



# 4<sup>th</sup> International Conference on

# Recent Advances in Material Science and Computational Techniques

(RAMSACT-4)

**April 04-06, 2024** 

Organized by

### **Faculty of Science**

in collaboration with

**Department of Biotechnology & Chemical Engineering** 

## **About Manipal University Jaipur**

Manipal group in education is a name to reckon with not just in India, but the world over. The seeds of its magnificent growth were sown back in 1953 by Padma Shree Late Dr. TMA Pai. Manipal University Jaipur is the fifth university established in 2011 by Manipal Global Education Services (MAGE) which is a part of a leading international quality higher education service provider. Manipal University Jaipur is the first university in the state of Rajasthan accredited as A+ (3.28) grade by NAAC. The vision of the University is to be a "Global Leader in Higher Education and Human Development". MUJ offers a wide spectrum of career- oriented programs in different disciplines like Engineering, Sciences, Management, Law, Arts, Design, Journalism and maintains the Manipal University's legacy of providing quality.

#### **About the Conference**

4<sup>th</sup> International Conference on "Recent Advancements in Materials Science and Computational Techniques" (RAMSACT-4) is a platform with the goal of bringing together prominent academic scientists, researchers, and research scholars to exchange and share their experiences and research findings on all aspects of Multifunctional Materials and Computational Techniques. It also provides a premier interdisciplinary platform for researchers, practitioners, and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered, and solutions adopted in the fields aligned with the conference theme. RAMSACT aims to provide an appropriate forum, where high quality and exceptional knowledge exchange can take place among students, academics, and industry researchers.

#### **Supported by: DST PURSE**

### **About Faculty of Science**

Faculty of Science (FoS) aims to foster creativity and innovation for an intellectually satisfying learning environment. FoS includes School of Basic Sciences (SBS), which is entrusted with the responsibility of developing and executing academic programs in different discipline of Basic Sciences at undergraduate, postgraduate and research levels. The FoS consists of five departments: Physics, Chemistry, Mathematics & Statistics, Biosciences, and the Computer Applications. In 2022, excellence of FoS in cutting edge research resulted in substantial funding under central government schemes such as DST-PURSE (Rs 10 Cr) and DST-FIST (Rs 1.5 Cr). The measure of research productivity is often the number of high-quality peer-reviewed publications & FoS has shown significant growth on the publications in the recent years, with 421 in 2022. FoS caters to synergistic collaborations from universities/institutes & industries.

# Department of Biotechnology and Chemical Engineering

The creation of the Chemical Engineering Department in 2014, following the University's establishment in 2011, represented a pivotal moment in the pursuit of interdisciplinary brilliance. Our department was formed by an assembly of highly qualified faculty members, each boasting substantial industrial and research acumen drawn from various global landscapes. This collective reservoir of expertise meticulously shaped an environment that cultivates inspiration and impels our students toward responsibility and innovation. Subsequently, in 2023, leveraging this foundation, the department expanded its horizons to encompass the realm of biotechnology. As a result, it underwent a transformation, evolving into the Department of Biotechnology and Chemical Engineering.

Within a short span of 10 years, the department has published over 100 international journal articles and received a research grant of ~ Rs 15 Cr. This includes a DST-PURSE grant of (Rs 10 Cr) with a strong collaboration with Faculty of Sciences, MUJ.

