

ICPMMM2024

International Conference on Processing

of Minerals, Metals, and Materials :



BEYOND TOMORROW



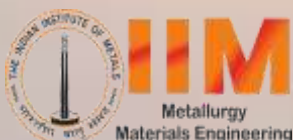
21-23 February, 2024

ORGANIZED BY

**Department of Metallurgical
Engineering, Kazi Nazrul
University, Asansol, INDIA**



In Association With



KNU – IIM Student Chapter,
Kazi Nazrul University,
Asansol, INDIA

Department of Metallurgical & Materials
Engineering, National Institute of
Technology, Durgapur, INDIA



VENUE : FAIRFIELD BY MARRIOTT, KOLKATA, INDIA

ABOUT THE UNIVERSITY AND THE DEPARTMENT

Kazi Nazrul University (KNU), a nascent university in the heart of industrial belt in West Bengal, runs on its campus and also in its affiliated colleges Diploma, UG, PG, MPhil and PhD courses in the Faculty of Arts and Fine Arts, Faculty of Science and Technology, Faculty of Law, and Faculty of Commerce and Management. It caters to the need of over forty four thousand students every year. Within ten years of its existence, KNU has put a mark in academia by way of imparting knowledge, developing skills, and promoting entrepreneurship among students for making them competent as per needs of the society from the local to the global in various fields including research and development. Various initiatives have already been taken to internationalize the University for connecting it globally with institutions of repute. As an academic institution, KNU believes in four I's : Inspiration, Innovation, Inculcation and Integration. The Department of Metallurgical Engineering in the School of Mines and Metallurgy, KNU, started offering three years diploma in Metallurgical Engineering from 2017 and B. Tech. in Metallurgical and Materials Engineering from 2019 onwards. Both the Diploma and Degree courses are approved by AICTE. The Department has its own Board of Studies (BOS) and Board of Research Studies (BRS) with experts from eminent institutes, e.g. IITs, Jadavpur University, etc. Besides teaching, faculty members are also engaged in collaborative research with various academic and research institutes, and industries. Students undertake vocational training, internship, and research projects in various reputed organizations like IISCO, Tata Hitachi, NML, RINL, and nearby iron and steel plants.

KOLKATA CITY

Kolkata, one of the biggest cities in India, is a perpetually ongoing festival of human existence, concurrently luxurious, refined, warm, and futuristic. A vibrant 350-year-old metropolis located on India's Eastern Coast, the capital of West Bengal thrives on contradictions and imposing spectacles. Kolkata, the City of Joy, in every sense, is the artistic, cultural and intellectual capital of the country and Kolkata boasts six Nobel Laureates as their place of birth or work. Netaji Subhash Chandra Bose International Airport, about 15km from the city centre, is well connected with other parts of India and abroad as well. Kolkata's streets are vivid, hectic, and yet, brimming with life and creativity. Driven by the indomitable spirit of the self-made middle class, the city has created a beautiful juxtaposition of old colonial-era charm with the nascent upcoming hipster culture that thrives amongst the city's millennial residents. Kolkata has a very lively nightlife and great street food that is famous all across the country. The city is lined with eateries and food stalls at every corner, where you can savour traditional Bengali food, or try out local snacks, like, Jhalmuri, or Ghugni Chaat. You just cannot miss the omnipresent sweetmeat shops all around. Weather in Kolkata in February is soothingly enjoyable, with temperature between 16-29°C and mostly bright sunny days.



