

Convergence of SDP hierarchies using kernel based methods

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We present a method on how to bound the accuracy of semi-definite programming relaxations for a large class of problems. As an example, we apply our method to obtain accuracy bounds for optimization of the hypersphere. This method also allows the explicit recovery of approximate representing measures for moment matrix relaxations. Our techniques are loosely inspired by methods used in quantum optics and a set of results from quantum information known as quantum de Finetti theorems.

Joint work with Andrew Doherty.