

Vincent Roulet

Education

- 2014 - 2017 **PhD in Optimization and Machine Learning**, *INRIA-ENS Ulm*, Paris.
"On the geometry of optimization problems and their structure"
Supervised by Alexandre d'Aspremont in SIERRA team
- 2013 - 2014 **MSc in Machine Learning**, *MVA, ENS Cachan-Telecom ParisTech*, Paris.
Obtained with high honors
- 2010 - 2013 **Engineering Degree in Applied Mathematics, Physics and Computer Science**, *Ecole Polytechnique*, Paris.

Professional experience

- 2018 - now **Postdoc**, *University of Washington*, Seattle, USA.
Study nonlinear control algorithms from an optimization viewpoint
- Summer 2014 **Research Intern**, *INRIA*, Paris, France.
Researched on hierarchical feature learning with kernel methods for computer vision
- Summer 2013 **Research Intern**, *Imperial College*, London, UK.
Researched to apply KWIK paradigm to bandits problem for recommendation systems
- Summer 2012 **Intern**, *Astrium EADS*, Bremen, Germany.
Developed a better systematic statistical analysis of the pneumatic tests on the Ariane 5

Research articles

Published

Iterative Linearized Control: Stable Algorithms and Complexity Guarantees. Vincent Roulet, Siddharta Srinivasa, Dmitry Drusvyatskiy, Zaid Harchaoui. *Proceedings of the 36th International Conference on Machine Learning (ICML2019)*.

A Smoother Way to Train Structured Prediction Models. Krishna Pillutla, Vincent Roulet, Sham Kakade, Zaid Harchaoui. *Advances in Neural Information Processing Systems 31 (NeurIPS2018)*.

Sharpness, Restart and Acceleration. Vincent Roulet, Alexandre d'Aspremont. *Advances in Neural Information Processing Systems 30 (NIPS2017)*.

Integration methods and Accelerated Optimization Algorithms. Damien Scieur, Vincent Roulet, Francis Bach, Alexandre d'Aspremont. *Advances in Neural Information Processing Systems 30 (NIPS2017)*.

Complexity versus Statistical Performance on Sparse Recovery Problems. Vincent Roulet, Nicolas Boumal, Alexandre d'Aspremont. *To appear in Information and Inference: a Journal of the IMA*.

Under review/Technical reports

Kernel-based Translations of Convolutional Networks. Corinne Jones, Vincent Roulet, Zaid Harchaoui. *Submitted*

Iterative Hard Clustering of Features. Vincent Roulet, Fajwel Fogel, Alexandre d'Aspremont, Francis Bach. *Technical report*

Learning with Clustering Structure. Vincent Roulet, Fajwel Fogel, Alexandre d'Aspremont, Francis Bach. *Technical report*

Talks

- June 2019 **Iterative Linearized Control: Stable Algorithms and Complexity Guarantees.**, *ICML*, Long Beach.
- Feb 2017 **Sharpness, Restart, Acceleration**, *Optimization and Statistical Learning Workshop*, Les Houches.
- Dec 2015 **Supervised Clustering in the Data Cube**, *Transfer and Multi-Task Learning Workshop*, NIPS 2015, Montreal.

Teaching

- 2014-2017 **Teaching Assistant**, *Convex Optimization*, MVA ENS Cachan, Paris.
- 2013-2014 **Oral Interrogations**, *Mathematics "Classes Préparatoires" MP**, Lycée Janson de Sailly, Paris.

Reviews

Reviewer for NIPS, ICML, IEEE, SIOPT

Skills

Languages French, English, German
Programming Matlab, Python, C++

Interests

- Music Play bass guitar, composed, performed concerts
Directed the Music Association of Ecole Polytechnique, organized, prepared and supervised concerts, developed musical activities, been awarded for the investment
- Sport Climbing, hiking