



IIT BOMBAY
NMD ATM 2020
The Indian Institute of Metals



IIT BOMBAY
Mumbai

www.nmdatm2020.org/

24 February 2021: 58th National Metallurgists' Day (NMD)
(Under the Aegis of Ministry of Steel, Government of India),
IIM Platinum Jubilee celebrations and IIM Awards function

23 - 26 February 2021: International Conference and 74th
Annual Technical Meeting (ATM)

Organised by:

IIM Mumbai with Pune, Nagpur, Dolvi, Goa and Baroda Chapters

IIT Bombay



IIM
Metallurgy
Materials Engineering





NMD ATM 2020

INVITATION

It is a great honour for The Indian Institute of Metals Mumbai, Pune, Nagpur, Dolvi, Goa and Baroda Chapters together with Indian Institute of Technology Bombay (IIT Bombay), to organize from **February 23 to 26, 2020** a composite event consisting of the following: (i) 58th National Metallurgists' Day (NMD); (ii) the IIM Awards function (in mixed onsite-online mode at **IIT Bombay**, Mumbai, Maharashtra, as per the prevailing situation); (iii) the International Conference (online) and the 74th Annual Technical Meeting (ATM) of IIM (online). NMD-ATM is the annual mega event of IIM where metallurgists, materials scientists and engineers from all over the world, spanning Industry, Academia & Research institutions, participate to share their knowledge and research excitement. The International Conference will specifically seek to provide a broad 75-year perspective of the most significant advances, at the national and international level, in the traditional verticals of IIM namely iron and steel, nonferrous metals and metal sciences. We, the Organizing Committee, cordially invite you to join us for a unique learning, sharing and networking experience.

About the **INDIAN INSTITUTE OF METALS (IIM)**

The Indian Institute of Metals (IIM) was formed in 1946 and has grown to have more than 55 chapters and 10,000 members from industry, R&D, academia and the Government across the country. The Institute publishes Transactions of IIM with Springer Publishers with an impact factor around 1.2 and authorship spanning across various countries. The monthly house magazine IIM Metal News covers interesting articles on metallurgy, news from the chapters and reports on the trends in the business of metals and alloys. Professional educational courses on metallurgy and materials engineering are being offered through the recently launched CII-IIM collaborative program. The Brahma Prakash Memorial Quiz is conducted

for high school children each year with heavy turnout. The Institute publishes technical books under the IIM Books Series in partnership with Springer Publishers, bringing the latest research and technical information from authors across the world. Various Chapters hold events of common professional interest and courses for the benefit of working professionals. The Ministry of Steel as well as the Institute have created a large number of awards recognising outstanding contributions in ferrous metallurgy, non-ferrous metallurgy, metal sciences and safety- health- environmental issues. The Institute will complete 75 years of service and will celebrate the Platinum Jubilee for one year starting from 24th February 2021.

International Conference.

IIM at Seventy Five: Inspiration and Aspirations

An International Conference on the theme “Seventy Five and Aspiring for Global Leadership in Metallurgy and Materials Engineering”, is being organised to cover the progress in theory, research, development, practice, and education in metallurgy in the last several decades, and taking a crystal ball view of the future in iron and steel, nonferrous metals and alloys, metal sciences, advanced materials, manufacturing, and

safety-health-environmental issues. Leaders from India and abroad will share their experiences and views. A panel discussion on “The role of professional societies in promoting engineering, engineers and the larger public good”, featuring presidents of major professional bodies in India and abroad will be held. The event will be held online during evenings of 23, 24 and 25 February 2021.

The Annual Technical Meeting

The Annual Technical Meeting will include four broad areas viz. ferrous metallurgy, non-ferrous metallurgy, metal sciences and environmental issues related to metallurgical industry, and their sub-disciplines, spanning theoretical and practical aspects of mineral beneficiation, metals extraction, processing, physical and mechanical metallurgy, and ceramics. In addition, contemporary topics like Industrial safety, Industry 4.0 and AI aided smart manufacturing and development of materials will be deliberated with invited and contributory lectures, posters and metallographic displays. All details and other updates will be made available through NMD-ATM website www.nmdatm2020.org/

The Themes.

- Advances in Ferrous Metallurgy.
- Advances in Non-Ferrous Metallurgy.
- Advances in Materials Science and Engineering.
- Manufacturing Technologies and Joining Processes.
- High temperature materials.
- Materials Degradation – characterization and protection.
- Computational Materials Science.
- Materials for Energy applications.

