

ARSHAK MINASYAN

pointguard0.github.io

5 Avenue Henry Le Chatelier, 91764 Palaiseau, France

arshak.minasyan@ensae.fr ♦ +33751154362

EDUCATION

Yerevan State University (YSU)

PhD in Mathematics

Thesis title: *Robust Minimax Estimation within the Domain of Computational Tractability*

Yerevan, Armenia

June 2021

Skolkovo Institute of Science and Technology (SkolTech)

Master of Science in Mathematics with *Academic Excellence* and *Best Thesis Awards*

Moscow, Russia

June 2018

Yandex School of Data Analysis (YSDA)

Master of Science in Computer Science (concurrent with the last year of HSE)

Moscow, Russia

June 2017

National Research University Higher School of Economics (HSE)

Major in Mathematics with *Academic Excellence Award*, 2nd/320

Moscow, Russia

June 2016

ACADEMIC POSITIONS & INTERNSHIPS

CREST-ENSAE

Postdoctoral fellow

Host: Arnak Dalalyan

Paris, France

September 2021 - present

ADVANCE Grant Program: Machine Learning Group

Senior Researcher

Junior Researcher

Yerevan, Armenia

September 2021 – present

September 2020 – September 2021

CREST-ENSAE

Visiting Scholar

Host: Arnak Dalalyan

Paris, France

May 2019 – July 2019

YerevaNN Research Lab

Machine Learning Researcher

Yerevan, Armenia

September 2018 – September 2021

Yandex LLC

Machine Learning Intern

Hosted by Yandex.Weather team.

Moscow, Russia

June 2017 – September 2017

Institute for Information Transmission Problems (IITP)

Junior Researcher

Group of Vladimir Spokoyny.

Moscow, Russia

June 2015 - June 2018

International Laboratory of Stochastic Analysis and its Applications, HSE

Research Assistant

Group of Valentin Konakov.

Moscow, Russia

June 2015 - May 2016

PUBLICATIONS

A. Minasyan, N. Zhivotovskiy. Statistically Optimal Mean Estimation for Nonisotropic Gaussians under Adversarial Contamination. *work in progress*, 2022.

A. Minasyan, T. Galstyan, S. Hunanyan, A. Dalalyan. Matching Map Recovery with an Unknown Number of Outliers, *submitted to AISTATS*, 2022.

A.-H. Bateni, A. Minasyan, A. Dalalyan. Nearly minimax robust estimator of the mean vector by iterative spectral dimension reduction, *submitted to Journal of the Royal Statistical Society: Series B*, 2022.

A. Dalalyan, A. Minasyan. All-In-One Robust Estimator of the Gaussian Mean, *Annals of Statistics*, 50 (2), 1193-1219, 2022.

T. Galstyan, A. Minasyan, A. Dalalyan. Optimal detection of the feature matching map in presence of noise and outliers, *accepted to Electronic Journal of Statistics*, 2022.

T. Galstyan, A. Minasyan. On Random Weighted Sum of Positive Semi-Definite Matrices, *Proceedings of the YSU A: Physical and mathematical sciences*. 54, 96–100, 2020.

A. Minasyan. Excess-Risk consistency of group-hard thresholding estimator in Robust Estimation of Gaussian Mean, *Journal of Contemporary Mathematical Analysis*, 55, 208–212, 2020.

A. Minasyan, B. Polyak. Minimization over Stiefel manifold: Robust PCA and eigenvalue problem. *submitted to Computational Optimization and Applications*, 2020.

A. Minasyan. Alternating Least Squares for Generalized Linear Models. *Journal of Contemporary Mathematical Analysis*, 54, 302–321, 2019.

