

# Matrix Computations and Scientific Computing Seminar

Organizer: J. Demmel and M. Gu

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

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Oct 26      **Beresford Parlett**, UC Berkeley

*The Envelope Method*

For a matrix that is real and symmetric and has a cluster of very close eigenvalues it is considered a challenge to compute the eigenvectors that are orthogonal to working accuracy.

We present some results which suggest that it is not so hard to compute a distinguished basis for the invariant subspace associated with the cluster. The supports of these basis vectors are disjoint except for the nearest neighbors. A simple projection delivers the eigenvectors.