

## Laurent JACOB

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Department of Statistics  
UC Berkeley  
USA

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### Employment

*From February 2011*     **University of California, Berkeley, USA.**  
Postdoctoral researcher with Pr. Terry Speed.

*2010*     **University of California, Berkeley, USA.**  
Genentech postdoctoral innovation fellow with Pr. Sandrine Dudoit.

*Dec. 2009 - Jan. 2010*     **Institut Curie, France.**  
Postdoctoral researcher. Improvement of local recidive prediction for breast cancer.

*Spring 2006*     **Mines ParisTech, France.**  
(6 months)     Master internship: Multi-task learning for epitope prediction.

*Spring 2005*     **Functional genomics department, CEA, Evry, France.**  
(6 months)     Final undergraduate studies project: Gene expression profiles clustering.

*Fall 2003*     **NovaXon BV, Maastricht, The Netherlands.**  
(6 months)     Java development for a clinical studies software.

### Education

*2007 – 2009*     **Mines ParisTech, France.**  
Ph.D. in machine learning and computational biology.  
Supervisor : Pr. Jean-Philippe Vert.

*2009*     **France.**  
Qualification for the assistant professor positions, sections 26 and 27.

*Fall 2008*     **University of California, Berkeley, USA.**  
3-month visit in Pr. Bin Yu's lab, sponsored by the France-Berkeley Fund.

*2006*     **Ecole Normale Supérieure de Cachan, France.**  
Master "Mathematics, Vision, Learning" *summa cum laude*. Ranked 3rd/40.

*Fall 2004*     **Universidad Politécnica de Valencia, Spain.**  
One semester as an exchange student.

*2001–2005*     **Université de Technologie de Compiègne (U.T.C.), France.**  
5-year studies in a "Grande Ecole". Major: Computer Science. Minor: Philosophy  
Technology and Cognition.

### Teaching

*Fall 2010*     **UC Berkeley.**  
Teaching assistant for the "PB HLTH C240C/STAT C245C: Biostatistical Methods: Computational Statistics with Applications in Biology and Medicine" class.

*Fall 2010*     **WEHI, Melbourne, Australia.**  
"Using networks in machine learning and statistics", 1-hour class at BioInfoSummer 2010 summer school.

*Fall 2010*     **Centro de Investigación Príncipe Felipe, Valencia, Spain.**  
"Statistical Methods and Software for mRNA-Seq and ChIP-Seq", 3-day class.

*Spring 2007-2009*     **Mines ParisTech, France.**  
4h-teaching "Machine learning in bioinformatics and kernels for structures".  
▷ The slides are available at <http://cbio.ensmp.fr/~ljacob/teaching/ensmp/bioinfo-kernels.pdf>. ▷ The exercises and codes for the practical sessions are available at <http://cbio.ensmp.fr/~ljacob/teaching/ensmp/tpsvm.tgz>.

## Referee service

### International Conferences.

NIPS 2008,2009,2011. ICML 2009–2011. AISTATS 2010–2012.

### Journals.

Bioinformatics, BMC Bioinformatics, IEEE-TPAMI, IEEE-TCBB.

### Workshops.

Machine learning for computational biology (NIPS 2009).

## Languages

French	Native speaker.
English	Fluent (277/300 to computer-based TOEFL).
Spanish	Fluent (one semester in Spain).
German	Studied in high school.
Dutch	Studied for 3 months at Maastricht University.

## References

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- [2] L. Jacob and J.-P. Vert. Efficient peptide-MHC-I binding prediction for alleles with few known binders. *Bioinformatics*, 24(3):358–366, Feb 2008.
- [3] L. Jacob and J.-P. Vert. Protein-ligand interaction prediction: an improved chemogenomics approach. *Bioinformatics*, 24(19):2149–2156, 2008.
- [4] J.-P. Vert and L. Jacob. Machine learning for in silico virtual screening and chemical genomics: New strategies. *Combinatorial Chemistry & High Throughput Screening*, 11(8):677–685, September 2008.
- [5] L. Jacob, F. Bach, and J.-P. Vert. Clustered multi-task learning: A convex formulation. In *Advances in Neural Information Processing Systems 21*, pages 745–752. MIT Press, 2009.
- [6] L. Jacob, G. Obozinski, and J.-P. Vert. Group lasso with overlap and graph lasso. In *ICML '09: Proceedings of the 26th Annual International Conference on Machine Learning*, pages 433–440, New York, NY, USA, 2009. ACM.
- [7] A.-C Haury, L. Jacob, and J.-P. Vert. Improving stability and interpretability of gene expression signatures. Technical report, arXiv, 2010.
- [8] L. Jacob, P. Neuvial, and S. Dudoit. Gains in power from structured two-sample tests of means on graphs. Technical report, arXiv, 2010. Submitted.
- [9] L. Jacob. Regularized learning in bioinformatics. *Journal de la Société Française de Statistiques*, 152(2), 2011.
- [10] M.E. Lopes, L. Jacob, and M.J. Wainwright. A more powerful two-sample test in high dimensions using random projection. In *Advances in Neural Information Processing Systems 24*. MIT Press, 2011.
- [11] M.E. Lopes, L. Jacob, and M.J. Wainwright. A more powerful two-sample test in high dimensions using random projection. Technical report, arXiv, 2011. Submitted.
- [12] G. Obozinski, L. Jacob, and J.-P. Vert. Group lasso with overlaps: the latent group lasso approach. Technical report, arXiv, 2011. Submitted.
- [13] N. Servant, M. A. Bollet, H. Halfwerk, K. Bleakley, B. Kreike, L. Jacob, D. Sie, R. Kerkhoven, P. Hupé, R. Hadhri, A. Fourquet, H. Bartelink, E. Barillot, B. Sigal-Zafrani, and M. J. van de Vijver. Search for a gene-expression signature of breast cancer local recurrence in young women, 2011. Submitted.