



IIT PALAKKAD

PHYSICS IN-HOUSE SYMPOSIUM 2024

Each year, the Physics Department at IIT Palakkad hosts an In-house Symposium, where faculty and students showcase their research projects. This event offers a platform for sharing cutting-edge work with fellow physics enthusiasts and the broader IIT student community.



Invited speakers



Dr. Loganayagam R

ICTS-TIFR Bengaluru
Area of Research: String Theory, Black Hole Physics and
Quantum Field Theory



Dr. Vijaykumar Chikkadi

IISER Pune
Area of Research: Soft condensed matter, Glasses,
Active matter

SCHEDULE

DAY 1

25/10/2024 Friday

Venue: Samgatha 305 2.00 PM - 5.20 PM

Dr. Loganayagam R (2.00 - 3.00 PM)	Radiation reaction in an expanding universe
Chandrima B Pushpan (3.00 - 3.30 PM)	Quantum information processing with 2D isotropic Heisenberg model

High Tea
(3.30 - 4.00 PM)

Amir Hamza Shaikh (4.00 - 4.30 PM)	Generalizations of Kiteav model
Sivadas P (4.30 - 4.50 PM)	Small molecule based sequence defined oligomers as membrane disrupting antibacterial agents
Manju C (4.50 - 5.20 PM)	Disorder driven phase transitions in long range interacting spin chains

DAY 2

26/10/2024 Saturday

Venue: Samgatha 305 9.00 AM - 5.15 PM

Dr. Vijaykumar Chikkadi (9.00 - 10.00 AM)	Revealing Structural Defects in Amorphous Materials Using Colloidal Suspensions
Flash Talks (10.00 - 11.00 AM)	

Tea Break + Poster session (Samgatha corridor)
(11.00 - 11.30 AM)

Dr. Gayathri V (11.30 - 11.50 AM)	Magnetism in Quasi-2D $\text{Cr}_{1-x}\text{Te}_2$ system
Olivia Vincent (11.50 AM - 12.10 PM)	An active particle near a curved interface
Prof. Manoj Gopalakrishnan (12.10 - 12.40 PM)	Active Brownian Motion in confinement
Nikhil Joseph Joy (12.40 - 1.00 PM)	Thermal transport near the edges of graphene

Lunch (Agora)
(1.00 - 2.00 PM)

Poster Session (Samgatha corridor) (2.00 - 3.00 PM)	
Dr. Vishwas V (3.00 - 3.30 PM)	Transient shear bands in yielding dense amorphous materials

Tea Break
(3.30 - 4.00 PM)

Furtado Akhil Pravin (4.00 - 4.30 PM)	Topological phases and edge states in exactly solvable Gamma matrix models
Jeena S K (4.30 - 5.00 PM)	Clear signature of type 1a supernova in the early galaxy

Closing Ceremony (5.00 PM)