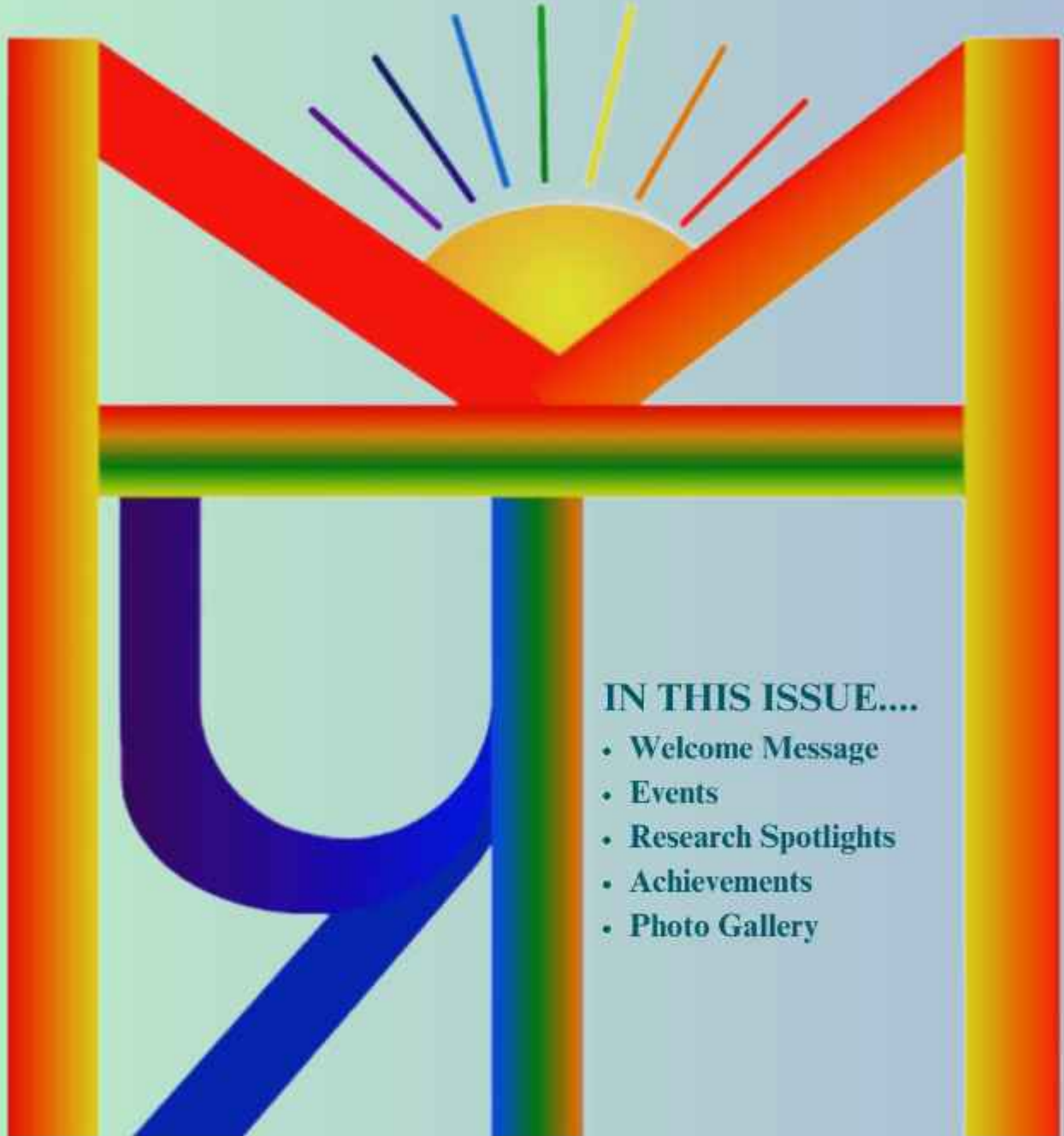


Physics Research Advancements by Thoughtful ~~Humankind~~ and their Achievements Miscellany

Quarterly Newsletter



IN THIS ISSUE....

- Welcome Message
- Events
- Research Spotlights
- Achievements
- Photo Gallery

PRATHAM

Welcome Message

From Dean's Desk



Dr. Lalita Ledwani
Dean, Faculty of Science

An educational institution never sleeps. It is like a vast ecosystem that keeps breathing, generating life and triggering responses. Growth is essential. Manipal University Jaipur is growing and we are growing along with it. I am extremely delighted and proud to release the inaugural issue of the newsletter PRATHAM of the department of Physics, faculty of science, Manipal University Jaipur. The newsletter is always a testimony to all the quality teaching and research happenings in the department and plays the vital role in the growth. I look forward to reading about the various activities, achievements and articles on recent advancements in the newsletter.

