

INTERNATIONAL CONFERENCE
on

**Recent Development on Materials,
Reliability, Safety and Environmental Issues**

**Jointly
Organized by**

Department of
Chemical
Engineering



Department of
Electronics &
Communication
Engineering



Department of
Industrial &
Production
Engineering



IMRSE-2021
June 25-27, 2021



**Dr B R Ambedkhar
National Institute
Technology,
Jalandhar**

Queries: imrse@nitj.ac.in

Welcome to Jalandhar

An ancient city in Punjab, Jalandhar ruled by the Hindus and the Mughals in succession, is believed to be the oldest city in Punjab. The city, which has major road and rail connections, is a market for agricultural products, textiles, leather goods, hand tools, wood products and sporting goods. Jalandhar today is a highly industrialized centre being India's foremost producer of world-class sports equipment. Popularly called the 'Sports City of India' as it has not only the finest sports industry but also the distinction of producing some of the best sports persons in the country, especially in the field of Indian Hockey. Jalandhar is also considered as a hub for education as many professional institutions are situated in the city. "Pushpa Gujral Science City situated on Jalandhar-Kapurthala Road is one of the major tourist attractions of the city. It has a very live atmosphere, something that is typical of the whole of Punjab. It is situated at a distance of 146 km from its capital Chandigarh and is at a distance of 350 km from New Delhi on Delhi-Amritsar National Highway. Nearest International airport is at Amritsar at a distance of 90 km. The other Airports in the vicinity are at Chandigarh and New Delhi.



About NIT Jalandhar

Dr B R Ambedkar National Institute of Technology was established in the year 1987 as Regional Engineering College and was given the status of National Institute of Technology (Deemed University) by the Government of India on October 17, 2002 under the aegis of Ministry of Human Resource Development, New Delhi. Now the Ministry of Human Resource Development, Government of India has declared the Institute as "*Institute of National Importance*" under the act of Parliament-2007. A large number of reputed Industrial houses in the country visit the Institution and select the final year students as Engineers/Management Trainees. The Institute has been placed amongst top 50 engineering institutions of the country as per the survey conducted by Mint-C Fore in the year 2008.

As one of the National Institutes of Technology (NIT), the Institute has the responsibility of providing high quality education in Engineering, Technology and Sciences to produce competent technical and scientific manpower for the country. The Institute offers B. Tech programs in nine engineering disciplines. In addition to these programs, the institute offers M.Tech, PhD programs in several disciplines of Engineering, Technology and Science.

Objective of the Conference

The primary objective of this International Conference is to provide a platform to scientists, researchers, academicians, industry people and students to contemplate on the ongoing research in the field of Materials, Safety, Reliability and Environment from the perspective of its contribution towards sustainable development and betterment of the society. The deliberations will be aimed at discussing and highlighting the role of current trends in the above mentioned disciplines in meeting global challenges and the emerging scenario vis-a-vis future trends in this direction.

Call for Paper

Prospective authors are invited to submit papers, which are relevant to the themes of the conference. Authors may submit full length papers limited to 2500 words (min 3 pages) typed in MS Word, Times New Roman, 11 pt font, single spacing with one inch margins on all sides. The corresponding author should be marked with asterisk (*) sign. The name of the author presenting the paper should be underlined. The abstracts must include the affiliations of all authors along with email. The papers will be considered for oral or poster presentations.

Only one author per paper whose name has been underlined will be allowed to present the paper and get the presentation certificate. Other co-authors, if registered, will get the participation certificate.

Paper Submission is available at conference website through easy chair:

<https://easychair.org/conferences/?conf=imrse2021>

The full length paper should be sent to the above mentioned link latest by 10/05/2021. The best paper award will be given to excellent contribution in the oral and poster presentation category.

FULL LENGTH PAPERS: Selected papers after peer review will be published in SCI/SCIE/Scopus Indexed Journal/Proceedings.

