

QUANTUM STATES AND SPACE-TIME CAUSALITY

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In this talk I will outline the basic idea of how space-time itself can be treated in a quantum-mechanical formalisms, and describe some of its physical implications. I will illustrate, in particular, how the notion of quantum states (and hence probabilities) emerge purely from the condition of causality relations of space-time. The talk is based on a work carried out with L.P. Hughston (King's College London).