



Department of
Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

An algebraic look at quantum theory

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Date: Dec 26, 2016
Time: 11.30 am
Venue: A-304, TIFR



(Duration and Location are subject to irreducible jitter)

An operator-oriented approach to quantum theories has recently been used to understand the definition of entanglement in gauge theories. The applicability of this approach extends far beyond this one problem, and in this talk I will discuss how one can understand dualities and coarse-graining in terms of operator algebras. This sheds light on two very concrete questions: how does entanglement entropy map under field-theoretic dualities, and how does one coarse-grain a quantum theory whose Hilbert space does not factorize? I will answer these questions, and as an application (time permitting) I will discuss how coarse-graining quantum mechanical theories provides a unified perspective on quantum chaos.

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