Call for Abstracts:

Authors are requested to submit abstracts latest by **15 October 2020**. The Abstract with maximum 300 words and prepared as per the guidelines, should be submitted online on the conference website: www.nmdatm2020.org/. Abstracts sent directly through e-mails will not be accepted. The abstract should be prepared using template provided on our website.

Technical Exhibition(Online).

A technical exhibition is planned to be hosted online for a week starting on **23rd February 2021**, in which various organizations, equipment suppliers, research institutions, consulting organizations and industries, both from India as well as from abroad, will get an opportunity to display their state-of-the-art products and technologies to the largest gathering of Metallurgical and Material Engineering community. The online platform will be professionally designed with provisions for product displays, hyperlinked text, short videos etc. Arrangements for dropping business cards by delegates and taking appointments with the marketing persons for one to one conversations will be made. The charge per exhibitor will be Rs. 1,00,000 (or USD 2,000) + 18% GST. For more details please visit the conference website.

Microstructures Contest (Online)

Registered delegates, who wish to participate in the Microstructures Contest, may submit entries under one of the following categories:

Light Microscopy

Scanning Electron Microscopy

Transmission Electron Microscopy

Advanced Techniques (3D Tomography, APT, AFM, SPM, etc.)

The contestants must carefully choose and specify the category of the entry, which will be unique and final. No reclassification will be done by the contestant or the judges afterwards. The micrographs may be in colour or in black & white. Winners for the best micrographs will be decided on the basis of technical content, aesthetics (visual aspect) and expertise of the techniques. Detailed instructions for preparation of the entries can be found on the conference website.

Registration

Delegates are requested to register and pay online. Alternatively, they may fill the registration form and post it to the Conference Secretariat. Registration fees can be paid either by electronic fund transfer or through Demand Draft in favour of "IIM NMD ATM 2020" payable at Mumbai.

Payment details:

Account name: IIM NMD ATM 2020
Account no.: 2724201010396
Bank & Branch: Canara Bank, IIT Powai, Mumbai
Account type: Current
IFSC code: CNRB0002724
PAN no.: AAATT3359D
GST No. of IIM: 27AAATT3359D1ZI

Registration Fees (Exclusive of 18% GST)

Category	Amount in Rs	Amount in US\$
IIM Non Member	9000	200
IIM Member	7000	150
IIM Member (Retired from service)	3000	-
Student (Under Graduate)	3000	65
Student (Post Graduate)	5000	100

Souvenir

During NMD ATM 2020, a Souvenir will be released by the Chief Guest on 24th February 2021. The Souvenir would display messages from Govt. and Eminent Professionals, Special Articles, NMD and ATM event details, details about various Committees, Awards, Sponsors/ Supporters and Advertisements from various industries, Organizations from India and abroad. The souvenir would be sent to all the delegates, and distributed to Govt. agencies, Industries, R&D labs and Academic Institutions.

Souvenir Advertisements Tariff as applicable (Exclusive of 18% GST)	
Position	Tariffs (INR)
Outside Back cover page Colour	50,000
Inside Cover Page Colour	40,000
Full Page Colour	25,000
Half Page Colour	20,000

Sponsorship.

Sponsorships are solicited from Government organizations, Public Sector enterprises, Private Industries, Commercial establishments and Research Laboratories, who wish to sponsor various events/functions during the NMD-ATM celebrations. Different categories of sponsorship rates and complimentary benefits are listed below (Sponsorship rates are exclusive of 18% GST)

■ Platinum Sponsor (Rs. 10,00,000 or USD 20,000)

- Full page colour advertisement in the souvenir
- One page sponsor profile in the souvenir
- Complimentary registration of up to 8 delegates for the event
- Recognition as a platinum sponsor on conference website and all printed documents and marketing literature for the event with corporate logo of the sponsor on the banner
- Slides before each online event

■ Diamond Sponsor (Rs. 7,50,000 or USD 15,000)

- Full page colour advertisement in the souvenir
- Complimentary registration of up to 6 delegates for the event
- Recognition as a diamond sponsor on conference website and all printed documents and marketing literature for the event with corporate logo of the sponsor on the banner
- Slides before each online event

■ Gold Sponsor (Rs. 5,00,000 or USD 10,000)

- Full page colour advertisement in the souvenir
- Complimentary registration of up to 4 delegates for the event
- Recognition as a gold sponsor on conference website and all printed documents and marketing literature for the event with corporate logo of the sponsor on the banner
- Slides before each online event

■ Silver Sponsor (Rs. 3,00,000 or USD 6,000)

