ERIC NASLUND, Princeton University

The multi-slice rank method and exponential upper bounds for the Erdös-Ginzburg-Ziv constant

In this talk, we introduce a more general notion of Tao's slice rank, which we call the multi-slice rank. We prove that the diagonal tensor has maximal multi-slice rank, and explain how this notion of rank gives us the additional flexibility needed to handle linear equations where each variable is required to be distinct. Using the multi-slice rank method, we give an exponential improvement to the upper bounds for the Erdös-Ginzburg-Ziv constant of high rank abelian groups.