

Matrix Computations & Scientific Computing Seminar

Organizer: James Demmel & Ming Gu

Wednesday, 12:10–1:00pm, 380 Soda

Oct. 26 **W. Kahan**, UC Berkeley

A Tutorial Overview of Vector and Matrix Norms

Intended for new graduate students whose experience as undergraduates may have prepared them inadequately to apply norms to numerical error-analyses and to proofs of convergence, this tutorial surveys norms for finite-dimensional real spaces in a way that may ease a transition to the infinite-dimensional spaces of Functional Analysis. The tutorial's notation is mostly standard but interpreted in ways not always taught to undergraduates, so attendees may prepare for it by reading just a few of my lecture notes for Math H110 posted at eecs.berkeley.edu/~wkahan/MathH110/2dspaces.pdf and ... /pts.pdf in that order and afterwards .../geo.pdf skimmed lightly. This tutorial omits proofs; almost all can be found in ... /NORMlite.pdf and .../GI1ite.pdf, and a few other places cited.

This is the third of a series of four lectures on vector and matrix norms. The final lecture will be on Nov. 9.

This tutorial's text is to be posted at eecs.berkeley.edu/~wkahan/MathH110/NormOvrvr.pdf