SEMPARIS – Séminaires en région parisienne

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FocusDays@LPENS

Mardi 23 Avril 2024, 10 :00
LPENS, Salle Langevin, 29 RUE D'ULM(*** 2h30 Tutorial with 30' break in the middle *** (1st of 3 talks in the Focus Day on Optimal Transport))
Domaines : cond-mat.stat-mech—math-ph—math.MP—physics.comp-ph

Titre : *An Introduction to Computational Optimal Transport (Tutorial)*

Orateur : **Gabriel PeyrÉ (DMA-ENS)**

Résumé : *Optimal transport (OT) is a fundamental mathematical theory at the interface between optimization, partial differential equations and probability. It has recently emerged as an important tool to tackle a surprisingly large range of problems in data sciences, such as shape registration in medical imaging, structured prediction problems in supervised learning, and training deep generative networks. This mini-course will interleave the description of the mathematical theory with the recent developments of scalable numerical solvers. This will highlight the importance of recent advances in regularized approaches for OT which allow one to tackle high dimensional learning problems. Material for the course (including a small book, slides, and computational resources) can be found online at https ://optimaltransport.github.io/.*