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Ms. Alka Darji
Mr. Samir Dave

Paper Submission and Technical Issues

Dr. Swadesh Kumar Singh
Professor, Dean R&D, GRIET, Hyderabad

Email: icmpc-hyd@griet.ac.in
Website: www.nirmauni.ac.in | www.icmpc.com

ABOUT THE NIRMA UNIVERSITY

Established in the year 2003, the Nirma University, Ahmedabad is a research-oriented, student-centric, multidisciplinary, not-for-profit state private university. Within a short period of its existence, it has emerged as a nationally renowned higher education institution. The University and its constituent institutes are highly ranked by different ranking agencies.

Nirma University is duly recognised by the University Grants Commission (UGC) under Section 2 (f) of the UGC Act. The University is accredited by the National Assessment and Accreditation Council (NAAC). The University is a member of Association of Indian Universities (AIU) and the Association of Commonwealth Universities (ACU). The university received the Centre of Excellence (CoE) status from the Government of Gujarat in January 2022.

Dr Karsanbhai K Patel, Chairman, Nirma Group of Industries and Nirma Education and Research Foundation (NERF), is the President of the Nirma University. Under his leadership, the University is expanding every passing year and moving from strength to strength.

Spread across the sprawling lush green 115-acre campus, the University has a host of institutes, departments and centres, including Institute of Technology, Institute of Management, Institute of Pharmacy, Institute of Science, Institute of Law, Institute of Architecture & Planning, Institute of Commerce, Institute of Design, Faculty of Doctoral Studies and Research, Centre for Advanced Instrumentation, Centre for Continuing Education, Centre for Entrepreneurship, Centre for Family Business and Entrepreneurship, Centre for Quality Assurance and Academic Development, Centre for Robotics and Automation and Centre for Excellence in Data Science. These institutions offer numerous undergraduate, postgraduate and doctoral programmes. Apart from these, the University also offers several certificates and diploma programmes.

ABOUT AHMEDABAD

Ahmedabad was named after Sultan Ahmed Shah, who founded the city in 1411. It served as the capital of Gujarat from 1960 to 1970. Located on the banks of the Sabarmati River, it has been the commercial capital of the state of Gujarat and was once renowned for its cotton textile mills. Ahmedabad is known for its rich history, culture, and hospitality. Notwithstanding its attraction as a business destination, Ahmedabad, the largest city in Gujarat remains steeped in history and has a wealth of historical attractions. Ahmedabad is also not far away from famous temples, various wildlife sanctuaries, the largest salt desert in the world (which is popular as a tourist destination between November and March) and beaches. The 1000-year-old Modhera Sun Temple is exquisite and is located two hours from Ahmedabad by road.

The Ahmedabad area, is known for the renowned Indian Institute of Management, National Institute of Design, Indian Space Research Organization, Physical Research Laboratory, Institute of Plasma Research and Entrepreneurial Development Institute, amongst others.



16th International Conference on Materials Processing and Characterization

at

**Institute of Technology
Nirma University, Ahmedabad**

27th-29th June 2024

16th ICMPC Editors

Dr. Swadesh Kumar Singh,
GRIET Hyderabad, India & Adjunct Professor, Victoria University Melbourne

Dr. K.M. Patel,
Institute of Technology, Nirma University

Dr. Nitin Kotkunde,
BITS Pilani Hyderabad Campus India

Dr. Mayur A. Makhesana,
Institute of Technology, Nirma University

Publication partners for 16th ICMPC

*Awaiting Approvals from other windows



About Conference

Functional materials, smart materials, intelligent materials – whatever you call them, they will be a key pillar of 21st century technology. Among the modern structural materials there has been a tremendous advancement in science and technology of materials. In recent years, nanostructure materials and nano composites have become increasingly important because of their remarkable properties and permanently growing areas for practical applications. Various aspects of mechanical properties of nano materials including analytical and computational modelling in combination with comprehensive experimental analysis of mechanical behaviour is yet to be investigated. In spite of the rapid progress in this field, mechanical properties of nano materials and composites are still remaining terra incognita in materials science. In the field of massive and complex manufacturing we are now in need of materials, with properties, that can be manipulated according to our needs.

There is an increasing awareness of the benefits to be derived from the development and exploitation of advanced materials and structures in applications ranging from hydrospace to aerospace. With the ability to respond autonomously to changes in their environment, smart systems can offer a simplified approach to the control of various material and system characteristics. Mechanistic understanding from any discipline is the routes to the development of materials with capabilities beyond those currently available.

