

1154-15-1949 **Kapila Kottegoda*** (kotteg1@math.ksu.edu). *Spanning tree modulus for secure broadcast games.*

The theory of p -modulus provides a general framework for quantifying the richness of a family of objects on a graph. When applied to the family of spanning trees, p -modulus has an interesting probabilistic interpretation. In particular, the 2-modulus problem in this case has been shown to be equivalent to the problem of finding a probability distribution on spanning trees that utilizes the edges of the graph as evenly as possible. We use this fact to produce a game-theoretic interpretation of modulus by employing modulus to solve a secure broadcast game. (Received September 16, 2019)