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Weak values as contextual values, categorically

Aharonov et al. introduced in quantum mechanics the notion of weak values which depend on post-selected states [AZV88]. Hosoya and Koga regarded weak values as *contextual values*, which clarified that they depend on the choice of post-selected states but the expectation value and the variance of them do not [HK11]. In this talk, we formulate contextual values in the form of categorical quantum mechanics of [AC04]. As an application, we discuss Ozawa's work on uncertainty relations [Oz03] in our abstract framework.

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