

GUILLAUME LECUÉ

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Nationality: French.
Date of birth: August 18, 1979 in Dinan (France).

CURRENT SITUATION

I am currently a CNRS researcher at the Laboratoire d'analyse, topologie et probabilité, LATP, Marseille.

INVITATIONS

- May. 2008-June. 2008 Department of mathematics of Technion, Haïfa, Israël. Invited by Pr. Shahar Mendelson.
- Feb. 2008-March 2008 Departamento de Estadística, Universidad de Valparaíso, Valparaíso, Chile. Invited by Dr. Karine Bertin.
- Oct. 2007-Dec. 2007 Department of mathematics of Technion, Haïfa, Israël. Invited by Pr. Shahar Mendelson.
- July 2007-Oct. 2007 Mathematical Science Institute (*MSI*) at Australian National University (*ANU*), Canberra, Australia. Invited by Pr. Shahar Mendelson.
- March 2006 Department of Statistics of University of California, Berkeley (*UCB*). Invited by Pr. Peter Bickel.
- April 2006 Department of Mathematics of the Institute of Technology of Georgia (*Georgia Tech*), Atlanta, USA. Invited by Pr. Vladimir Koltchinski.
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FORMATION

- May 2007 **CNRS researcher** Position.
- Sep. 2004-May 2007 **PhD student and teaching assistant at Université Paris 6.** The subject of my PhD is "Aggregation methods: optimality and fast rates." My adviser is Alexandre Tsybakov. *Laboratoire de Probabilités et Modèles aléatoires. Université Paris 6.*
- 2003-2004 **Master in stochastic modeling and statistics** (with honor (rank: 3-rd)).
Forth year at ENS Cachan. *Université Paris-Sud, Centre Scientifique d'Orsay.*

- 2002–2003 **Agrégation in Mathematics, rank: 43-th** (highest-level french national competitive exam for high-school teacher recruitment, also used as a form of graduate in french academia).
Third year at ENS Cachan. *Ker Lann, Université de Rennes 1.*
- 2001–2002 **Bachelor in mathematics** (with honor).
Bachelor in mathematical engineering (with honor).
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PUBLICATIONS AND PREPRINTS

- G. Lecué. **Lower bounds and aggregation in density estimation.** *Journal of Machine Learning Research*, 2006, Vol. 7(Jun): 971–981.
- G. Lecué. **Simultaneous adaptation to the margin and to complexity in classification.** *The Annals of Statistics*, 2007, Vol. 35, No. 4, 1698-1721.
- G. Lecué. **Optimal oracle inequality for aggregation of classifiers under low noise condition.** 19th Annual Conference on Learning Theory, COLT06. Proceedings. Gabor Lugosi, Hans Ulrich Simon (Eds.). Springer. LNAI 2006, 364–378. “*Mark Fulk award*” for “*the best student paper*”.
- G. Lecué. **Optimal rates of aggregation in classification.** *Bernoulli*, 2007, Vol. 13, No. 4, 1000-1022.
- C. Chesneau and G. Lecué. **Adapting to Unknown Smoothness by Aggregation of Thresholded Wavelet Estimators.** To appear in *Statistica Sinica*.
- G. Lecué. **Suboptimality of Penalized Empirical Risk Minimization in Classification.** 20th Annual Conference On Learning Theory, COLT07. Proceedings. Bshouty, Gentile (Eds.). Springer. LNAI 4539, 142-156. Springer.
- G. Lecué. **Classification with minimax fast rates for classes of Bayes rules with sparse representation.** Under revision in *Electronic Journal of Statistics*.
- S. Gaïffas and G. Lecué. **Minimax rates and adaptivity in the Single-Index Model.** *Electronic Journal of Statistics*, Vol. 1, pp. 538-573. 2007
- G. Lecué and S. Mendelson **Aggregation Vs. Empirical Risk Minimization.** Submitted.
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PHD DEFENSE

I have defended my PhD on the 18th of May 2008 in front of the following jury:

M. Alexandre	TSYBAKOV	Université Paris–VI	PhD supervisor
M. Vladimir	KOLTCHINSKI	Georgia Institute of Technology	Referee
M. Gábor	LUGOSI	Universitat Pompeu Fabra	Referee
M. Pascal	MASSART	Université Paris–XI	President
M. Olivier	CATONI	Université Paris–VI	Member
M. Arkadi	NEMIROVSKI	Georgia Institute of Technology	Member
M. Stéphane	BOUCHERON	Université Paris–VI	Member
M. Lucien	BIRGÉ	Université Paris–VI	Member

PRESENTATIONS

Marseille, December 2005: Statistical workshop at CIRM. *Invited by Laurent Cavalier.*

Atlanta, January 2006: Statistic seminary of Georgia Institute of Technology (Georgia Tech). *Invited by Vladimir Koltchinskii.*

Berkeley, February 2006: Statistic seminary of the department of computer science at the university of California Berkeley. *Invited by Peter Bartlett.*

Berkeley, February 2006: Statistic seminary of the department of statistics at the university of California Berkeley. *Invited by Bin Yu.*

Aussois, March 2006: Statistical workshop for young probabilists and statisticians. *Invited by Marc Hoffmann.*

ENS Ulm, June 2006: Statistical workshop at ENS. *Invited by Gilles Stoltz.*

Pittsburgh, June 2006: 19th Annual Conference on Learning Theory, COLT06.

Chevaleret, Paris 6, Octobre 2006: Statistic seminary of the Laboratoire de Probabilité et Modèles Aléatoires. *Invited by Stephane Boucheron and Alexandre Tsybakov.*

Marseille, December 2006: Statistical workshop at CIRM. *Invited by Laurent Cavalier.*

Grenoble, January 2007: Statistic seminary of the Laboratoire Jean Kuntzman. *Invited by Anatolie Iouditski.*

ENS Ulm, February 2007: Statistical workshop at ENS. *Invited by Gilles Stoltz.*

Marseille, Paris 6, March 2007: Statistic seminary of the LATP. *Invited by Laurent Cavalier.*

Praz-sur-Arly, May 2007 SMAI 2007. *Invited by Stéphane Boucheron.*

San Diego, June 2007 20th Annual Conference on Learning Theory, COLT07.

Lisboa, August 2007 56th International Statistical Institute, 56th ISI. *Invited by Feng Liang.*

Toulouse, February 2008 Statistic seminary of the Laboratoire Paul Sabatier. *Invited by B/v'e atrice Laurent.*

Valparaiso, March 2008 Statistic seminary of the Departamento de Estadística de Universidad de Valparaiso. *Invited by Karine Bertin.*

MASTER COURSES

First semester: Université Paris-Sud (Paris 11), Centre Scientifique d'Orsay.

- “Large deviations” by R. CERF.
- “stochastic calculus” by Y. LE JAN.
- “Percolation and Ising’s model” by W. WERNER.
- “empirical process and adaptive estimation” by P. MASSART.
- “semi-parametric statistics and experience convergence” by E. GASSIAT.

Second semester : Université Pierre et Marie Curie (Paris 6), Chevaleret.

- “Decision theory and parametric estimation” by A. TSYBAKOV.
- “The T -estimators” by L. BIRGE.
- “Minimax, Maxiset and non-parametric bayesian methods” by D. PICARD.
- “Stochastic modeling and statistical learning in post-genomic” by J.-P. VERT.

TEACHING AND PROFESSIONAL EXPERIENCE.

Juillet-Août 2002 Training period at the INRIA of Rennes.

2002–2007 Teaching assistant for undergraduate and graduate students. *Université de Rennes 1 and Université Paris 6.*

Paris, March 18, 2008