

First Information
Brochure

2nd International Conference on
Processing and Characterization of Materials

(ICPCM-2019)

December 12th-14th 2019



Organised by

Department of Metallurgical and Materials Engineering
National Institute of Technology, Rourkela

<http://icpcm2019.nitrkl.ac.in/>

Knowledge Partners

Massachusetts Institute of Technology (MIT), USA
National University of Singapore (NUS), Singapore
Nanyang Technological University (NTU)
Hanyang University (HU), South Korea
Auckland University of Technology (AUT), New Zealand
Hongik University (HU), South Korea
Universiti Teknologi Petronas (UTP), Malaysia

Sponsored By



10+
Plenary Lectures

20+
Keynote Lectures

150+
Contributory Session

20+
Exhibitors

Venue: Bhubaneswar Behera Auditorium

About ICPCM-2019

The Department of Metallurgical and Materials Engineering, National Institute of Technology Rourkela is going to organize the 2nd International Conference on Processing and Characterization of Materials (ICPCM-2019) during 12th-14th December 2019 after successful completion of earlier 1st international conference/8th national conference in this series (NCPCM-2011-2018). The *International Conference on Processing and Characterization of Materials*, ICPCM2019, will be a forum to bring together the users, manufacturers, designers and researchers involved in structures or structural components manufactured using different materials. The forum would provide an opportunity for the exchange of the researches and insights from scientists and scholars, and promoting research, development and use of composite material and structures. The conference theme for the ICPCM2019 is "Processing and Characterization: Recent Advances and Development", which tries to explore the very important role of innovation in the development of materials. Papers dealing with design, research and development studies, experimental investigations, theoretical analysis and fabrication techniques relevant to the application of materials in various assemblies, ranging from individual components to complete structure will be presented at the conference.

About NIT Rourkela

National Institute of Technology Rourkela (NITR), formerly Regional Engineering College Rourkela (REC Rourkela), established in 1961, is one of the premier national level institutions for technical education in the country and is funded by the Government of India. As per the Times Higher Education World University Rankings of 2018, NIT Rourkela has the position in between 601-800 in the world and 126th in Asia. QS BRICS overall University Ranking 2019 has figured NIT Rourkela at 121st position. NIT Rourkela is presently ranked the 2nd best NIT and 12th nationwide (including IITs) by the MHRD. The campus has all the amenities for developing personal, social and academic skills of the student community. The Institute has been modernized by two foreign collaborative funding agencies i.e. the Material theme in the Materials and Metallurgical Engineering department under Indo-U.K. REC project and the Computer Science and Electronics streams under World Bank cum Swiss Development Corporation IMPACT project. With 21 departments awarding graduate and post graduate degrees including Ph.D. in Engineering, Science, Planning and Architecture, Management, and Humanities, NIT Rourkela is one of the prestigious institutes in the country. NIT Rourkela is a well-known technical institute of national importance serving as a knowledge hub to the nation. The campus of the institute consisting of the Institute buildings, halls of residence and staff colony, spread over an area of 262 hectares of land is surrounded by scenic hills providing a spectacular rejuvenating atmosphere, which is very conducive for study and research. The well maintained green campus of the Institute provides accommodation to all students, faculties and staffs. The campus has all the amenities for developing personal, social and academic skills of young people. The greeneries and flowers in the campus further make the stay very pleasant and enjoyable.

Chief Guest

To be uploaded soon

Patron



Director, NIT Rourkela

Key note Speakers



Prof. Ashwin Gopinath,
Massachusetts Institute
of Technology (MIT),
USA



Prof. HyukSu
Han, Hongik
University (HU),
South Korea



Prof. Sarat Singamneni,
Auckland University of
Technology (AUT), New
Zealand



Prof. PAN Jisheng,
National University of
Singapore (NUS),
Singapore



Prof. Faiz Ahmad,
Universiti Teknologi
Petronas (UTP),
Malaysia



Prof. Ravindra N.
Bulakhe, Yeungnam
Univesity, S. Korea



Prof. P. R.
Mohapatra,
IISc Bangalore



Prof. Shampa Aich,
IIT Kharagpur



Dr. T. Theivasanthi,
International
Research centre



Prof. A. Nayak,
VIT, India



Dr. Mayadhar Debata
Scientist, CSIR-IMMT



Chandra Sekhar Tiwary,
IIT Kharagpur



Dr. Jitendra Sahu,
Scientist CSIR-NML



Er. Priyabrata Mallick,
Sr.Manager, HAL



Dr. Saralashrita
Mohanty, NISER

Nodal Dates

Abstract Submission Deadline	09 September 2019
Notification of Acceptance	15 September 2019
Final Paper Submission Deadline	01 October 2019
Registration Deadline for Authors	28 October 2019

CONFERENCE THEMES

✓ Materials Processing

- Process metallurgy
- Fabrication of Material
- Equipment Processing
- Designing of materials
- Industrial unit processes
- Machining of materials
- Processing of materials and its environmental effect