Tracks of the conference

The conference will cover wide range of topics related to theme of the conference, but not limited to the following:

- ✚ Solid Waste Management
- ✚ E Waste Management
- ✚ Water and wastewater treatment
- ✚ Air Pollution
- ✚ Risk Assessment
- ✚ Membrane Separation Processes
- ✚ Advance Oxidation Processes
- ✚ Biodegradable polymers

- ✚ Sustainable development
- ✚ Nanomaterials
- ✚ Biopolymers
- ✚ Green technology
- ✚ Biofuels
- ✚ Ion exchange, adsorption
- ✚ Economic analysis
- ✚ Nanofiltration
- ✚ Innovations in pollution abatement
- ✚ VLSI Circuit Design
- ✚ Nanoelectronics
- ✚ MEMS Technology
- ✚ Microelectronics & Nanotechnology
- ✚ Electronics Communication
- ✚ RF & Antenna Design
- ✚ Electronics System Design
- ✚ FPGA/ASIC Based Design
- ✚ Internet of Things
- ✚ Machine Learning
- ✚ Solar/PV cell Design
- ✚ Materials, Synthesis & Characterization
- ✚ Flexible Devices
- ✚ Organic Electronics
- ✚ Nano & Bio Sensors
- ✚ Safety & Loss prevention
- ✚ Security Risk Assessment
- ✚ Inherent Safer Processes
- ✚ Bhopal Gas Tragedy & its effects on safety, Reliability, Vulnerability assessment
- ✚ Reliability modeling & Evaluation
- ✚ RAMS Analysis
- ✚ FMECA
- ✚ Fault tolerant Systems
- ✚ Maintenance Strategies
- ✚ Reliability Evaluation using Simulation Nets
- ✚ Application of Soft Computing Techniques

Registration Fee

The authors presenting the papers and others who are interested to participate in the conference must register themselves before the last date of registration.

Only the registered persons will be given the conference certificates. Registration fee does not include the accommodation charges. The registration fee for various categories is as follows:

Online		
	Indian authors	Foreign authors
Category I	1500	100 USD
Category II	2500	200 USD
Category III	3000	250 USD

Offline		
	Indian authors	Foreign authors
Category I	1500	100 USD
Category II	2500	200 USD
Category III	3000	250 USD

(Category I: Student; Category II: Academician/Research Institution/Autonomous Bodies/Industrial Persons; Category III: Industry)

Mode of payment

The registration fee (non-refundable) has to be paid in the form of Demand Draft (DD) or through online bank transfer. The demand draft should be drawn from any nationalized bank in favor of NITJ-IMRSE payable at NIT Jalandhar. The details for the online bank transfer are as follows:

Account Name: NITJ-IMRSE
 Account Number: 50100397832230
 IFSC Code: HDFC0000046
 Name of the Bank: HDFC Bank
 Branch Code: 000046

Important Dates

Receipt of full paper	10/05/2021
Intimation of acceptance	20/05/2021
Submission of Camera ready paper	31/05/2021
Last Date for Registration	31/05/2021
Date of Conference	25-27/06/2021

Chief Patron

Shri Subhash Chandra Ralhan,
Chairman BOG,
NIT Jalandhar

Patron

Professor (Dr) L. K. Awasthi,
Director,
NIT Jalandhar

Co-Patron

Dr. Arun Khosla, Dean (R & C), NITJ
Dr. S K Mishra, Registrar, NITJ
Dr Mamta Khosla, Head ECE, NITJ
Dr Rajeev Trehan, Head IPE, NITJ
Dr Renu Bansal, Head Chemical, NITJ

Chairman cum Organizing Secretary

Dr. Anish Sachdeva,
Industrial & Production Engineering, NITJ
Dr. Pamita Awasthi,
Chemistry, NIT Hamirpur
Dr Shailendra Bajpai,
Chemical Engineering, NITJ
Dr Ashish Raman,
Electronics & Communication Engineering, NITJ

Joint Organizing Secretary

Dr. Anurag Kumar Tiwari,
Chemical Engineering, NITJ
Dr Dilbag Panchal,
Industrial & Production Engineering, NITJ
Dr Mohit Tyagi,
Industrial & Production Engineering, NITJ
Dr Nitesh Kashyap,
Electronics & Communication Engineering, NITJ
Dr Manjeet Singh,
Electronics & Communication Engineering, NITJ



