1135-81-2314 **Grant W Allen***, grallen@ucsd.edu, and **Orest Bucicovschi** and **David A Meyer**.

Semi-Algebraic Laws of Entanglement.

Polynomials in the wavefunction that remain invariant under local SL operations are non-increasing on average under general local operations and classical communication. Such monotonic behavior is one of the most widely accepted properties that entanglement measures should obey. Algebra-based entanglement measure theory has then revealed a popular set of entanglement measures called the tangles. In this talk we give a complete description of 3-qubit pure state entanglement in terms of the image of the tangles, which is only constrained by a single polynomial inequality. We discuss how this set is related to and in fact stronger than the famous monogamy inequality, and then we discuss the generality of these inequality laws. (Received September 25, 2017)