Session Program

2-6 Sept 2024

EUROSTRINGS 2024 MEETS FUNDAMENTAL PHYSICS UK

Eurostrings 2024 Parallel sessions

University of Southampton Highfield Campus Southampton SO17 1BJ

Monday 2 September

14:00

Parallel sessions: Black holes

Session | Location: University of Southampton, B46/LTA | Convener: [Convener: Alejandra Castro]

14:00-14:30 The light we can see: Extracting black holes from weak Jacobi forms

Speaker

Alejandra Castro

14:30-14:50

Isospectrality in Effective Field Theory Extensions of General Relativity

Speaker

Marina David

14:50-15:10 Null infinity as an inverted extremal black hole horizon

Speaker

Panagiotis Charalambous

15:10-15:30 AdS_3 Black Holes Double Copy from Mini-Twistor space

Speaker

Mariana Carrillo Gonzalez

15:30 14:00

Parallel sessions: Bootstrap I

Session | Location: University of Southampton, B46/LTB | Convener: [Convener: Balt Van Rees]

14:00-14:30 Constraining Glueball Couplings

Speaker

Balt van Rees

14:30-14:50

CFT Data of Stringy Operators of N = 4 Super-Yang-Mills at Strong Coupling

Speaker

Nika Sokolova

14:50-15:10 Trace anomalies and graviton-dilaton scattering amplitudes

Speaker

Mr Biswajit Sahoo

15:10-15:30 Field theory expansions of string theory amplitudes

Speaker

Dr Arnab Priya Saha

15:30

Parallel sessions: Holography (applied) I

Session | Location: University of Southampton, B46/LTC | Convener: [Convener: Aristomenis Donos]

14:00-14:30 Nearly critical superfluids and holography

Speaker

Aristomenis Donos

14:30-14:50 Fluid/Gravity Duality for Viscoelastic Crystals

Speaker

Andre Oliveira Pinheiro

14:50-15:10 On the GCL prescription for Schwinger-Keldysh holography

Speaker

Vaios Ziogas

15:10-15:30 Black hole pseudospectrum in AdS

Speaker

Christiana Pantelidou

15:30

Parallel sessions: QFT I

Session | Location: University of Southampton, B44/LTA

14:00-14:30

Non-Invertible Surface Defects in 3d QFTs from Half Spacetime Gauging

Speaker

Lorenzo Ruggeri

14:30-14:50

The free energy of the large-N fermionic Chern-Simons theory in the 'temporal' gauge on R2 and S2

Speaker

Mr Souparna Nath

14:50-15:10 Higgsing SCFTs via Decay and Fission of Magnetic Quivers

Speaker

zhenghao zhong

15:10-15:30 Superconformal indices in N=(0,2) Quantum Mechanics

Speaker

15:30

14:00

Canberk Sanli

Parallel sessions: Resurgence & non-perturbative methods I

Session | Location: University of Southampton, B44/LTB | Convener: [Convener: Daniele Dorigoni]

14:00-14:30 Resurgence in CFT2 - Minimal models and beyond?

Speaker

Tomás Reis

14:30-14:50

Paolo Vallarino

Integrated correlators in a SU(N) $\Lambda(N)$ $\Lambda(N)$ =2\$ SYM theory with fundamental flavours

Speaker

14:50-15:10 Brane scattering from integrated correlators in N=4 SYM

Speaker

Francesco Galvagno



On the structure of wave functions in complex Chern-Simons theory [cancelled]

Speaker

Ms Claudia Rella

15:30

Tuesday 3 September

14:00

Parallel sessions: Bootstrap II

Session | Location: University of Southampton, B46/LTB | Convener: [Convener: Shai Chester]

14:00-14:30 Bootstrapping string and M-theory

Speaker

Shai Chester

14:30-14:50

Matrix Quantum Mechanics bootstrap at finite temperature

Speaker

Barak Gabai

14:50-15:10

Bootstrapping frustrated magnets: the fate of the chiral \${\rm O}(N)\times {\rm O}(2)\$ universality class

