

Scientific Program of ICGC-2023

Poster Sessions

Venue: Foyer of Dr. Bhupen Hazarika Auditorium

Poster No.	Name	Poster Title
6 - 7 December 2023 (Day – 1 and Day – 2)		
Session: Classical and Quantum Gravity		
S1-P1	AKHIL U Nair	Aspects of transitivity in quantum field theory and its possible consequences
S1-P2	Avijit Chowdhury	Plasma-photon interaction around Exotic Compact Objects
S1-P3	Ayanendu Dutta	The effect of massive gravitons on wormhole formation in ghost-free gravity
S1-P4	Bhargabi Saha	Quantum Bottleneck in Chaotic Inflation and in the subsequent Reheating
S1-P5	Bhaskar Shukla	Using Lyapunov Exponents to portray Black Hole Phase Transitions
S1-P6	BIJENDRA KUMAR VISHVAKARMA	Gravitational Red-shift of emitted photons and frame dragging from Bardeen black hole in presence of clouds of string
S1-P7	DEBADRI BHATTACHARJEE	Gravastar model in Cylindrically Symmetric Space-time and its possible mass limit
S1-P8	Debojit Paul	Testing $f(R)$ Scalaron gravity near the Galactic Center black hole
S1-P9	Dhritimalya Roy	Exploring Dynamic Wormholes with Modified Chaplygin Gas in the Emergent Universe.
S1-P10	Divyesh Solanki	Soft Graviton Theorem and Gravitational Memory Effect at Finite Temperatures
S1-P11	Goutam Manna	Collapsing scenarios in K-essence emergent generalized Vaidya spacetime through $f(\bar{R}, \bar{T})$ gravity
S1-P12	gowtham sidharth	Shadow of Rotating Bardeen Blackhole in Asymptotically Safe Gravity
S1-P13	H Lalrinfela	Influence of tidal love number in pericenter shift of S-stars near Sgr A*.
S1-P14	HARPREET SINGH	Foamy Interior Geometry of Schwarzschild Black Holes in Quantum Gravity
S1-P15	Jitumani Kalita	Hawking radiation at finite temperature

Poster No.	Name	Poster Title
S1-P16	Kajol Paithankar	Role of the Unruh effect in Bremsstrahlung
S1-P17	Kaustav Das	Testing Bell's inequality for Black holes
S1-P18	Koushik Ballav Goswami	Mass limit of strange star in colour flavour locked equation of state and density dependent B parameter
S1-P19	Madhukrishna Chakraborty	Raychaudhuri Equation in $f(T)$ gravity: Classical and Quantum aspects
S1-P20	Mehedi Kalam	Lorentzian Wormhole in the framework of Loop Quantum Cosmology
S1-P21	Nabajyoti Gogoi	Topology of thermodynamics in R-charged black holes
S1-P22	Pabitra Tripathy	Local first law of black hole
S1-P23	Pradip Kumar Chattopadhyay	A study on the maximum mass and stability of strange stars affected by the mass of strange quarks ($m_s \neq 0$).
S1-P24	Ranjan Sharma	Electromagnetic extension of Buchdahl bound in $f(R,T)$ gravity
S1-P25	Rikpratik Sengupta	Traversable Lorentzian wormhole on the Shtanov-Sahni braneworld with matter obeying the energy conditions
S1-P26	Rukkiyya V P	Strong deflection gravitational lensing by kazakov-solodukhin black hole
S1-P27	Samarjit Chakraborty	Testing the Weyl proposal of gravitational entropy in gravitational collapse & other gravitational systems
S1-P28	Sanjay Pant	A holographic study of the characteristics of chaos and correlation in the presence of backreaction
S1-P29	Saraswati Devi	Naked singularity in 4D Einstein-Gauss-Bonnet novel gravity: Echoes and instability
S1-P30	Soumik Bhattacharya	Properties of relativistic star in 5 -D Einstein-Gauss-Bonnet gravity
S1-P31	Esha Bhatia	Velocity dispersion of dark matter deficit ultra-diffuse galaxies: A case for modified gravity
S1-P32	subhadip sau	Unveiling the elusive traces of extra dimensions through the dimming of the photon ring of black holes via axion-photon conversion mechanism
S1-P33	Subhodeep Sarkar	Exploring Quasinormal Modes and Strong Cosmic Censorship in 2D Black Hole Models
S1-P34	Suman Kumar Panja	Evolution of Universe in κ -deformed Non-commutative space-time
S1-P35	Sunil singh Bohra	Probing Extra Dimensions through Scalar Perturbations in Rotating Black Hole Spacetimes
S1-P36	Sunil singh Bohra	Traversable wormholes in bi-metric gravity

