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Roy Araiza* (raraiza@purdue.edu) and **Travis Russell**. *An Abstract Characterization for Projections in Operator Systems.*

Given an abstract operator system V it is not clear how one would go about defining the notion of a projection. During this talk I will present an answer and some recent results on this question. This is done by first considering abstract compression operator systems associated with a positive contraction in V and then determining when we have a realization of V in such an abstract compression operator system. It then follows that there is a one-to-one correspondence between abstract and concrete projections, and in particular, that every abstract projection is a concrete projection in the C^* -envelope of V . I will then conclude with some applications to quantum information theory. In particular, the study of certain correlation sets. (Received September 12, 2020)