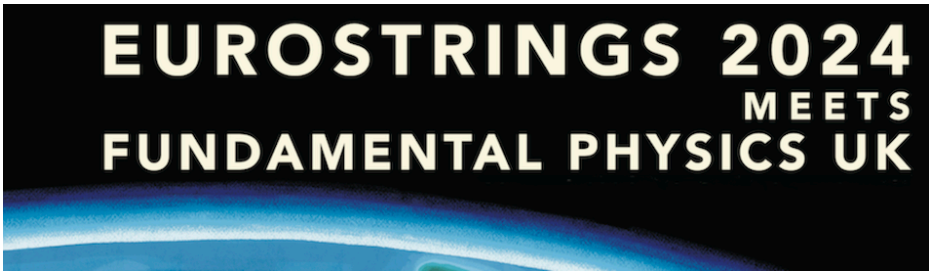

Contribution ID: **136** Type: **Talk in parallel session**

Holographic timelike entanglement entropy: prescription and application

Tuesday 3 September 2024 14:00 (30 minutes)

Holographic entanglement entropy has significantly advanced our understanding of the emergence of spacetime and paved a way for other sharp geometric proxies of the bulk such as holographic complexity. In the course of the past two years, it was proposed that a promising complementary proxy of the bulk, sensitive in particular to the emergence of the bulk time, is given by an analytic continuation of the (holographic) entanglement entropy to timelike separated boundary subregions. In my talk I will discuss the bulk prescription for computing this timelike entanglement entropy based on intrinsically complex extremal surfaces and present its applications to black hole spacetimes, in particular as a probe of black hole singularity and as a new way of quantifying entanglement production in quenches.

Link to publication (if applicable)

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Session Classification: Parallel sessions

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