

Matrix Computations & Scientific Computing Seminar

Organizer(s): James Demmel, Ming Gu & Beresford Parlett

Wednesday, 11:00am–12:00pm, 380 Soda

Oct. 7 **Prof. Zhaojun Bai**, UC Davis

Re-design of High-level Matrix Algorithms for Multicore and Distributed Architectures

In this talk, we discuss how to re-design two matrix algorithms for computing the polar decomposition and Green's function. These re-designed algorithms explicitly exploit the BLAS and primitive matrix decomposition kernels (such as DGEMM and QR) which are optimized for multicore and distributed architectures. The application of these matrix algorithms to nano-structure simulation will also be discussed.