Poster No.	Name	Poster Title
S1-P37	Suraj Maurya	Maximal hypersurface in a D-dimensional dynamical spacetime
S1-P38	Suvikranth Gera	Some observational aspects of black holes in degenerate Einstein Gauss-Bonnet gravity
S1-P39	Utkal Keshari Dash	Gravitational Waves in F(R) Gravity

Poster No.	Name	Poster Title
6 - 7 December 2023 (Day – 1 and Day – 2)		
Session: Gravitational Waves		
S2-P1	Abhishek Chowdhuri	Exploring binary dynamics and radiations from binaries in deformed Kerr geometries
S2-P2	Abhishek Sharma	Accelerated parameter estimation of massive black hole binaries in LISA using meshfree approximation
S2-P3	Akash Maurya	Surrogate models for eccentric binary black hole coalescences
S2-P4	Anuj Mishra	Unraveling the Connection: Eccentric Binary Black Holes and Microlensed Signals
S2-P5	Anushka Doke	Gravitational Waves from Magnetized Neutron Stars in Eccentric Orbits
S2-P6	Apratim Ganguly	Microlensing meets TGR
S2-P7	Chandra Kant Mishra	Inferring additional physics through model-agnostic signal reconstructions
S2-P8	Deeshani Mitra	Improved gravitational waveform surrogate modelling through lower error and model extension
S2-P9	Divyajyoti .	Tests of binary black hole nature of observed compact binary mergers employing double-spin precessing waveforms
S2-P10	Gopalkrishna Prabhu	Constraining the abundance of Galactic compact objects with continuous gravitational waves
S2-P11	GOURAB BANERJEE	Direct mapping of tidal deformability to the iso-scalar and iso-vector nuclear matter parameters
S2-P12	Johann Fernandes	A Machine learning approach to detect IMBH signals
S2-P13	Kaustubh Gupta	Measuring Earth's Motion Using a Population of Gravitational-Wave Sources
S2-P14	M Laxman	Modelling eccentricity in Not-So-Equal mass binary black hole inspirals

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S2-P15	MAYUSREE DAS	Detection possibility of continuous gravitational waves from isolated rotating magnetized compact objects
S2-P16	Md Emanuel Hoque	Estimate on maximum characteristics strain of Continuous Gravitational Wave from systematic study on galactic pulsar population in context of various observational scenarios.
S2-P17	Mohit Raj Sah	A new approach to study the high redshift binary black hole population using gravitational waves.
S2-P18	Neev Shah	Population Inference of Merging Compact Binaries in the Presence of Lensing
S2-P19	Neha Sharma	Prospects of detection of strongly lensed gravitational waves using LGWA
S2-P20	Pankaj Saini	Resolving the eccentricity of stellar mass binary black holes with next generation gravitational wave detectors
S2-P21	Prasad R	Examining the Evidence for Gravitational Wave Lensing in LIGO-Virgo Observations
S2-P22	Pratul Manna	Improved eccentric models for binary black hole mergers with gauge-invariant definitions of orbital elements.
S2-P23	Rajesh Karmakar	Superradiant Scattering Of Electromagnetic Field And Scalar Field By The Ringing Black Holes
S2-P24	Sachin Shukla	Localizing binary neutron star sources with LIGO-Aundha
S2-P25	Sajad Ahmad Bhat	Testing General Relativity in presence of binary eccentricity
S2-P26	Sajal Mukherjee	How does Carter flux may affect the resonance crossing in an EMRI inspiral ?
S2-P27	Samanwaya Mukherjee	A phenomenological gravitational waveform model of binary black holes incorporating horizon fluxes
S2-P28	SARBARI GUHA	Memory Effect of Gravitational Wave Pulses in PP-Wave Spacetimes
S2-P29	Shailesh Kumar	Detecting astrophysical environment with extreme mass-ratio inspirals
S2-P30	Shamim Haque	Effects of Phase Transition in Gravitational Wave Signals From Binary Neutron Star Mergers
S2-P31	SUBHASIS MAITI	Constraining Reheating Dynamics with Gravitational Waves
S2-P32	Surajit Kalita	Gravitational waves from pulsars to understand generation mechanism of fast radio bursts
S2-P33	Uddeepa Deka	Probing black hole hair with gravitational micro-lensing of gravitational waves
S2-P34	VARENYA UPADHYAYA	The Role of r-Modes in Pulsar Spindown, Pulsar Timing and Gravitational Waves
S2-P35	Yuvraj Sharma	Rapid Identification and Classification of Eccentric BBH mergers using Machine Learning