- Full page colour advertisement in the souvenir
- Complimentary registration of up to 3 delegates for the event
- Recognition as a silver sponsor on conference website and all printed documents and marketing literature for the event with corporate logo of the sponsor on the banner
- Slides before each online event

■ Session Sponsorship (Rs. 1,00,000 or USD 2,000)

- Full page colour advertisement in the souvenir
- Complimentary registration of up to 1 delegate for the event
- Welcome signage for the particular session will carry the logo of the sponsor and a small logo in all the slides



Committees for NMD-ATM 2020

Patrons

Anil Agarwal, Chairman, Vedanta Resources Plc
Rajiv Bajaj, Bajaj Auto Ltd
N Bajendra Kumar, CMD, NMDC Ltd, Hyderabad
Kumar Mangalam Birla, Chairman, Aditya Birla Group
N Chandrasekharan, Chairman, Tata Sons
Anil Kumar Chaudhary, Chairman, SAIL
Subhasis Chaudhary, Director, IIT Bombay
R M Dastur, MD, M N Dastur Co
P Goenka, MD, M&M position
Naveen Jindal, CMD, Jindal Steel & Power Ltd
Ratan Jindal, CMD, Jindal Stainless Ltd
Sajjan Jindal, CMD, JSW Steel Ltd
Aditya Mittal, Chairman, Arcelor Mittal Nippon Steel India Ltd
Baba. N Kalyani, CMD, Bharat Forge Ltd
R Madhavan, CMD, HAL
Shekhar C Mande, Director General, CSIR
Sridhar Patra, CMD, NALCO
Ved Prakash, CMD, Metals & Minerals Trading Corp Ltd
P K Rath, CMD, RINL, Visakhapatnam
G Sathesh Reddy, Chairman, DRDO, Secretary DDR&D
Arun Kumar Shukla, CMD, Hindustan Copper Ltd
K Sivan, Chairman, ISRO and Secretary DOS
S N Subramanian, CEO & MD, L&T
K N Vyas, Chairman, Atomic Energy Commission

Advisory committee of former presidents

R N Parbat, 1995-96
L Pugazhenthay, 2008-09
Sanak Mishra, 2009-10
D Banerjee, 2010-11
M Narayana Rao, 2011-12
H M Nerurkar, 2012-13
K Chattopadhyay, 2013-14
R N Patra, 2014-15
S S Mohanty, 2015-16

National steering committee

Chairman: U. Kamachi Mudali, Immediate former President, IIM
Co-Chairman: Amol A Gokhale, President, IIM & Professor, IIT Bombay
Convener : Kushal Saha, Secretary General, IIM

CK Asnani, CMD, UCIL
K Balasubramanian, Director, NFTDC
A K Bhaduri, Director, IGCAR
A. Bharadwaj, Head (Technology) – MRV, M&M
Guenter Butschek, CEO & MD, Tata Motors Ltd
I Chatteraj, Director, CSIR-NML
P Chaudhari, Chairman, Praj Industries
G S Deodhare, Director, ADA
K Ellangovan, Chairman, KMML
Salil Gupte, President, Boeing India
S K Jha, CMD-Elect, MIDHANI
Amit Kalyani, Bharat Forge
S V Kamat, DG (NS, M), DRDO
D Kashiva, Sponge Iron Manufacturing Association
Dinesh Keskar, Sr. Vice President, Asia Pacific and India, Boeing
Anurag Kumar, Director, IISc, Bangalore
Ashwini Kumar, CEO, Rourkela Steel Plant
Arun Mishra, CEO, Hindustan Zinc Ltd
B K Misra, Director, IIT Goa
A K Mohanty, Director, BARC
S R Mukherjee, CEO, TAML
T. Mukherjee, MD, EMIL
K. Muraleedharan, Director, CGCRI
B S Murty, Director, IIT Hyderabad
T V Narendran, MD, Tata Steel
Vinod Nowal, Dy MD, JSW
D Oommen, CEO, Arcelor Mittal-Nippon Steel India Ltd
G Padmanabham, Director, ARCI
Abhijit Pati, CEO, BALCO
Satish Pai, MD, HINDALCO
J D Patil, Sr. Vice President, and Director L&T
APVS Prasad, Chief Executive, CEMILAC
N Eswara Prasad, Director, DMSRDE
G Raghurama, Director, BITS Pilani Goa
AV Kamlakar CEO ISP & DSP, SAIL
G Madhusudhan Reddy, Director, DMRL
Sanjib K Roy, Director, NALCO
A D Sahasrabuddhe, Chairman, AICTE
Rajeev Shekhar, Director, IIT Dhanbad
S. Singal, CEO & MD, Bhushan Power & Steel Ltd
D Singh, CMD, IREL
S. Srinivasan, CMD, Hoganas India
Dinesh Srivastava, Chief Executive, NFC
S. Somanath, Director, VSSC
V K Tewari, Director, IIT Kharagpur
M S Unnikrishnan, MD & CEO, Thermax
Rashmi Urdhwarashe, Director, ARAI
Srinivasan Venkatakrishnan, CEO, Vedanta

