Title: Games with Entanglement
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Abstract: One of the most remarkable predictions of quantum mechanics, dating back to the mid-20th century [Einstein et al. 1935, Bell 1964], is the fact that remote parties that share entanglement can exhibit behaviors that cannot be explained classically. We will survey this exciting area, focusing on its mathematical and geometric aspects. Among other things, we will cover Tsirelson's connection to Grothendieck's inequality and to semidefinite programming and extensions of this result to unique games and to quantum games using the non-commutative Grothendieck's inequality. Time permitting, we will also mention games exhibiting large so-called ``Bell violations,'' using operator space theory and without.