



THE UNIVERSITY OF
CHICAGO

Department of Statistics
STATISTICS COLLOQUIUM

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Convex Recovery from Interferometric Measurements

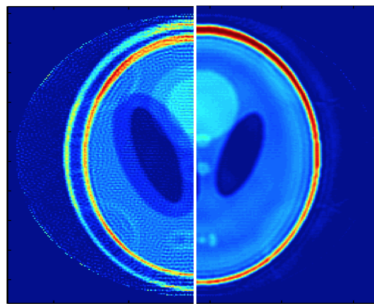
MONDAY, October 14, 2013 at 4:00 PM

133 Eckhart Hall, 5734 S. University Avenue

Refreshments following the seminar in Eckhart 110

ABSTRACT

Lifting, semidefinite relaxation, and expander graphs have recently helped formulate good solutions to the phase retrieval problem (Candes et al.) and the angular synchronization problem (Singer et al.) In this talk, I explain how the same line of thought reliably removes the local minima in interferometric inversion, a useful variant of numerical inverse scattering where the problem is to fit cross-correlations of wavefields rather than the wavefields themselves. While most compressed-sensing-like results assume randomness in the measurements, I explain why interferometric inversion is a setting in which a deterministic recovery result holds. In the process, we solve a question posed by Candes et al. in 2011 on robust phase retrieval.



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