

# Gravitational Geometry and Dynamics Group Seminar

Wed., April 15, 2026, at 11h00.

Room: Sala Sousa Pinto and Teams ID: 356 958 590 263 30

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### Event horizon termination and the emergence of Lorentz signature

In this talk, I describe in detail how one might understand the termination of the event horizon of a black hole in terms of of quasiregular singularity characterized by points possessing two future-directed light cones and two past-directed light cones (in fact this spacetime is conformal to a region of the 1+1 trousers spacetime). I then discuss Euclidean signature shift-symmetric scalar-tensor theories from which one can extract a Lorentzian structure, and show how this theory can provide a microscopic description for the aforementioned singularities. I discuss some recent works on the emergence of Lorentzian dispersion relations and a model for the big bang, as well as some preliminary and ongoing work on understanding compact objects in this class of theories.