

SEMINARIO

MATEMÁTICAS DISCRETAS

EXPOSITOR

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TITULO

Provably efficient high dimensional feature extraction

Abstract:

The goal of inference is to extract information from data. A basic building block in high dimensional inference is feature extraction, that is, to compute functionals of given data that represent it in a way that highlights some underlying structure. For example, Principal Component Analysis is an algorithm that finds a basis to represent data that highlights the property of data being close to a low-dimensional subspace. A fundamental challenge in high dimensional inference is the design of algorithms that are provably efficient and accurate as the dimension grows. In this context, I will describe two well-established feature extraction techniques: column subset selection (CSS) and independent component analysis (ICA). I will also present work by my coauthors and myself on CSS with optimal approximation guarantees, new applications of ICA and ICA for heavy-tailed distributions.

Miércoles 28 de Diciembre a las 14:30 hrs. Sala de Seminarios John Von Neumann CMM, Torre Norte, Piso 7.