



**ATAL Online**

# Faculty Development Program

on the theme

## Novel Materials and their Applications

from

19<sup>th</sup> July to 23<sup>rd</sup> July 2021

Organized by



**Department of Physics**

Maharaja Ranjit Singh

Punjab Technical University, Bathinda

Dabwali Road, Bathinda -151 001

**Catalyzed and supported by:**



**AICTE Training And Learning (ATAL)  
Academy**

**All Indian Council for Technical Education**

## ORGANIZING COMMITTEE

### Patron

**Prof. (Dr.) Buta Singh Sidhu**

Vice Chancellor,

Maharaja Ranjit Singh Punjab Technical

University, Bathinda

### Advisory Committee

**Prof. (Dr.) Jasbir Singh Hundal**

(Prof. & Head dept. of Physics, MRSPTU)

**Dr. Gurinder Pal Singh Brar**

(Registrar, MRSPTU)

**Prof. (Dr.) Sandeep Kansal**

(Professor dept. of Physics, MRSPTU)

**Prof. (Dr.) Rabinder Nath**

(Sr. Professor dept. of Physics, IIT Roorkee)

**Prof. (Dr.) Balwinder Singh**

(Coordinator AICTE-MRSPTU MoU)

### Coordinator

**Dr. Satnam Singh** (Asst. Professor)

### Co-coordinators

**Dr. Veena Sharma** (Asst. Professor)

**Dr. Gagan Gupta** (Asst. Professor)

### Technical Staff

**Sh. Jaswinder Singh** (Lab Supdt.)

**Mr. Rahul Menon** (Tech. Gr-II)

**Mrs. Manjeet Kaur** (Steno)

### Student Assistants

**Mrs. Priya Dhuria** (PhD Scholar)

**Mrs. Sumandeep Kaur** (PhD Scholar)

**Mr. Arpan Sethi** (PhD Scholar)

**Ms. Ankita Buwaniwal** (PhD Scholar)

## About Faculty Development Program (FDP):

A round table discuss with experts is equivalent to read many books, therefore we are calling experts from various institutions/ laboratories/ industries on this platform, so that, our audience could get acquaintance with the present scenario of research and technology in India and Abroad. Therefore, the theme of this FDP is widely chosen as "Novel Materials and their Applications" for pursuance of individual attending from different streams. These materials are indistinguish part of our daily life and find variety of applications such as: Sensors, Actuators, Display Devices, Energy Storage, Renewable Energy Materials, Data Storage, Fuel, Aerospace, Environmental, Biomedical etc.

## Content of FDP to be covered:

- Nano- Materials
- Multi-Ferroic Materials
- Advanced Composites
- Magnetic Materials
- Electronic Materials
- Energy Materials
- Smart Materials
- Biomaterials for diagnostics
- Polymers and Soft materials
- Materials of Super-capacitors
- Glassy and Amorphous Materials
- Functional Materials
- Ion Beam for Materials
- Material Characterization Techniques

## About University:

Maharaja Ranjit Singh Punjab Technical University (MRSPTU), Bathinda is an affiliating Technical University, established by Govt. of Punjab vide Punjab Act No. 5 of 2015 notified through Punjab Government Gazette-Extraordinary (Regd. No. CHD/0092/2015-2017) notification No. 5-Leg./2015 dated 12th February 2015 and registered under section 2(f) and 12(B) of UGC. The objectives of this new Technical University at Bathinda are to provide, upgrade and promote Quality Technical & Scientific Education, Training and Research in Technical & Scientific Education to create entrepreneurship and a conducive environment for the pursuit of Technical & Scientific Education in close cooperation with industry.

## About Department of Physics

The Department was a part of Department of Applied Sciences GZSCCET Bathinda since 1989. It was established as independent department in 2012. Since inception, it has expanded and emerged as a great Academic and R&D center of the region. Department offers M.Sc. (Physics), B.Sc.(Hons.) Physics and Ph.D. programs (full time and part time) in specialized areas: Radiation Physics, Nuclear Physics, Condensed Matter Physics, Nano-technology, Ferroelectric Ceramics, Polymer Composite Films, Theoretical Physics. Major strength of the department is its Faculty having vast teaching and research experience within India and abroad.

## RESOURCE PERSONS

### Dr. Ravi Kumar (Professor)

Department of Material Science and Engineering,  
National Institute of Technology, Hamirpur

### Dr. A.L. Sharma (Asst. Professor)

Centre for Physical Sciences, School of Basic and  
Applied Sciences, Central University of Punjab.

