



STATE-LEVEL WORKSHOP ON ADVANCED PHYSICS EXPERIMENTS FOR COLLEGE TEACHERS



Organized by

Department of Physics

St. Joseph's College (Autonomous)

Nationally Accredited at A++ Grade (4th cycle) by NAAC & College with Potential for Excellence by UGC
DBT-STAR & DST-FIST Sponsored College, Special Heritage Status awarded by UGC, Secured 25th position in NIRF (2025)

Tiruchirappalli-620002, Tamil Nadu, India

August 13 & 14, 2026

HOST INSTITUTION

St. Joseph's College (SJC) was founded by Jesuit visionaries in 1844 with the noble aim of educating humanity for the Good and the True (Pro Bono Et Vero). SJC now serves as a beacon of light for all men and women aspiring to pursue holistic higher education. SJC is a pioneer higher education institution affiliated to Bharathidasan University, Tiruchirappalli, Tamil Nadu. It is one of the first colleges to be granted autonomy by the UGC in 1978.

SJC

- Was recognized by the UGC as a College with Potential for Excellence in 2004 and again in 2014
- Received DST-FIST funding in 2008 and 2014 and DBT-STAR status in 2014 • Received the coveted honor of the Special Heritage Status from the UGC in 2015
- Secured the Five Star Status (2000), A+Grade (2006), A Grade (2012) and A++Grade (2019) in NAAC accreditation process.
- Secured 25th position in NIRF (2025) under college category

The college caters to the educational needs of all sections of society with a marked emphasis on the preferential option for the poor, the marginalised, the first-generation learners and the other deprived sections of the society.

ABOUT THE WORKSHOP

St. Joseph's College (Autonomous), during the 183 years of its existence, has constantly and consistently upheld the Jesuit principle of the magis. In order to impart experimental skills among the college teachers handling PG labs, this workshop has been planned. With the rich experience of our faculty handling the following experiments, complete hands-on training will be imparted through this workshop.

ABOUT THE DEPARTMENT

This century-old Department of Physics started B.A. Physics (1881), B.Sc (Hons.) Physics (1911), B.Sc (1930), M.Sc Physics (1961), Ph.D. (1971) and M.Phil (1977). Other than its own evolution, it had given birth to two departments, Computer Science (1983) and Electronics (1993), in the college. To cater to the needs of the students, B.Sc and M.Sc (Physics) programmes in the self-financing section (shift II) were established in 1982 and in 2004, respectively. Presently, there are 31 faculties and 9 non-teaching staff in the department. The department is continually developing with support from management and funding from UGC, DST-FIST, DST-SERB, DRDO, and CSIR.

The department has established national and international collaborations in many fields of research in recent years and organises symposia and conferences periodically at all levels to ignite the students with a scientific spirit. Over a period of 145 years, the alumni of the department have served and are still serving the nation in various capacities. Notable among them are Bharat Ratna, Dr APJ Abdul Kalam, the former President of India, and Dr G. N. Ramachandran, an Indian physicist who was known for his work, "The Ramachandran Plot", for understanding peptide structure and was nominated for the Nobel Prize (doctoral student of Nobel laureate Sir C. V. Raman).

TRAVEL AND ACCOMMODATION

Participants are requested to make their own arrangements for travel and accommodation. Several budget hotels are located around our campus.

Registration fee: Rs.1500

Venue: Physics Laboratory

Participation Certificate and Lunch Will be provided

Last date for Registration: 30.07.2026

Eligibility: Faculty from any higher education Institution

EXECUTIVE COMMITTEE

- Dr. B. Kanickairaj
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- Dr. A. Maggie Dayana
- Dr. M. M. Armstrong Arasu
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- Dr. P. Adal Arasu
- Dr. A. Sinthiya
- Ms. B. Mary Dayana
- Mr. G. Novin Senetra Roy
- Dr. M. Augustin
- Dr. G. Genifer Silvena
- Dr. S. Rex Rosario

THE EXPERIMENTS TO BE COVERED

1. Millikan Oil Drop Experiment
2. Michelson Interferometer (Conventional & Laser)
3. Microwave-Klystron & Gunn Diode oscillators
4. Laser Experiments
5. Fibre Optics
6. Hall Effect
7. Energy Band Gap Study of Semiconductor
8. Hysteresis Loop
9. Quincke's & Gouy's Method for Magnetic Susceptibility
10. Electron Spin Resonance Spectrometer
11. Zeeman Effect
12. Ultrasonic Interferometer & Ultrasonic Diffraction
13. Geiger- Muller Counter
14. Arc Spectra of Copper, Brass & Aluminium
15. UV-Visible & FTIR Spectrometer
16. Dielectric Constant Measurements (Solid & liquid)
17. Four-Probe Method
18. Fresnel's Biprism
19. Elliptic & Hyperbolic Fringes by Cornu's Method
20. Modulation & Demodulation Methods: Analog & Digital (PAM, PWM, PPM, PCM, ASK, FSK and PSK).
21. Computational / Simulation-based Experiments: (Basics of Origin, Scilab, Python, Proteus, and Arduino)

ORGANIZING COMMITTEE

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REGISTRATION and PAYMENT LINK



<https://service.sjctni.edu/Seminar/25/index.php?programcode=PH03130313>