Poster No.	Name	Poster Title
8 - 9 December 2023 (Day – 3 and Day – 4)		
Session: Astrophysical Relativity		
S3-P1	Aneesha U	Long term Wideband X-ray properties of outbursting black hole sources GX 339-4 and H1743-322: AstroSat and NuSTAR results
S3-P2	Arbind Pradhan	Investigation of energy-dependent nature QPO of GRS 1716-249 during its "failed" outbursts.
S3-P3	Bishnu Das	Dependence of maximum mass on finite strange quark mass of anisotropic strange quark star in Finch-Skea geometry
S3-P4	Dr. Abisa Sinha	Indirect estimation of distance of a star from apparent magnitude.
S3-P5	GARGI SEN	Properties of relativistic advective accretion flow in a Kerr-like wormhole
S3-P6	Jyothi Lakshmi OP	Slow Rotating Bose-Einstein Condensate stars
S3-P7	Lupamudra Sarmah	Effects of modified gravity on stability and age of white dwarfs
S3-P8	Premachand Mahapatra	Modified Gravity Approach to Compact Star Study in $f(R,T)$ Model
S3-P9	RAJ KISHOR JOSHI	Numerical simulations of relativistic radiatively driven jets
S3-P10	Ritam Mallick	Can the inverse method unravel the matter at the neutron star interior?
S3-P11	Ritwik Acharyya	Modelling Einstein cluster using Einasto profile
S3-P12	Shyam Das	Theoretical model of compact stars: Vanishing complexity approach
S3-P13	Sreetama Das Choudhury	Revisiting the Black hole binary XTE J1859+226 to understand the disk-jet coupling.
S3-P14	VIBHAVASU PASUMARTI	Search for spatial correlation between IceCube Neutrinos and Radio pulsars

Poster No.	Name	Poster Title
8 - 9 December 2023 (Day – 3 and Day – 4)		
Session: Cosmology		
S4-P1	A Thariq	Cosmological perturbation in Einstein frame and Jordan frame for two-field model
S4-P2	Afaq Maqsood	Dynamical systems approach in cosmology
S4-P3	Anirban Chowdhary	Halo Occupation Distribution of Quasars : Redshift Evolution
S4-P4	Antara Dey	Constraints on Dark Matter-Neutrino Interaction from 21-cm Cosmology
S4-P5	ANUPAMA B	Alleviating the Hubble tension with curvaton scenario
S4-P6	Ashmita Rai	Inflationary Cosmology with a scalar-curvature mixing term $\xi R \phi^2$
S4-P7	Bikash Chandra Paul	Early and Late time cosmology in Modified gravity with interacting fluids
S4-P8	Chandrachud Dash	Post-reionization HI 21cm signal: A probe of negative cosmological constant
S4-P9	DILIP KUMAR	Short Gamma Ray flares from cosmic string wakes.
S4-P10	Dipankar Laya	Noether Symmetry Analysis in Scalar Tensor Cosmology : A Study of Classical and Quantum Cosmology
S4-P11	Dr. Dibyendu Panigrahi	Viability of Variable Generalised Chaplygin gas – a thermodynamical approach
S4-P12	EMY MONS	MCF studies on High redshif galaxies
S4-P13	Ganga R Nair	On the independence of predictions of LQC on the inflationary potential
S4-P14	Hrisikesh Thakur	Reheating by Parametric Resonance in the ϕ^4 Model of Chaotic Inflation
S4-P15	Indrani Banerjee	Critical analysis of modulus stabilization in a higher dimensional F(R) gravity
S4-P16	Jibitesh Dutta	Cosmology in $f(Q)$ Gravity through Unified Dynamical System Analysis.
S4-P17	Jose Mathew	Starobinsky inflation and its spin-offs in the light of exact solutions
S4-P18	Karthik R	Cosmological Perturbations and Complexity in Bianchi I Spacetime

