Seminar/Talk

Symmetry preserving quantum channels and their minimal output entropy

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For a group G we study quantum channels, i.e., completely positive trace preserving maps between operators on irreducible unitary representations of the group that intertwine the group action, i.e., are eqivariant. We will mainly focus on G=SU(2) but also discuss SU(d) for d>2. It turns out that the set of equivariant SU(2) channels forms a finite dimensional simplex and we will describe the critical points and give several ways to represent them. Using majorization we will determine the minimal output entropy of two of these extremal channels. Generalizations to SU(2) and several open questions will be discussed

Tuesday, September 24, 2024 04:30pm - 05:30pm
Office Bldg West / Ground floor / Heinzel Seminar Room (I21.EG.101)