My heartiest congratulations to the entire department, all the contributors and editorial board for their efforts on making this edition of the newsletter a success.

Wishing the best for achieving newer heights in the coming days!

From HoD's Desk

Dear Students, Faculty, and Staff,

I am delighted to welcome you to the inaugural issue of our department newsletter! This marks an exciting new chapter for our community as we aim to keep everyone informed, connected, and engaged through regular updates on the achievements, events, and opportunities within our department.

Our vision for this newsletter is to create a platform that celebrates the hard work, innovation, and success of our students and faculty. Whether it's a groundbreaking research project, an inspiring student story, or an upcoming event, this space will serve as a window into the vibrant life of our department.

In this first issue, you will find updates on initiatives, research accomplishments, partnerships, etc., and we hope to see more of your contributions in the issues to come.

I encourage you all to actively engage with this newsletter—share your stories, achievements, and ideas with us. Together, we can make this platform a true reflection of the excellence and collaborative spirit that defines our department.

Thank you for your continued commitment and dedication. I look forward to seeing what we accomplish together in the months ahead.



Dr. Ashima Bagaria
HoD, Physics

PRATHAM

Student Editorial Board



Jyoti Kumari
Research Scholar



Khushabu Shekhawat
Research Scholar



Mahesh Malpani
Research Scholar

Faculty Advisor



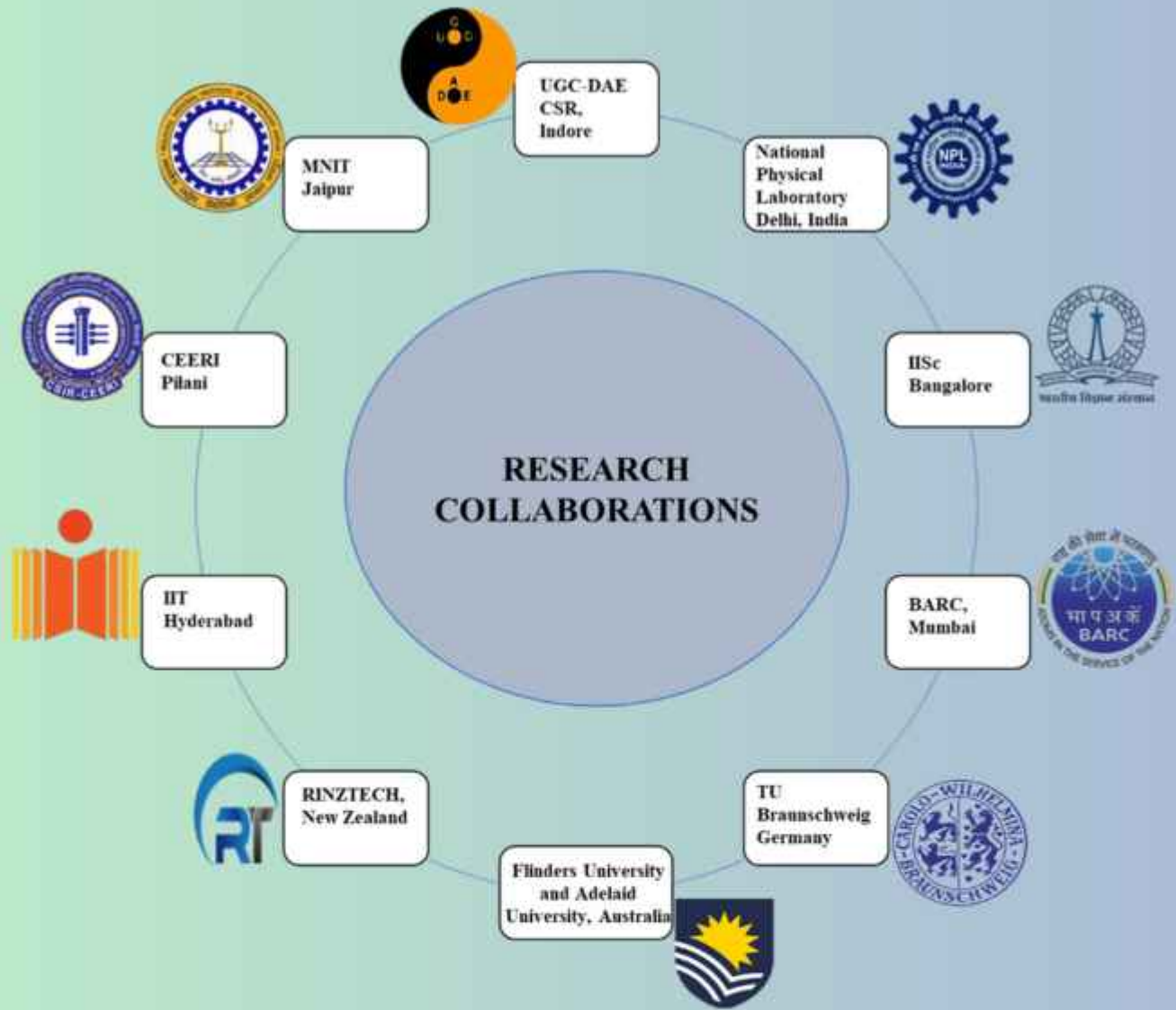
Dr. Manoj Kumar Saini
Assistant Professor

