



Einladung zum Vortrag

Characterizing quantum phenomena: from foundations to quantum information

von

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9. Boltzmannngasse 5 / Strudlhofgasse 4, 1. Stock

Abstract:

Nonlocality, Contextuality and Steering are manifestations of powerful correlations which arise naturally within quantum mechanics, but, that cannot be explained in the classical world. Quantum theory, however, may not be the ultimate physical theory of Nature. Hence, it is imperative that we obtain a clear understanding of the possibilities and limitations of nonclassical phenomena, both within, and beyond, the quantum realm.

In this talk I will present a research programme tailored at understanding nonclassical phenomena in an operational manner. On the one hand, such a programme provides a path to explaining both why Nature should be quantum and the role of quantum systems in information processing. On the other hand, it opens the door to the exploration of alternative physical theories.