Nikolay Arefyev

University of North Dakota
Nistler College of Business & Public Administration
3125 University Avenue, Stop 8369, Grand Forks, ND 58202-8369
nikolay.arefyev@und.edu

Research Interests

Macroeconomics; monetary policy; causal inference and structural econometrics; optimal capital taxation; computational economics; artificial intelligence, automation, and urban spatial structure.

Education

Ph.D. in Economics, Université Paris 1 Panthéon-Sorbonne 2006

Specialization: Macroeconomics and optimal capital taxation.

M.A. in Economics, Higher School of Economics 1998

Academic Experience

Instructor (part-time), University of North Dakota Aug. 2026-present

Nistler College of Business & Public Administration, Grand Forks, ND

- Teach Principles of Macroeconomics (ECON 202).
- Develop course materials, practice problems, and assessments for undergraduate macroeconomics.

Independent Researcher and Software Developer 2016-present

- Conduct research in macroeconomics and related fields, including joint work with Alina Arefeva.
- Develop NeatPlan, a planning and execution application, and research software tools.

Assistant Professor, Higher School of Economics 1999-2016

National Research University Higher School of Economics (HSE), Moscow

- Taught undergraduate and graduate economics and quantitative methods courses.
- Designed and led courses in computational economics and structural modeling.
- Supervised student research and contributed to curriculum development.

Teaching

University of North Dakota

- **Fall 2026:** ECON 202, Principles of Macroeconomics.
- **Spring 2027 (planned):** ECON 505, Macroeconomic Theory & Applications; Part II: Business Cycles.

Selected courses previously taught at HSE: Macroeconomics; Economic Growth; Dynamic Optimization; Numerical Methods; DSGE Modeling; Computational Economics; Structural Modeling; Information Theory in Economics and Computer Science.

Honors and Awards

- **Best Teacher Awards, HSE, 2012-2016.** Selected through student voting; also recognized in the 2015 alumni selection.
- **Research Supervision Award, HSE Faculty of Economics, 2008.** Recognition for supervision of undergraduate and graduate student research.

Selected Publications

Publications appear under the surname spellings Arefyev and Arefiev.

1. Arefeva, A., & Arefyev, N. (2025). Playing by the Taylor rules or sticking to Friedman's policy: A new approach to monetary policy identification. *Economic Modelling*, 143, 106966. doi:10.1016/j.econmod.2024.106966
2. Arefyev, N., & Baron, T. (2019). Capital taxation and rent seeking. *Revue d'économie politique*, 129(5), 815-832. doi:10.3917/redp.295.0815
3. Arefiev, N., & Khabibullin, R. (2018). Bayesian identification of structural vector autoregression models. *Prikladnaya Ekonometrika* (Прикладная эконометрика), 49, 115-142. (In Russian.)
4. Arefiev, N. (2016). Partial identification of monetary rule using restrictions on lagged effects. *HSE Economic Journal*, 20(3), 500-512. (In Russian.)
5. Arefiev, N., Kusnetzov, S., & Ponomarev, K. (2015). From correlation to causation: Econometric versus computer science approaches. *HSE Economic Journal*, 19(3), 457-496. (In Russian.)

Current Research

Artificial Intelligence and the Future Spatial Structure of Cities
With Alina Arefeva; work in progress (working title).

Investigates how advances in artificial intelligence and automation may reshape the spatial structure of cities, including where people live and where economic activity takes place.

Selected Conference Presentations

- North American Meeting of the Econometric Society, 2018.
- European Economic Association Annual Congress, 2016.
- World Congress of the Econometric Society, 2015.
- European Meeting of the Econometric Society, 2014.

Research and Study Support

Recipient of grants from the French Government, Soros Foundation, and Higher School of Economics.

Technical Skills

Programming and software: C++, R, MATLAB, Python, GAUSS, EViews.
Methods: Bayesian estimation, structural vector autoregressions (SVAR), dynamic stochastic general equilibrium (DSGE) simulation, and numerical methods.
Software development: NeatPlan, a planning and execution application in development, including core logic, language design, and supporting tools.

Languages

Russian (native); English (fluent); French (reading/conversational).