

Matrix Computations & Scientific Computing Seminar

Organizer: James Demmel & Ming Gu

Wednesday, 11:00am–12:00pm, 380 Soda

April 20 **Aaditya Rangan**, Courant Institute, NYU

Detecting low-rank submatrices: some methods and applications

Many techniques for matrix-compression, such as matrix-skeletonization, take advantage of the reduction in dimensionality which can be attained when the matrices in question have structurally evident low-rank sub-blocks. A natural question when dealing with a matrix of unknown structure is: how can one detect the submatrices of low rank? In this talk I will describe some techniques for detecting low-rank submatrices. I will also present a few examples where these techniques can be used for matrix-compression, and as tools for data-analysis.