



INTERNATIONAL CONFERENCE ON ADVANCES IN FOUNDRY AND FORMING TECHNOLOGY

December 18 & 19 | 2024

NIAMT (Formerly NIFFT), Ranchi



www.icafft2024.com

Jointly Organized By



Department of Foundry and Forge Technology
National Institute of Advanced Manufacturing Technology, Ranchi
Deemed to be University (Under Distinct Category)



The Institution of Engineers (India)
Jharkhand State Centre
Under Aegis of Mechanical Engineering Division Board, IEI

Industry Partners



NIAMT, Ranchi

"Established in 1966 by Govt. of India and UNDP-UNESCO, National Institute of Foundry and Forge Technology (NIFFT) is a society for providing quality manpower in manufacturing technology. It is governed by a board of governors with representatives from various sectors. Recently, it has been renamed as National Institute of Advanced Manufacturing Technology (NIAMT). NIAMT is a leading institute for teaching, training, research, consultancy, and information services in manufacturing and related fields. It aims to achieve excellence in technical education and disseminate state-of-the-art knowledge and expertise in the field. For more information please visit: www.niamt.ac.in



Dept. of Foundry and Forge Technology

The Foundry Technology and Forge Technology Department independently came into existence in 1966 at the time of inception of Institute. The department offers an Advanced Diploma Courses and M. Tech course in Foundry Forge Technology. In 2022, they merged and started a B. Tech course in Production and Industrial Engineering with honours in Foundry and Forge Technology.

The Institution of Engineers (India)

The Institution of Engineers (India) [IEI] is the largest multidisciplinary professional body, representing 15 engineering disciplines with over 0.8 million members. Established in 1920 and headquartered in Kolkata, IEI is a prestigious organization recognized by Royal Charter in 1935. It operates through 125 centers in India and 6 overseas chapters, providing technical and professional services globally. Recognized as a Scientific and Industrial Research Organisation (SIRO) by the Government of India, IEI supports research and development and maintains the International Professional Engineers (IntPE) Register for India. IEI also publishes peer-reviewed journals in collaboration with Springer.

Jharkhand State Centre

The Ranchi Sub-Centre of The Institution of Engineers (India), founded on 23rd July 1961, evolved into a Local Centre in 1983 and was elevated to Jharkhand State Centre in 2001. It actively engages in technical discussions, societal roles of engineers, and cultural programs, fostering a strong community bond. The center, now in a modern three-story building with conference halls, a library, and an auditorium, supports continuous education. With around 6,000 corporate and 7,500 student members, it has been designated an 'A' category centre and has received multiple awards for excellence from IEI. For more details, visit: www.ieijscjharkhand.org.

Industry Partners

MPM Group

MPM Group, established in 1984 by Deepak Chowdhary, is a pioneer in the Indian foundry industry. Over the past 40+ years, MPM has grown into India's largest manufacturer of engineered Lustrous Carbon Additives, playing a crucial role in the green sand molding practices of iron foundries. The company has consistently innovated in product, application and technical services with domain expertise in green sand molding.

Over the years, the company expanded its portfolio to include proprietary products like "Lustron," an engineered pre-blend of Lustrous Carbon formers, and diversified into areas such as refractory coatings, recarburisers and inoculants through strategic joint ventures with global leaders.

In addition to its traditional manufacturing prowess, MPM has embraced digital transformation through its subsidiary, MPM Infrosoft. This division is at the forefront of leveraging Industry 4.0 and AI technology to enhance foundry processes. Their flagship software, SANDMAN, utilizes patented ML-based predictive and true AI prescriptive analytics to optimize the entire foundry process end to end, integrating seamlessly with existing systems to provide a unified platform.

Today, MPM Group continues to lead in the foundry sector, offering a comprehensive range of products and digital solutions that cater to the evolving needs of the industry.

CMR Green Technologies Limited

CMR Green Technologies Limited is India's largest producer of recycled aluminum and other non-ferrous metals, with a global presence and 12 plants across India. With an annual recycling capacity exceeding 400,000 MT, CMR is a leader in the industry, known for introducing Liquid Metal in India and developing a patented technology for molten metal transport. The company has strategic joint ventures with Japan's Nikkei MC Aluminium and Toyota Tsusho Corporation, further solidifying its market position.

Since its inception in 2006, CMR has achieved a 25% CAGR, becoming the preferred supplier for major automotive OEMs in India, including Maruti Suzuki, Honda, and Hero MotoCorp. CMR sources scrap from over 200 suppliers across 25 countries and is committed to sustainability, using 100% post-consumer scrap to produce high-quality alloys. The company's processes are certified by ISO and OHSAS standards, and it boasts a diverse workforce, with 50% female employees.

CMR's sustainability efforts are aligned with GRI Universal Standards 2021, emphasizing resource efficiency and closed-loop systems to reduce waste. With over 4,000 employees, CMR is dedicated to continuous improvement, technological advancement, and making a positive impact on communities and the environment.

Danieli Corus B.V.

