

Abstract Cone Systems: A Categorical Approach To Operator Systems

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1. Abstract

Abstract operator systems provide a framework in which several important concepts from quantum information theory can be studied. This also provides a connection to convex algebraic geometry and semidefinite optimization. I will introduce these concepts and connections, explain recent results on the classification of operator systems, and demonstrate some applications. I will also speak about possible generalizations of the notions and results beyond abstract operator systems, and what we hope to achieve through them.