Dmitrii M. Ostrovskii **February 9, 2023**

CONTACT INFORMATION
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WEBSITE
ostrodmit.github.io

OTHER LINKS:
Scholar • GitHub • YouTube

RESEARCH INTERESTS

- ***Optimization theory:***

  nonconvex minimax problems; acceleration under non-Euclidean geometries.
- ***Learning theory:***

  fast rates in statistical and online learning; applications of self-concordance.
- ***Mathematical statistics:***

  high-dimensional, robust, and adaptive estimation and hypotheses testing.
- ***Information theory:***

  information-theoretic techniques in optimization, statistics, combinatorics.
- ***Signal processing:***

  sparse recovery; super-resolution; estimation with shift-invariant structure.

CURRENT POSITION

Assistant Professor (RTPC) of Mathematics since 08/2021
U. of South. California (Department of Mathematics)

PREVIOUS POSITIONS

Postdoctoral Scholar 08/2019–08/2021
U. of South. California (Viterbi School of Engineering; hosted by Meisam Razaviyayn)

ERCIM Alain Bensoussan Postdoctoral Fellow 02/2018–06/2019
INRIA Research Center, Paris (SIERRA team, hosted by Francis Bach)

PhD Student Visitor 12/2016–05/2017
University of Washington, Seattle (Department of Statistics, hosted by Zaid Harchaoui)

DEGREES

PhD – Université Grenoble Alpes 10/2014–01/2018
Thesis: *Adaptive Signal Recovery by Convex Optimization*
Advisors: Anatoli Juditsky (UGA), Zaid Harchaoui (Univ. of Washington)

MSc – Moscow Institute of Physics and Technology 09/2012–08/2014
Thesis: *Concentration Inequalities for the Exponential Weighting Method*
Advisor: Yuri Golubev (Univ. Aix-Marseille, IITP RAS)

BSc – Moscow Institute of Physics and Technology 09/2008–08/2012
Thesis: *Analytical Study of NHDP Link Management Protocol*
Advisors: Andrey Lyakhov & Evgeny Khorov (IITP RAS)

Preprints & Working Papers

Efficient and Near-Optimal Online Portfolio Selection
R. Jézéquel, D. Ostrovskii, P. Gaillard. arXiv:2209.13932, 2022.

Nonconvex-Nonconcave Min-Max Optimization with a Small Maximization Domain
D. Ostrovskii, B. Barazandeh, M. Razaviyayn. arXiv:2110.03950, 2021.

Near-Optimal Procedures for Model Discrimination with Non-Disclosure Properties
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.

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

Book Chapter

Adaptive Denoising of Signals with Shift-Invariant Structure
D. Ostrovskii, Z. Harchaoui, A. Judistky, A. Nemirovski. arXiv:1806.04028
Foundations of Modern Statistics: V. Spokoiny's 60th Anniversary Festscrift, to appear.

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
SIAM Journal on Optimization, 31:4, pp. 2508-2538, 2021.

Finite-Sample Analysis of M-Estimators Using Self-Concordance
D. Ostrovskii, F. Bach. arXiv:1810.06838
Electronic Journal of Statistics, 15:1, pp. 326-391, 2021.

Concentration Inequalities for the Exponential Weighting Method
Y. Golubev, D. Ostrovskii. hal-01292413
Mathematical Methods of Statistics, 23:1, pp. 20-37, 2014.

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, pp. 1460-1473, 2013.

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, pp. 1314-1321, 2012.

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

Reviewing

Journals: Math. Programming (MAPR), SIAM J. on Optimization (SIOPT), Ann. of Statist. (AoS), IEEE Trans. on Inform. Theory (IEEE-IT), Math. of Operations Research (MOR), J. of Machine Learning Research (JMLR), Computational Optim. & Appl. (COAP), Optim. Methods & Software (OMS), J. of Computational & Graphical Statistics (JCGS). **Conferences** (*occasionally*): NeurIPS, ICML, STOC, COLT, ALT.