I extend my heartfelt gratitude to the student editors for their dedicated efforts in compiling and publishing the quarterly newsletter of the Physics Department. This newsletter beautifully captures the essence of the events, activities, and achievements that took place in the department, serving as a vibrant reflection of our department's dynamic spirit.

A special thanks to Ms. Khushabu for her creative contribution in designing the logo and naming the newsletter "Pratham." The thoughtfulness behind each letter of the name and the choice of colors in the logo adds a profound depth of meaning, perfectly encapsulating the values and vision of our department.

Thank you all for your hard work and for bringing this newsletter to life.

PRATHAM



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Events

Workshop

Material Characterization Techniques

Aim of conducting a workshop on material characterization techniques is to enhance participants understanding of various analytical methods used to evaluate material properties. By providing hands-on experience and theoretical knowledge, the workshop seeks to equip attendees with essential skill for effective material analysis and improving research outcomes in materials science.

Convener: Dr. Nilanjan Halder, Dr. Ajay Saini



Research Facility Training Program

Successfully organized a "Research Facility Training Program" under the Scientific Social Responsibility (SSR) initiative of the Science and Engineering Research Board - Startup Research Grant (SERB-SRG). This program aimed to enhance the technical skills and knowledge of research scholars and faculty members in the use of the LCR meter (frequency range 20Hz to 20MHz) and Benchtop digital multimeter techniques.



MANIPAL UNIVERSITY
JAIPUR

RESEARCH FACILITY TRAINING PROGRAM
Scientific Social Responsibility (SSR)

NSERB
INDIA

July 19, 2024 (Friday)

Presentation:
12:00 pm
Board Room, FB-5,
3rd Floor, AB-1

Training Session:
01:30 pm
Room-349, FB-5,
3rd Floor, AB-2

Convener:
Dr. Manoj K. Saini
Assistant Professor
Department of Physics

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BoPM

An online webinar series was hosted by Department of Physics at Manipal University Jaipur under “Blend of Physics and Materials (BoPM)”



Second webinar in this series provided a comprehensive and accessible overview of our current understanding of elementary particles and the significant breakthroughs achieved in recent years.



**MANIPAL UNIVERSITY
JAIPUR**
(University under Section 2(f) of the UGC Act)



*Department of Physics
invites you to join
BOPM-Webinar series on*

LHC: The Lord of the Rings



Opportunities and Highlights in High Energy Physics and it's Applications

31st JULY, 2024

03:00 PM

ONLINE MODE

Dr. Swagata Mukherjee
ASSISTANT PROFESSOR
DEPARTMENT OF PHYSICS
INDIAN INSTITUTE OF TECHNOLOGY KANPUR

Convener: Dr. Abhik Mukherjee
Co-conveners: Dr. Shashi S Tiwary and Dr. Anurag

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Guest Lecture



Dr. Vikas Rana (Senior Researcher at Forschungszentrum Julich, Germany) explores the transformative potential of memristive devices in the “New Era of Computing”. His insights highlight their role in enhancing computational efficiency, enabling advanced neural networks, and revolutionizing data processing technologies.



Motivational Lecture

The lecture explores the transition between undergraduate and postgraduate education, offering insights into academic, professional, and personal development. It equips educators, mentors, and students with strategies to navigate this critical phase and inspires enthusiasm and a proactive approach towards achieving academic and professional aspirations.



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Industrial Talk

Department of Physics and Impulse Technology conducted an Industrial talk/Webinar on **"NanoDCAL & Rescu for Nanoelectronics, nanomaterial simulation Software"** to educate all faculties, research scholars and students on Nanoelectronics material, device modeling & Simulation using Rescu Software from Nanoacademic Technologies.

