Matrix Computations and Scientific Computing Seminar

Organizer: Jim Demmel and Ming Gu

Wednesday, 12:10–1:00 pm, 380 Soda Hall

Nov 26   **Ming Gu**, UC Berkeley
An Efficient Algorithm for Computing a Generalized Weaver Partition

In their seminal work in 2013, Marcus, Spielman and Srivastava showed the existence of the generalized weaver partition (GWP). Their work immediately implies that the Kadison-Singer conjecture is true, but leaves the question of computing the GWP unanswered. In this talk, we discuss a close connection between GWP and fundamental problems in numerical linear algebra, and present an efficient algorithm for computing the GWP. We show the correctness of our algorithm under mild conditions and present numerical experimental results that support our claims.