Dmitrii M. Ostrovskii

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Website

ostrodmit.github.io

GITHUB

github.com/ostrodmit

Research Interests

- Statistical learning theory
- Robust and adaptive estimation
- Convex and non-convex optimization and minimax problems

Current

Postdoctoral Scholar - Research Associate

Aug. 2019 - present

Position

University of Southern California

Host: Meisam Razaviyayn

Previous

ERCIM Alain Bensoussan Postdoctoral Fellow

Feb. 2018 - Jun. 2019

Positions

Inria (Paris) and CWI (Amsterdam)

Hosts: Francis Bach, Peter Grünwald

Visiting Student, Univ. of Washington

Dec. 2016 - May 2017

Host: Zaid Harchaoui

• Thesis:

Degrees

PhD, Université Grenoble Alpes

Oct. 2014 - Jan. 2018

• Thesis: Adaptive Signal Recovery by Convex Optimization Advisers: Anatoli Juditsky, Zaid Harchaoui, Laurent Desbat

MSc, Moscow Institute of Physics and Technology

Sep. 2012 - Jul. 2014 Concentration Inequalities for the Exponential Weighting Method

Adviser: Yuri Golubev

BSc, Moscow Institute of Physics and Technology

Sep. 2008 - Jul. 2012

• Thesis: Analytical Study of NHDP Link Management Protocol Adviser: Andrey Lyakhov

Preprints and

Near-Optimal Model Discrimination with Non-Disclosure

Working Papers D. Ostrovskii, M. Ndaoud, A. Javanmard, M. Razaviyayn. arXiv:2012.02901, 2020

> Efficient Primal-Dual Algorithms for Large-Scale Multiclass Classification D. Babichev, D. Ostrovskii, F. Bach. arXiv:1902.03755, 2019

Adaptive Denoising of Signals with Shift-Invariant Structure

D. Ostrovskii, Z. Harchaoui, A. Judistky, A. Nemirovski. arXiv:1806.04028, 2018

Structure-Blind Deconvolution via Convex Optimization D. Ostrovskii, A. Juditsky. Available upon request, 2018

Journal Papers

Efficient Search of First-Order Nash Equilibria in Nonconvex-Concave Smooth Min-Max Problems

D. Ostrovskii, A. Lowy, M. Razaviyayn. arXiv:2002.07919, 2020 SIAM Journal on Optimization, in review (min. rev.)

Finite-Sample Analysis of M-Estimators Using Self-Concordance D. Ostrovskii, F. Bach. arXiv:1810.06838, 2018 Electronic Journal of Statistics, vol. 15, no. 1, pp. 326-391, 2021

Concentration Inequalities for the Exponential Weighting Method Y. Golubev, D. Ostrovskii.

Mathematical Methods of Statistics, 23:1, 2014, pp. 20-37

A Dynamic Channel Reservation Method for Multimedia Streaming in Wi-Fi Mesh Networks

A. Krasilov, A. Lyakhov, D. Ostrovskii, E. Khorov. Automation and Remote Control, 74:9, 2013, pp. 1460-1473

Analytical Study of the Quality of Links Established by the Neighbourhood Discovery Protocol

A. Lyakhov, D. Ostrovskii, E. Khorov. Journal of Communications Technology and Electronics, 57:12, 2012, pp. 1314-1321

REFEREED CONFERENCE PAPERS

Affine Invariant Covariance Estimation for Heavy-Tailed Distributions D. Ostrovskii, A. Rudi. arXiv:1902.03086, COLT 2019

Beyond Least-Squares: Fast Rates for Regularized Empirical Risk Minimization through Self-Concordance

U. Marteau-Ferey, D. Ostrovskii, A. Rudi, F. Bach. arXiv:1902.03046, COLT 2019

Efficient First-Order Algorithms for Adaptive Signal Denoising D. Ostrovskii, Z. Harchaoui. arXiv:1803.11262, ICML 2018

Structure-Blind Signal Recovery

D. Ostrovskii, Z. Harchaoui, A. Juditsky, A. Nemirovski. arXiv:1607.05712, NeurIPS 2016

Adaptive Recovery of Signals by Convex Optimization

Z. Harchaoui, A. Juditsky, A. Nemirovski, D. Ostrovskii. hal:01250215, COLT 2015

Dynamic Resource Allocation for MCCA-Based Streaming in Wi-Fi Mesh Networks E. Khorov, A. Krasilov, A. Lyakhov, D. Ostrovskii. WiFlex 2013

Analytical Study of Neighborhood Discovery and Link Management in OLSR E. Khorov, A. Kiryanov, A. Lyakhov, D. Ostrovskii *IFIP 2012*

SERVICE

- Journal reviewing: JMLR, Mathematical Programming
- Conference reviewing: NeurIPS (in top reviewers), ICML, COLT, ALT
- Workshop organized: Khronos-Persyvact Spring School 2015, Grenoble

Teaching

- 2019–2020: Invited lectures, Optimization for Machine Learning class USC
- 2015–2017: Calculus for science & engineering (French) Univ. Grenoble Alpes
- 2015–2016: Statistical methods in biology (French) Univ. Grenoble Alpes

Talks 2021

• University of Southern California EPFL

Weierstrass Institute, Berlin

Near-Optimal Model Discrimination with Non-Disclosure

2019

- University of Southern California, Epstein Seminar On Fast Rates in Empirical Risk Minimization Beyond Least-Squares
- COLT 2019, Phoenix Optimization and Statistical Learning workshop, Les Houches (**poster**) Affine Invariant Covariance Estimation for Heavy-Tailed Distributions
- Toyota Technological Institute, Chicago
 Algorithmic Efficiency and Statistical Optimality in Empirical Risk Minimization

2018

- ICML 2018, Stockholm (**poster**) Optimization and Learning workshop, Toulouse (**poster**) CWI–Inria Workshop, Paris Finite-Sample Analysis of M-Estimators Using Self-Concordance
- ICML 2018, Stockholm
 Efficient First-Order Algorithms for Adaptive Signal Denoising
- CWI seminar, Amsterdam SIERRA Team seminar, INRIA, Paris PhD Thesis Defense, Univ. Grenoble Alpes Adaptive Signal Recovery by Convex Optimization

2015-2017

- NeurIPS 2016, Barcelona (**poster**) Structure-Blind Signal Recovery
- Université Grenoble Alpes
 University of Göttingen
 IRIT, Toulouse
 ORFE, Princeton
 University of Washington, Seattle
 PGMO Days 2016, Paris
 COLT 2015, Paris
 Adaptive Signal Denoising by Convex Optimization

SCIENTIFIC SCHOOLS

Structural Inference 2016, Brodten GPU for Signal and Image Processing 2015, Grenoble Machine Learning Summer School 2015, Kyoto Khronos-Persyvact Spring School at *Statlearn* 2015 workshop, Grenoble Microsoft School on Algorithms for Massive Data 2013, Moscow HONORS NeurIPS 2019 Free Registration (awarded to 400 highest-scoring reviewers)

COLT 2019 Travel Award

HDSI Postdoctoral Felloship at UC San Diego, 2019–2021 (declined)

ERCIM Alain Bensoussan Postdoctoral Fellowship, 2018–2019 (completed)

NIPS 2016 Travel Award

Increased State Academic Scholarship of the Russian Government, 2012–2014

Abramov-Frolov Fund Scholarship, 2009–2011

Other Activities Mathematical blog: https://ostrodmit.github.io/blog

LANGUAGE SKILLS English (proficient) Russian (native)

French (fluent) German (basic)