

Workshop on New Approaches to to Phase Problem for Non-Periodic Objects
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“Maximum entropy-type methods and convex programming.”

Abstract. I intend to discuss the formalization of inverse problems such as signal recovery as (convex and non-convex) optimization problems over the infinite dimensional space of signals. The talk will discuss the following issues:

1. The impact of the choice of “entropy” (e.g., Boltzmann-Shannon, Fisher information, Burg) on the *well-posedness* of the problem.
2. Convex programming duality: what it is and what it buys you.
3. Algorithmic consequences.
4. Non-convex extensions: life is hard.

The lecture will be lodged at www.cecm.sfu.ca/personal/jborwein/talks.html
Related papers are available at www.cecm.sfu.ca/preprints/