Dmitrii M. Ostrovskii **September 29, 2022**

CONTACT INFORMATION

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OTHER LINKS: Google Scholar • GitHub • YouTube

RESEARCH INTERESTS

- ***Optimization theory:***
  - minimax & nonconvex problems, acceleration, non-Euclidean geometry.
- ***Learning theory:***
  - fast rates/low regret in statistical/online learning; model misspecification.
- ***Mathematical statistics:***
  - high-dimensional & robust estimation, adaptation, testing, nonparametrics.
- ***Signal processing:***
  - estimation with shift-invariant structure, super-resolution.

CURRENT POSITION

Assistant Professor (RTPC) of Mathematics since 08/2021
University of Southern California, Department of Mathematics

PREVIOUS POSITIONS

Postdoctoral Scholar 08/2019–08/2021
University of Southern California, Viterbi School of Engineering
Host: Meisam Razaviyayn

ERCIM Alain Bensoussan Postdoctoral Fellow 02/2018–06/2019
Inria Paris, France
Host: Francis Bach

Visiting PhD Student 12/2016–05/2017
University of Washington, Seattle
Host: Zaid Harchaoui

DEGREES

PhD, University of Grenoble 10/2014–01/2018

- PhD Thesis: *Adaptive Signal Recovery by Convex Optimization*
  Advisors: Anatoli Juditsky & Zaid Harchaoui

MSc & BSc, Moscow Institute of Physics and Technology 09/2008–07/2014

- MSc Thesis: *Concentration Inequalities for the Exponential Weighting Method*
  Advisor: Yuri Golubev
- BSc Thesis: *Analytical Study of NHDP Link Management Protocol*

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 Publications

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 Publications

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

Mathematical Programming, SIAM Journal on Optimization, Annals of Statistics, Journal of Machine Learning Research, NeurIPS, ICML, COLT, ALT, STOC

Teaching

University of Southern California (2019-2022):

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 (2016-2017, 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.

Talks[1]

`TBA:` Optimization and Statistical Learning workshop, Les Houches	`i`
`TBA:` Meeting in Mathematical Statistics, Luminy	`i`
`TBA:` INFORMS Annual Meeting, Indianapolis	`i`
`TBA:` Georgia Tech, Stochastic Seminar	`i`

2022

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`

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

2021

University of Washington, IFDS seminar	i,z
Johns Hopkins University, AMS seminar	i
Southern California Probability Symposium (SCPS 2022)	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 (×2)	j,z

2019

University of Southern California, Epstein Seminar	
COLT 2019, Phoenix	
Optimization and Statistical Learning workshop, 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 seminar, Inria, Paris	
PhD defense, University of Grenoble	

2017 & before

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

Russian
- mother tongue

French
- fluent, 5 years of living in France

German
- B1, needs reactivation