Danieli Corus B.V., with roots in the IJmuiden steel plant since 1924, has become a global leader in Blast Furnace Ironmaking and BOF Steelmaking. Founded in 1977, it became fully owned by Italian manufacturer Danieli & C Officine Meccaniche S.p.A in 2015. With over 30 years in the industry, Danieli Corus partners with leading steel producers worldwide, delivering top operational, economic, and sustainable benefits through advanced technologies.

Themes and Sub-themes

In an era of globalization, the dynamics of production and manufacturing are undergoing a significant transformation. The complexity associated with transformation leads us to explore and understand the evolving paradigm. Foundry and forming industries are one of the main contributors of metallic components for various industries, from automotive to medicine, from aerospace to the energy sector. For manufacturing a component, understanding of various interlinked field are required. Hence this conference is not limited to foundry and forming only and will act as a single place to address various related issues. ICAFFT 2024 is meticulously designed to bring together renowned academicians, honored researchers from distinguished institutions, industry leaders and practitioners as well as doctoral students.

Papers are called in the following tracks, but not limited to:

- Advanced Foundry Processes and Technologies
- Advanced Forming Processes and Technologies
- Advanced Materials and Technologies
- Simulation and Modelling
- Industry 4.0 and Smart Manufacturing
- Environmental Sustainability and Emission control
- Quality Control and Inspection Techniques
- Innovations in Tooling and Equipment
- Advancements in Heat Treatment
- Advanced Machining Processes and Technology
- Advances in Furnace Control, Energy Optimization and Maintenance
- Mechanization, Automation, Robotics and Digitization
- Education and Training in Foundry, Forming and allied Advanced Manufacturing

Call for Papers

All interested participants are invited to contribute technical/research papers and case studies detailing concepts, innovations, ideas, or practical experiences for oral and poster presentations. Abstracts are invited of approximately 200 words and should preferably be within 300 words in format provided by the conference committee. International delegates will be allowed to present their work in an online mode. For more information, please visit website www.icafft2024.com

Abstraction Submission Starts	30 th June 2024
Abstraction Submission End	15 th November 2024
Manuscript Submission Starts	01 st July 2024
Manuscript Submission End	20 th November 2024
Early Bird Registration	15 th September 2024
Registration Deadline	5 th December 2024
Conference Dates	18-19 th December 2024

Publication

Peer-reviewed and selected papers will be considered for publication in SCI or SCOPUS indexed journals/ conference proceedings (like lecture notes in mechanical engineering, Institution of Engineers etc.). List will be informed later. Authors must submit original and unpublished research work that is not

under consideration for publication elsewhere. Authors should check for plagiarism before submitting their work ensuring it is preferably below 15%. The plagiarism criteria are subject to change based on the requirements of the publishers. In this regard, decisions of the publication committee are final. For publication related queries contact us at publication.icafft@niamt.ac.in

Registration

The registration fee for the Conference will cover participation in Technical Sessions, Conference Proceedings, Printed materials, Conference kit, Lunch, Tea/coffee, Conference Banquet, etc

Category of Delegate	National Delegate	International Delegate
Delegates from Academia/Institutes	Rs. 5000	US\$ 95
Delegates from Industries	Rs. 6000	US\$ 100
Research Scholars and Students	Rs. 4000	US\$ 80
Conference Participation without Publication and KIT	Rs. 2000	US\$ 50
Spouse/Accompanying person/co-authors (Without KIT)	Rs. 2000	US\$ 50

We are pleased to announce that the **registration fees will be waived for the first 20 selected research scholars** whose papers are accepted for presentation at ICAFFT 2024. To qualify for this waiver, the research scholar must be both the corresponding and presenting author of the accepted paper. Additionally, the scholar will need to upload a valid ID and a forwarding letter from their institute.

Advertisement Tariff

Back cover colour page	₹ 50,000
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Account Details

Account Name: NIAMT IRG FUND ACCOUNT
Account No: 2730101006939
Branch: CANARA Bank, NIFFT Ranchi
IFSC: CNRB0002730



About Ranchi

Ranchi is the capital of state of Jharkhand, which is endowed with rich iron ore and coal deposits. With its rich mineral resources and industrial base, Ranchi is rapidly developing into an important industrial sector in India. The city is surrounded by thick forests and beautiful natural waterfalls and still unspoiled by modern commercialism. Ranchi is located in eastern part of India, around 400 km from Kolkata. It has very pleasant and cold climate throughout the year and the temperature in November may vary between +21°C and +26°C.

Travel

Domestic airlines operate between Ranchi and other major cities of India such as New Delhi, Mumbai, Kolkata, Bengaluru, Hyderabad, Raipur, Bhubaneswar and Patna. Ranchi is also well connected by rail and road with all major cities of the country, namely Bengaluru, Bhubaneswar, Chennai, Hyderabad, Jamshedpur, Jaipur, Kolkata, Mumbai, Nagpur, Patna, Raipur, New Delhi, Vishakhapatnam, etc.

Accommodation

Ranchi offers a wide range of accommodation to suit every budget. Both economy and luxury class hotels are located within 5 km from the directly or through Conference Venue. Delegates are requested to book the accommodation in advance to get preferred choice. Accommodation for participants may be provided in Institute hostel (if available) on payment basis.

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Venue

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