#### **Collaborative Partners**





#### **Chief Patron**

Mr S Vaitheeswaran

Chairperson, MUJ

#### Patron

Dr G K Prabhu

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#### Co-Patrons

Cmde. (Dr) Jawahar M Jangir
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#### **Conference Chair**

Dr Lalita Ledwani

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**Dr Abhishek Sharma** 

#### **Conveners**

Dr Mousumi Debnath, Department of Biosciences

Dr Anamika Jain, Department of Mathematics and Statistics

**Dr Saurabh Srivastava**, Department of Chemistry

Dr Manisha Sharma Department of Biotechnology &

**Chemical Engineering** 

#### **Co-Conveners**

**Dr. Anupam Sharma**, Department of Physics **Dr Rekha Jain**, Department of Computer Applications

#### **Organizing Secretaries**

Dr Rashi Nathawat	Department of Physics	
Dr Rajeev Nema	Department of Biosciences	
Dr Pramod Soni	Department of Computer Applications	
Dr Ankur K. Jain	Department of Mathematics & Statistics	
Dr Prathap Somu	Department of Biotechnology &	
	Chemical Engineering	

# **Conference Theme Areas**

#### TRACK 1

#### **Advancements in Biotechnology & Microbiology**

- Plant Biotechnology
- Microbial Technology
- Food Biotechnology
- Agriculture Biotechnology
- Environmental and Marine Biotechnology
- Structural Biology
- Bioinformatics and Cancer Biology
- Nanobiotechnology

#### TRACK 2

# Advancements in Chemical/Environmental Sciences & Technologies

- Natural Products and Biomaterials
- Environmental Chemistry
- Environmental Assessment and Sustainability
- Theoretical and Computational Chemistry
- Organic Synthesis
- Nano and Composite Materials
- Green Chemistry & Energy Storage Materials
- Societal Applications of Materials

#### TRACK 3

#### **Advancements in Mathematical and Statistics Sciences**

- Algebra & Analysis
- Computational Fluid Dynamics and Solid Mechanics
- Cosmology and Celestial Mechanics
- Fuzzy Set Theory, Graph Theory & Information Theory
- Mathematical Modelling
- Operations Research and Optimization Techniques
- Special Functions and Fractional calculus
- Statistical Methods





#### TRACK 4

#### **Advancements in Computational Techniques**

- Machine Learning and Deep Learning
- Data Science and Computing Technologies
- Cyber Physical Systems & IoT
- Healthcare & Agriculture Technologies
- Information & Network Security
- Cloud and Mobile Computing
- Image Computing
- Augmented & Virtual Reality

#### **TRACK 5**

#### Advancements in Physics & Applied Physics

- Multifunctional Nanomaterials
- Emerging 2D-materials
- Sensors & Actuators
- Computational Physics
- Nuclear & Particle Physics
- Plasma & Controlled Fusion
- Biophysics
- Soft Condensed Matter & Non-linear Dynamics

#### **Registration Fee**

Attendee	Indian	Overseas
Faculty Member	Rs 3500/-	USD 100/-
Student	Rs 2000/-	USD 50/-
Industrial Representative	Rs 7500/-	USD 200/-



for more details visit the website of

#### RAMSACT-2024: https://ramsact.in/ Manipal University Jaipur

Jaipur-Ajmer Express Highway, Dehmi Kalan, Near GVK Toll Plaza, Jaipur, Rajasthan 303007

# **Advisory Committee**

- Prof Ashutosh Sharma, INSA President and Former Secretary
- Prof Seeram Ramakrishna, FREng National University of Singapore
- Professor Bhajan Lal, Universiti Teknologi Petronas, Malaysia
- Prof Shrish Tiwari, CCMB hydrabad
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- Prof Madhavi Sinha, BIT Mesra, Ranchi, Jaipur Campus
- Prof Basant Agarwal, Central University of Rajasthan
- Prof Vikas Pareek, MGCU, Bihar

# **Important Dates**

Last date of Abstract Submission

**February 25, 2024** 

**Acceptance Notification of Abstract** 

March 03, 2024

Last Date for Registration

March 10, 2024

#### **Publication Partners**

After rigorous peer review the selected, papers shall be considered for publications in **Scopus Indexed Journals/Proceedings**.

#### Contact

**Dr Saurabh Srivastava** 

Dr Mousumi Debnath

saurabh.srivastava@jaipur.manipal.edu

mousumi.debnath@jaipur.manipal.edu