

The Paulsen Problem Made Simple

Ankur Moitra, MIT

The Paulsen problem is a basic problem in operator theory that was resolved in a recent tour-de-force work of Kwok, Lau, Lee and Ramachandran. In particular, they showed that every ϵ -nearly equal norm Parseval frame in d dimensions is within squared distance $O(\epsilon^{1/3})$ of an equal norm Parseval frame. We give a dramatically simpler proof based on the notion of radial isotropic position, and along the way show an improved bound of $O(\epsilon^2)$.

This is based on joint work with Linus Hamilton