DEPARTMENT OF PHYSICS
ST. JOSEPH'S COLLEGE (Autonomous)
TIRUCHIRAPPALLI – 620002

Nationally Accredited at A++ Grade (4th cycle) by NAAC, Special Heritage Status Awarded by UGC
DBT-STAR & DST-FIST Sponsored College and College with Potential for Excellence by UGC

Organizes a

Workshop on Computational Physics Experiments (PG Students / Faculty)

📅 **06th March 2023**

🕘 **9:00 am – 4:00pm (IST)**

📍 **KP Joseph Hall**

About the Workshop

This workshop aims to provide a forum for PG Physics Students to be enlightened on Computational Physics especially using PYTHON

Workshop Focusses on

Computational physics is the study of scientific problems using computational methods.

The numerical techniques from mathematics like
- Interpolation & Model fitting
- Derivatives & Integrals
- Differential equations
- Eigenvalue problems
- Monte Carlo methods

are used to solve problems from all areas of physics.

Some examples are
- Calculating the magnetic field of a charged wire (integrals & derivatives)

- Chaos & the butterfly effect (differential equations)
- Heat propagation in a sample (differential equations)
- Simulating (and navigating) a spaceship interacting with sun, earth and moon (differential equations)
- The strange behavior of coupled oscillators (Eigenvalue problems, Fourier analysis & fitting procedure)
- Ferromagnets & Antiferromagnets (Monte Carlo methods)
- Special properties of graphene
- Electronic oscillators
- Mechanics
- Quantum mechanics

Python will be used in this workshop.

Convenor
Dr. N. Ravi

Course Coordinator
Dr. B. Kanikairaj

Technical Support
Dr. H. Joy Prabu, Prof. G. Novin Senetra Roy

Course Incharges
Dr. A. J. Clement Lourduraj, Dr. S. Lourduraj, Dr. A. Maggie Dayana, Dr. M. Lawrence

Requirements: Participants are requested to bring their Laptop for hands on training

Free Registration

(2 or 3 PG Students/Faculty of Physics from each Institution can register)
Lunch and E - Certificate will be provided for all Participants

Registration link : https://forms.gle/HbnfkbZSmFbE321i6
Deadline : 04th March 2023 by Noon

or

Scan the QR

For Further Details Contact: Dr. S. Lourduraj, Co-ordinator - Shift II, Assistant Professor E.mail ID: lourduraj82@gmail.com Cell No. : 9786114169