Date: 25 Jan 2024

Convener: **Dr. Sushil Kumar Jain**

Webinar on Nanoscale Semiconductor Device Modeling and Simulation using NanoDCAL Software

Speaker:-
Er. Deepak Upadhyay
Application Engineer
IMPULSE TECHNOLOGY
Mob.No: 7289022818

- Completed B. Tech with Electronics & Communication Engineering from Dr. A.P.J. Abdul Kalam Technical University Lucknow, Uttar Pradesh.
- Worked at Leeway Design Consultants India pvt.ltd. gurgaon, Haryana as a Junior Design Engineer.
- Now working in Impulse Technology as Application Engineer. Currently working on EDA tool called Nanoacademic. Today he will show presentation & demonstration on Nanoscale Semiconductor Device simulation by DFT+NEGF Quantum Transport method using NanoDCAL software from Nanoacademic Technologies and its application in current & future technology

The online interaction meeting welcomed guests, alumni, and faculty members. Dr. Sathi Sharma introduced the Department of Physics, established in 2011, with Dr. Ashima Bagaria as Head. The department has international collaborations, research facilities, and 100 international publications. Extracurricular activities included a donation drive and societal connect.

Convener: **Dr. Sushil Kumar Jain, Dr. Manoj Kumar Saini, Dr. Sathi Sharma**

Career Opportunities in Physics
Hosted by Department of Physics (Online)
May 2024 | 11:00 am-12:30 pm (IST)

Industry Talk
Speaker: Mr. Vardhman Shah (Suresh Indu Lasers Pvt. Ltd., Pune)

Alumni Talk
Amal Pusho (Helomatrix consulting, Founder, CEO, Bengaluru, India)
Pragati Chaurhan (IIM, New Delhi, India)
Nayan Trivedi (Research fellow, HAL, Ladakh)

Faculty Introduction

Convener
Dr. Sushil Kumar Jain
Dr. Manoj Kumar Saini
Dr. Sathi Sharma

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Research Spotlights

Best Researcher of the month



Dr. Pushendra Kumar
| Jan | Feb | March | July |



Dr. Abhik Mukherjee
| Feb |



Dr. Saikat Chattopadhyay
| Feb |



Dr. Ashima Bagaria
| May |



Dr. Kamakhya Prakash Misra
| May |

Best Department of the month



**March
2024**
Department of
Physics receives
“Best Department
of the Month-Top
Research
Outcomes”

Achievements



Ms. Kritika Garg (Research Scholar)

Poster Title: Comprehensive Analysis of the Influence of Fluorine Substitution on Benzene Ring in Two Fluorinated Liquid Crystal Compounds using TG-DTA, FT-IR, UV and PED techniques”

Conference: International Conference on Recent Advances in Fluid Mechanics and Nanoelectronics (ICRAFMIN-2024)

Ms. Himani Jain (BSc SEM-4)

Paper Title: “Irradiation-Introduced Formation of AuV3/V2O5/V4O7 System:Tuning Structural and Optical Properties via Defects and Nanostructuring”

Conference: International Conference on Recent Advances in Fluid Mechanics and Nanoelectronics (ICRAFMIN-2024)



Mr. Rohan Santosh Pandhre (BSc SEM-4)

Summer Internship Topic: “Hot electron relaxation in metals”

Training Program: Physical Research Laboratory Navrangpura, Ahmedabad

Ms. Khushabu Shekhawat (Research Scholar)

Secure 2nd Position

Poster Title: “MXenes: From Fundamentals to Applications”

Event: National Science Day at Manipal University Jaipur.



Ms. Deepika Maan (Research Scholar)

Poster Title: “ Metal Organic Framework as Dyes Adsorbent from Wastewater- An Analytical Approach”

Conference: International Conference on Materials and Membranes for Water and Energy (ICMMWE-2024)

Ms. Pavini Sharma (BSc SEM-4)

Journey Title: “Astronomy Bootcamp 2024”

Event: Nehru Planetarium Prime Ministers Museum & Library New Delhi.



Ms. Karishma Jain (Research Scholar)

Paper Title: “Comprehensive Insights into Reduced Graphene Oxide”

Conference: International Conference on Mathematical Modeling Computational Intelligence Techniques and Renewable Energy (MMCITRE-2024)

Mr. Mahesh Malpani (Research Scholar)

Poster Title: “ITER - The Way to New Energy”

Event: National Science Day at Manipal University Jaipur.



Mr. Ashish Kumar(Research Scholar)

Poster Title: “Indigenous Technologies for Viksit Bharat”

Event: Rajasthan Vigyan Mahotsava

PRATHAM

Photo Gallery

What's inside
Lab-318?