### Dr. Ashish Agarwal (Professor)

Department of Physics, Guru Jambheshwar  
University of Science & Technology, Hisar

### Dr. Ravi Bhatia (Asst. Professor)

Department of Physics, Guru Jambheshwar  
University of Science and Technology, Hissar.

### Dr. Ashis Kumar Panda

(Senior Principal Scientist) CSIR-National  
Metallurgical Laboratory, Jamshedpur.

### Dr. Somenath Roy (Principal Scientist)

Functional Material & Devices Division, CSIR-  
Central Glass & Ceramic Research Institute,  
Kolkata.

### Dr. Kulveer Singh (Professor)

Thapar Institute of Engineering and Technology,  
Patiala.

### Dr. Atul Khanna (Professor)

Department of Physics, Guru Nanak Dev  
University, Amritsar

### Dr. M.V. Reddy (Scientist)

Institute of Research Hydro-Québec, Varennes,  
Montreal, Quebec, Canada

### Dr. Rajeev Varshney (Professor cum Coordinator AICTE-Human Values Cell)

Maharaja Ranjit Singh Punjab Technical  
University, Bathinda

### Dr. Prabhakar Singh (Professor)

Department of Physics, Indian Institute of  
Technology (Banaras Hindu University), Varanasi

### Dr. Jasbir Singh Hundal (Professor)

Department of Physics, Maharaja Ranjit Singh  
Punjab Technical University, Bathinda

### Dr. Pravin Kumar (Scientist-F)

Inter-University Accelerator Centre (IUAC), Delhi-41

### Dr. Amitava Mitra (Visiting Professor)

Department of Physics, Indian Institute of  
Technology Jodhpur.

## How to Apply

Applicants have to signup, register and apply  
from the online portal of ATAL.

<http://www.aicte-india.org/atal>

<http://atalacademy.aicte-india.org/signup>

## Test and Certificates

A test will be conducted by the coordinator at  
the end of program.

Certificates will be issued to those participants  
who have attended the program with  
minimum 80% attendance, scored minimum  
60% marks in the test and submitted feedback  
form.

## Contact details of coordinator

**Dr. Satnam Singh** (Assistant Professor)

Department of Physics, Maharaja Ranjit  
Singh Punjab Technical University,  
Bathinda-151001 (Punjab)

M: +91-7986595372

E-mail: [satnam@mrsptu.ac.in](mailto:satnam@mrsptu.ac.in)

Candidates may visit our website for regular  
updates: <https://www.mrsptu.ac.in>

# Schedule of the Faculty Development Program

**Timing for Inaugural Function : 8:30 AM to 9:30 AM on 19<sup>th</sup> July 2021**

<b><u>Date/Time</u></b>	<b><u>9:30 AM to 11:30AM</u></b>	<b><u>11:30AM to 1:30 PM</u></b>	<b><u>2:30 PM to 4:30 PM</u></b>
<b>19<sup>th</sup> July 2021 (Monday)</b>	<b>Dr. Ravi Kumar</b> Nano-Materials	<b>Dr. Achchhe Lal Sharma</b> Materials for Supercapacitor Applications	<b>Dr. Ashish Agarwal</b> Multiferroic materials
<b>20<sup>th</sup> July 2021 (Tuesday)</b>	<b>Dr. Ravi Bhatia</b> Carbon Nano-Tubes	<b>Dr. Ashis Kumar Panda</b> Magneto-Caloric Materials	<b>Dr. Somenath Roy</b> Biomaterial for Diagnostics
<b>21<sup>st</sup> July 2021 (Wednesday)</b>	<b>Dr. Kulveer Singh</b> Materials characterization Techniques	<b>Dr. Atul Khanna</b> Glass and Crystalline Phosphors for Solid State Lighting	<b>Dr. M.V. Reddy</b> Novel functional materials for Energy storage
<b>22<sup>nd</sup> July 2021 (Thursday)</b>	<b>Dr. Rajeev Varshney</b> Human Values in New Education Policy	<b>Dr. Prabhakar Singh</b> Novel materials for Energy applications.	<b>Dr. Jasbir S. Hundal</b> Ferro-electric materials
<b>23<sup>rd</sup> July 2021 (Friday)</b>	<b>Dr. Pravin Kumar</b> Ion beam synthesis of novel materials and their modifications	<b>Dr. Amitava Mitra</b> Nanostructured magnetic materials	<b>Valedictory Function/Test</b>