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Quantum Error Correction for Gravitational Algebras at large-N

Thursday, 6 June 2024 16:00 (30 minutes)

Emergent gravitational von Neumann algebras, describing the observables of quantum gravity in various spacetime regions, embed naturally into some microscopic theory as a quantum error correcting code. The resulting mathematical structure naturally incorporates the large-N limit into the QEC program. I will discuss some applications including the computation of von Neumann entropies as well as constraining the stringy regime of AdS/CFT.

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