Teaching

University of Southern California

2023, Spring: Analysis of Variance and Regression	9×🧍, 3 hrs./wk.
2022, Fall: Introduction to Mathematical Statistics	15×🧍, 3 hrs./wk.
2022, Summer: Linear Algebra and Linear Differential Equations	12×🧍, 6 hrs./wk.
2022, Spring: Elementary Probability and Statistics	34×🧍, 3 hrs./wk.
2021, Fall: Introduction to Mathematical Statistics	10×🧍, 3 hrs./wk.
2019–2021: Optimization for Machine Learning (invited lectures)	10×🧍, 2 hrs./mo.

University of Grenoble (in French)

2017, Spring: Calculus for Science and Engineering ("Cours-TD")	30×🧍, 3 hrs./wk.
2016, Spring: Calculus for Science and Engineering ("Cours-TD")	30×🧍, 3 hrs./wk.
2016, Spring: Statistical Methods for Biology & Medicine ("TP")	28×🧍, 3 hrs./wk.

Organization

USC Probability and Statistics Seminar (Fall 2022 – Spring 2023)

Invited speakers (local): Mateo Diaz (Caltech), Misha Belkin (UCSD), Yian Ma (UCSD), Robi Bhattachargee (UCSD), Qiyang Han (Rutgers), Masoud Zargar (USC).

Talks[1]

2023:

Toulouse School of Economics	`j,z`
Optimization and Statistical Learning 2023, Les Houches	`i`

[1] Legend: `i` – invited talk, `z` – via Zoom, `p` – poster presentation, `j` – job talk, `s` – session chaired.

2022:

Meeting in Mathematical Statistics, Luminy	i
CNRS AI Rising Talents (Selected among top 3 contenders)	j,z
INFORMS Annual Meeting, Indianapolis	i
Georgia Tech, Stochastic Seminar	i
Georgia Tech, ISyE 8813 (guest lecture)	i,z
Statistical Inference and Convex Optimization (SICO 2022), Grenoble	i,z
University of Southern California, Math. Finance Colloquium	
École Polytechnique, Paris	j,z
INFORMS Optimization Society Conference (IOS 2022), Greenville	s
Johns Hopkins University	j,z
University of Cambridge	j,z

2021:

University of Washington, IFDS seminar	i,z
Johns Hopkins University, AMS seminar	i
Southern California Probability Symposium (SCPS 2021)	i,z
Higher School of Economics, Moscow	i
Universitat Pompeu Fabra, Barcelona	j,z
École Polytechnique Fédérale de Lausanne	j,z
Weierstrass Institute, Berlin	i,z
École Polytechnique, Paris ($\times 2$)	j,z

2019-2020:

University of Southern California, Epstein Seminar	
COLT 2019, Phoenix	
Optimization and Statistical Learning 2019, Les Houches	p
Toyota Technological Institute, Chicago	j

2018:

ICML 2018, Stockholm	p
Optimization and Learning workshop, Toulouse	p
CWI-Inria workshop, Paris	
ICML 2018, Stockholm	
CWI seminar, Amsterdam	
SIERRA team seminar, INRIA Paris	
PhD defense, Université Grenoble-Alpes	

2015-2017:

Optimization Without Borders 2017, Les Houches	
NeurIPS 2016, Barcelona	p
Université Grenoble Alpes	
University of Göttingen	j
IRIT, Toulouse	j
ORFE seminar, Princeton	j
University of Washington, Seattle	
PGMO Days 2016, Paris	
COLT 2015, Paris	
StatLearn 2015, Grenoble	

Honors & Awards

NeurIPS 2019 Best Reviewer (awarded to 400 reviewers out of 4500+)
COLT 2019 Travel Award
HDSI Postdoctoral Fellowship at UC San Diego, 2019–2021 (offered)
ERCIM Alain Bensoussan Postdoctoral Fellowship, 2018–2019
NVIDIA GPU Grant, 2017
NIPS 2016 Travel Award
Abramov-Frolov Fund Scholarship, 2009–2011

Languages

English
- bilingual proficiency

French
- fluent

Russian
- mother tongue

German
- needs reactivation