Dmitrii M. Ostrovskii **March 22, 2022**

CONTACT INFORMATION

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OTHER LINKS: Google Scholar • GitHub • YouTube

RESEARCH INTERESTS

- ***Mathematical statistics:***
  - high-dimensional & robust estimation, adaptation, testing, nonparametrics.
- ***Optimization theory:***
  - minimax & nonconvex problems, acceleration, non-Euclidean geometry, lower complexity bounds.
- ***Learning theory:***
  - fast rates/low regret in statistical/online learning; model misspecification.
- ***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
Promoter: Stanislav Minsker

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

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, Spring: Elementary Probability and Statistics (Math 208)	34 st. 3h/wk.
2021, Fall: Introduction to Mathematical Statistics (Math 541b)	10 st. 3h/wk.
2019–2021: Optimization for Machine Learning (invited lectures)	10 st. 2h/mth.

University of Grenoble (2016-2017, in French):

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

Talks[1]

2022

INFORMS Optimization Society Conference (IOS 2022), Greenville	`sc`
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	`i,z`
Higher School of Economics, Moscow	`i`
Universitat Pompeu Fabra, Barcelona	`j,z`
University of Southern California	
École Polytechnique Fédérale de Lausanne	`j,z`
Weierstrass Institute, Berlin	`i,z`
Ecole Polytechnique, Paris (×2)	`j,z`

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

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
Increased State Academic Scholarship of the Russian Government, 2012–2014
Abramov-Frolov Fund Scholarship, 2009–2011

Scientific schools

Structural Inference 2016, Brodten
GPU for Signal and Image Processing 2015, Grenoble
Machine Learning Summer School 2015, Kyoto
Khronos-Persyvact Spring School 2015, Grenoble
Microsoft School on Algorithms for Massive Data 2013, Moscow

Languages

English
- quasi-native level, 113/120 ToEFL

French
- fluent, 5 years of living in France

Russian
- native tongue

German
- B1, needs reactivation