



**SURANA COLLEGE  
AUTONOMOUS**

Affiliated to Bangalore University | Re-accredited by NAAC with A+  
Recognised under section 2(f) & 12(B) of UGC  
ISO 21001:2018 Certified Institution

**DEPARTMENT OF PHYSICS  
IN ASSOCIATION WITH  
RESEARCH & CONSULTANCY CELL  
ORGANIZES**

# **ADVANCED FUNCTIONAL MATERIALS AND ITS APPLICATIONS**

**FIVE DAYS FACULTY DEVELOPMENT PROGRAM (ONLINE) – 2023**

**Date : September 25<sup>th</sup> to 29<sup>th</sup>, 2023**

**Time : 3:00 pm to 5:00 pm (All Five Days)**



## ABOUT THE FDP:

The primary objective of five-days Faculty Development program on “Advanced Functional Materials and its Applications” is to provide participants to the current state of Multifunctional materials and related research, as well as next generation innovations. With technological advancements in various disciplines, the demand for new sustainable materials that can replace conventional materials is increasing. Functional Materials research aims to produce more meaningful, applicable results that benefit to the scientific community directly.

This FDP will include a broad discussion of topics such as Advances in nanomaterials, Energy storage device applications, NLO Materials for SHG applications, bio/nano composites, various processing and characterization techniques, and different research avenues. The invited talks will cover the fundamentals, advances, and applications of various materials, particularly multifunctional materials, for the benefit of participants from various academic and research institutes involved in the disciplines of Physics, Chemistry, Electrical, Electronics, Nanotechnology, and so on.

The FDP will encourage and promotes research collaboration across disciplines. Incorporates public desires, with communities being engaged to determine their needs for innovation. Identifies and promotes the use of best practices in multidisciplinary research.

### **MAIN OBJECTIVES:**

- To upgrade the knowledge about recent advances in Multifunctional Materials and Synthesizing processes.
- To understand the industry trends and research opportunities in the allied field.
- To select the suitable processing technique for the customized/newly developed functional material.
- An exposure to recent advances in the field.

## About Surana College:

Surana College Autonomous (est. 1995) under GDA Foundation Trust is affiliated to Bangalore University (u/s 53(5), (& under Karnataka State Universities Act 2000) and is also included under section 2(f) & 12(B) of the UGC Act 1956. The institution has been catering to all sections of society on need-based quality education. Surana College has clarity on students' future, both in their career and life. The institution has many case studies on inducting average students only to raise them to achieve distinction and ranks. The emphasis is on academic focus adding to training for holistic development of students. Constantly identifying value-additions to the university stipulated curriculum, the college designs balanced inputs of curricular and co-curricular components into its practice.

## About the Department of Physics:

The Department of Physics started the UG degree program in the year of 1996. Dedicated, well qualified and experienced faculty members of the department lead to the path of success. The faculty members are very active in reaching out to students imparting varied effective methods of learning skills. The main objective is to stimulate the minds and hearts of the student's relentless curiosity and dynamic involvement in Physics.

A well-equipped and spacious lab is provided to inspire students to explore creatively hypotheses through experimentation and it provides ample opportunities to the students to become leading winning personalities. Remedial measures like special and coaching classes are conducted apart from class hours. The focus of the Department is the holistic development of the students and involving them in curricular and co-curricular activities.

## About the Research & Consultancy Cell:

In the year 2022, Surana College Autonomous, established a dedicated wing "Research & Consultancy Cell" for active participation in various assignments and deliverables in research, consultancy, and training areas for both external and internal stakeholders. The cell has dedicated research cohort in the areas of Science and Technology, Humanity & Management. The focus areas of assignments are external research funded projects and grants, extended research activities such as corporate trainings, MDPs, FDPs and simulations with interdisciplinary and multidisciplinary approaches. To explore further opportunities and collaboration with the Research & consultancy cell, feel free to contact to Dr. Vanishree M.R, Dean – Research and consultancy cell. Email ID: vanishree.drc@suranacollege.edu.in



# SESSIONS

<u>DAYS/DATE</u>	<u>TOPIC TO BE COVERED</u>
<u>Day 1 (25.09.2023)</u>	<u>Development of Device Quality Technologically Important Single Crystals: Crystal Growth, Characterization and Applications</u>
<u>Day 2 (26.09.2023)</u>	<u>Multifunctional Materials and its Applications</u>
<u>Day 3 (27.09.2023)</u>	<u>Energy storage Materials</u>
<u>Day 4 (28.09.2023)</u>	<u>Piezoelectric Ceramics for energy storage applications</u>
<u>Day 5 (29.09.2023)</u>	<u>Recent Trends in Nanoscience and Nanotechnology</u>

## EXPERT RESOURCE PERSONS:



### **Dr. Muthu Senthil Pandian, Ph.D.**

Research Scientist (Grade II), Photovoltaic Devices Laboratory  
SSN Research Centre, SSN Institutions  
Chennai – 603110, Tamilnadu, India.



