

UNIVERSITY OF CHICAGO
DEPARTMENT OF COMPUTER SCIENCE and
DEPARTMENT OF STATISTICS

PRESENTS:

“Multiresolution Matrix Factorization”



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Abstract:

The sheer size of today's datasets dictates that learning algorithms compress or reduce their input data and/or make use of parallelism. Multiresolution Matrix Factorization (MMF) makes a connection between such computational strategies and some classical themes in Applied Mathematics, namely Multiresolution Analysis and Multigrid Methods. In particular, the similarity matrices appearing in data often have multiresolution structure, which can be exploited both for learning and to facilitate computation. Other applications that we discuss include solving large Gaussian process regression problems and preconditioning for symmetric linear systems. The research presented in this talk is the product of joint work with Nedelina Teneva, Pramod Mudrakarta, Yi Ding, Jonathan Eskreis-Winkler and Vikas Garg.

Bio:

Risi Kondor is an Assistant Professor at The University of Chicago in the Department of Computer Science and the Department of Statistics. His research focuses on Machine Learning and Computational Harmonic Analysis. He obtained his PhD from Columbia University and was a postdoc at the Gatsby Unit at UCL, and at Caltech.

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