✓ Advanced Materials

- Smart materials
- High Temperature Materials
- Ultralight materials
- Nanomaterials & Nanotechnology
- Oxide Dispersion Strengthened Alloys
- Plasma technology
- Bulk Metallic Glass
- Aero-vehicle Materials
- Functional Graded Materials
- Bio-Implants
- Magnetic Materials

✓ Surface Engineering

- Surface Design
- Surface modification technologies
- Surface process control
- Surface non-destructive examination
- Tribology of surface
- Thin film
- Surface and Interface analysis

✓ Sustainable Energy Materials

- Cleaner methods of producing energy and energy conservation
- Materials used for solar energy
- Materials used for wind energy
- Materials used for geothermal energy
- Materials used for tidal energy and hydropower
- Energy storage materials

✓ Computational Methods and Material

- Nonlocal theories
- Fracture mechanics, Delamination
- Generalized continuum theories
- Multiscale Analysis of materials
- Advanced Numerical Techniques
- Micromechanics
- Optimization techniques and methods
- Plate and Shell finite elements
- Industrial equipment structure design
- Structures simulations
- Thermal problems on material structures

✓ Materials Characterization

- Characterization Technique
- Product characterization
- Microanalysis and surface analytical techniques.
- Advanced Characterization

✓ Composites

- Polymer, Ceramic, Metal matrix composites
- Fiber reinforced composites
- Nano composites, Bio composites
- Textile Hybrid composites
- Auxetic materials
- Porous and cellular materials
- Composite Repair techniques, self-healing
- Composites in Innovative applications
- Repair & Recycling of composite
- Offshore structures and Marine Applications

✓ Defence Materials

- Nuclear Materials
- Radioactive material
- Materials for advanced defence application
- Transport of nuclear materials
- Storage of nuclear materials
- Disposal of nuclear materials
- Reactor design, fuels, fusion, future technologies
- Radioisotope production
- Naturally occurring radioactive materials

✓ Waste Utilization

- Industrial Waste Utilization
- Organic waste Utilization
- Hazardous Waste Utilization
- Recyclable waste
- Electronic waste utilization in material
- Industrial Waste management

✓ Environmental

Degradation of Materials

- Oxidation of Metals
- Corrosion & Protection
- High Temperature degradation
- Bio-corrosion
- Self-passivating materials
- Techniques for protection against degradation



Scopus
Indexed



SCI



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Vaisho Devi Temple



Pitamahal Dam



Hanuman Vatika



vedavyasa



Mandira Dam



Khandadhar fall

Chief Guest: To be uploaded soon

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Treasurer: Prof. R. K. Prusty, prustyr@nitrkl.ac.in

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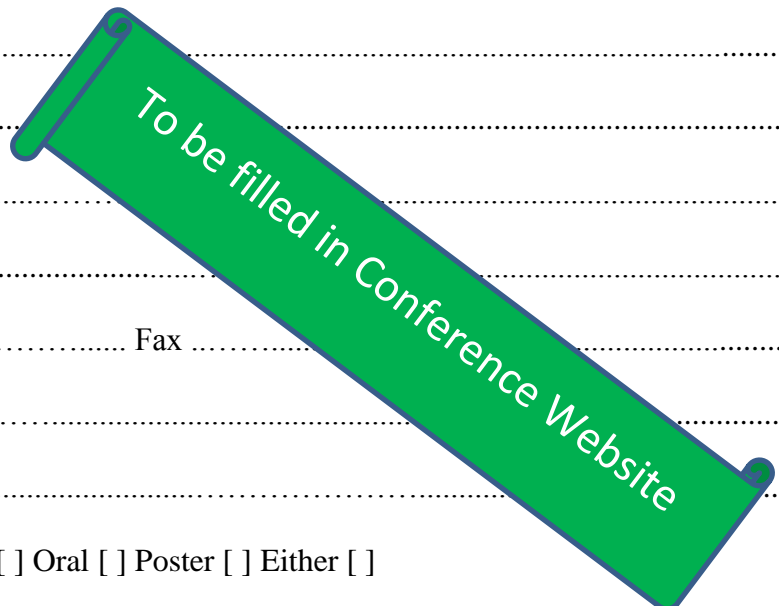
Mr. Suman Dutta (OIC,
Safety and Security)

**2nd International Conference on
Processing and Characterization of Materials
(ICPCM-2019)**

December 12-14, 2019, Rourkela, India

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Processing and Characterization of Materials (ICPCM-2019)

DECEMBER 12-14, 2019, ROURKELA, INDIA

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About Previous Conferences

All paper published
in Scopus Indexed
Journal

2018

1st International Conference on Processing
and Characterization of Materials
and
8th National Conference on Processing and
Characterization of Materials

**Published by: 1) Materials Science
Forum, 2) Int. Journal of Materials
Research**

2017

7th National Conference on
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**Published by: Materials
Science and Engineering**

2016

6th National Conference on
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2nd National Conference on
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**Published by: Materials
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2011

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Registration:

You can register at: <http://icpcm2019.nitrkl.ac.in/>

Mobile Application: XXXXXX (To be announced in website just before conference day)

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