
JEREMY LEVICK, University of Guelph
Mixed Unitary Rank

We discuss the mixed unitary rank of a mixed unitary channel: the smallest number of unitaries required to express the channel in Choi-Kraus form. We present an upper bound on mixed unitary rank in terms of the Choi rank and the dimension of an associated operator system, and present a class of examples based on mutually unbiased bases which exhibit a large gap between mixed unitary rank and Choi rank.