Programme Schedule of Cosmology@CCSP_2

29.11.2023

9.00- 9.45 AM	Registration & Breakfast
9.45-10.15 AM	Inauguration (VC, SGTU)(Director, CCSP)
10.15-11.15 AM **Chair:T. R. Seshadri**	**Keynote Lecture** (A. Wang, Baylor University, USA) **Title: An Alternative Method to WKB Approximations and Its Applications to Cosmology and Gravitational Wave Physics**
11.15-11.30 AM	High Tea
11.30-1.00 PM	Plenary Session (P1)
1.00-2.00 PM	Lunch
2.00- 3.10 PM	Parallel Sessions (PC1, DE1)
3.10- 3.30 PM	Coffee Break
3.30- 4.40 PM	Parallel Sessions (PC2, G1)

30.11.2023

9.00- 9.30 AM	Breakfast
9.30-11.00 AM	Plenary Session (P2)
11.00-11.15 AM	High Tea
11.15-12.00 PM 12.00- 1.00PM	Plenary Session (P3) Panel Discussion (PD)
1.00-2.00 PM	Lunch
2.00- 3.10 PM	Parallel Sessions (PC3, G2)
3.10- 3.30 PM	Coffee Break
3.30- 4.40 PM	Parallel Sessions (HEP, DE2)
6.30- 9.00 PM	Conference Dinner

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01.12.2023

9.00- 9.30 AM	Breakfast
9.30-10.30 AM **Chair: S. Minwalla**	**Meghnad Saha Memorial Lecture** (G. Bhattacharyya, SINP, Kolkata, India) **Title: A brief ancestral history of the Higgs boson**
10.30- 10.45PM	High Tea
10.45- 1.00PM	Plenary Session (P4)
1.00- 1.15 PM	Discussion Session
1.15- 1.30 PM	Vote of Thanks (Director, CCSP)
1.30-2.30 PM	Lunch

Venue:

Plenary Sessions: A Block, Room Number 318
Parallel Sessions: A Block, Room Number 205, 106
Lunch: A Block, Ambrotia
Conference Dinner: Faculty Guest House Ananda

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Details of the Plenary Session:
Talk Timing: 45' (40' +5')

Date	Session Name	Speaker	Title	Chair
DAY-1				
29.11.23	P1	L. Sriramkumar (IITM, India)	Genesis of magnetic fields during inflation: Effects due to non-trivial dynamics	TBA
29.11.23	P1	T. R.Govindarajan (Krea University, IMSc, India)	Ultra Light dark matter - Novel proposal	
DAY-2				
30.11.23	P2	K. Dutta (IISER-Kolkata, India)	Constraining Inflation from Preheating	Gautam Mandal
30.11.23	P2	P. Kumar (ICTS-TIFR, India)	Changing computation paradigms in astrophysical relativity	
30.11.23	P3	P. Mehta (JNU, India)	Exploring foundational aspects of quantum mechanics with neutrinos	R. Kaul
30.11.23	PD	S. Panda, G. Mandal, T.R. Govindarajan, L. Sriramkumar, S.G. Ghosh	Panel Discussion	
DAY-3				
01.12.23	P4	S. Minwalla (TIFR, Mumbai, India)	Grey Galaxies as the end point of the super radiant decay of Kerr AdS black holes	S. Panda
01.12.23	P4	S. Trivedi (TIFR, Mumbai, India)	The Problem of Time in Two Dimensional Models	
01.12.23	P4	G. Mandal (TIFR, Mumbai, India)	A microscopic model of black hole evaporation	

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Dark Energy Parallel Session

Date: 29.11.23	Time: 2.00PM-3.10PM	Room No. 106	Chair: Mukesh Ojha

DE 1

Name	Affiliation	**Title**
GOUTAM MANNA (R)	Prabhat Kumar College, Contai and Institute of Astronomy Space and Earth Science, Kolkata	Research with a Non-canonical theory
Md Saddam Hussain	Indian Institute of Technology Kanpur, UP, India	Stability of warm quintessential dark energy model.
Pradosh Keshav	Department of Physics and Electronics, Christ University, Bangalore	Quintessence and false vacuum: Two sides of the same coin?
Mohd Shahalam	Department of Physics, Integral University, Lucknow	Descending dark energy models
Sarath N	Indian Institute of Technology Kanpur	Observational evidence for phenomenological emergent-type dark energy models

DE 2

Date: 30.11.23	Time: 3.30PM-4.40PM	Room No. 106	Chair: Richa Arya

Name	Affiliation	**Title**
Ajay Bassi	PhD Scholar, Centre for Theoretical Physics, JMI, New Delhi	LSS growth in bimetric gravity and observational constraints
Anita Yadav	Indira Gandhi University, Meerpur, Rewari	Exploring Λs CDM: Resolving Cosmological Tensions
Sonej Alam	Jamia Millia Islamia University	Effect of a transiting vacuum energy density on H0 and σ8
Suryakanta Swain	Central University of Himachal Pradesh, HP, India	Rotating Black holes, dark energy and Loop Quantum Cosmology

