



Contribution ID: 16

Type: not specified

## Does quantum version of decision theory make sense?

*Thursday, June 29, 2023 9:35 AM (20 minutes)*

Contemporary decision making (DM) theory stands on classical probability. However, it has been shown that there is a variety of situations when the decision theory fails to explain some psychological and cognitive effects observed in human decision making. Other aspects not covered by the classical approach are that the results of merging information depend on the order of merging, or that the observation influences the next state. The main question posed is whether quantum probability is suitable for DM and can solve these problems.

This contribution introduces some of the potential ways how to construct quantum formulation of DM task and discusses related open questions.

**Primary authors:** Mr GAJ, Aleksej (Department of Mathematics, FNSPE, Czech Technical University in Prague); Dr KÁRNÝ, Miroslav (Institute of Information Theory and Automation, CAS)

**Presenter:** Mr GAJ, Aleksej (Department of Mathematics, FNSPE, Czech Technical University in Prague)

**Session Classification:** Dynamic Decision Making