National organising committee

Chairman: Amol A Gokhale, President, IIM & Professor, IIT Bombay
Co-Chairman: T. V. Narendran, Vice President, IIM & MD, Tata Steel
Convener: Suhas S. Joshi, Dean (ACR), IIT Bombay
Co-Convener: Sushil K. Mishra, Associate Professor, IIT Bombay

A Agnihotri, Director, JNARDDC
B Arun Kumar, Head, Downstream Operations, HINDALCO
V Balasubramanyam, Director (Production), NALCO
K. Bhanu Sankara Rao, University of Hyderabad
Raman Datta, RDCIS, SAIL
P K De, M N Dastur & Co.
Y K Degan, ED (Works), Bhilai Steel Plant
S N Guha, Hony Treasurer, IIM
Vikram Jayaram, IISc
S K Jain, Director (JSCMS), Jindal Stainless Ltd
M Kamaraj, Professor, IITM
Sridhar Kamineni, MD, OCTL
R. Krishna Kumar, Vedanta
K Madangopal, Group Director, BARC
Dipak Mazumder, IIT Kanpur
KL Mehrotra, New Delhi

S P Mehrotra, IIT Gandhinagar
Bibhu Prasad Mishra, President, HINDALCO
M P Mishra, ED (Smelter), NALCO
Rahul Mitra, Professor, IIT Kharagpur
Sudhanshu Pathak, VP, Steel Manufacturing, Tata Steel
Amalendu Prakash, SAIL
Rajashekar Pattanashetty, JSW Steel
Manoranjan Patri, Director, NMRL
Pradip, Vice President, INAE
Divakar Ramachandran, IGCAR
A T Ramchandani, L&T
D De Sarkar, ICDC
R K P Singh, Bharat Forge
V Ramaswamy, PSG College of Technology
Vilas Tathavadkar, Aditya Birla Science and Technology Corp.
S M Vaidya, VP, Godrej & Boyce

International conference

Theme leaders: TV Narendran, Samir Kamat, Satish Pai (Vice Presidents)
with D Banerjee, S V Joshi (Int. Relations Committee)

Core organising committee

Chairman: Prof. Suhas Joshi, IIT Bombay
Convener: Prof. Sushil Mishra, IIT Bombay
Treasurer: Dr. Arvind Bidaye, Formerly BARC
Co-Treasurer: Prof. Smrutiranjana Parida, IIT Bombay

Chairpersons from IIM Mumbai, Pune, Nagpur, Dolvi, Goa and Baroda Chapters

Conference Secretariat Professor Sushil K. Mishra
Department of Mechanical Engineering
Indian Institute of Technology Bombay, Powai, Mumbai 400 076
Phone: 022 2576 7391
Email: admin@nmdatm2020.org
Website: www.nmdatm2020.org/

Chairman/ Co-chairman Annual Technical Meeting International Conference	Prof. Parag Bhargava, IIT Bombay / Dr. Rajeev Kapoor, BARC Prof. Chandra Sekher Yerramalli, Prof. Alankar Alankar, IIT Bombay
Chairman Poster Sessions	Dr. Rajesh Raghavan, SANDVIK R&D
Chairman Metallography Contest	Dr. Bhagyaraj J., TATA STEEL R&D
Chairman/Co-Chairman Resource Mobilization & Finance	Prof. N.N Viswanathan, IIT Bombay / Sanjay Sharma, L&T
Chairman/Co-Chairman Registration	Prof. Makarand Kulkarni / Prof. Soham Mujumdar, IIT Bombay
Chairman / Co-Chairman Exhibition	Prof. Anirban Guha, IIT Bombay / Niraj Kumar HWB
Chairman / Co-Chairman Online platform management	Prof. Amartya Mukhopadhyay / Prof. Shyam Karagadde, IIT Bombay Prof. Swadesh K Singh, GRIET
Chairman Publications & Souvenir	Prof. Amit Agrawal, IIT Bombay
Chairman Website & Communications	Prof. Amber Shrivastava, IIT Bombay