

A branching space-times view on quantum error correction

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Abstract

In this paper we describe some first steps for bringing the framework of branching space-times to bear on quantum information theory. Our main application is quantum error correction. It is shown that branching space-times offers a new perspective on quantum error correction: as a supplement to the orthodox slogan, "fight entanglement with entanglement", we offer the new slogan, "fight indeterminism with indeterminism".

Keywords: indeterminism, quantum mechanics, branching, quantum information

Subjects: [General Issues: Determinism/Indeterminism](#)
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