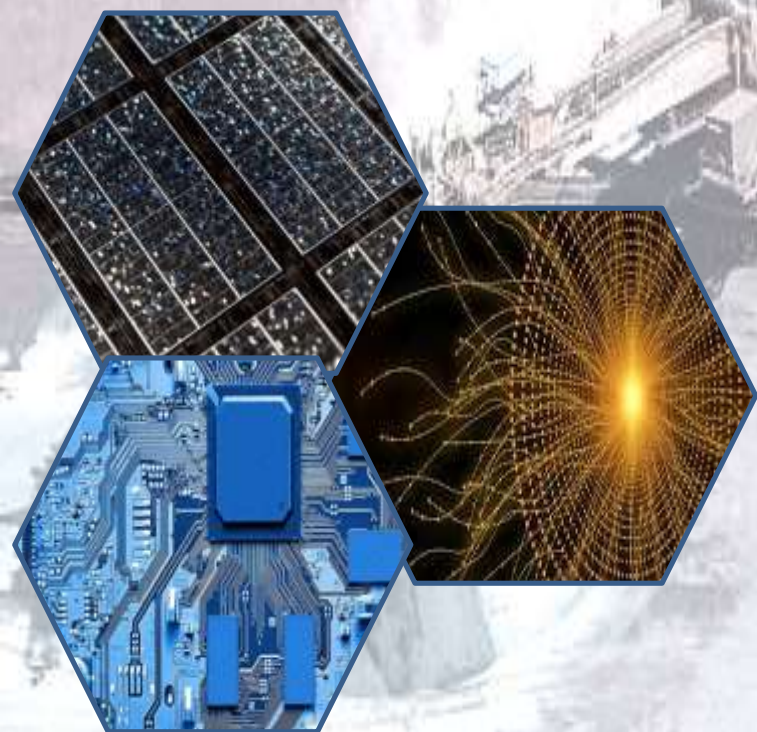
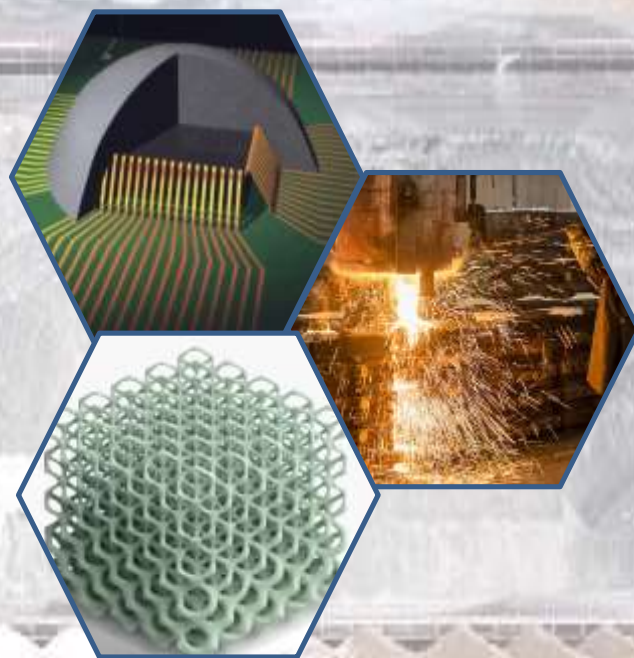
VENUE

Fairfield by Marriott is one of the best hotels in Kolkata, located in the Newtown area, with nice amenities and away from the city chaos. It is 5 km from the Metro Station, 8 km from Sealdah Railway Station and 11 km from the international airport.

Invitation

At the onset, we want to introduce ourselves as a fledgling Department of Metallurgical Engineering of Kazi Nazrul University, a state aided university in the eastern state of West Bengal, India. We are running AICTE approved UG courses as well as doctoral programs duly supported by required infrastructures, well qualified faculty members, close collaborations with industries and research labs, and external fundings. Our faculties are actively engaged in teaching and research and we strive to keep pace with the fast changing world of Minerals, Metals, and Materials through our research programs.

Major areas of research include but not limited to : Iron and Steelmaking, Materials Degradation, Composites, Alloy Development, Smart and Functional Materials, Nano Materials, Environmental Management in the Metals and Minerals Sector, Value Addition to Wastes, Traditional Metalcraft, Structure - Property Correlation, Materials Characterization, etc. We are always open to the fast changing and fascinating world of minerals, metals and materials and we strive to keep ourselves abreast of their local and global developments. Organizing this conference is a sincere endeavor to bring the gamut of academicians, professionals, researchers, policy makers, and students to exchange views and share visions with a focus on the developments in near and far future. We cordially invite you for your active participation in this conference to make it a success.



Call for Papers

ICPMMM2024 will cover a wide range of themes spanning the entire spectrum of activities related to minerals, metals, and materials that are of current and possible future interests to researchers and professionals from academia, research, industry, and policy makers. ICPMMM2024 will provide a knowledge sharing platform on technological advances and will promote collaborations and dialogues among leaders, experts, budding professionals, researchers, and students so that they can utilize the mutual strengths to deliberate on challenges and opportunities. The ICPMMM2024 will consist of theme based parallel sessions that will be inspiring for the professionals and students through career opportunities, technology trends, industry and society needs. The ICPMMM2024 will be structured around a few broad verticals, which would appropriately leverage invited and keynote lectures from leading experts in the related fields as well as contributory papers presentations. Overall, ICPMMM2024 programme is sure to provide the participants an enriching experience. The paper should only be submitted by Email at icpmmm2024@gmail.com and CC to basudrprojjal@gmail.com. We invite contributions on the following themes as well as other relevant fields related to Minerals, Metals, and Materials.

