

Marina Gomtsyan

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CURRENT SITUATION

UMR LPSM, Sorbonne University

Paris, France

October 2023 –

Postdoctoral researcher in Statistics

- Modelling of intergenerational socio-geographic mobility in France

PUBLICATIONS

C. Jayet, M. Gomtsyan, A. Fischer, F. Gargiulo, M. Lenormand (2025)

The geography of social class mobility in France : a multidimensional approach

Submitted. [Link](#)

M. Gomtsyan, C. Lévy-Leduc, S. Ouadah, L. Sansonnet, C. Bailly, L. Rajjou (2025)

Variable selection in sparse multivariate GLARMA models: Application to germination control by environment

To appear in *Statistical Methods & Applications*. [Link](#)

M. Gomtsyan, C. Lévy-Leduc, S. Ouadah, L. Sansonnet (2024)

Sign-consistent estimation in a sparse Poisson model

Statistics & Probability Letters 209, 110107. [Link](#)

M. Gomtsyan (2024)

Variable selection in a specific regression time series of counts

Submitted. *arXiv:2307.00929*. [Link](#)

M. Gomtsyan, C. Lévy-Leduc, S. Ouadah, L. Sansonnet, T. Blein (2022)

Variable selection in sparse GLARMA models

Statistics 56(4), 755–784. [Link](#)

M. Gomtsyan, N. Mokrov, M. Panov, Y. Yanovich (2019)

Geometry-Aware Maximum Likelihood Estimation of Intrinsic Dimension

Proceedings of The Eleventh Asian Conference on Machine Learning, PMLR 101:1126-1141. [Link](#)

EDUCATION

UMR MIA Paris-Saclay, AgroParisTech,

INRAE, University of Paris-Saclay

Palaiseau, France

October 2020 – September 2023

Defended on 26 September 2023

PhD in Statistics

- Title: **Variable selection methods in sparse GLARMA models**
- Under supervision of Céline Lévy-Leduc, Sarah Ouadah and Laure Sansonnet
- Working on statistical methods for the study of kinetics of transcriptomic data: theoretical and practical statistical modelling, motivated by the study of gene expression data of RNA-Seq time series

University of Paris-Saclay

Orsay, France

September 2019 – August 2020

Master 2 in Statistics and Machine Learning

- Average grade 15.15 (out of 20)
- High dimensional statistics, Statistical learning theory, Optimization and statistics, Optimal transport, Probabilistic graphical models, Robust Learning, Compressed sensing

National Research University Higher School of Economics & Skolkovo Institute of Science and Technology

Moscow, Russia

September 2017 – July 2019

Master of Science in Statistical Learning Theory

- Cumulative GPA 8.06 (out of 10)
- Russian Government and Skolkovo Foundation academic scholarships
- Member of Structural Learning research group
- Research Project on Online classification of graph nodes

American University of Armenia

Yerevan, Armenia

September 2013 – May 2017

Bachelor of Science in Computer Science

- Cumulative GPA 3.89 (out of 4.0)
- Received a full merit-based scholarship

TEACHING EXPERIENCE

UMR Maths, University of Paris Cité

Paris, France

September – November, 2025

Teaching assistant

- Led practical sessions for *Statistical learning* course
- 30 hours

UMR Maths, University of Paris Cité

Paris, France

September – October, 2025

Teaching assistant

- Led practical sessions for *Data analysis* course
- 15 hours

Sciences Po

Paris, France

January – May, 2025

Teaching assistant

- Led tutoring sessions for *How AI works: Intelligence, Learning, and Society* course
- 16 hours

CentraleSupélec, ESSEC Business School

Gif-sur-Yvette, France

January – February, 2025

Teaching assistant

- Led problem solving sessions for *Integrals & Differential Calculus* course
- 9 hours

Sciences Po

Paris, France

January – May, 2024

Teaching assistant

- Led tutoring sessions for *AI and Society* course
- 16 hours

CentraleSupélec, ESSEC Business School

Gif-sur-Yvette, France

February, 2024

Teaching assistant

- Led problem solving sessions for *Integrals & Differential Calculus* course
- 6 hours

UMR Maths, University of Paris Cité

Paris, France

September – November, 2023

Teaching assistant

- Led practical sessions for *Statistical learning* course
- 30 hours

AgroParisTech, University of Paris-Saclay

Palaiseau, France

September – December, 2022

Teaching assistant

- Led practical sessions for *Data science: statistical learning* course
- 23 hours

AgroParisTech, University of Paris-Saclay

Paris, France

September – December, 2021

Teaching assistant

- Led practical sessions for *Data science: statistical learning* course
- 15 hours

INTERNSHIPS

AgroParisTech/INRA MIA-Paris, University of Paris-Saclay

Paris, France

April – August, 2020

Master 2 Internship

- Working on statistical methods for the study of kinetics of transcriptomic data: theoretical and practical statistical modelling
- Motivated by the study of gene expression data of RNA-Seq

Group-IB

Moscow, Russia

June – August, 2018

Machine Learning Intern

- Worked on creating automatic multiclass website classifier
- Developed NLP, classification, and topic models, worked with big data

