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Manifestations of duality in quantum information

The recent representation theory surrounding locally compact groups has initiated several new connections between harmonic analysis and quantum information. In this talk, we will use this theory to generate two "dual" classes of quantum channels for every locally compact group. Focusing mainly on finite groups we will explore their properties from the point of view of quantum information such as noiseless subsystems, quantum capacities and entanglement preservation. Time permitting, we will present further manifestations of this duality, in particular its connection to the complementarity of private and correctable subsystems. This is joint work with Matthias Neufang.