Broad Theme of the Conference

“Processing of Minerals, Metals and Materials : Beyond Tomorrow”

There will be one dedicated parallel event on **“Green Steel : Concept to Reality”** on 22 February 2024 comprising of three sessions.

Sub-Themes

* Ore Beneficiation * Mineralogical Characterization * Process Mineralogy, Design and Development of Mineral Processing Equipment and Process * Simulation of Mineral Processing Circuits * Agglomeration of Ores * Iron Making and Steel Making * Non-Ferrous Extractive Metallurgy * Hydrometallurgy * Bio-Materials * Composites * Material Science and Engineering * Metallography * Materials Property and Characterization * Materials Testing and Control * Microstructure Evolution * MEMS Integration * Meta Materials * Ceramics * Electrical, Optical, Magnetic Materials * Intermetallics and Special Polymers * Nano-materials and their Fabrication * Numerical Modelling and Simulation * Alternate Materials * Material Substitution * Computational Modeling * Advanced Alloys * Optical and Electronic Materials * Microelectronics * Electronic Packaging Materials * High Entropy Alloys * Ultralight Alloys * Semi-solid Processing * Metallic Foams * Tribology * Sustainable Materials * NDT * Life Cycle Analysis * Thin Film Technology * Coatings * Pollution Abatement * Zero Emission * Nano-electronics * Membrane Materials * Catalysis * Materials Chemistry * Battery * e-waste Processing * Solar Cell * Photovoltaic Materials * Energy Storage * Carbon Capture * Hydrogen Storage * Sintering * Powder Metallurgy * Atomization * Metal Forming * Sensors * Devices * Surface Engineering * Materials in Medical Applications * Implant Materials * Self-healing Materials * Thermoelectric Materials * 3-D Smart Materials * Carbon Nanotubes, Graphene and Composites * Piezoelectric Materials * Semiconductor Materials * Ceramics, Glasses and Composite Materials * Advanced Nanomaterials * Renewable materials * Functional Materials * Dental Alloys * Conducting Polymers * Metal Joining * Computational Materials Design * Evolutionary Structural Materials * Energy Storage and Conversion Materials * Hybrid Materials * Fuel Cell * Optical fibers and displays * Controlling and Monitoring Devices * Solid State Ionics * Design, Synthesis and Characterization * Smart/Intelligent Materials in Automation and Control * Dielectrics and Photonic Materials * Intelligent Semiconductor Models * Conventional Superconductors * High-temperature Superconductivity * Detectors, Emitters * Thermoelectric and Energy Applications * Additive Manufacturing and 3D Printing * Applications of AI in Materials * Corrosion and Degradation * Energy Management * Energy Audit * Environment Impact Assessment * Safety and Health Issues

Call for Abstracts

The abstract, not exceeding 500 words with maximum five keywords and prepared as per the guidelines, should be submitted through Email at icpmmm2024@gmail.com and CC to basudrprojjal@gmail.com. The abstract should be prepared using template provided on the conference website.

Abstract Submission Deadline
30th November, 2023

Guidelines for Authors

- ☐ The abstract of the Paper within 500 words with a maximum of five keywords has to be submitted first and after acceptance of the same, the full text of the paper has to be submitted.
- ☐ Domain experts will review the Abstract and the decision will be communicated to those authors whose Abstract is accepted.
- ☐ Full Text Paper should be prepared in line with the following.
- ☐ Papers should be camera-ready in MS-Word format, not exceeding 3000 words in length excluding figures, tables, appendices.
- ☐ The language of the publication is English. The mode of presentation should be in third person.
- ☐ SI units should be used wherever possible. Other units, if used, should be given only in parentheses preceded by SI units.
- ☐ Mathematical symbols should be typed and care should be taken to differentiate between similar characters (e.g. 1 and I), upper and lower case letters and superscripts and subscripts.
- ☐ Lengthy mathematical proofs and derivations and extensive test data are discouraged. If absolutely essential, they should be given as appendices.

