

سخنرانی عمومی ریاضی

نظریه احتمالات ناجابه‌جایی

سلمان ابوالفتح بیگی

پژوهشگاه دانش‌های بنیادی

Abstract: Any probability distribution can be thought of as a trace-one diagonal matrix with non-negative entries. Similarly any random variable corresponds to a diagonal matrix, so its expectation value is computed as the trace of the multiplication of two matrices. Following this approach quantum mechanics is the non-commutative version of probability theory in which case the assumption that the matrices are diagonal is ignored. Needless to say this non-commutativity imposes several difficulties in generalizing results of probability theory to the quantum theory. In this talk after explaining this point of view to quantum information theory, I will explain the problem of local state transformation.

This problem in the commutative classical case has been studied from 70's and we know several results about that. In this talk I will report on the very first attempts to generalize these results to the non-commutative quantum case. These generalizations are based on theory of complex interpolation in functional analysis.

زمان: چهارشنبه ۳۰ مرداد ۱۳۹۲

ساعت: ۱۶ الی ۱۷

مکان: میدان نیاوران، پژوهشگاه دانش‌های بنیادی (مرکز تحقیقات فیزیک

نظری و ریاضیات)، تالار تجمعات ۱