Thibaut Le Gouic

Maître de conférence (Associate Professor)

thibautlg.github.io

French citizen, born on 1987, in Saint-Pierre (974), France

Academic Employment

2019–2021	**Détachement**
	Two years as visiting associate professor at Massachusetts Institute of Technology, Cambridge, USA
2018–2019	**Détachement**
	One year contract of research at Higher School of Economics, Moscow, Russia
2017–2018	**Délégation CNRS**
	Six months research sabbatical awarded by the CNRS (France)
Sept 2014 –	**Maître de conférence (Associate Professor)**
	Ecole Centrale de Marseille, Marseille
2013–2014	**ATER (1-year contract assistant professor)**
	École centrale de Marseille, Marseille
2010–2013	**Moniteur (Teaching assistant)**
	Université Paul Sabatier, Toulouse

Education

2010–2013	**PhD**
	Université Paul Sabatier, Toulouse
	Title: *Mass localization and Wasserstein spaces*
	Advisor: *Philippe Berthet*
2008–2010	**Master de Mathématiques**
	Université Paul Sabatier, Toulouse
	Mémoire: *Quantization and measure transportation for clustering in Banach spaces*
2005–2008	**Licence de Mathématiques**
	Université Paul Sabatier, Toulouse

Scientific activities

Jun 2019	**Ten days long visit with Philippe Rigollet (MIT)** Institute of Advanced Study, Princeton (USA)
Feb 2019	**Two weeks long visit with Philippe Rigollet (MIT)** Institute of Advanced Study, Princeton (USA)
Oct 2017-Mar 2018	**Five months research visit at the Higher School of Economics** Moscow (Russia)
Sept 2016-July 2017	**Responsible of the seminar of statistics** *Institut de Mathématiques de Marseille*
Oct 2016	**Two weeks research visit at the Higher School of Economics** Moscow (Russia)
May 2016	**Selection committee** for an assistant professor position at the École Centrale de Casablanca (Morocco)
Jan-Jun 2013	**Organisation of a PhD student workshop** *Institut de Mathématiques de Toulouse*
Oct 2012	**Organisation of the welcoming day for new PhD students in probability and statistics** *Institut de Mathématiques de Toulouse*
Oct 2012	**Organisation of mini-courses between PhD students** *Institut de Mathématiques de Toulouse*
Mars et Nov 2012	**Participations at the Hippocampe program: the scientific world for high school students** *Institut de Recherche pour l'Enseignement des Mathématiques de Toulouse*

Conferences and seminars

Sept 2019	**Talk at Workshop "Recent advances in mass transportation"** Poncelet Center and Higher School of Economics, Moscow (Russia)
Oct 2019	**Lecture at seminar course on Optimal Transport** Yale University, New Haven (USA)
Jul 2018	**Mini-course at Conference on Statistical Optimal Transport** Skoltech, Moscow (Russia)
Nov 2018	**Seminar of Probability and Statistics** Université Paris Sud, Orsay (France)
Dec 2017	**Invited Session, CFE-CMStatistics meeting** University of London, London (UK)
Dec 2016	**Latin American Congress of Probability and Mathematical Statistics (CLAPEM)** San José (Costa Rica)
Oct 2016	**Talk on Wasserstein barycenter** Faculty of Mathematics, Higher School of Economics, Moscow (Russia)
Oct 2015	**2nd conference on Geometric Science of Information** Ecole Polytechnique, Paris-Saclay
Jun 2015	**Meeting on statistics Avignon-Marseille** Université d'Avignon, Avignon
Sept 2014	**Seminar of probabilities and statistics** I3M, Montpellier
Feb 2014	**Seminar of statistics** LAREMA, Angers
Jan 2014	**Workshop on PDE/Probability** LATP, Marseilles
Nov 2013	**Seminar of probabilities** IMT, Toulouse
Aou 2013	**Rencontres des jeunes statisticiens** Centre Paul Langevin, Aussois
Juin 2012	**Sexto encuentro of Estadística Matemática BoSanTouVal** CIEM, Castro Urdiales (Spain)

PUBLICATIONS AND PREPRINTS

Publications

[1] A. Ahidar-Coutrix, T. Le Gouic, and Q. Paris. "Convergence Rates for Empirical Barycenters in Metric Spaces: Curvature, Convexity and Extendable Geodesics". In: *Probability Theory and Related Fields* (2019), pp. 1–46.

[2] E. Arias-Castro and T. Le Gouic. "Unconstrained and Curvature-Constrained Shortest-Path Distances and Their Approximation". In: *Discrete & Computational Geometry* 62.1 (2019), pp. 1–28.

[3] T. Le Gouic and Q. Paris. "A Notion of Stability for K-Means Clustering". In: *Electronic journal of statistics* 12.2 (2018), pp. 4239–4263.

[4] T. Le Gouic and J.-M. Loubes. "Existence and Consistency of Wasserstein Barycenters". In: *Probability Theory and Related Fields* 168.3-4 (2017), pp. 901–917.

[5] E. Boissard, T. Le Gouic, and J.-M. Loubes. "Distribution's Template Estimate with Wasserstein Metrics". In: *Bernoulli* 21.2 (2015), pp. 740–759.

[6] T. Le Gouic and J.-M. Loubes. "Barycenter in Wasserstein Spaces: Existence and Consistency". In: *International Conference on Geometric Science of Information*. Springer, 2015, pp. 104–108.

[7] E. Boissard and T. Le Gouic. "On the Mean Speed of Convergence of Empirical and Occupation Measures in Wasserstein Distance". In: *Annales de l'IHP Probabilités et Statistiques*. Vol. 50. 2. 2014, pp. 539–563.

Preprints

[1] T. Le Gouic. "A Note on Flatness of Non Separable Tangent Cone". In: *arXiv preprint arXiv:1906.11536* (2019).

[2] T. Le Gouic et al. "Fast Convergence of Empirical Barycenters in Alexandrov Spaces and the Wasserstein Space". In: *arXiv preprint arXiv:1908.00828* (2019).

[3] T. Le Gouic. "Recovering Metric from Full Ordinal Information". In: *arXiv preprint arXiv:1506.03762* (2015).

Teaching

2017–2018 | **96h service**

- courses in probability theory (L3)
- courses in statistical learning (M2)
- project tutoring

2016–2017 | **250h service**

- courses in probability theory (L3)
- courses in statistical learning (M2)
- courses in statistics (M1)
- refresher course in probability theory to École Préparatoire teachers in Casablanca
- project tutoring

2015–2016 | **314h service**

- courses in probability theory (L3,M1)
- courses in statistical learning (M2)
- courses in statistics (M1)
- project tutoring

2014–2015 | **225h service**

- courses in probability theory (L3,M1)
- courses in statistical learning (M2)
- courses in statistics (M1)
- project tutoring

2013–2014 | **192h service**

- courses in probability theory (L3,M1)
- courses in statistics (M1)
- project tutoring