Publication Opportunity

The good quality research papers from the conference, after thorough peer review, will be published in a **Springer journal**. The publication of a paper will be subject to the referee's decision through peer review process and submission of copyright agreement and less than 15% plagiarism report.

Key Dates

Abstract Submission by : 30th November, 2023

Full Paper Submission by : 15th December, 2023

Full Paper Acceptance by : 15th January, 2024

Registration Deadline : 31st January, 2024

Registration

Delegates are requested to register and pay online

CATEGORY	INR	USD
ACADEMICS	8000	300
INDUSTRY AND R&D LAB	9000	400
STUDENTS	4000	150
ACCOMPANY/ SPOUSE	4000	150

Note: Registration is mandatory to participate (excluding GST)

For the participants unable to attend the conference at the venue due to unavoidable reasons, special **online** sessions for presentation will be arranged

Registration and Payment Link :

Registration Link :

<https://docs.google.com/forms/d/e/1FAIpQLSfTLI7FJ0aLX1E4NXkPyYUGAPwo9rZiX9rN2HQztCP55IG6Jw/formResponse>

Bank Details :

Bank Name : HDFC

Account Name : KAZI NAZRUL UNIVERSITY

Account No. : 50100489460550

IFSC Code : HDFC0000324

Branch Name : ASANSOL

Scan and Pay



Prospective participants are requested to visit
<https://icpmmm2024.in/> for latest updates

Special Attraction

We would like to come forward to promote the **Dokra Art** which is an ancient and traditional **metalcraft** practiced in many parts of India, including West Bengal. Unfortunately, however, this special art form is struggling for its existence due to various socio-economic reasons. We want to create a wider awareness among various socio-economic strata to take interest in this unique metalcraft that will help the Indian metallurgical heritage survive and flourish. We are planning to give a piece of Dokra casting to each participant as a memento.

Souvenir

During ICPMMM2024, a Souvenir will be released. The Souvenir will contain messages from Govt. functionaries and eminent professionals, special articles, event details, details about various committees, sponsors/ supporters and advertisements from various industries, organizations from India and abroad.

The soft copy of the souvenir will be provided to all the delegates attending the event. Limited high quality hard copies will be printed for distribution to Govt. agencies, Industries, R&D labs and Academic Institutions.



Committees for ICPMMM2024

Chief Patron

Prof Debashis Bandyopadhyay, Vice Chancellor, KNU

Patrons

Dr Chandan Konar, Registrar, KNU

Prof Santanu Kumar Ghosh, Dean Faculty of Science and Technology, KNU

Chairman

Prof Projjal Basu, KNU

Advisory Committee

INTERNATIONAL

- Prof Cheong Kuan Yew, USM, Malaysia
- Ts Dr Teo Pao Ter, UMK, Malaysia
- Dr Samayamutthirian Palaniandy GM, Eirich Australia/Global Product Manager
- Prof Elizabeth Makhatha, HOD, Metallurgy, Univ Johannesburg
- Mr Ram Chandra Chakraborty, MD, PSI Metals (India) Private Limited
- Dr Anrin Bhattacharya, CEO, RECYRON, Austria
- Dr Saikat Chatterjee, Tata Steel, Ijmuiden, Netherlands
- Prof Ir Dr Wong Yew Hoong, UM, Malaysia
- Dr Saikat Samanta, AGM Process & Sales, NewFer, Germany

NATIONAL

- Prof Rajeev Ahuja, Director, IIT Ropar
- Mr Arup Krishna Saha, COO, MINEX Metallurgical Company Limited
- Prof Sumantra Bhattacharya, Emeritus Fellow, IIT Dhanbad
- Prof Govind S Gupta, IISc Bangalore
- Dr Ashis Bhaduri, VP Operations, TATA Bluescope Steel Pvt Ltd
- Prof Somnath Basu, IIT Bombay
- Prof Samit K Roy, IIT Kharagpur
- Mr S K Dutta, MD, Duttcon Consultant & Engineers, Kolkata
- Prof Karabi Das, HOD, Metallurgical & Materials Engineering, IIT Kharagpur
- Prof Sutapa Roy Ramanan, BITS Pilani (Goa)
- Prof D Ravi Kumar, IIT Delhi
- Dr P K Banerjee, Outstanding Scientist and Scientist-in-Charge, CIMFR, Dhanbad

