STATISTICS SEMINAR

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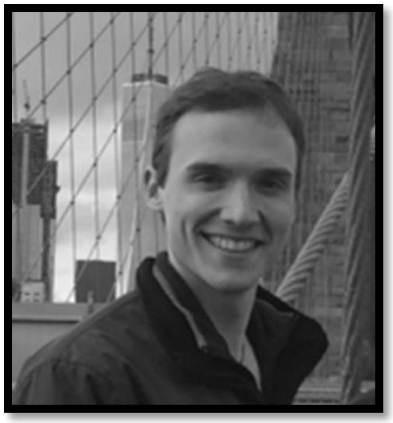

TITLE: **Statistical analysis and spectral methods for signal-plus-noise matrix models**

Abstract: Estimating eigenvectors and principal subspaces is of fundamental importance for numerous problems in statistics, data science, and network analysis, including covariance matrix estimation, principal component analysis, and community detection. For each of these problems, we obtain foundational results that precisely quantify the local (entrywise) behavior of sample eigenvectors within the context of a unified signal-plus-noise matrix framework. Our methods and results collectively address eigenvector consistency and asymptotic normality, decompositions of large matrices, Procrustes analysis, deterministic perturbation bounds, and real-data spectral clustering applications in connectomics.

Speaker:

Joshua Cape
Postdoctoral Research Fellow in the Dept. of Statistics University of Michigan

Time & Place:

Wednesday, September 4, 2019
4:00 pm, Room 140 Bardeen
Cookies & Coffee @ **3:30**, Rm 1210 MSC

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