Picsart Incorporation, Yerevan Office

Yerevan, Armenia

July – September, 2016

R&D Intern – Machine Learning Engineer

- Worked on user-to-user recommender engine for social network platform
- Developed clustering and ranking models, worked with big data

CONFERENCE AND SEMINAR PRESENTATIONS

Probability & Statistics Seminar of**Luxembourg University**

Belval Esch-sur-Alzette, Luxembourg

October 23, 2025

Variable selection methods in sparse GLARMA models

Seminar on Data Science and Sociology of Dauphine University Paris, France October 6, 2025	The geography of social class mobility in France: a multidimensional approach
StatMathAppli Fréjus, France June 12, 2025	Variable selection in specific regression for count time series
Seminar of Probability and Statistics of LAMA Marne-la-Vallée, France June 12, 2025	Variable selection in sparse GLARMA models
Statistics Days (JDS) 2025 Marseille, France June 2–5, 2025	Unpacking the map of opportunity: A multidimensional approach to the sub-national variations of social mobility in France
Parisian Statistics Seminar Villetaneuse, France January 15, 2024	Variable selection in sparse GLARMA models
Seminar LAGA Villetaneuse, France December 15, 2023	Variable selection in sparse GLARMA models
Statistics Days (JDS) 2023 Brussels, Belgium July 3–6, 2023	Variable selection in sparse multivariate GLARMA models: Application to germination control by environment
Statistical Methods in Post Genomic Data Ghent, Belgium February 2-3, 2023	Variable selection in sparse multivariate GLARMA models: Application to germination control by environment
Seminar MIA Paris-Saclay Palaiseau, France December 15, 2022	Variable selection in sparse GLARMA models
Workshop for State of the R Group Palaiseau, France November 25, 2022	Manipulating Git with RStudio
Young Statisticians Meeting (RJS) Porquerolles, France April 3-7, 2022	Variable selection in sparse GLARMA models
Statistical Methods in Post Genomic Data Nantes, France (remote) January 20-21, 2022	Variable selection in sparse GLARMA models
Seminar in Cité Internationale Universitaire de Paris Paris, France April 9, 2021	Artificial Intelligence: Introduction and applications

SELECTED COURSES, EVENTS, and SUMMER & WINTER SCHOOLS

Geometry in Data: Statistical Inference and Methodology Nantes, France June 16–18, 2025	<ul style="list-style-type: none"> • Attended the conference
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Women in Quant Finance

London, UK

September 4–5, 2022

- Invited to participate to the event organised by G-Research

Finist'R 2022

Paimpont, France

August 22–26, 2022

- R bootcamp organised by *State of the R* group
- Explored different R packages and tools
- Prepared an introductory guide to Quarto

Statistics Days (JDS) 2022

Lyon, France

June 13–17, 2022

- Attended the conference

New Frontier in High-Dimensional Probability and Statistics Winter School

Moscow, Russia

February 22–23, 2019

- Lectures in Markov Chain Monte-Carlo, High dimensional principal component analysis, Manifold Learning, and Optimal Transport

Partial Differential Equations Summer School at Instituto Superior Técnico

Lisbon, Portugal

July 4–9, 2016

- Lectures in Mathematical Modeling in Hydrodynamics, Systems of Conservation Laws, and Elliptic and Parabolic PDEs
- Participated in mathematics conference of undergraduate research program

Machine Learning Training at Picsart Inc.

Yerevan, Armenia

April – June 2016

- Lectures including topics in linear algebra, probability, statistics, optimization, and machine learning
- Worked on mini-projects

Data Mining Training at American University of Armenia

Yerevan, Armenia

February – April 2016

- Lectures in Data Mining
- Finished in top 15% among 2926 teams in a Kaggle competition organised by BNP Paribas Cardiff

Course in Neural Networks at Yerevan State University

Yerevan, Armenia

September – December 2015

- Deep Learning for Natural Language Processing
- Implementation of Word2vec on Armenian Wikipedia

Mathematics and Application Summer School

Tsaghkadzor, Armenia

July 2–9, 2105

- Lectures in statistics, optimization, financial mathematics, algorithmic algebra, and Fourier analysis used in number theory
- Participated in mathematical competition

R PACKAGES

M. Gomtsyan (2023)

NBtsVarSel: Variable Selection in a Specific Regression Time Series of Counts

M. Gomtsyan (2022)

MultiGlarmaVarSel: Variable selection in sparse multivariate GLARMA models

M. Gomtsyan, C. Lévy-Leduc, S. Ouadah, L. Sansonnet (2021)

GlarmaVarSel: Variable selection in sparse GLARMA models

COMPUTER SKILLS

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| • R | • LaTeX | • git |
| • Python | • MATLAB | • C++ |

ORGANISATION

Forum Entreprises & Mathématiques

Paris France,

October 7, 2024

- Volunteer

Forum Entreprises & Mathématiques

Paris France,
October 10, 2023

- Volunteer

**Cité internationale universitaire de Paris –
House of Armenian students**

Paris, France
October 2020 – July 2023

- Member of the resident council
- Treasurer

LANGUAGES

- | | |
|------------------------------|-----------------------------|
| • Armenian (native language) | • French (proficient user) |
| • English (proficient user) | • Russian (proficient user) |