



Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

Dienstag, 02.06.2026

17 Uhr, Geom H6

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(University of Bologna)

Borel complexity theory as a bridge between higher-order notions in topology, algebra, and analysis

Abstract:

In this talk, I will explain how the study of algebraic invariants from the perspective of Borel complexity theory can be used as a "Rosetta stone" to isolate "higher-order" analogues of classical notions and results, and to translate between their different manifestations. In particular, I will focus on the notions of phantom map from topology, pure extension from algebra, and phantom automorphism in analysis, together with their higher-order analogues. This is an overview of joint works with Jeffrey Bergfalk, Matteo Casarosa, and Aristotelis Panagiotopoulos.

**Vor dem Vortrag (ab 16.30 Uhr) stehen im Foyer vor Hörsaal H6
Kaffee und Tee bereit.**