



DELHI TECHNOLOGICAL UNIVERSITY

DEPARTMENT OF APPLIED PHYSICS (Under the initiative of Viksit Bharat)

Organizes

2nd ONE DAY NATIONAL SEMINAR
on

**RECENT TRENDS IN
APPLIED PHYSICS AND
ENGINEERING (RTAPE-2024)**

by

Shanti Swarup Bhatnagar (SSB) Awardees

APRIL 12, 2024

CHIEF PATRON



Prof. Prateek Sharma
Hon'ble Vice Chancellor
Delhi Technological University

PATRON



Prof. Madhusudan Singh
Registrar, DTU

CHIEF GUEST



Prof. V. Rangopal Rao
Vice Chancellor, Birla Institute of Technology
& Science (Shanti Swarup Bhatnagar
Awardee and Former Director, IIT Delhi)

CHAIRPERSON



Prof. A. S. Rao
HOD, Applied Physics, DTU

CO-CHAIRPERSON



Prof. Suresh C. Sharma
Former Dean (Acad.-PG), DTU

CONVENER



Dr. Mukhtiyar Singh
Deptt. of Applied Physics, DTU

CO-CONVENER



Dr. Richa Sharma
Deptt. of Applied Physics, DTU

 **9:00 AM
ONWARDS**

 **PRAGYAN HALL, 2nd Floor
Administrative Block, DTU**

ORGANIZING COMMITTEE

DEPARTMENT OF APPLIED PHYSICS

- Prof. A. S. Rao
- Prof. Suresh C. Sharma
- Prof. R. K. Sinha
- Prof. Rinku Sharma
- Prof. Vinod Singh
- Prof. Rishu Chaujar
- Prof. Nitin K Puri
- Dr. M. S. Mehata
- Dr. Yogita Kalra
- Dr. M. Jayasimhadri
- Dr. Amrish Kumar Panwar
- Dr. Ajeet Kumar
- Dr. Pawan Kumar Tyagi
- Dr. Mukhtiyar Singh
- Dr. Richa Sharma
- Dr. Bharti Singh
- Dr. Renuka Bokolia
- Dr. Sarita Baghel
- Dr. Deshraj Meena
- Mr. Yogendra Meena
- Dr. Kamal Kishor

OTHER DTU DEPARTMENTS

- Prof. Vishal Verma (EE)
- Prof. O. P. Verma (ECE)
- Prof. S. Indu (ECE)
- Prof. Rajeshwari Pandey (ECE)
- Prof. S. K. Garg (MAE)
- Prof. Neeta Pandey (ECE)
- Prof. D. Kumar (AC)
- Prof. Yasha Hasija (Biotech)
- Prof. Kapil Sharma (IT)
- Dr. Shikha N. Khera (DSM)
- Dr. Sonam Rewari (ECE)
- Dr. Shilpa Pal (Civil)
- Dr. Anil Kumar (MAE)
- Dr. Yashna Sharma (ECE)
- Prof. Sangita Kansal (AM)

Chief Guest

Prof. V. Ramgopal Rao

Vice Chancellor

Birla Institute of Technology & Science
(Shanti Swarup Bhatnagar Awardee
and Former Director, IIT Delhi)

Chief Patron

Prof. Prateek Sharma

Hon'ble Vice Chancellor, DTU

Patron

Prof. Madhusudan Singh

Registrar, DTU

Chairperson

Prof. A. S. Rao

HOD, Applied Physics, DTU

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Recent Trends in Applied Physics and Engineering (RTAPE-2024)

by

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APRIL 12, 2024

Organized by:

Department of Applied Physics
DELHI TECHNOLOGICAL UNIVERSITY
(Under the Initiative of Viksit Bharat)

About the Seminar

Department of Applied Physics, DTU has started a unique initiative of bringing together the eminent scientist awarded with prestigious Shanti Swarup Bhatnagar Award in Physics and Engineering by organizing 1st National Seminar in 2020. This award is named after the founder Director of the Council of Scientific & Industrial Research (CSIR) India, the late Dr (Sir) Shanti Swarup Bhatnagar'. The Prize is given each year for outstanding contributions to Science and Technology. The aim of the National Seminar is to provide a platform to the young researchers to interact with Shanti Swarup Bhatnagar (SSB) Awardees and get benefited from their research expertise. In continuation of this, a 2nd National Seminar is being organized by the Department on April 12, 2024.

