# JURI TRIFONOV

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## EDUCATION

**HSE University – Moscow** 2021-2023
Master's Degree, Finance (Research track) *Moscow, Russia*
Academic performance: **9.71/10 GPA**, ***Summa Cum Laude***
Student ranking: **TOP 1% on the program (Ranked 1 out of 62)**
Thesis: GARCH-M Model with an Asymmetric Risk Premium: Distinguishing Between "Good" and "Bad" Volatility Periods.

**HSE University – Moscow** 2017-2021
Bachelor's Degree, Economics *Moscow, Russia*
Academic performance: **8.16/10 GPA**
Thesis: Application of Multivariate GARCH Models to Assets Joint Volatility and Return Estimation.

## RESEARCH & TEACHING EXPERIENCE

**Becker Friedman Institute for Economics, The University of Chicago** Aug 2023 - present
Predoctoral Research Professional (Big Data Initiative) *Chicago, IL, USA*
Professors: Azeem Shaikh, Max Tabord-Meehan
Research field: Econometric Theory: Randomized Experiments & Causal Inference

- Developed from scratch the package '`sreg`' for inference in stratified randomized experiments (available for R, Stata, and Python).
- Derived expressions and generalized consistency proofs for ATE and its variance estimators in scenarios with multiple treatments and cluster-level treatment assignments.
- Performed Monte-Carlo simulations to evaluate the size and power of statistical tests, and to analyze the efficiency of super-population and finite-population estimators in randomized experiments.
- Developed an optimization procedure using MILP and performed simulations for Prof. Shaikh's and Prof. Santos's project on inference for large-scale linear systems with estimated coefficients.
- Conducted a comprehensive literature review for Prof. Shaikh's and Prof. Vytlacil's project on inference in experiments involving treatment preferences.
- Redeveloped code and conducted Monte-Carlo analysis for Prof. Tabord-Meehan's project on the fairness-accuracy improvability of algorithms.
- Contributed to editing the final draft and provided comments and suggestions for the paper Randomization Inference: Theory and Applications by Azeem Shaikh, Joseph Romano, and David Ritzwoller.

**HSE University, ICEF** Mar 2022 - Feb 2023
Research Assistant *Moscow, Russia*
Professor: Sofya Budanova
Research topic: Penalized Estimation of Models with Non-Identified Parameters

- Implemented a penalized estimation procedure for nonlinear and ARFIMA family models to statistically detect non-identified parameters.
- Developed and implemented an algorithm based on coordinate descent to efficiently optimize Dr. Budanova's models.

**HSE University, Econometrics Research Group** Jan 2021 - Jul 2023
Research Fellow *Moscow, Russia*
Research topic: Development of Econometric Methods of Data Analysis with Limited Dependent Variables

- Contributed to developing the '`hpa`' package for R, which focuses on semiparametric binary and sample selection models using Hermite polynomial approximation.

**HSE University, Department of Applied Economics** Sep 2022 - Jul 2023
Seminar Instructor *Moscow, Russia*
Courses: Advanced Econometrics I & II (Taught in English)
Professor: Elena Kotyrlo

- Awarded the Faculty of Economic Sciences' 2023 Best Teacher Award.
- Led weekly classes for the research master's program in economics.
- Developed problem sets, exams, and project assignments.

**HSE University** Sep 2020 - Jul 2022
Teaching Assistant *Moscow, Russia*
Courses: Econometrics, Models with qualitative and limited dependent variables
Professors: Olga Demidova, Elena Kossova

- Conducted weekly TA sessions; developed, administered, and evaluated tests, exams, and problem sets.

## PEER-REVIEWED PUBLICATIONS

Trifonov, Ju., Potanin, B. GARCH-M Model With an Asymmetric Risk Premium: Distinguishing Between Good and Bad Volatility Periods, *International Review of Financial Analysis, Vol 91, 2024.*

Trifonov Ju., Potanin B. Semi-nonparametric Generalized Autoregressive Conditional Heteroscedasticity Model with Application to Bitcoin Volatility Estimation, *HSE Economic Journal, Vol 26, Issue 4, 623-646, 2022.*

## WORKSHOPS & CONFERENCES

**2nd International Conference on Econometrics and Business Analytics (iCEBA)** 2022
*Central Bank of Armenia & American University of Armenia, Yerevan, Republic of Armenia*
Presentation: GARCH-M Model with an Asymmetric Risk Premium: Distinguishing between "good" and "bad" volatility periods.

**VII International Conference Modern Econometric Tools and Applications – META2021** 2021
*HSE University, Nizhny Novgorod, Russia*
Presentation: Semi-nonparametric multivariate GARCH model with dynamic correlation matrix.

**XXII April International Academic Conference on Economic and Social Development: 3rd Workshop "Applied Econometrics"** 2020
*HSE University, Moscow, Russia*
Presentation: Influence of investors' expectations on oil prices.

## ACADEMIC HONORS

- **E.Ershov Memorial Scholarship** (2022)
  Awarded the prestigious memorial scholarship for graduate students *(Only one scholarship awarded university-wide).*
- **Research Scholarship**. Scholarship for research-track master's students. (2021)
  Awarded a scholarship for master's students with high research abilities. *(Awarded to 4 students out of 200+).*
- **"The Highest League" International Olympiad**. HSE University student olympiad. (2020)
  Awarded a 2nd-degree diploma in the "Finance" track.

## CODING SKILLS

**R®, Python®, LaTeX®, Stata®, Gurobi®**

## LANGUAGES

- English: fluent
- Estonian: native
- Russian: native

## TEST SCORES

- GRE QUANT 169/170
- TOEFL iBT 115/120