

# Statistics SEMINAR

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**Title:**

High-dimensional low-rank matrix recovery

**Speaker:**

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**Time & Place:**

Wednesday, January 21, 2015, 4:00–5:00pm

Room 133 SMI

*(Cookies & Coffee @ 3:30 in Rm 1210 MSC)*

**Abstract:**

High-dimensional low-rank structure arises in many applications including genomics, signal processing, and social science. In this talk, we discuss some recent results on high-dimensional low-rank matrix recovery, including low-rank matrix recovery via rank-one projections and structured matrix completion. We provide theoretical justifications for the proposed methods and derive lower bounds for the estimation errors. The proposed estimators are shown to be rate-optimal under certain conditions. The methods are applied to integrate several ovarian cancer genomic studies, which enables us to construct more accurate prediction rules for ovarian cancer survival. Several extensions and related problems are also discussed.



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