

# Matrix Computations & Scientific Computing Seminar

Organizer: James Demmel & Ming Gu

Wednesday, 11:00am–12:00pm, 380 Soda

---

April 13    **Ichitaro Yamazaki**, LBNL

*Sparse Matrix Techniques in a Parallel Hybrid Solver for Large-scale Linear Systems*

A parallel hybrid (direct/iterative) linear solver based on the Schur complement method has a great potential to utilize thousands of processors for solving large-scale linear systems that are becoming increasingly difficult to solve using standard techniques. In this talk, we outline the algorithm implemented in our parallel hybrid solver, and discuss the sparse matrix techniques used for achieving high-performance. We also present numerical results of solving highly-indefinite linear systems from real applications.