Speaker

Marten Reehorst

15:10-15:30

Bootstrapping the AdS Veneziano amplitude

Speaker

Tobias Hansen

15:30 14:00

Parallel sessions: Holograhy (flat) I

Session | Location: University of Southampton, B44/LTA | Convener: [Convener: Tim Adamo]

14:00-14:30 Celestial chiral algebras in higher dimensions

Speaker

Tim Adamo

14:30-14:50

Lessons from light-cone formulation for physics at null infinity

Speaker

Sucheta Majumdar

14:50-15:10

w(1+infinity) Algebra with a Cosmological Constant and the Celestial Sphere

Speaker

Dr Bin Zhu

15:10-15:30 Operator product expansion in carrollian CFT

Speaker

Mr Kevin Nguyen

15:30 14:00

Parallel sessions: Holography (applied) II

Session | Location: University of Southampton, B46/LTC | Convener: [Convener: Michal Heller]

14:00-14:30

Holographic timelike entanglement entropy: prescription and application

Speaker Michal P. Heller The dynamics of first-order phase transitions in holographic theories 14:30-14:50 Speaker Oscar Henriksson **Carroll Gravity, BKL Dynamics and Holography** 14:50-15:10 **Speaker** Gerben Oling 15:10-15:30 Black Hole Singularity from OPE Speaker Nejc Čeplak Parallel sessions: Supergravity I Session | Location: University of Southampton, B46/LTA | Convener: [Convener: Dario Martelli] 14:00-14:30 Localization in Supergravity Speaker Alice Luscher

14:50-15:10 Exploring thermal black holes in a precise AdS_5/CFT_4 setup

Wilson Loops and Spherical Branes

Speaker

Speaker Alexia Nix

14:30-14:50

15:30

14:00

15:30

Vasil Radoslavov Dimitrov

15:10-15:30 Exotic Spheres, Kaluza-Klein Formalism and Supergravity

Speaker

Tancredi Schettini Gherardini

Parallel sessions: Symmetries

Session | **Location:** University of Southampton, B44/LTB

14:00-14:30 On classical integrability of heterotic strings

Speaker

David Osten

14:30-14:50 Categorical-Symmetry Resolved Entanglement in CFT

Speaker

Arpit Das

14:50-15:10

W-symmetries, anomalies and heterotic backgrounds with SU holonomy

Speaker

Mr Loukas Grimanellis

15:10-15:30 The Harry Dym hierarchy and AdS_3 General Relativity

Speaker
Francisco Reyes

Wednesday 4 September

11:00

Parallel sessions: Amplitudes

Session | Location: University of Southampton, B46/LTA | Convener: [Convener: Oliver Schlotterer]

11:00-11:30

Integration on higher-genus Riemann surfaces from and for string amplitudes

Oliver Schlotterer

11:30-11:50 Non-planar integrated correlator in \$\mathcal{N}=4\$ SYM

Speaker

Shun-qing Zhang

11:50-12:10 A double copy from twisted (co)homology at genus one

Speaker

Andrzej Pokraka

12:10-12:30

Non-analytic terms of string amplitudes from partial waves

Speaker

Mr Hynek Paul

12:30 11:00

Parallel sessions: Black holes and quantum information

Session | Location: University of Southampton, B44/LTA | Convener: [Convener: Julian Sonner]

11:00-11:30 Chaos, Complexity and Black Holes

Speaker

Julian Sonner

11:30-11:50

Entanglement Entropy via replica trick and theories with islands in higher dimensional curved backgrounds.

