



Confluentia 2025 - Third In-house Symposium

Venue: Raman Hall, Physics Department, NIT Calicut

Date: March 01, 2025

Programme Schedule

Time	Programme	
09:00 AM - 09:30 AM	Registration	
09:30 AM - 10:00 AM	Inauguration	
10:00 AM - 10:15 AM	High Tea	
Session 1 - 10:15AM - 11:15AM		
Time	Speaker	Title
10:15 AM - 10:35 AM	N. Yogesh	Effective Medium Theory: Validity of Defining Constitutive Parameters for Photonics Crystals, Metamaterials and Periodic Composites
10:35 AM - 10:55AM	Geethu P. M.	Effect of Confinement and Temperature on Polymer Dynamics
10:55 AM - 11:15 AM	Madhumita Halder	Spintronic materials from Heusler Family
Session 2 - 11:15AM – 12:00PM		
11:15 AM - 11:30 AM	Hasana Jahan E. K.	Enhanced and Tunable Photoluminescence of Graphene Quantum Dots in a Tamm Plasmon Cavity
11:30 AM - 11:45 AM	Bhupender Kaushal	Fizz the AI Buzz: Let's Understand How AI is Transforming Physics

11:45 AM - 12:00 PM	Rishin Chandran P.	Realization of Negative Refractive Index for Circularly Polarized Light using Supramolecular Chiral Metamaterial
12:00 PM - 02:00 PM	Poster + Lunch	
Session 3 - 02:00 PM – 03:20 PM		
02:00 PM - 02:20 PM	Saurabh Gupta	Beyond Hermiticity
02:20 PM - 02:35 PM	Adarsh S.	Entanglement Entropy and Tensor Network Methods
02:35 PM - 02:50 PM	Ansha S. Nair	FFBRST and the bridge between effective theories
02:50 PM - 03:05 PM	Sachin Raj Kapoor Kanaujiya	The Role of Magnetic Reconnection in Quasi-Periodic Pulsations of a Solar Eruption
03:05 PM - 03:20 PM	Anoop Krishna	Analysing & Interpreting the 21 cm Cosmological Observation
03:20 PM - 03:50 PM	Poster + Tea	
Session 4 - 03:50 PM - 05:20 PM		
03:50 PM - 04:05 PM	Kanimozhi J.	Interfacing Method for Metal Oxide Gas Sensors Using Resistance to Time Period Conversion Circuit
04:05 PM - 04:20 PM	Abhishek Sudan	Studying the Large Scale of the Universe
04:20 PM - 04:35 PM	T. Sushma Sree	Studying the first stars of the Universe using 21-cm signal
04:35 PM - 04:50 PM	Vedha Varshini B.	Exploring Generic Gravitational Wave Polarizations with a Null-Stream Based Bayesian Framework
04:50 PM - 05:05 PM	Gopika Hari K.	Effective Parametric Retrieval of Metamaterial Enhanced Metal Halide Perovskite Absorbers in Terahertz Regime
05:05 PM - 05:20 PM	Abijith K. Reju	Spatially-Modulated Metasurface Tiles for Dual-Band Electromagnetic Shielding at Terahertz Regime
05:20 PM - 05:45 PM	Valedictory and Feedback	

LIST OF POSTERS

Poster No.	Presenter's Name	Title
P1	Athira V	The Weyl semimetallic behaviour of quaternary Heusler compound FeRhCrSi
P2	Priyansh Chouhan	Aerosol optical properties retrieval using Cavity-enhanced Albedometer
P3	Ashiq K M	Study of Light Localization in One Dimensional Random Media
P4	Naseeb Abdu Taikkaden	Effect of Dual Excitation on Tamm Plasmon Polariton Mode
P5	Sona Mariya	An Observational Study of Solar Differential Rotation Using Sunspot Tracking.
P6	Sidharth B	Investigating the Role of Dissipation and Collective Enhancement of Level Density in Neutron Emission from Compound Nuclei.
P7	Priti Bankat Gitte, Rohit Kumar Parbat, Savan Sajith	Periodic and Temporal Analysis of Solar and Geomagnetic Indices and their Associations Across Solar Cycles
P8	Aliya Thasnim H	Systematic Analysis of Fission Fragment Mass Distribution in the Mass 190 Region Using General Description of Fission Observables (GEF) Model
P9	Ch. Gaurav	Simulating the Cosmos: Generating the Initial Conditions for Cosmological Simulations.
P10	Meghaja K, Shaik Muskan Nazmi, Avani AR	Melamine Functionalized ZnO Cathode Buffer Layer for Improved Performance in Inverted Organic Solar Cells
P11	Anoop C. S.	Fine Tuning the Work Function of ZnO Cathode Buffer Layers in Organic Solar Cells by Phenanthroline Coordination
P12	Aswin Ramesh	Charge transport in self assembled TS-CuPc in acidic PEDOT:PSS
P13	Karthika P Moni	Direct Deposition of PZT Thin Film on Single Crystal Diamond Substrate
P14	Shameela P	Synthesis and Characterization of MnO ₂ for High Performance Supercapacitor Electrode Application
P15	Nabeel N. A	Direct Growth of Vanadium-Incorporated Co _x S _y Nanopyramids on Conducting Substrates: A Facile Approach for Enhanced Alkaline Hydrogen Evolution Reaction
P16	K. Venkat Bharath	A comparative analysis of the electrochemical performance of δ -MnO ₂ synthesised via coprecipitation and hydrothermal techniques.

P17	Aleena Antony, Pranaw M P, Debabrata Kalita, Isac Antony Babu Vazhappilly	High-Q Dielectric Sensing with Fano Resonant Microwave Metasurface
P18	Amogh Suseelan, Arjun P V, Abdul Varis C	MNZ metamaterial for broadband applications
P19	Febina Sherin M	Exceptional Point of a Non-Hermitian Terahertz Metasurface for Controllable Polarization Transmission
P20	Sunitha K	Modeling of Re-ionization Using Semi-analytical Galaxy Formation Technique
P21	Akshay S Nair	Non-Moire Tiles: A Novel Strategy for Polarization Engineering