ICTP SAIFR | International Centre for Theoretical Physics
South American Institute for Fundamental Research

Campus of IFT-UNESP – São Paulo, Brazil

GAETAN BOROT
Humboldt U. of Berlin, Germany
Topological recursion

ALEJANDRO PEREZ
U. Aix-Marseille, France
From black hole thermodynamics to Planckian discreteness

August 17 – 28, 2026

V PATRICIO LETELIER SCHOOL ON MATHEMATICAL PHYSICS

CLIFFORD JOHNSON
U. of California
Santa Barbara, USA
Random matrix models and 2d gravity

KASIA REJZNER
University of York, UK
Algebraic quantum field theory: symmetries and measurement

HERNÁN A. GONZÁLEZ
San Sebastian University, Chile
Observables at Infinity: Asymptotic Symmetries and Energy Operators

ANTONY SPERANZA
U. of Amsterdam, Netherlands
Gravitational von Neumann algebras

The fifth edition of the Patricio Letelier School on Mathematical Physics at ICTP-SAIFR will focus on recent advances in the use of formal mathematical methods in quantum field theory and gravity. In particular, it will explore two key areas — operator algebras and matrix models — and their applications to the study of quantum fields, quantum gravity, and generalized symmetries.

Topics will include the use of algebraic methods to address problems such as symmetries and measurement, black hole thermodynamics, and entropy formulas, as well as the role of matrix models and topological recursion in understanding black hole spectra.

The School is primarily aimed at PhD students but will also be accessible and relevant to advanced undergraduate and master's students, as well as early-career postdoctoral researchers.

To complement the minicourses, the program will also include seminars offered by local researchers: João Barata (U. of São Paulo, Brazil); Marcel Novaes (Federal U. of Uberlândia, Brazil); Guilherme L. F. Silva (U. of São Paulo, Brazil); João Paulo Pitelli (U. of Campinas, Brazil).

Application deadline:
May 19, 2026

Online application and more information:
ictp-saifr.org/plsmp2026

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