice-versa.

## PATRON

### Prof. K. Umamaheshwar Rao

(Director- NIT ROURKELA)

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## CHAIRMAN

### Prof. Ranabrata Mazumder

(Head of the Department)

Ceramic Engineering

E-mail: ranabrata@nitrkl.ac.in

## CONVENER

### Prof. Swadesh Kumar Pratihar

(Faculty Advisor - InCerS Student Chapter NITR)

Professor

Ceramic Engineering

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### Prof. Ritwik Sarkar

Professor

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## LOCAL ORGANISING COMMITTEE

- Prof. Arindam Paul
- Prof. Arun Chowdhury
- Prof. Bibhuti Bhusan Nayak
- Prof. Debasish Sarkar
- Prof. Japes Bera
- Prof. Partha Saha
- Prof. Ritwik Sarkar
- Prof. Ranabrata Mazumder
- Prof. Santanu Bhattacharyya
- Prof. Shantanu Kumar Behera
- Prof. Sudip Dasgupta
- Prof. Sumit Kumar Pal
- Prof. Sunipa Bhattacharyya
- Prof. Swadesh Kumar Pratihar

## TECHNICAL COMMITTEE

- Prof. Debasish Sarkar
- Prof. Partha Saha
- Prof. Santanu Bhattacharyya

## IMPORTANT DATES

Last Date of Online Registration - 20.03.2023

Spot Registration - 06.04.2023

Last Date of Abstract Submission- 15.03.2023

(Accepted Abstracts will be published in full paper form in scopus index proceedings after peer review)

## NECESSARY INFORMATION

Abstract Submission - <https://forms.gle/5ppuNFeJiPuUFsQr7>

Registration Link - <https://forms.gle/weCwmF1geQPnQ98H6>

## SPONSORSHIP

On behalf of the organizing committee of the 3-day national conference & MRITTIKA 2.0, we solicit your active participation and gracious presence during the event as a financial sponsor. Four levels of sponsorship are available as mentioned below.

SL.NO.	DETAILS OF SPONSORSHIP	RATE (INR)	NO OF FREE DELEGATES
1	TITLE	2,00,000	4
2	PLATINUM	1,50,000	3
3	GOLD	1,00,000	2
4	SILVER	50,000	1

## SOUVENIR

On the occasion of 3-day national conference & MRITTIKA 2.0, a souvenir will be published by the organizing committee. Printed advertisements in the souvenir are welcome with the following charges in different slabs:

SL.NO.	DETAILS OF ADVERTISEMENT	RATE (INR)
1	INSIDE COVER PAGE	20,000
2	FULL PAGE	10,000
3	HALF PAGE	5,000

## CONFERENCE REGISTRATION

SL.NO.	CATEGORY	REGISTRATION FEES(INR)
1	INDUSTRY DELEGATES	5000
2	R&D/ ACADEMIC INSTITUTES (FACULTY MEMBERS/SCIENTISTS)	3000
3	STUDENTS/RESEARCH SCHOLARS	1000

Use the link for registration: <https://forms.gle/weCwmF1geQPnQ98H6>

For payment of Registration fees / Advertisement fees / Sponsorship, please write to us at [incersnitr@gmail.com](mailto:incersnitr@gmail.com). Bank Account and other transaction details will be provided for the same.



For further information, please contact:

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Scan this QR Code for registration:

For any queries, mail us at : [incersnitr@gmail.com](mailto:incersnitr@gmail.com)