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Quantum probability and Hilbert’s sixth problem. (English) Zbl 1470.81008

Summary: With the birth of quantum mechanics, the two disciplines that Hilbert proposed to axiomatize, probability and mechanics, became entangled and a new probabilistic model arose in addition to the classical one. Thus, to meet Hilbert’s challenge, an axiomatization should account deductively for the basic features of all three disciplines. This goal was achieved within the framework of quantum probability. The present paper surveys the quantum probabilistic axiomatization.

MSC:
81P05 General and philosophical questions in quantum theory
81P16 Quantum state spaces, operational and probabilistic concepts
60J99 Markov processes

Keywords:
quantum probability; non-Kolmogorovian probability; chameleon effect; quantum physics

Full Text: DOI

References:
[18] Accardi L. 1985 Non Kolmogorovian probabilistic models and quantum theory. Invited talk at 45th Int. Statistical Institute


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