

Matrix Computations & Scientific Computing Seminar

Organizer(s): James Demmel & Ming Gu

Wednesday, 12:00–1:00pm, 380 Soda

Sept. 2 **Prof. Michael Friedlander**, UC Davis

Gauges, sparsity, and spectral optimization

Gauge optimization is the class of problems for finding the element of a convex set that is minimal with respect to a gauge (e.g., the least-norm solution of a linear system). These conceptually simple problems appear in a remarkable array of applications of sparse optimization. Their structure allows for a special kind of duality framework that can lead to new algorithmic approaches to challenging problems. Low-rank spectral optimization problems that arise in two signal-recovery applications, phase retrieval and blind deconvolution, illustrate the benefits of the approach.