FACULTAD DE CIENCIAS
FÍSICAS Y MATEMÁTICAS
UNIVERSIDAD DE CHILE

CMM
Center for
Mathematical
Modeling

cmm.uchile.cl

Beauchef 851, edificio norte, piso 7
Santiago, CHILE
CP 837 0456

tel +56 2 2978 4870

Seminario Aprendizaje de Máquinas

Presentador
Gonzalo E. Mena
(PhD student, Columbia University)

Título
Optimal transport and applications to Data Science

Abstract:

Optimal transport (OT) provides rich representations of the discrepancy between probability measures supported on geometric spaces. Recently, thanks to the development of computational techniques, OT has been used to address problems involving massive datasets, as an alternative to usual KL-divergence based approaches. In this talk I will introduce the OT problem and comment on its elementary duality properties. Then, I will present the entropy regularized problem and its (fast) solution via Sinkhorn iterations. Finally, I will overview two applications to Data Science: first, dimensionality reduction via Wasserstein Barycenters and Wasserstein PCA. Second, parameter inference in generative models defined through complex nonlinear transformation of a noise distribution.

Miércoles 17 de enero del 2018 a las 16:30 hrs., en la sala John von Neumann (CMM piso 7).

CONICYT
Ministerio de Educación
Gobierno de Chile

cnrs