The conference is creating a cross disciplinary summit that transcends departmental, institutional, industrial, public and private research organizations and global barriers and lends itself to the integration of research and education in the vital field of advanced materials. This conference is mainly aims in major sectors of advanced processing, material characterization, modeling and simulation, properties, performance and device fabrication.

Scope of the conference

The role of manufacturing in the country's economy and societal development has long been established through their wealth creation activities. To deepen and broaden our knowledge of materials and to increase innovation and responsiveness to ever-increasing international needs, more in-depth studies of functionally graded materials/ tailor-made materials are needed at present. The objective of this conference is to bring together experts from academic institutions, industries and research organizations and professional engineers for sharing of knowledge, expertise and experience in the emerging trends related to advanced materials processing, and characterization.

The conference is structured as follows: plenary lectures followed by parallel sessions. The plenary lectures will be delivered by eminent personalities of international repute to introduce the theme of the conference. Each parallel session starts with an invited talk on specific topic followed by contributed papers. Papers are invited from the prospective authors from industries, academic institutions and R&D organizations and from professional engineers.

International Executive Committee

Swadesh Kumar Singh Professor, Dean R&D, Department of Mechanical Engineering, GRIET Hyderabad, India & Adjunct Professor, Victoria University Melbourne.

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Asma Perveen, Assistant Professor, Department of Mechanical Engineering, Nazarbayev University, 53 KabanbyBatyr, Astana 10000, Kazakhstan

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Eswar Prasad Korimilli, Department of Materials Engineering, IIT Indore, India

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Tanya Buddi, Department of Mechanical Engineering, GRIET Hyderabad, India

Saurav Dixit, Peter the Great St. Petersburg Polytechnic University, Russia & Division of Research & Innovation, Uttaranchal University, Uttarakhand, India

Dr. Manoj Kumar Gupta, Institute of Plasma Research , Gandhinagar, Gujarat, India

Conference Topics

- Material Characterization (Room and at Elevated Temperatures)
- Sustainable materials
- Green Manufacturing
- Shape memory alloys
- Environmental aspects of traditional materials
- High strain rate deformation of Materials
- Bio-materials
- Advanced machining processes
- Advanced metal forming, bending, welding & casting techniques
- Alternate materials /material substitution
- Applications FEA
- Composite and Polymer Manufacturing
- Composites, Intermetallics
- Fabrication Process of Nano materials and Nano devices
- Functionally Graded Materials
- Future generation materials
- Heat Treatment
- High-Energy Beam Processing
- High-speed and Hybrid Machining
- Laser Based Manufacturing
- Material Testing
- MEMS Integration
- Meta materials
- Metallography
- Multi-Physics Coupling Simulation and Optimization
- Nano materials
- Non-destructive Examination
- Numerical Modelling and Simulation
- Optimization Techniques
- Powder Metallurgy and Ceramic Forming
- Recycling and re-manufacturing of Materials and Components
- SMART materials
- Super Alloys
- Thermally-Enhanced Processes and Materials

Registration

It is essential that at least one of the author of the accepted papers and register to participate in the conference, for including the papers in the special issue of the journal. Registration can be done by mailing the complete registration form along with the fee after receiving the acceptance of the paper.

	Earlybird	Late
Regular Registration	Rs 11,500/-	Rs 15,000/-
Journal Papers	Rs 16,000/-	Rs 20,000/-

Your registration includes concurrent/Sessions of technical program, welcome breakfast, morning and afternoon refreshment breaks and lunch at the conference venu, paper presentation, attendance to all sessions, conference bag, certificate of presentation, complimentary city tour.

Bank Account Number	916010080365885
Account Name / Beneficiary name	Gokaraju Rangaraju Educational Society – ICMPC
Bank Address	Sri Vikram Towers Balaji Nagar Colony Opp. BJP party office Kukatpally Hyderabad 500075.
IFSC code	UTIB0003062
MICR Code	500211060
SWIFT Code	AXISINBB193

For any queries keep in touch with **www.icmpc.com**

Exhibition cum Sponsorship

An exhibition will be organized concurrently with the conference. The industries who are interested in showcasing their products, and equipment may contact the conference chairs. Two delegates sponsored by the exhibitors are allowed to participate in the conference without any extra fee.

Agencies are invited for being co-sponsors of the conference. Delegates will be allowed to attend the conference if any agency support the conference financially. For future details visit our website.