Dmitrii M. Ostrovskii   January 22, 2024

CONTACT INFORMATION	Georgia Institute of Technology School of Mathematics H. Milton Stewart School of Industrial & Systems Engineering (ISyE) Office: Skiles 263 Phone: (+1) 213 255 6724 Email: ostrov@gatech.edu
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 hypothesis testing.

- ***Information theory:***

  information-theoretic techniques in optimization, statistics, combinatorics.

- ***Signal processing:***

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

CURRENT POSITION

Tenure-Track Assistant Professor   since 08/2023
Georgia Tech – School of Mathematics ($\times 2/3$)
Georgia Tech – H. Milton Stewart School of Industrial and Systems Engineering ($\times 1/3$)

PREVIOUS POSITIONS

Assistant Professor of Mathematics   08/2021–07/2023
U. of Southern California – Department of Mathematics (promoter: Stanislav Minsker)

Postdoctoral Scholar   08/2019–08/2021
U. of Southern California – Viterbi School of Engineering (host: Meisam Razaviyayn)

ERCIM Alain Bensoussan Postdoctoral Fellow   02/2018–06/2019
INRIA Research Center in Paris – SIERRA Project-Team (host: Francis Bach)

DEGREES

PhD – Université Grenoble Alpes   10/2014–01/2018
Thesis: *Adaptive Signal Recovery by Convex Optimization*
Advisors: Anatoli Juditsky, Zaid Harchaoui (University 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 AND 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*
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

Georgia Tech:

2024, Spg:	Statistical Estimation (Math 6262)	2.5 hrs/wk
2023, Fall:	Introduction to Linear Algebra (Math 1553)	100×♟, 2 hrs/wk

University of Southern California:

2023, Spg:	Analysis of Variance and Regression (Math 542)	4×♟, 3 hrs/wk
2022, Fall:	Introduction to Mathematical Statistics (Math 541b)	15×♟, 3 hrs/wk
2022, Smr:	Linear Algebra and Differential Equations (Math 225)	12×♟, 6 hrs/wk
2022, Spg:	Elementary Probability and Statistics (Math 208)	34×♟, 3 hrs/wk
2021, Fall:	Introduction to Mathematical Statistics (Math 541b)	10×♟, 3 hrs/wk
2019–2021:	Optimization for Machine Learning (invited lectures)	10×♟, 2 hrs/mo

Université Grenoble Alpes (in French):

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

ORGANIZATION

Georgia Tech Mathematics Colloquium (2023–2024), with Alex Dunn & Gong Chen.
Guests: Hong Wang (NYU Courant), Weijing Liao (Georgia Tech), Suvrit Sra (MIT).

GT ISyE Seminar (2023–2024), occasionally. **Guest:** Nikita Zhivotovskiy (Berkeley).

USC Probability and Statistics Seminar (2023), with Stas Minsker & Steve Heilman.
Guests: Mateo Díaz (Caltech), Misha Belkin (UCSD), Yian Ma (UCSD), Robi Bhattachargee (UCSD), Qiyang Han (Rutgers), Masoud Zargar (USC), Andrew Lowy (USC).

Long-term visits		
	Université Grenoble Alpes – Anatoli Juditsky, Roland Hildebrand	12/2022–01/2023
	Centrum Wiskunde & Informatica – Peter Grünwald	06/2019
	Centrum Wiskunde & Informatica – Peter Grünwald	06/2018
	University of Washington – Zaid Harchaoui	12/2016–05/2017

Talks[1]

2023

SIAM Conference on Optimization (OP23), Seattle	i
ENSAE, Paris – Job Candidate Seminar	j,z
Toulouse School of Economics – Job Candidate Seminar	i,j
Georgia Tech, Department of Mathematics – Job Candidate Seminar	i,j
Optimization and Statistical Learning 2023, Les Houches	i
Toulouse School of Economics	j,z

2022

Meeting in Mathematical Statistics 2022, Luminy	i
CNRS AI Rising Talents – Job Interview (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 – Mathematical Finance Colloquium	
École Polytechnique, Paris	j,z
INFORMS Optimization Society Conference (IOS 2022), Greenville	s
Johns Hopkins University – AMS Seminar	j,z
University of Cambridge – StatLab Seminar	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
EPFL, Institute of Mathematics	j,z
Weierstrass Institute, Berlin	i,z
École Polytechnique, Paris (×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	

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

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
Princeton – ORFE Seminar   j
University of Washington, Seattle
PGMO Days 2016, Paris
COLT 2015, Paris
StatLearn 2015, Grenoble

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

LANGUAGES   English   Russian
                • quasi-bilingual proficiency   • mother tongue
                French   German
                • fluent   • intermediate