Ekaterina Ugulava

UvA Econometrics, University of Amsterdam
Roetersstraat 11, E5.03
1018 WB Amsterdam, The Netherlands

e.ugulava@uva.nl
LinkedIn
https://eugulava.github.io/

Education

University of Amsterdam — Amsterdam, the Netherlands
PhD Candidate in Econometrics — *Sep 2021 – may 2026 (expected)*
Supervisors: Prof. Dr. H. Peter Boswijk, Dr. Sander Barendse and Dr. Paolo Gorgi

Tinbergen Institute — Amsterdam, the Netherlands
MPhil in Economics (Advanced Econometrics Track) — *Jan 2020 – Aug 2021*
Thesis: Long Memory Realised GAS Model

National Research University – Higher School of Economics — Saint-Petersburg, Russia
BSc in Economics — *Sep 2015 – Jun 2019*

University of York — York, the United Kingdom
Academic mobility programme — *Jan 2018 – Jun 2018*

Research

Primary Fields: Econometrics, Financial Econometrics.
Secondary Fields: Risk Management, Macroeconometrics.

Job Market Paper (Working Paper)

• *"Horizon-Targeted Estimation of Volatility Models: Application to a Misspecification Testing and Forecasting", 2024.* Download

Summary: We propose an estimator for volatility models that is matched to the specification of the forecast evaluation loss function. We examine the estimator's performance under a bias-variance trade-off, highlighting conditions where it is likely to offer improvements over standard estimation methods (QML). We also propose a model specification test based on the Hausman principle, which exploits the fact that our estimator and the standard one are consistent for the true parameter under the null and converge to different pseudo-true values under the alternative. The proposed test has the correct size and good power to detect misspecification. Our empirical results suggest that when model misspecification is more severe, it is generally preferable to align the estimation horizon closely with the forecasting horizon.

Other Working Papers

• *"Long Memory Realised GAS Model", 2022.*

Summary: We introduce a univariate score-driven model that explicitly incorporates long-memory dynamics in the conditional variance of daily returns. We model the conditional variance as a fractionally integrated process and as a heterogeneous autoregressive model. The new model accommodates heavy-tailed densities for both daily returns and realised measures. This choice of observational densities ensures automatic correction for influential observations through the score function. Our out-of-sample analysis identifies that accounting for long memory is particularly useful for volatility level evaluation and return risk assessment during non-crisis periods.

Work in Progress

• *"Constructing multi-period density forecasts from dynamic quantile regression", 2024.*

Summary: We propose a method for constructing multi-period quantiles for variables of interest (e.g., GDP growth over a yearly horizon) based on a finite set of one-step-ahead conditional quantiles estimated from the dynamic multiple quantile model of Catania and Luati (2023). We show that the resulting multi-period quantile forecast is optimal in the sense that it minimises the expected quantile tick-loss function. This property is confirmed through simulations. We apply our methodology to forecast GDP growth over a yearly horizon, as motivated by Adrian et al. (2019). Our approach directly produces quantiles at any desired level (e.g., 1%, 5%), and also provides the predictive density of GDP growth and the macroeconomic Expected Shortfall, which is the expected GDP growth conditional on falling below a given quantile.

Academic Experience

Vrije Universiteit Amsterdam (VU Foundation) — Amsterdam, the Netherlands
Research Assistant for Prof. dr. Siem Jan Koopman and Prof. dr. Francisco Blasques — *Feb 2021 – Jul 2021*
- *Score-Driven Models: Methodology and Theory, 2022.* Download
- *Score-Driven Models: Methodology and Applications, 2022.* Download

National Research University (NRU)– Higher School of Economics — Saint-Petersburg, Russia
Research Assistant for dr. Alexander Muravyev — *Nov 2018 – Dec 2018*

Teaching Experience

Teaching Assistant, University of Amsterdam
- Econometrics 2 (BSc): *Spring 2025*
- Econometric Analysis (BSc): *Fall 2024*
- Advanced Risk Management (MSc): *Spring 2022, 2023, 2024*
- Econometrics (BSc): *Fall 2022, 2023*
- Thesis supervision (BSc): *Spring 2022*

Teaching Assistant, Tinbergen Institute
- Advanced Mathematics (MPhil): *Fall 2021, 2022, 2023*
- Advanced Econometrics III (Time Series Econometrics, MPhil): *Spring 2021*

Seminars and Conferences

2025: Macro and Financial Econometrics Workshop in Heidelberg University (invited speaker by Christian Conrad), 17th Annual SoFiE Conference: Pre-Conference for Young Scholars (discussant Peter R. Hansen).

