IVAN TODOROV,

A quantum sandwich theorem

The classical sandwich theorem in combinatorial optimisation, due to Grötschel, Lovász and Schrijver, is an inclusion chain between three convex corners arising canonically from a given graph, and plays a cornerstone role in classical zero-error information theory. In this talk, based on a joint work with Gareth Boreland and Andreas Winter, I will describe a non-commutative version of this result, suited to the context of zero-error quantum information theory, and based on non-commutative graphs. The viewpoint we employ leads to new quantum versions of the classical Lovász number of a graph and to improved bounds on the zero-error capacity of a quantum channel.