



Project-Action Khronos

<http://ama.liglab.fr/Khronos/>

CEA, GIPSA, LIG, LJK & TIMC

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Aims

The Khronos project aims to

1. establish a new theoretical learning framework that takes into account data that are sequential, interdependent and non-identically distributed ;
2. design new models and learning algorithms working on this type of data and that are able to scale.

The work of 2 Phds

1. Large-scale structure-adaptive signal recovery - PhD thesis of Dmitrii Ostrovsky (Sept. 2014- Sept. 2017)
2. Scalable learning algorithms for distributed collaborative filtering and large-scale multi-class classification - PhD thesis of Bikash Joshi (Sept. 2014- Sept. 2017)

Publications

<http://ama.liglab.fr/Khronos/index.php?title=Publications>

In best Machine Learning and Optimization conferences and Journals (31).

Selected papers :

- ❑ Babbar R., Partalas I., Gaussier E., Amini M.-R., Amblard C. Learning Taxonomy Adaptation in Large-scale Classification, Journal of Machine Learning Research , 17(98):1–37, 2016
- ❑ Ostrovsky D., Harchaoui Z., Juditsky A., Nemirovski A. Structure-Blind Signal Recovery . Neural Information Processing Systems (NIPS), 2016
- ❑ Harchaoui Z., Juditsky A., Nemirovski A., Ostrovsky D. Adaptive Recovery of Signals by Convex Optimization. Conference On Learning Theory (COLT), 2015

Organizations

- ❑ Conférence francophone sur l'Apprentissage Automatique, CAP 2017, June 28-30, 2017, Grenoble, France
- ❑ ATLAS - Khronos workshop on Statistical Tools for Data-Mining, May 22-23, 2016, Grenoble, France
- ❑ Spring school on Large-scale learning, March 31st-April 1st, 2015, Grenoble, France
- ❑ ECML'15 Workshop on BigTargets: Big Multi-Target Prediction, September 11, 2015, Porto, Portugal.
- ❑ Summer school on High-dimensional Learning and Optimization, June 10-12, 2014, Grenoble, France
- ❑ ICML'14 Workshop on New Learning Frameworks and Models for Big Data, June 25, 2014, Beijing, China.

Launching pad

- The preliminary study we conducted in Khronos allowed us to define new milestones for on-line advertising which helped to define a collaborative project with Kelkoo and Purch (FUI Calypso).