

Anna Korba

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📄 <https://akorba.github.io/>

Education

Télécom ParisTech <i>Ph.D. in Applied Mathematics (Machine Learning)</i> <ul style="list-style-type: none">○ Title: Learning from Ranking Data: Theory and Methods○ Supervisor: Stephan Cléménçon (Télécom ParisTech)○ Rapporteurs: Shivani Agarwal (University of Pennsylvania), Eyke Hüllermeier (University of Paderborn)○ Président du jury: Jean-Philippe Vert (Mines ParisTech - Google Brain)○ Examineurs: Florence d'Alché-Buc (Télécom ParisTech), Nicolas Vayatis (ENS Cachan)	Oct. 2015–Oct. 2018 <i>Paris, France</i>
ENS Cachan <i>Master MVA, First class honours</i> Applied Mathematics for Computer Vision and Machine Learning.	Sep. 2014–Jun. 2015 <i>Cachan, France</i>
ENSAE ParisTech <i>Engineering degree, First class honours</i> Applied Mathematics, Advanced Statistics & Economics.	Sep. 2012–Jun. 2015 <i>Paris, France</i>
Lycée Henri IV <i>Classes préparatoires</i> Mathematics, Physics, Computer Science.	Sep. 2009–Jun. 2012 <i>Paris, France</i>

Professional Experience

Academic	
Gatsby Unit, University College London (UCL) <i>Postdoctoral Research Fellow</i> Laboratory of Pr. Arthur Gretton. My research is focused on learning theory, kernel methods and optimal transport.	Dec. 2018–Present <i>London, United Kingdom</i>
Teaching and Supervision	
Télécom ParisTech <i>Teaching assistant</i> Practical sessions for Master's students: <ul style="list-style-type: none">○ Machine Learning, with Python (32 hours a year, 2016-2018)○ Econometrics, with MATLAB (32 hours a year, 2015-2016)○ Introduction to Bayesian Learning, with R (8 hours a year, 2017-2018) Supervision of long-run Master's students Machine Learning projects with companies (32 hours a year, 2015-2018): <ul style="list-style-type: none">○ Search-engine improvement for the start-up Clustaar○ French presidential elections predictions for the newspaper LePoint○ Recommendation for personalized newsfeed for the MonsterMessenger app	Oct. 2015–Oct. 2018 <i>Paris, France</i>
Industrial	
Principal Research engineer <i>Fentech</i> Development of algorithms for personalized recommendation and causal inference.	Apr. 2019–Present <i>Paris, France</i>
Data Scientist consultant <i>Zebria (Jan. 2017–Sep. 2017)</i>	Sep. 2015–Sep. 2017 <i>Paris, France</i>

Text-mining on data from patients suffering from chronic diseases: scraping, pre-processing with the nltk library, Word2Vec analysis.

Temiseo (May 2016–Oct. 2016)

Development of algorithms for vision tasks on images (detection and recognition of media device and logos with OpenCV and Keras, barcode detection and reading with zbar).

The PriceHub (Sep. 2015–Jan. 2016)

Implementation of a pricing algorithm for industrial mechanical parts.

Data Scientist intern

Jul. 2014–Sep. 2014

Over-Graph (909c agency)

Paris, France

Optimization of strategies for marketing campaigns on Facebook.

Skills

Languages: French (native), English (fluent), Italian (intermediate).

Programming: Python, R, MATLAB (advanced), C++ (basic).

Others: Latex (advanced), HTML/CSS, D3.js (Javascript library for Dataviz).

Publications

Below, * denotes equal contribution.

- [1] *Maximum Mean Discrepancy Gradient Flow*. M. Arbel, A. Korba, A. Salim, A. Gretton. NeurIPS, 2019.
- [2] *Dimensionality Reduction for Bucket Ranking: A Mass Transportation Approach*. M. Achab*, A. Korba*, S. Cléménçon. ALT, 2019. (*: equal contribution)
- [3] *A Structured Prediction Approach for Label Ranking*. A. Korba, A. Garcia, F. D'Alché-Buc. NeurIPS, 2018.
- [4] *On Aggregation in Ranking Median Regression*. S. Cléménçon, A. Korba. ESANN, 2018.
- [5] *Ranking Median Regression: Learning to Order through Local Consensus*. S. Cléménçon, A. Korba, E. Sibony. ALT, 2018.
- [6] *A Learning Theory of Ranking Aggregation*. A. Korba, S. Cléménçon, E. Sibony. AISTATS 2017.
- [7] *Controlling the distance to a Kemeny consensus without computing it*. Y. Jiao, A. Korba, E. Sibony. ICML 2016.

Invited Talks

- Orsay statistics seminar, Orsay, December 2019.
- CFE-CMStatistics conference, London, December 2019.
- INRIA MAGNET, Lille, November 2019.
- Stuttgart Workshop on Statistical Learning, Stuttgart, July 2019.
- Algorithmic Learning Theory (ALT), Chicago, March 2019.
- LAMSADE, Université Paris Dauphine, February 2019.
- Gatsby Computational Neuroscience Unit, University College London, August 2018.
- Laboratory for Computational and Statistical Learning (LCSL) seminar, Università di Genova, June 2018.
- Conférence sur l'Apprentissage Automatique (CAp 2018), INSA Rouen, June 2018.
- Journée des Statistiques (JDS18 - Ranking session), EDF Lab, May 2018.

- Machine Learning for Big Data Chair day, Paris, April 2018.
- Algorithmic Learning Theory (ALT), Lanzarote, April 2018.
- Statistics/Learning at Paris-Saclay (3rd edition), Institut des Hautes Etudes Scientifiques (IHES), Bures-sur-Yvette, January 2018.
- Discrete Structures In Machine Learning Workshop at NIPS 2017, Long Beach, December 2017.
- French Forum of Young Women in Mathematics, Institut Élie Cartan de Lorraine, Nancy, November 2017.
- France/Japan Machine Learning Workshop, École Normale Supérieure, Paris, September 2017.
- Machine Learning for Big Data Chair Day, Paris, May 2017.
- Junior Conference on Data Science and Engineering (JDSE 2016), Paris, September 2016.
- European Conference on Operational Research (EURO 2016 - Preference Learning Stream), Poznań, July 2016.
- International Conference of Machine Learning (ICML 2016 - Ranking session), New York, June 2016.
- Machine Learning for Big Data Chair Day, Paris, June 2016.

Other research activities

- Co-organizer of a minisymposium "Gradient flows and interactions between optimization and simulation algorithms" (two sessions) at SIAM Conference on Optimization 2020.
- Co-organizer of the CSML (Computer Science and Machine Learning) seminar at UCL and of the Gatsby external seminar.
- Reviewer for the international conferences and journals: Neural Information Processing System (NeurIPS, 2017-2019), International Conference of Machine Learning (ICML, 2017-2019), Artificial Intelligence and Statistics (AISTATS, 2019) , Asian Conference on machine Learning ACML (2018).

Distinctions

2017: Participated to the *Machine Learning Summer School* (MLSS) 2017 in Tübingen, Germany (15 % success rate).

2016: Best Communication award at *Junior Conference on Data Science and Engineering*.

2015: Ranked 6th as part of a team at the *Data Science Game 2015* international competition.