### **Dr. Paul Blessington Selvadurai, Ph.D.**

Kothari-Post-Doctoral Researcher (KPDF),  
Department of Nuclear Physics,  
University of Madras, Chennai – 600025, India.



### **Dr. G. Kumar, Ph.D.**

Assistant Professor, Department of Chemistry,  
Presidency College (Autonomous)  
Chepauk, Chennai – 600005, Tamilnadu, India.



### **Dr. M. Muneeswaran, Ph.D.**

Assistant Professor & Researcher, Department of Physics  
Vellore Institute of Technology-AP (VIT-AP)  
Andhra Pradesh – 522237, India.



### **Dr. R. Ramesh Kumar, Ph.D.**

Assistant Professor & Researcher, Department of Physics  
Surana College Autonomous,  
Bangalore – 560004, Karnataka, India.

## Who Can Attend?

Young Scientific, Academicians, Industrialist, Research Scholars, UG & PG students.

## Expected Outcome:

The FDP will provide a platform for experts from academia and industry to showcase their latest findings in the areas of expertise that include multi-functional materials in Medical, Engineering, Nanotechnology, Environmental Technologies and so on.

## Registration Link:

Format: <https://forms.gle/oBZm6kB9bVrGZz7D7>



## Registration Fees:

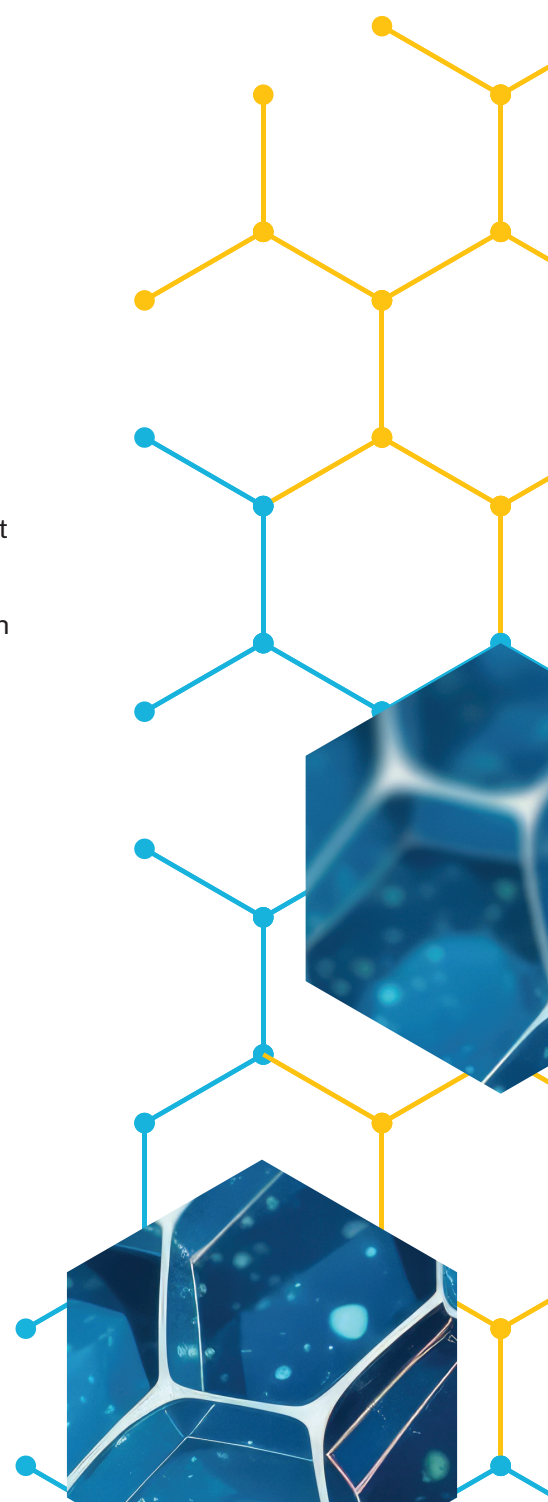
- The registration is **Rs. 300/-** (Rupees Three Hundred Only) per participant which inclusive of GST.
- Participants will be receiving training & presentation materials along with e-Certificate on completion.
- The payment can be made through net banking or UPI. Registration fee is non-refundable and non-adjustable.