International Advisory Committee

Prof Genserik Reniers, Delft University,
Netherlands
Prof O. P. Yadav,
North Dakota State University, USA
Prof Ajay Dalai,
University of Saskatchewan, Canada
Prof Uday Kumar,
Luleå University of Technology, Sweden
Prof Daoud Ait Kadi,
Université Laval, Québec (QC) Canada
Prof Vijay Kumar, UMKC, USA
Prof Y S Dutuit, University of Bordeaux,
France
Dr. Murlidhar Gupta, Canmet Energy Natural
Resources, Canada
Prof R Subramanian, Laurantial University,
Canada
Prof S B Jonnalagadda, University of Kwazulu-
Natal, South Africa
Prof. J. P. Gupta, SNU, Noida
Prof. G D Yadav, ICT Mumbai
Prof. Rabindra Gudi, IIT Mumbai
Prof Rajiv Tripathi, Director, MNIT Allahabad
Prof M K Tiwari, Director, NITIE Mumbai

National Advisory Committee

Prof. Shishendu Dey, IIT Kharagpur
Prof K K Pant, IIT Delhi
Prof Pradeep Kumar, IIT Roorkee
Prof Dinesh Kumar, IIT Roorkee
Prof Dr Akshay Dvivedi, IIT Roorkee
Prof Shishir Sinha, IIT Roorkee
Prof V C Srivastava, IIT Roorkee
Prof Anil Verma, IIT Delhi
Prof. C C Trapharathi, UIET, Kurukshetra
Prof Satyanarayana, JNTU, Anantnagar
Prof. S D Gupta, IIT Roorkee
Prof. Sudeb dasgupta, IIT Roorkee
Prof. R K Sharma, NII Kurukshetra
Prof. Rajeevan Chandel, NIT Hamirpur
Dr Manish Vashishth, MNIT Jaipur
Dr Rohi Bhakar, MNIT Jaipur
Dr. Vikas Sangal, MNIT Jaipur
Dr K L Bashnab, NIT Silchar
Dr Ashwani Rana, NIT Hamirpur
Dr Rajesh Sharma, NIT Hamirpur
Dr Rajiv Sharma, NIT Hamirpur

Local Advisory/Organizing Committee

Dr S K Sinha, NIT Jalandhar
Dr R K Garg, NIT Jalandhar
Dr Subhash Chander, NIT Jalandhar
Dr B S Saini, NIT Jalandhar
Dr Vinay Midha, NIT Jalandhar
Dr A Bharadwaj, NIT Jalandhar
Dr M K Jha, NIT Jalandhar
Dr B S Kaith, NIT Jalandhar
Dr Ajay Bansal, NIT Jalandhar
Dr A Mukhopadhyay, NIT Jalandhar
Dr R Sunkaria, NIT Jalandhar
Dr Sangeeta Garg, NIT Jalandhar
Dr Poonam Gera, NIT Jalandhar
Dr N K Srivastava, NIT Jalandhar
Dr Jatinder K Ratan, NIT Jalandhar
Dr Vishal Sharma, NIT Jalandhar
Dr Rakesh Kumar, NIT Jalandhar
Dr Ajay Gupta, NIT Jalandhar
Dr Jagwinder Singh, NIT Jalandhar
Dr A K Chowdhary, NIT Jalandhar
Dr Pramod Kumar, NIT Jalandhar
Dr Raman Bedi, NIT Jalandhar
Dr Dinesh Shukla, NIT Jalandhar
Dr Lalit Jajpura, NIT Jalandhar
Dr Monica Sikka, NIT Jalandhar
Dr Rajesh Singla, NIT Jalandhar
Dr Indu Saini, NIT Jalandhar
Dr H M Mittal, NIT Jalandhar
Dr Rohit Mehra, NIT Jalandhar
Dr Harleen Dahiya, NIT Jalandhar
Dr Rajiv Jindal, NIT Jalandhar
Dr Uma Shankar, NIT Jalandhar
Dr R R Sinha, NIT Jalandhar
Dr Parveen Malik, NIT Jalandhar
Dr Aditya Prakash, NIT Jalandhar
Dr Anjireddy Bhavanam, NIT Jalandhar
Dr Deepak Sahu, NIT Jalandhar

For any query please contact:
Conference Secretariat,
IMRSE – 2021,
Dr B R Ambedkar NIT Jalandhar
Email: imrse@nitj.ac.in