Speaker

Arvind Shekar

11:50-12:10 On the Backreaction of Dirac Matter in JT Gravity and SYK Model

Speaker

Chen-Te Ma

12:10-12:30

Bulk quantum corrections for non-spatial holographic entanglement

Speaker

Marius Gerbershagen

12:30 11:00

Parallel sessions: Cosmological bootstrap

Session | Location: University of Southampton, B46/LTC | Convener: [Convener: Massimo Taronna]

11:00-11:30 Holographic Correlators for all Lambdas

Speaker

Massimo Taronna

11:30-11:50

Hidden Simplicity of Cosmological Correlators

Speaker

ARTHUR, ELIAS LIPSTEIN

11:50-12:10 Cosmological Correlators From Flat Space Feynman Integrals

Speaker

Sadra Jazayeri

12:10-12:30 [cancelled] Loops in (anti)de Sitter

Speaker

Sergio Luigi Cacciatori

12:30

11:00 Parallel sessions: Holography (flat) II

Session | **Location:** University of Southampton, B46/LTB

11:00-11:30 Asymptotic symmetries and logarithmic soft theorems

Speaker

Sangmin Choi

11:30-11:50

Logarithmic soft graviton theorems from superrotation Ward identities

Speaker

Shreyansh Agrawal

11:50-12:10

Eikonal amplitudes on the celestial sphere

Speaker

Piotr Tourkine

12:10-12:30

Amplitudes and celestial OPEs around curved backgrounds

Speaker

Giuseppe Bogna

12:30 11:00

Parallel sessions: Swampland

Session | Location: University of Southampton, B44/LTB | Convener: [Convener: Miguel Montero]

11:00-11:30 Emergent geometry in string theory

Speaker

Ivano Basile

11:30-11:50

Holography for KKLT: Anatomy of a Flow

Speaker

Yixuan Li

11:50-12:10

S-folds: new N=4 D=4 consistent truncation of Type IIB and N=2 black-hole solutions

Speaker

Colin Yannick P Sterckx

12:10-12:30 Dynamics and the Distance Conjecture

Speaker

Filippo Revello

12:30

Thursday 5 September

14:00

Parallel sessions: Cosmology (formal, string cosmology)

Session | Location: University of Southampton, B44/LTA | Convener: [Convener: Viktor Gorbenko]

14:00-14:30 Bra-Ket Wormholes in Cosmology

Speaker

Viktor Gorbenko

Constraints on inflation from the gravitational path integral? 14:30-14:50

Speaker

Oliver Janssen

Charged quantum-corrected black holes in dS3 14:50-15:10

Speaker

Emanuele Panella

15:10-15:30 de Sitter Connectivity from Holographic Entanglement

Speaker

Victor Franken

14:00

15:30

Parallel sessions: Generalized symmetries

Session | Location: University of Southampton, B44/LTB | Convener: [Convener: Lakshya Bhardwaj]

14:00-14:30 Categorical Landau Paradigm

Lakshya Bhardwaj

14:30-14:50

Polarization Pairs and Non-invertible Duality Defects across Dimensions

Speaker

Craig Lawrie

Gapped phases and phase transitions with categorical symmetries 14:50-15:10

Speaker

Lea Bottini

Non-Invertible Symmetries, Anomalies and Scattering Amplitudes 15:10-15:30

Speaker

Christian Copetti

15:30 14:00

Parallel sessions: Holography

Session | Location: University of Southampton, B46/LTB | Convener: [Convener: Shira Chapman]

14:00-14:30 Holographic AdS5 correlators for LLM geometries

Speaker

Alexander Tyukov

14:30-14:50 Semiclassical black hole microstates

Speaker
Mr Juan Hernandez

14:50-15:10 Nambu-Goto equation from three-dimensional gravity

Speaker
Avik Banerjee

15:10-15:30 Exploring Cosmic Censorship in a Collider

Speaker
Javier Subils

15:30

14:00

Parallel sessions: Non-relativistic field theories

Session | Location: University of Southampton, B46/LTC | Convener: [Convener: Jelle Hartong]

