

SDP bounds on uncertainty relations and quantum codes

Thursday, August 29, 2024 9:30 AM (1 hour)

I will introduce the framework of state polynomial optimization, a variant of the NPA hierarchy. It can be used to construct complete SDP hierarchies for quantum uncertainty relations and bounding the parameters of quantum codes. In both cases the Lovász theta number from graph theory plays a key role, and there are a range of relaxations available to make these SDPs numerically useful.

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