## Online Payment Details:

Beneficiary Name : SURANA COLLEGE  
IFSC Code : CNRB0001173  
Account Number : 1173201001056  
Bank Name & Branch : CANARA BANK, South End Road  
UPI ID :

## Important Date:

Last date for Registration on or before **15th September 2023**.



## HOW TO APPLY

Apply in the prescribed format by google form.

## SELECTION CRITERIA:

Selection will be based on first-come-first-serve basis to a maximum number of 100 participants. The list of selected participants will be intimated through email.

### Note:

E-Certificates will be issued to participants who attend all the sessions (\*80% of the attendance is mandatory), completion of requisite assessments and feedback form.

# FDP ORGANIZING COMMITTEE

### CHIEF PATRON:

**Dr. Archana Surana**

Managing Trustee, SEI

---

### PATRON:

**Dr. D N S Kumar**

Principal & Academic Director

---

### ORGANIZING COMMITTEE:

**Dr. Vanishree M.R.**

Dean, Research & Consultancy Cell, SEI.

**Dr. R. Ramesh Kumar**

Assistant Professor & Researcher, Department of Physics

---

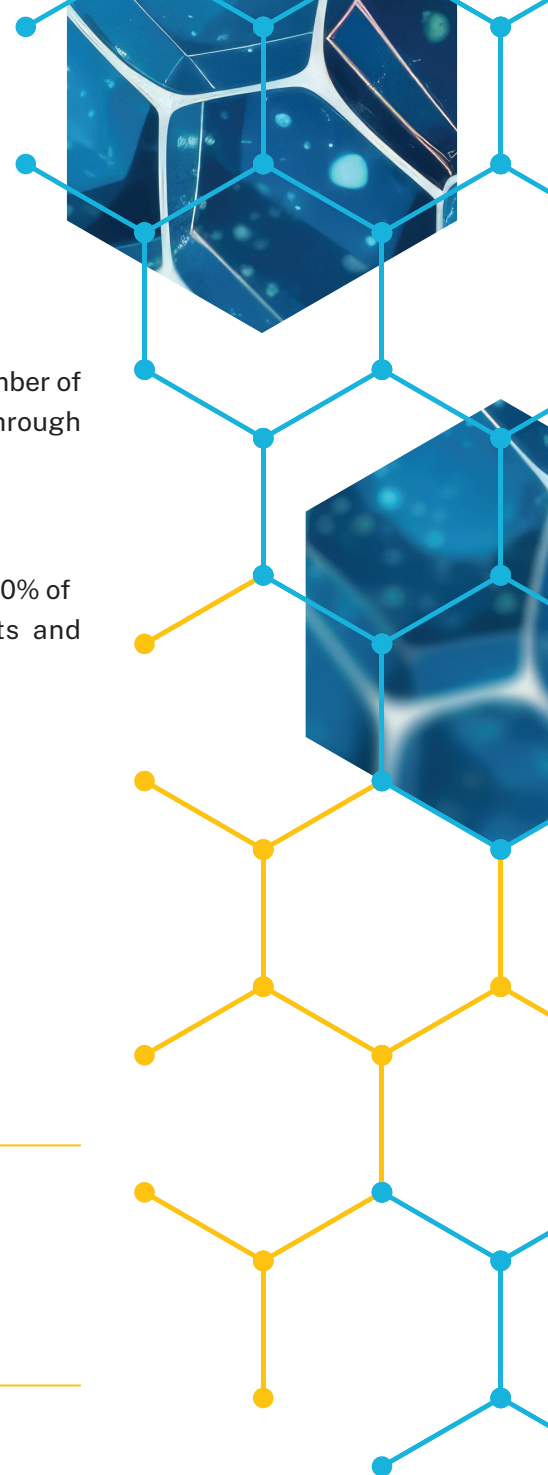
### CONVENERS OF FDP:

**Mr. Srinivasa S**

Head & Assistant Professor, Department of Physics

**Dr. Pooja R,**

Assistant Professor, Department of Biotechnology





**ADDRESS FOR COMMUNICATION:**

**Dr. R. Ramesh Kumar**

Assistant Professor & Researcher  
Department of Physics

**SURANA COLLEGE AUTONOMOUS**

No-16, South End Road, Bengaluru - 560004

Email ID: ramesh.phy@suranacollege.edu.in

Mobile Number: +91-8807743700



**SURANA COLLEGE AUTONOMOUS**  
DEPARTMENT OF PHYSICS

No-16, South End Road, Bengaluru - 560004

Ph: 080-2244 6141, 26642292, 9108058650 | email : principal@suranacollege.edu.in

[www.suranacollege.edu.in](http://www.suranacollege.edu.in)