2024: 12th SIdE Workshop for PhD students in Econometrics and Empirical Economics (discussant Massimiliano Caporin); International Association for Applied Econometrics (Xiamen, China; Thessaloniki, Greece), MInt Lunch Seminar (UvA).

2023: UvA Econometrics internal seminar (Amsterdam, the Netherlands); TopQuants: Autumn Event, poster (ING, the Netherlands); 3rd International Econometrics PhD Conference (Econometric Institute at Erasmus University Rotterdam, the Netherlands).

2022: Brown Bag Econometrics Lunch Seminar (University of Amsterdam, the Netherlands); International Association for Applied Econometrics (King's College London, the UK); 2nd International Conference on Econometrics and Business Analytics (Yerevan and Dilijan, Republic of Armenia); CEBA talk (online); 16th International Conference CFE (King's College London, the UK).

Additional Education

Scientific Programming in Python — University of Amsterdam
Lecturer: Dr. Simon Pauw — *Feb – Mar 2024*
- Python data structures, Pandas, Seaborn, functional and object oriented programming.

Machine Learning in finance — Tinbergen Institute
Lecturer: Prof. Dr. Yacine Aït-Sahalia — *Nov 2021*
- Methodologies employed in machine learning and applications in finance (credit scoring, factor models, sentiment analysis).

QFFE Spring School — Aix-Marseille University
Lecturers: Prof. Dr. Jun Yu, Prof. Dr. Kris Jacobs — *Jun 2023*
- Estimation, inference, prediction, identification of fractional time series. Specification and estimation of dynamic option valuation models.

Tutorials CFE — King's College London
Lecturers: Prof. Dr. Armelle Guillou, Dr. Michael Pitt — *Dec 2022*
- Extreme value analysis. Latent variable dynamic models.

QFFE Spring School Aix-Marseille University
Lecturers: Dr. Christian Brownlees, Prof. Dr. Peter Reinhard Hansen *Jun 2022*
• Large dimensional network models. Estimation of covariances and correlations in finance.

Econometrics Summer Workshop Vrije Universiteit Amsterdam
Lecturers: Prof. Dr. Siem Jan Koopman and Prof. Dr. Francisco Blasques *Aug 2019*
• Estimation and inference of econometric models, and prediction.

Prizes and Awards

Tinbergen Institute Full Graduate Scholarship	*2020-2021*
Holland Scholarship Programme (contribution towards costs of living)	*2019*
VU Fellowship Programme (tuition fee waiver for MSc)	*2019*
Excellence Scholarship Erasmus+	*2018*
Scholarship from VTB Bank for outstanding results in studies and scientific work	*2018*
Finalist in the Econometrics projection competition: "The level of domestic corruption in Russia"	*2018*
Full State Scholarship for merits (tuition fee waiver for BSc)	*2015-2019*

Skills

Languages: Russian (native), English (fluent), Dutch (pre-intermediate, B1), Spanish (beginner, A2.1)

Programming languages: Matlab (expert), Python (proficient) and R (proficient)

Statistical software: Stata (experienced) and EViews (experienced)

Placement

Prof. Dr. Eric Bartelsman
Placement Director (e.j.bartelsman@vu.nl)

Christina Månsson
Placement Assistant (c.mansson@tinbergen.nl)

References

Prof. Dr. H. Peter Boswijk
Professor of Financial Econometrics
University of Amsterdam
H.P.Boswijk@uva.nl

Dr. Sander Barendse
Assistant Professor of Econometrics
University of Amsterdam
s.c.barendse@uva.nl

Dr. Paolo Gorgi
Associate Professor of Econometrics and Data Science
Vrije Universiteit Amsterdam
p.gorgi@vu.nl

Dr. Anne Opschoor
Associate Professor of Finance
Vrije Universiteit Amsterdam
a.opschoor@vu.nl