Technical Committee

Prof Kaushik Biswas, IIT Kharagpur
Prof Bankim Roy, NIT Rourkela
Dr Satadal Ghorai, NIT Durgapur
Dr Tejas Ramakrishnan, McGill University, Canada
Prof SC Patnaik, IGITS, Sarang, Odisha
Dr Samir Ch Roy, IIT Ropar
Dr Sandipan Roy, SRM Institute of Science & Technology, Chennai
Dr Golap Md Chowdhury, RDCIS, Ranchi
Prof Amitava Basu Mallick, IEST, Shibpur
Dr Arup Kumar Mandal, NIT Durgapur
Prof B B Panigrahi, IIT Hyderabad
Dr Durbadal Mandal, NIT Durgapur
Prof K Banerjee, NIT Surathkal
Dr Arup Dasgupta, IGCAR, Kalpakkam
Prof Rajib Dey, Jadavpur University
Prof Indradev Samajdar, IIT Bombay
Prof J N Roy, KNU

Organizing Committee

Technical & Logistics

Dr Arijit Sinha, KNU
Dr Chanchal Biswas, KNU
Dr Gurudas Mandal, KNU
Mrs Barnali Sengupta, KNU
Prof P C Chakraborti, Jadavpur University
Dr Supriyo Bera, NIT Durgapur

Hospitality

Ms Amrita Bhattacharya, KNU
Mr Somnath Dutta, KNU
Mr Sumit Dey, KNU
Mr Sagir Khan, KNU

Student Member

Indrajit Ghanta, IIT Bombay
Girish Roy, KNU
Abhishek Nag, KNU
Ranjan Ghosh, KNU
Ananya Adhikary, KNU
Anuparna Das, KNU
Snehanjali Mukherji, KNU
Suresh Naskar, KNU
Swarnava Das, KNU

Agradip Acharya, Jadavpur University

IT Support

Suman Mondal, KNU

Sponsorship

Types	Fees
Gold Sponsor	INR 2,00,000 (includes 5 delegates, full page advertisement in souvenir, logo in souvenir, conference webpage & banner)
Silver Sponsor	INR 1,50,000 (includes 3 delegates, full page advertisement in souvenir, logo in souvenir, conference webpage & banner)
Dinner or 1 lunch Sponsor	INR 1,25,000 (includes 3 delegates, half page advertisement in souvenir, logo in souvenir, conference webpage & banner)
Seminar Kit Sponsor	INR 1,00,000 (includes 3 delegates, logo in souvenir, conference webpage & banner)
1 Hall Sponsor (Full Day)	INR 75,000 (includes 2 delegates, logo in souvenir, conference webpage & banner)
Other Sponsor	As discussed (logo in souvenir, conference webpage & banner)

Sponsors and Support

Keynote Speakers

(confirmed so far)

**Dr Samayamutthirian
Palaniandy**

Global Product Manager (Tower Mill),
Nippon Eirich Co. Ltd., AUSTRALIA

Prof. Samit K. Ray

Institute Chair Professor, Department of
Physics, IIT Kharagpur

Prof. Rajeev Ahuja

Director, IIT Ropar

Dr. Anrin Bhattacharyya

Managing Director, RECYRON, AUSTRIA

**Mr. Ram Chandra
Chakraborty**

Managing Director, PSI Metals (India) Pvt
Ltd

Prof. Karabi Das

Professor & HOD, Department of
Metallurgical & Materials Engineering, IIT
Kharagpur

Dr. D. Ravi Kumar

Professor, Department of Mechanical
Engineering, IIT Delhi

TS. Dr. Teo Pao Ter

Senior Lecturer, Materials Technology
Program;
Department of Energy, Mineral and
Materials Technology; Universiti Malaysia
Kelantan (UMK), MALAYSIA

Dr. Cheong Kuan Yew

Professor, School of Materials & Mineral
Resources Engineering,
Universiti Sains Malaysia (USM), MALAYSIA

<https://icpmmm2024.in/>

ICPMMM2024



Contact

Conference Chairman : Prof Projjal Basu

KAZI NAZRUL UNIVERSITY, Asansol-713340

West Bengal, India

Mobile: (+91) 7406409273

icpmmm2024@gmail.com /

metallurgy.projjal@knu.ac.in /

icpmmm24@gmail.com

For regular updates, please keep eye on

<https://icpmmm2024.in/>

