

1155-14-168

Swastik Kopparty, Guy Moshkovitz and Jeroen Zuiddam* (jzuiddam@ias.edu), 1 Einstein Drive, Princeton, NJ 08540. *Geometric rank of tensors and the subrank of matrix multiplication*. Preliminary report.

Motivated by problems in algebraic complexity theory, extremal combinatorics and quantum information theory, and inspired by the analytic rank of tensors, we introduce and study a new tensor parameter called the geometric rank. We use the geometric rank to answer a question that was left open by Strassen in 1987. (Received January 11, 2020)