

Measurement incompatibility: A new measure and its revelations

Dagmar Bruss

University Duesseldorf, Institute for Theoretical Physics

Measurement incompatibility is an important resource in quantum information processing tasks such as e.g. quantum key distribution, Bell inequality violation and steering. While resource theories for quantum states have already been widely studied, much less is known about resource quantification for quantum measurements, in particular for sets of quantum measurements. We introduce distance-based quantifiers for this context. These allow to establish a hierarchy between different measurement resources, and to derive certain polygamy inequalities for subsets of multiple measurements.