CONFERENCES, TALKS, AND WORKSHOPS

Optimal Transport, Statistics, Machine Learning and moving in between	2022, Eindhoven, Netherlands
International Conference on Computational Statistics (COMPSTAT)	2022, Bologna, Italy
Hi! PARIS Summer School	2022, Paris, France
International Symposium on Nonparametric Statistics	2022, Paphos, Cyprus
Princeton Machine Learning Theory Summer School	2022, Princeton, USA
Meeting in Mathematical Statistics	2021, Luminy, France
Modern methods of information theory and optimization	2021, Sochi, Russia
International Conference Dedicated to the 100th Anniversary of YSU	2019, Yerevan, Armenia
Science and Technology Convergence Conference. NAS RA	2019, Yerevan, Armenia
Structural Inference in High-Dimensional Models 2	2019, Saint-Petersburg, Russia
21st European Young Statisticians Meeting	2019, Belgrade, Serbia
9th Lisbon Machine Learning School	2019, Lisbon, Portugal
12th International Conference on Numerical Optimization and Numerical Linear Algebra	2019, Jiangxi, China
International Conference on Mathematical Optimization	2019, Beijing, China
XIII Annual Research Conference	2018, Yerevan, Armenia
Science and Technology Convergence. NAS RA	2018, Yerevan, Armenia
Structural Inference in High-Dimensional Models. Higher School of Economics	2018, Moscow, Russia
Summer School in Machine Learning. Yerevan State University	2018, Yerevan, Armenia
Summer School in Random Matrices. University of Michigan	2018, Michigan, USA
Summer School: Information theory: Inequalities, Distances and Analysis	2018, Paris, France
New frontiers in high-dimensional probability and statistics	2018, Moscow, Russia
Yerevan State University (YSU) 4th International Conference	2017, Yerevan, Armenia
Generation-Y Conference	2017, Sochi, Russia
Introductory Workshop: Phenomena in high dimensions	2017, Berkeley, USA
Gene Golub Siam Summer School 2017 Annual Meeting	2017, Berlin, Germany
Summer School on Lèvy Processes	2016, Lille, France
Bayesian Statistics and Algorithms (Thematic Month on Statistics - Week 5)	2016, Marseille, France
Workshop on Group Representation in Dynamical Systems and Geometry	2015, Marseille, France

TEACHING

Yerevan State University (YSU) Yerevan, Armenia

- Teaching Assistant in “Probability Theory I” Fall 2019-2020
- Teaching Assistant in “Probability Theory II” Spring 2020

Skolkovo Institute of Science and Technology (SkolTech) Moscow, Russia

- Teaching Assistant in “Biostatistics” Spring 2018

National Research University Higher School of Economics (HSE)

Moscow, Russia

- Head Teaching Assistant in “Statistical Methods in Machine Learning” Fall 2017
- Head Teaching Assistant in “Statistics of Stochastic Processes” Spring 2017, 2018
- Teaching Assistant in “Probability Theory and Statistics I, II” 2014, 2015

ACADEMIC HONORS & AWARDS

EIF PhD Support Program	2020–2021, Yerevan
Research Grant for Young Scientists by Science Committee of Armenia	2020–2021, Yerevan
FAST Research Travel Grant	2019, Yerevan
Best Thesis Award at Skoltech	2018, Moscow
Best Speech Award in YSU 4th International Conference	2017, Yerevan
Best Undergraduate Research Award at HSE	2016, Moscow

SERVICE

I co-organizer StatEcoML seminar held in ENSAE-CREST and Yerevan Machine Learning Reading Group.

I am a reviewer for

- **Conferences:** ALT, COLT, ICML, NeurIPS.
- **Journals:** Bernoulli, Annals of Statistics, Electronic Journal of Statistics.

SKILLS

Programming: C/C++, Python, Julia, R, MATLAB, Mathematica, Git, Vim, \LaTeX .

Foreign Languages: Bilingual in Armenian and Russian. English (fluent), French (intermediate).

MISC

HSE Olympiad in Applied Mathematics and Informatics: 2 nd prize, 2 nd absolute place	2015–2016, Moscow
Moscow Institute of Physics and Technology (MIPT) Olympiad in Mathematics: 1 st prize	2016, Moscow
Jaguar Game Changer Scholarship Winner	2015, Moscow
International Mathematical Olympiad (IMO): Participation and Honourable Mention	2011, Amsterdam
International Zhautykov Olympiad (IZhO): Bronze medal	2011, Almaty