Topos formulation of History Quantum Theory

CECILIA FLORI, Perimeter Institute — In this talk I will describe a topos formulation of consistent histories obtained using the topos reformulation of standard quantum mechanics put forward by Doering and Isham. Such a reformulation leads to a novel type of logic with which to represent propositions. In the first part of the talk I will introduce the topos reformulation of quantum mechanics. I will then explain how such a reformulation can be extended so as to include temporally-ordered collection of propositions as opposed to single time propositions. Finally I will show how such an extension will lead to the possibility of assigning truth values to temporal propositions.