

Special Session on Recent Developments in String Theory

Speakers, titles and abstracts:

Inês Aniceto (Jagiellonian University, Krakow)

Title: Asymptotics, summability and resurgence in quantum theories.

Abstract: We review and discuss asymptotics, summability and resurgence in quantum field and string theories.

Giulio Bonelli (SISSA Trieste)

Title: Computing path integrals in supersymmetric field theories using equivariant localization methods.

Abstract: We use equivariant localization techniques to obtain exact results in $N=2$ supersymmetric gauge theories on compact manifolds.

Gabriel Lopes Cardoso (ULisboa)

Title: Deformed special geometry and the holomorphic anomaly equation.

Abstract: Deformed special geometry describes a modification of special geometry that allows for the incorporation of non-holomorphic terms. We show how it encodes the holomorphic anomaly equation of perturbative topological string theory.

Michele Cirafici (ULisboa)

Title: Persistent homology and the problem of vacuum selection in string theory.

Abstract: We use methods from topological data analysis to study the topological features of certain distributions of string vacua.

Ricardo Couso-Santamaria (ULisboa)

Title: The theory of resurgence as a tool: the case of topological strings.

Abstract: We discuss resurgence in the context of topological string theory.

Kevin Goldstein (University of the Witwatersrand, Johannesburg)

Title: Asymptotics of non-Schwarzschild black holes in higher derivative gravity.

Abstract: We investigate the asymptotics and thermodynamics of non-Schwarzschild black holes in four-derivative gravity.

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Gianluca Inverso (Nikhef Amsterdam)

Title: Deformed exceptional geometries and the Romans mass.

Abstract: We show how to obtain an exceptional generalised geometry for massive type IIA supergravity from the framework of exceptional field theory.

Silvia Nagy (ULisboa)

Title: Double copy structures in supergravity.

Abstract: We review and discuss the theme of supergravity as the double-copy of super Yang-Mills theory.

Suresh Nampuri (ULisboa)

Title: Black holes and integrability: from Einstein to Riemann-Hilbert and Calogero.

Abstract: We discuss extremal black holes from the point of view of integrable systems by means of a Riemann-Hilbert approach to them as well as Calogero models.