



Programme Schedule

Frontiers In Physics-2023

March 3-4, 2023



Venue: Zakir Hussain Lecture Hall, (G-09) University of Hyderabad

DAY 1

March 3, 2023 (Friday)

Registration		
08:30 - 09:00		
09:00 - 09:45	Inauguration & Address By Prof. Subodh R Shenoy, TIFR Hyderabad and felicitation to Prof. Ashok Chatterjee & Prof. G. Rajaram	
09:45 - 10:15	High Tea	
Session Chair: Prof. Rukmani Mohanta		
10.15 - 11:00	Plenary Talk - 1	Prof. Kumar S Gupta, SINP, Kolkata Black Hole Entropy and Quantum Information Scrambling.
11:00 - 11:30	Invited Talk IT-1	Prof. Banibrata Mukhopadhyay, IISC, Bengaluru Massive white dwarfs and neutron stars: observational evidence, origin and violating their conventional limit
11.30—12:00	Invited Talk IT-2	Prof. Rahul Srivastava, IISER, Bhopal The Neutrino and Dark Matter Portals to New Physics
12:00-12.30	Invited Talk IT-3	Prof. Sumati Surya, RRI, Bengaluru Spacetime Causality and Quantum Gravity
12.30-13:00	Invited Talk IT-4	Prof. Shamik Gupta, TIFR, Mumbai Quantum unitary evolution interspersed with repeated non-unitary interactions at random times
13:00 - 13.30	Short Talk ST-1	Abhisek Saha, University of Hyderabad Initial Geometry and Flow Fluctuation Characteristics in Heavy-ion Collision Experiments
	Short Talk ST-2	Somnath Das, University of Hyderabad Python Code for Cosmic Inflationary Parameters
Lunch		
Session Chair: Prof. Nirmal K Viswanathan		
14 :30 - 15.00	Invited lecture IT-5	Prof. K V Adarsh, IISER, Bhopal Photoexcitation on low dimensional semiconductors: A playground for optical properties
15:00 - 15.30	Invited lecture IT-6	Prof. Rajeev N Kini, IISER, Thiruvananthapuram Up conversion of terahertz phonons via nonlinear coupling
15 :30 - 16:00	Invited lecture IT-7	Dr. Harish Krishnamurthy, TIFR, Hyderabad Topological Insulator Materials for Photonics
16.00 - 16.30	Invited lecture IT-8	Prof. Surajit Saha, IISER, Bhopal Quantum Many-Body Interactions in Double-Perovskite Oxide Systems: Intriguing Ground States
16:30 - 16:45	Tea	
16.45 - 17.45	Short Talk ST-3	Vinod K Rajput, University of Hyderabad Unraveling carrier dynamics in few-layer MoS ₂ using mid-IR probe transient spectroscopy
	Short Talk ST-4	Devika V S, University of Hyderabad light activated nematic colloids and colloidal crystals
	Short Talk ST-5	Dr. Ramesh Manda, University of Hyderabad Electrically Tunable Photonic Band Gaps for High Color Gamut Displays
	Short Talk-6	Dr. Mridusmita Buragohain, University of Hyderabad

		Observational search of PAHs footprints using UBARU/COMICS telescope
17.45 – 19.30	Poster Presentation	
19.30 – 21.00	Dinner	

DAY 2		
March 4 (Saturday)		
Session Chair: Prof. S. Srinath		
09.00 – 09:45	Plenary Talk 2	Prof. Enakshi Bhattacharya, IIT, Madras Silicon nanoporous membranes for dialysis
09:45 – 10.15	Invited Talk IT-9	Prof. G Rajaram, University of Hyderabad An unusual application of GaAs multilayer structure
10.15 – 10:45	Invited Talk IT-10	Dr. P.D. Babu, UGC-DAE-CSR Mumbai Probing Magnetism through Neutron Diffraction
10:45 – 11.00	Tea	
11.00 – 11.30	Invited Talk IT-11	Prof. K. G. Suresh, IIT, Bombay Spintronic and topological aspects of certain equiatomic Heusler alloys
11.30 – 12.00	Invited Talk IT-12	Prof. Arabinda Halder, IIT, Hyderabad Reconfigurable magnonics using self-biased reprogrammable magnetic structures
12.00 – 12.30	Invited Talk IT-13	Dr. G Rajalakshmi, TIFR, Hyderabad Optical fields as sensors of magnetic fields and magnetisation.
12.30 – 13.30	Short Talk ST-7	Lanuakum A Longchar, University of Hyderabad Effect of disorder and thickness on the structural, magnetic and transport properties of $\text{Co}_2\text{FeAl}_{0.5}\text{Si}_{0.5}$ Heusler alloy thin films
	Short Talk ST-8	M Praveen Kumar, University of Hyderabad Giant electroviscous effects in a ferroelectric nematic liquid crystal
	Short Talk ST-9	Devaparna Bhattacharya, University of Hyderabad Correlations combining Atom Pair Bond and DFT in AuCu_3 type compounds
	Short Talk ST-10	Pawan Kumar Verma, University of Hyderabad Enhancement of flux pinning in BSCCO superconductors by nano particle addition
13:30 – 14:30	Lunch	
Session Chair : Prof. V. Subrahmanyam		
14 :30 – 15.00	Invited lecture IT-14	Prof. M. S. Santhanam, IISER, Pune Higher order spectral statistics in complex quantum systems
15:00 – 15.30	Invited lecture IT-15	Dr. Kabir Ramola, TIFR, Hyderabad Universal Stress Correlations in Crystalline and Amorphous Packings
15:30 – 15:45	Short Talk ST-11	Suman Kumar Panja, University of Hyderabad Maximal acceleration in Lorentz invariant Non-commutative space-time
15 :45 – 16:15	Invited lecture IT-16	Prof. Alok Kumar Pan, IIT, Hyderabad Device-independent self-testing of unsharp instruments and degeneracy-breaking measurements
16:15 – 16.30	Tea	
16.30 – 17.00	Valedictory Function	