

STANFORD UNIVERSITY
DEPARTMENT OF STATISTICS
JOINT PROBABILITY AND STATISTICS SEMINAR

4:15 p.m., Tuesday, January 15, 2002
Sequoia Hall Room 200
(Cookies at 3:45 in 1st Floor Lounge)

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Singular values of matrices generated from spherical distributions

Motivated by an image analysis problem, we study asymptotic properties of the singular values of random matrices $A_{p,n}$, where the n columns are random samples from the unit sphere in R^p . We show that the empirical law of the singular values of $A_{p,n}$ satisfies the semicircular law. We will also discuss a possible Tracy-Widom law for the largest singular value of $A_{p,n}$.