

Department of Mathematics

University of Houston

Analysis Seminar

FRIDAY, March 23, 2018

13:00-14:00 – Room 646 PGH

Speaker: Jason Crann (Carleton University)

Title: State convertibility in the commuting operator framework

Abstract: Nielsen characterized the convertibility of two finite-dimensional bipartite pure states via local operations and classical communication (LOCC) using majorization. This important result, which has seen many applications in quantum information, describes the LOCC-transfer of entanglement between bipartite pure states. In this talk, we present a version of Nielsen's theorem in the commuting operator framework using a generalized class of LOCC operations and the theory of majorization in von Neumann algebras. This allows us, in particular, to witness a fundamental property of entanglement in the absence of a Hilbert space tensor product.