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S4-P19	KHURSID ALAM	Non-thermal moduli production during preheating in α -attractor inflation models
S4-P20	Leila Kalhor	Light dark matter around 100 GeV from the inert doublet model
S4-P21	M. S. Sūryan Śivadās	A Novel Count-In-Cells Model for Galaxies
S4-P22	Malalay Ramazanoghly	Review of The Measurements and Results of the Coma Cluster Dark Mass
S4-P23	Manish Kumar Sharma	Revisiting Dipole Dark Matter at Proposed International ColliderSession
S4-P24	Masroor Bashir	Testing statistical isotropy and Gaussianity of CMB lensing data from the Atacama Cosmology Telescope.
S4-P25	Nayan Das	Thermalised dark radiation in the presence of PBH: Neff and gravitational waves complementarity
S4-P26	Nirmali Das	Formation of massive black holes with $M = (10^3-10^8) M_{\odot}$ through accretion of self-interacting dark matter onto a stellar mass seed black hole
S4-P27	PRADOSH KESHAV M V 2370066	The Role of Interaction parameter in Dark Energy and Structure Formations in Early Universe
S4-P28	Pradyumn Kumar Sahoo	H_0 Tension in Torsion-based Modified Gravity
S4-P29	Pranjal Sarmah	Study of cosmological parameters from LRS-BI metric in $f(Q)$ gravity theory
S4-P30	Priyanka Gawade	Primordial black hole dark matter abundance constraints using lensing parallax of GRBs
S4-P31	Rahul Shah	Hubble tension in the light of eLISA/ET: A Three-Pronged Approach with Fisher, MCMC and ML
S4-P32	Rajeev Kumar Jain	Axion dark matter and helical electromagnetic fields
S4-P33	Ronit Karmakar	Thermodynamic behaviour of GUP-corrected black holes in bumblebee gravity
S4-P34	Saikat Chakraborty	Inflation in Minimally Modified Gravity (MMG) theories
S4-P35	Sasmita Kumari Pradhan	Singular Bounce in Generalised Brans-Dicke Theory
S4-P36	Shagun Kaushal	Background electric and magnetic fields in cosmological de Sitter spacetime and correlations
S4-P37	Shantanu Desai	Bayesian analysis of the DAMA/LIBRA data
S4-P38	SHOUVIK SADHUKHAN	Representations of New Phase Space and their Evolution in Different Inflationary Era
S4-P39	SHOUVIK SADHUKHAN	Non-Commutative to Commutative Geometry Transformation and Origin of Cosmic Scale Viscosity

Poster No.	Name	Poster Title
S4-P40	Shreya Banerjee	Alleviating H_0 Tension with New Gravitational Scalar Tensor Theories
S4-P41	Sk Sohail	Evolution of global 21 cm temperature in scalar field models
S4-P42	SOMITA DHAL	Revisiting Cosmic Microwave Background (CMB) Spectrum using COBE/FIRAS dataset: Blackbody Radiation Inversion problem
S4-P43	Somnath Das	Higher Order Quantum Gravity Corrections on Inflationary Dynamics
S4-P44	Somnath Das	Interfacing Theory with Data: An Interactive Tool for Cosmological Analysis
S4-P45	Soumyadip Basak	Constraints on Compact Dark Matter from Gravitational Wave Microlensing
S4-P46	Sourav Pal	Magnetogenesis from anisotropic universe
S4-P47	SUDHAVA Yadav	Constraints on modified form of quadratic chaotic inflation through reheating
S4-P48	Sudip Naskar	Tensor non-gaussianities in Loop Quantum Cosmology
S4-P49	Surajit Kalita	Fast radio bursts as a probe to constrain primordial mass black holes made of dark matter
S4-P50	Surendra Kumar Gour	Baryogenesis by Heavy Scalar Field in the Inflationary Universe
S4-P51	Suresh Parekh	Power Law solution for FRW Universe with Observational Constraints
S4-P52	Suresh Parekh	Modified Power Law Cosmology with higher order curvature terms and observational constraints
S4-P53	Swaraj Pratim Sarmah	Effect of diffusion on the propagation of UHECRs in the $f(R)$ theory of gravity
S4-P54	V. Sreenath	Primordial Connection of CMB Anomalies
S4-P55	Vesselin Gueorguiev	The Scale Invariant Vacuum Paradigm: Main Results and the Current BBNS Progress
S4-P56	Manosh T M	Does holographic dark energy fix any problems of the Λ CDM model?