14:00-14:30 Non-Lorentzian Geometry and String Theory

Speaker

Jelle Hartong

14:30-14:50 Spin Matrix Theories as Conformal Field Theories

Speaker

Stefano Baiguera

14:50-15:10 Butterflies revisited for asymptotically Lifshitz black hole

Speaker

Dr Adrita Chakraborty

15:10-15:30 A new non-relativistic holography

Speaker

Andrea Fontanella

15:30 14:00

Parallel sessions: Supergravity II

Session | Location: University of Southampton, B46/LTA

14:00-14:30 Supersymmetric localization of N = (2,2) theories on a spindle

Speaker

Aaron Poole

14:30-14:50 NUTs, Bolts, and Spindles

Speaker

Dr Alessio Fontanarossa

14:50-15:10

Holography with conical singularities: black hole entropy from SCFT on the spindle.

Speaker

Edoardo Colombo

15:10-15:30 SO(9) supergravity in the context of matrix model holography

Speaker

Mr Alfred Bovon

15:30

Friday 6 September

14:00

Parallel sessions: AI & machine learning

Session | Location: University of Southampton, B44/LTA

14:00-14:30 Non-perturbative Quantum Physics and Deep Learning

Speaker

Costis Papageorgakis

14:30-14:50 Learning Integrable Models. From numerics to exact result

Speaker

Dr Evgeny Sobko

14:50-15:10

Computation of Fermion Masses and Mixing in Geometric String Compactifications

Speaker

Andrei Constantin

15:10-15:30

[cancelled] Reinforcement Learning-based numerical approaches for the **Conformal Bootstrap**

Speaker

Costis Papageorgakis

15:30 14:00

Parallel sessions: CFT

Session | Location: University of Southampton, B46/LTB

14:00-14:30 Orbifold Averages

Speaker

Stefan Forste

14:30-14:50

Modulated instabilities and the AdS2 point in dense holographic matter

Speaker

JESUS CRUZ ROJAS

14:50-15:10 Renormalization of Conformal Correlators and its Implications

Speaker

Ms Pratyusha Chowdhury

15:10-15:30 Constraining boundary conditions in non-rational CFTs

Speaker

Hassaan Saleem

15:30 14:00

Parallel sessions: Holography (flat) III

Session | Location: University of Southampton, B46/LTC

14:00-14:30 Spinning Massive Amplitudes from the Flat Limit of CFT Correlators

Speaker

Dr Raffaele Marotta

14:30-14:50

Soft factorization of scattering processes on AdS spacetimes

Speaker

Karan Fernandes

14:50-15:10

On-shell Bootstrap for n-gluons and gravitons scattering in (A)dS, Unitarity and Soft limits

Speaker

Yuyu Mo

15:10-15:30 Entanglement Rényi entropies in celestial holography

Speaker

Ronnie Rodgers

15:30 14:00

Parallel sessions: QFT II

Session | Location: University of Southampton, B46/LTA | Convener: [Convener: Christopher Beem]

14:00-14:30

Hidden Unitarity in the SCFT/VOA Correspondence

Speaker

Prof. Christopher Beem

14:30-14:50

Classifying large N limits of multiscalar theories by algebra

Speaker

Nadia Flodgren

14:50-15:10

MTC[M3,G]: 3d Topological Order Labeled by Seifert Manifolds

Speaker

Jingxiang Wu

15:10-15:30

Homotopy algebras in hep-th

Speaker

Hyungrok Kim

15:30 14:00

Parallel sessions: Resurgence & non-perturbative methods II

Session | **Location:** University of Southampton, B44/LTB | **Convener:** [Convener: Ines Aniceto]

14:00-14:30

strong-weak resurgent symmetry and the beauty of L-functions

Speaker

Veronica Fantini

14:30-14:50 An algebraic approach to parametric resurgence

Speaker

Mr Samuel Crew

14:50-15:10 Localization and resummation in 2d Yang-Mills

Speaker

Dr Rodolfo Panerai

15:10-15:30

Strong coupling expansion of determinant observables in supersymmetric gauge theories

Speaker

15:30

Bercel Boldis