



HARVARD UNIVERSITY
17 Oxford Street
Cambridge, MA 02138

Mathematical Picture Language Seminar



Tuesday, November 26

4:30 p.m. Boston time

Jefferson 356 and Zoom

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MIT

A temporal analogue of quantum states for sequential measurements and time-reversal symmetry

Abstract: If a quantum state distributed over regions of space provides the expectation values of observables on those regions, what object provides the expectation values of observables measured sequentially in time? We will first provide a rigorous definition of such quantum "states over time". Using such a definition will naturally lead us to an extension of Bayes' rule from classical probability to quantum systems. Such a quantum Bayes' rule provides concrete predictions for the construction of processes that admit time-reversal symmetric expectation values of measurements. We will analyze the concrete example of an amplitude-damping channel on qubits.



Zoom QR Code & Link:

<https://harvard.zoom.us/j/779283357?pwd=MitXVm1pYUIJVzZqT3lwV2pCT1ZUQTog>

Passcode: 657361

<https://mathpicture.fas.harvard.edu/seminar>