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How much entanglement is carried out by Hawking radiation?

Tuesday 20 September 2022 15:00 (1h 20m)

That event horizons generate quantum correlations via the Hawking effect is well known. In this talk, I will argue that the creation of entanglement in Hawking's process very much depends on the environment surrounding the horizon. In fact, I'll show that such entanglement can be modulated as desired, by appropriately illuminating the horizon. I will further apply these ideas to analog event horizons concocted in the laboratory and insist that the ability to tune the generation of entanglement offers a promising route towards detecting quantum signatures of the elusive Hawking effect.

Presenter: AGULLO, Ivan (Louisiana State University)