PROGRAMME SCHEDULE



9:00 AM – 9:30 AM

Registration

9:30 AM – 9:35 AM

National Anthem

9:35 AM – 9:45 AM

Floral Welcome of Guests and Lamp Lighting

9:45 AM – 9:50 AM

Welcome address by **Prof. A.S. Rao**, Head, Department of Applied Physics, DTU (Chairperson, RTAPE-2024)

9:50 AM – 9:55 AM

Address by **Prof. Suresh C. Sharma**, Former Dean (Acad-PG), DTU (Co-Chairperson, RTAPE-2024)

9:55 AM – 10:00 AM

Address by **Prof. V. Ramgopal Rao**, Vice-Chancellor, Birla Institute of Technology & Science (Shanti Swarup Bhatnagar Awardee and Former Director IIT Delhi) (Chief Guest, RTAPE-2024)

10:00 AM – 10:05 AM

Address by **Prof. Madhusudan Singh**, Registrar, DTU (Patron, RTAPE-2024)

10:05 AM – 10:15 AM

Address by **Prof. Prateek Sharma**, Hon'ble Vice Chancellor, DTU (Chief Patron, RTAPE-2024)

10:15 AM – 10:20 AM

Vote of thanks by **Dr. Mukhtiyar Singh**, Assistant Professor, Applied Physics, DTU (Convener, RTAPE-2024)

10:20 AM – 10:45 AM : HIGH TEA

10:45 AM – 11:30 AM

LECTURE 1

TITLE OF THE TALK: Multidisciplinary Research Opportunities in Nanoelectronics

EXPERT SPEAKER: **Prof. V. Ramgopal Rao** (Shanti Swarup Bhatnagar Awardee and Former Director IIT Delhi)

Session In-charge: Prof. Suresh C. Sharma, DTU

11:30 AM – 12:15 PM

LECTURE 2

TITLE OF THE TALK: Einstein and his famous equation $E=mc^2$

EXPERT SPEAKER: **Prof. Ajoy Ghatak** (Shanti Swarup Bhatnagar Awardee and Former Professor, Department of Physics, IIT Delhi)

Session In-charge: Prof. A.S. Rao, DTU

12:15 PM – 1:00 PM

LECTURE 3

TITLE OF THE TALK: Optics of Nanostructured Plasmonic Materials

EXPERT SPEAKER: **Prof. S. Anantha Ramakrishna** (Shanti Swarup Bhatnagar Awardee and Professor, Department of Physics, IIT Kanpur)

Session In-charge: Prof. Rinku Sharma, DTU

1:00 PM – 2:00 PM : LUNCH

2:00 PM – 2:45 PM

LECTURE 4

TITLE OF THE TALK: Electrically active defects in Semiconductors and their role in devices

EXPERT SPEAKER: **Prof. Vikram Kumar** (Shanti Swarup Bhatnagar Awardee and Former Director NPL, Delhi and SSPL, Delhi)

Session In-charge: Prof. Rishu Chaujar, DTU

2:45 PM – 3:30 PM

LECTURE 5

TITLE OF THE TALK: Laser Speckles: Fundamentals and Some Applications

EXPERT SPEAKER: **Prof. Kehar Singh** (Shanti Swarup Bhatnagar Awardee and Former Professor, Department of Physics, IIT Delhi)

Session In-charge: Prof. Nitin K. Puri, DTU

3:30 PM – 4:15 PM

LECTURE 6

TITLE OF THE TALK: Photonics Around us

EXPERT SPEAKER: **Prof. Anurag Sharma** (Shanti Swarup Bhatnagar Awardee and Former Professor, Department of Physics, IIT Delhi)

Session In-charge: Prof. Vinod Singh, DTU

4:15 PM – 4:20 PM

Vote of thanks by **Dr. Richa Sharma**, Assistant Professor, Applied Physics, DTU (Co-Convener, RTAPE-2024)

4.20PM – 4.45 PM : TEA