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Gravity Parallel Session

Date: 29.11.23	Time: 3.30PM-4.40PM	Room No. 106	Chair: H. Nandan

G 1

Name	Affiliation	**Title**
Dibya Chakraborty (R)	Ashoka University	String Cosmology: Brane Inflation
Shauvik Biswas	Indian Association for the Cultivation of Science, Kolkata, West Bengal 700032	Galactic wormholes: Geometry, stability, and echoes
Vishnu A Pai	Department of Physics, Cochin University of Science and Technology, Kochi-682022	Bulk viscous late acceleration under near equilibrium conditions in $f(R,T)$ gravity with mixed dark matter
Raghvendra Singh	IMSc, Chennai	Decoherence due to spacetime curvature
Shubham Atmaram Narawade	Birla Institute of Technology and Science, Pilani - Hyderabad campus	Accelerating cosmological models in f(Q) gravity and the phase space analysis

G 2

Date: 30.11.23	Time: 2.00PM-3.10PM	Room No. 106	Chair: L. Sriramkumar

Name	Affiliation	**Title**
Nandhida Krishnan P.	Department of Physics, CUSAT, Kerala.	Emergence of cosmic space due to Barrow entropy; a non-equilibrium description
Manosh T. M.	Department of Physics, Cochin University of Science and Technology, Kochi–682022, India.	Statistical Analysis of Granda – Oliveros Holographic Dark Energy against ΛCDM
DEBASIS SAHU	DEPARTMENT OF PHYSICS, FAKIR MOHAN UNIVERSITY, BALASORE, ODISHA, INDIA, PIN:	Fate of Dark Energy Contaminated Universe in Loop Quantum Cosmology

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Pratick Sarkar	Indian Association for the Cultivation of Science	Exploring Axions through the Photon Ring of a Spherically Symmetric Black Hole
SURAJ KUMAR PATI	Fakir Mohan University, Balasore, Odisha	Cosmological Parameters, Black Hole Dynamics, and Metric f(R) Gravity
Lokesh Kumar Duchaniya	Birla Institute of Technology and Science-Pilani, Hyderabad Campus, Hyderabad, India	Dynamical System Analysis at Both Background and Perturbation Levels in f(T) Gravity Cosmological Models

High Energy Physics Parallel Session

Date: 30.11.23	Time: 3.30PM-4.40PM	Room No. A 205	*Chair: R. Adhikari*

HEP 1

Name	Affiliation	**Title**
Vandana Sahdev (R)	Delhi University	Phenomenology of exotic fermions at the LHC
Shilpa Jangid	Asia Pacific Center for Theoretical Physics (APCTP), Republic of Korea	Phenomenological Study of the Electroweak Vacuum at Zero and Finite temperature in Scalar and Fermionic Extensions of the Standard Model
Arindam Basu	SRM University AP	Viability of Boosted Light Dark Matter in a Two-component Scenario
MANISH KUMAR SHARMA	BITS PILANI GOA CAMPUS	Revisiting Dipole Dark Matter at Proposed International Linear Collider

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Primordial Cosmology Parallel Session

PC 1

Date: 29.11.23	Time: 2.00PM-3.10PM	Room No. 205	Chair: A. Deshmukhya

Name	Affiliation	**Title**
Debottam Nandi (R)	University of Delhi	Viable bounce from inflation
Abhijit Kumar Saha	Institute of Physics, Bhubaneswar	CMB imprints of high scale non-thermal leptogenesis
Udaykrishna Thattarampilly	Ariel University	Sourced Perturbations in nonsingular bounce
Ashmita Rai	BITS Pilani K K Birla Goa Campus	Inflationary Cosmology with a scalar curvature mixing term 1/2 ξ Rφ2
Richa Arya	Department of Physics, MNNIT Allahabad	Preheating of the Universe by a non-minimal coupling of matter to geometry

PC 2

Date: 29.11.23	Time: 3.30PM-4.40PM	Room No. 205	Chair: P. Kumar

Name	Affiliation	**Title**
Surajit Kalita (R)	University of Cape Town, South Africa	Fast radio bursts as a probe to constrain primordial mass black holes made of dark matter
Suhail Khan	CTP Jamia Millia Islamia	Primordial Black Hole Leptogenesis in Supersymmetry
Rahul Vijay Bhagat	BITS-Pilani Hyderabad Campus, Hyderabad, India	Weyl type f(Q,T) gravity observational constrained cosmological model
Manjeet Kaur	University of Delhi	Analytical unification of inflationary and reheating solution

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PC 3

Date: 30.11.23	Time: 2.00PM-3.10PM	Room No. 205	Chair: K. Dutta

Name	Affiliation	**Title**
Nur Jaman (R)	IISER Kolkata	Induced Gravitational Waves and NANOGrav Data
Amresh Verma	Ariel University	The NANOGrav Collaboration reported conclusive evidence for a stochastic gravitational-wave background
Kritartha Dey	CCSP, SGT University	Evading no-go for PBH formation and production of SIGWs using Multiple Sharp Transitions in EFT of single field inflation
Dhruv Ringe	Indian Institute of Technology Indore	the stochastic gravitational wave (GW) background resulting from the strong first-order phase transition (SFOPT)
Ahaskar Karde	CCSP, SGT University	Primordial non-Gaussianity as a saviour for PBH overproduction in SIGWs generated by Pulsar Timing Arrays for Galileon inflation