

## Confluentia 2026 - Fourth In-House Symposium

Venue: Raman Hall, Physics Department

Date: 27/02/2026, Friday

### Programme Schedule

<b>Time</b>	<b>Programme</b>	
09:00 - 09:30	Registration	
09:30 - 10:00	Inauguration	
10:00 - 10:30	High Tea	
10:30 - 12:10	<b>Session 1</b>	
	<b>Speaker</b>	<b>Title</b>
10:30 - 10:50	Geethu P. M.	Spatially and Chromatically Programmable Soft Actuation in Plasmonic Hybrid Multilayers of Starch
10:50 - 11:10	Sachin Raj Kapoor Kanaujiya	First Statistical Study of Hard X-ray QPPs in X-Class Solar Flares Using Aditya-L1 HEL1OS Data
11:10 - 11:30	Rishin Chandran P.	Decoding THz Metasurface Resonances via Multipole Expansion
11:30 - 11:50	Darshana S. Nambiar	Förster Resonance Energy Transfer between green synthesised Carbon dots and Fluorescein
11.50 – 12.10	Adarsh S.	Equilibration, Conjugate Measurements and Decoherence

12:10 - 14:30	Poster Session + Lunch	
14:30 - 15:30	<b>Session 2</b>	
	<b>Speaker</b>	<b>Title</b>
14:30 - 14:50	Naseeb Abdu Taikkaden	Investigation of Simultaneous Bidirectional Excitation of Tamm Plasmon Polariton Modes with Deep Learning
14:50 - 15:10	Hiten	Primordial Magnetic Fields and Early Structure Formation: Implications for the High-Redshift 21 cm Signal
15:10 - 15:30	R. Meena	Epsilon-Near-Zero Metamaterial for Electromagnetic Confinement and Waveshaping Applications in the Terahertz Regime
15:30 - 16:30	Tea + Poster Session	
16:30 - 17:30	<b>Session 3</b>	
	<b>Speaker</b>	<b>Title</b>
16:30 - 16:50	Deepthi Moorkanat	Exploring the Dark Ages Using 21-cm Cosmology
16:50 - 17:10	Ashiq K. M.	Random Lasing in a Disordered Non-distributed Microfluidic Device
17:10 - 17:30	Valedictory Function	

## List of Posters

Poster No.	Presenter's Name	Title
P1	Ajo Saran A. J.	Studying the Epoch of Reionization using the statistics of 21-cm signal
P2	Akshay Sekar	Cosmological N-Body Simulation
P3	Aleena Antony, M. P. Pranaw, Debabrata Kalita, Isac Antony Babu Vazhappilly	Fano-Resonant Microwave Metasurface for Dielectric Characterization and Fuel Composition Sensing
P4	Aliya Thasnim	Yield of Neutron-Induced Fission Products Using a Residual-Learning ML Model
P5	Amrutha S.	Chemical-Free Fabrication of Nb <sub>2</sub> C MXene Quantum Dots by Pulsed Laser Irradiation in Liquid and Their Nonlinear Optical Response
P6	Anoop Krishna	Improving 21-cm Inference with Machine Learning & Higher-Order Statistics
P7	Raj R. Arunya	Iron-Decorated VS <sub>2</sub> Nanosheets as a Bifunctional Catalyst for Alkaline Water/Seawater Electrolysis
P8	Athira Venugopalan	Coexistence of Weyl Nodes and Nodal lines in quaternary Heusler compound FeRuVIn
P9	Christy Antony P.	Numerical and Experimental Investigations of Petrochemical Sensing Using a One-Dimensional Photonic Crystal Cavity Resonator at Microwave Frequencies

P10	Devika J.	Isospectral Deformation of Schwarzschild Black Hole in Thermal Potential
P11	Divya V. S.	Altermagnetism and Topological Properties of NiF <sub>3</sub>
P12	Isaac Anand P.	Exceptional Point of Non-Hermitian Electromagnetic Metasurface for THz Waveband Applications
P13	Karthick Ramanan R.	Tsallis Entropy as a Non-Gaussianity Probe of the Epoch of Reionization
P14	Karthika	Fusion in sub barrier energies in <sup>19</sup> F + <sup>158</sup> Gd reactions
P15	Keerthi P. S.	Study of Transport Coefficients and Characterization of Absorbing Phase Transitions in a Conserved Pair-Factorized Steady State
P16	Madhumita Halder	Disorder-induced topological properties in Heusler alloys
P17	Pavan Kumar G. S.	Charge Transport and Nonlinear Optical Properties of TS-CuPc Reinforced PEDOT:PSS via Molecular Ordering
P18	Soorya P. N.	Partial Focusing Effect Due to a Hyperbolic Medium for Infrared Imaging Applications
P19	Srinjay Sen	Multi-Frequency Electromagnetic Transparency via Pseudoanapole Modes Using Pairs of Mirrored Split-Ring Metamaterials
P20	Swetha Gopinathan	Analysis of Doppler Velocity Power Spectra and Magnetic Fields in the Solar Active Region NOAA 13842