Quantum Information Science for Fundamental Physics

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Quantum Gravity in the Lab

Friday, 21 February 2020 10:00 (30 minutes)

The trend of theoretical advances in AdS/CFT suggests that quantum gravity is broadly applicable as an effective description of chaotic many-body physics. Experimental realizations of such systems are now coming online, with more progress expected in the next few years. We can and should use tools of quantum gravity to describe the physics of these experiments. I will sketch one possible experiment exhibiting nontrivial behavior which, though perfectly understandable in hindsight using conventional methods, is motivated entirely by the physics of wormholes.

Presenter: LEICHENAUER, Stefan

Session Classification: Morning session