# Adil Salim

Postdoctoral fellow

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### Education

- 2015–2018 **Ph.D**, *Telecom ParisTech*, Paris, Stochastic optimization for machine learning. Supervisors: Pascal Bianchi and Walid Hachem. Summa cum laude
- 2014–2015 **M.Sc**, *Paris XI University*, Orsay, Probability Theory and Stochastic Modeling. Magna cum laude
- 2012–2015 M.Sc, ENSAE ParisTech, Malakoff, Data Science and Statistical Engineering.
- 2009–2012 **Preparatory Classes for the "Grandes Ecoles"**, *Lycée Lakanal*, Sceaux Mathematics/Physics.

Three-year undergraduate intensive course

2009 **Baccalauréat Scientifique**, *Lycée Mistral*, Fresnes, Spe. Math. Summa cum laude + Merit scholarship

# Teaching

2015-2017 Tutorial assistant, ENSAE ParisTech, Malakoff, 128h.

Algebra, Measure Theory, Introduction to Stochastic Processes, Applied statistics project: French presidential elections, Twitter graph and Markov chains

#### Experience

2019-2020 Postdoctoral fellow, KAUST, Thuwal, Saudi Arabia, VCC.

Host: Peter Richtarik

- 2018 2019 Chief Technical Officer, Revna Sciences, Paris, Consulting in R&D.
- March 2018 Visiting Student, EPFL, Lausanne, Switzerland, LIONS.

Host: Volkan Cevher

- 2012-2017 **Member of the Teaching Pole**, *Nonprofit organizations*, Paris, Coaching ambitious students from rough urban area to prepare competitive exams for prestigious schools in France.

  Organizations: Renovo, Connex'cités, Gics, Prémices
- Fall 2015 Freelance data scientist, The Price Hub.com, Paris, Pricing of industrial custom parts.
- Summer 2015 Freelance data scientist, Kwanko, Bourg-la-Reine, Real Time Bidding algorithm.
- Summer 2015 Internship, CREST-ENSAE, Malakoff, Master thesis: Free stochastic calculus and Large random matrices.

Supervisor: Philippe Biane

Summer 2014 Internship, Insight-UCD, Dublin, Importance sampling, MCMC methods.

Supervisor: Florian Maire

Summer 2013 Auditor, Deloitte, Neuilly-sur-Seine, Audit of banks and insurance companies.

## **Publications**

- [1] A. Salim. "On Stochastic Primal Dual Algorithms". ICCOPT 2019.
- [2] A. Salim\*, A. Korba\*, M. Arbel and A. Gretton. "Yet another look at Stein Variational Gradient Descent". *ICML 2019 Workshop on Stein's Method*.
- [3] M. Arbel, A. Korba, A. Salim and A. Gretton. Maximum Mean Discrepancy Gradient Flow. arXiv preprint arXiv:1906.04370, 2019.
- [4] A. Salim, D. Kovalev and P. Richtarik. Stochastic Proximal Langevin Algorithm: Potential Splitting and Nonasymptotic Rates. *arXiv preprint arXiv:1905.11768*, 2019.
- [5] A. Salim, P. Bianchi and W. Hachem. A Fully Stochastic Primal-Dual Algorithm. arXiv preprint arXiv:1901.08170, 2019.
- [6] A. Salim and W. Hachem. On the Performance of the Stochastic FISTA. *Technical Report*, March 2019.
- [7] A. Salim, P. Bianchi and W. Hachem. Snake: a Stochastic Proximal Gradient Algorithm for Regularized Problems over Large Graphs. *IEEE Transaction on Automatic Control*, May 2019.
- [8] P. Bianchi, W. Hachem and A. Salim. A constant step Forward-Backward algorithm involving random maximal monotone operators. *Journal of Convex Analysis*, May 2019.
- [9] P. Bianchi, W. Hachem and A. Salim. Constant step stochastic approximations involving differential inclusions: Stability, long-run convergence and applications. *Stochastics*, pages 1–33, 2018.
- [10] S. Schechtman, A. Salim and P. Bianchi. "Passty Langevin". CAp 2019.
- [11] A. Salim, P. Bianchi and W. Hachem. "A Splitting Algorithm for Minimization under Stochastic Linear Constraints". *ISMP 2018*.
- [12] A. Salim, P. Bianchi and W. Hachem. "A Constant Step Stochastic Douglas-Rachford Algorithm with Application to Non Separable Regularization". *IEEE ICASSP 2018*.
- [13] A. Salim, P. Bianchi and W. Hachem. A constant step stochastic Douglas Rachford algorithm. Technical Report, October 2017.
- [14] A. Salim, P. Bianchi and W. Hachem. "A Stochastic Proximal Point Algorithm for Total Variation Regularization over Large Scale Graphs". *IEEE CDC 2016*.
- [15] A. Salim, P. Bianchi and W. Hachem. "Snake: a Stochastic Proximal Gradient Algorithm for Regularized Problems over Large Graphs". NIPS 2017 Workshop Black in AI.
- [16] R. Mourya, P. Bianchi, A. Salim and C. Richard. "An adaptive Distributed Asynchronous Algorithm with Application to Target Localization". *IEEE CAMSAP 2017*.
- [17] P. Bianchi, W. Hachem and A. Salim. "Convergence d'un algorithme du gradient proximal stochastique à pas constant et généralisation aux opérateurs monotones aléatoires". GRETSI 2017.
- [18] A. Salim, P. Bianchi and W. Hachem. "Snake: a Stochastic Proximal Gradient Algorithm for Regularized Problems over Large Graphs". CAp 2017.