Vitalii Tubdenov

CONTACT INFORMATION

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COVER LETTER

Dear Organizers of the Digital Economics and AI Tutorial,

I am a fourth-year economics PhD student at Harvard University. My research is in econometrics and economic theory.

My first research area focuses on markets for information in settings where data is generated over time. This topic is closely aligned with the tutorial's agenda: in the digital economy, data has become an important asset for training AI models. I am interested in using economic theory to understand what mechanisms will emerge in data markets and how the features of data as a good shape those mechanisms.

Second, I am interested in applying statistical decision theory to understand the properties of common econometric procedures. I believe that statistical decision theory can also be valuable for analyzing AI, viewed as procedures that map data to beliefs and actions (of humans and AI agents), and for understanding the properties of AI systems beyond predictive accuracy, such as alignment and fairness.

Descriptions of relevant research projects, my CV, and my transcript follow below.

I am excited to attend your tutorial. I believe it offers an opportunity to learn from leading researchers in the area and interact with fellow students. Thank you for considering my application.

Vitalii Tubdenov

RESEARCH PROJECTS

Selling Information Sequentially

A seller sequentially supplies information to a decision-maker under uncertainty. In each period, the seller posts a price for the current signal, and the buyer either stops and acts or buys the signal. After each sale, the signal realization is observed by both parties. I characterize equilibrium under a common prior. In a Nash equilibrium, the seller extracts the full social surplus using a two-part tariff with an access fee and per-period prices set at marginal cost. In subgame-perfect equilibria, full extraction persists with history-dependent pricing, which may involve prices below marginal cost.

Rational Expectations for Empirical Bayes
with Cheaheon Lim

Given an empirical Bayes (EB) procedure, which maps data to posterior distributions, we construct a pseudo-prior satisfying the rational expectations property. Because the pseudo-prior varies with the tuning choices in the EB procedure, it provides a way to interpret the implications of these choices. For downstream decisions, the pseudo-prior induces an ex ante optimality criterion that allows us to incorporate ex ante constraints directly into the decision problem, ensuring that optimal decision rules satisfy these constraints in finite samples. We compute the pseudo-priors for the gene expression study of Efron (2016) and the contact gap study of Kline et al. (2022) and derive the optimal rules subject to various constraints. Across these applications, we show how tuning choices in the EB procedure affect the optimal rule through both the pseudo-prior and EB posterior.

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Education

Harvard University

Ph.D., Economics (2023–present, expected 2029)
A.M., Economics (2026)

Lomonosov Moscow State University

Bachelor of Economics with Honors (2021)

References

Jesse Shapiro (primary)
Harvard University
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Shengwu Li
Harvard University
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Rahul Singh
Harvard University
rahul_singh@fas.harvard.edu

Elie Tamer
Harvard University
elietamer@fas.harvard.edu

Research Fields

Econometrics, Economic Theory

Work in Progress

Lim, C. and V. Tubdenov: "Rational Expectations for Empirical Bayes."

Tubdenov, V.: "Weakly Informative Markovian Dynamics."

Working Papers

Tubdenov, V. (2026): "Selling Information Sequentially."

Publications

Antràs, P. and V. Tubdenov (2025): "Measuring the Average Period of Production," *AEA Papers and Proceedings*, 115, 624–30.

Kartaev, P. and V. Tubdenov (2021): "The Transparency of Monetary Policy and the Effect of Exchange Rate Pass-Through," *Voprosy Ekonomiki*, (6), 32–46 [in Russian].

Presentations

(presented by a coauthor)*

Harvard Graduate Workshop in Econometrics, Cambridge, MA, 2025, 2026

Harvard Graduate Workshop in Economic Theory, Cambridge, MA, 2025, 2026

* ASSA Annual Meeting, San Francisco, CA, 2025

Incentives for Collaborative Learning and Data Sharing Workshop, TTIC, Chicago, IL, 2025

Research Experience

Empirical Research Fellow, Kellogg School of Management
Northwestern University, 2021–2023

Vitalii Tubdenov

Teaching

Harvard University

ECON 2120: Principles of Econometrics (graduate), Teaching Assistant for Elie Tamer, Fall 2026

Math Camp (incoming economics Ph.D. students), Co-Instructor with Martin Bernstein, Summer 2026

ECON 2140: Econometric Methods (graduate), Teaching Assistant for Rahul Singh, Spring 2026

ECON 1052: Game Theory and Economic Applications (undergraduate), Teaching Assistant for Shengwu Li, Fall 2025

Service

Referee, *Journal of Economic Theory*

Organizer, Harvard Graduate Workshop in Econometrics, 2026–2027

Graduate Student Mentor, Harvard Undergraduate Economics Association, 2026–present

Mentor, Ph.D. Peer Mentoring Program, Harvard Department of Economics, 2024–present

Additional Training

Machine Learning in Economics, University of Chicago, Summer 2025

Languages

Russian (native), English (fluent), Korean (intermediate)

Unofficial Transcript

Harvard University, Ph.D. in Economics coursework.

Course	*Description*	*Grade*
ECON 2003	Computing for Economists	A
ECON 2010A	Economic Theory: Microeconomics	B+
ECON 2010B	Economic Theory: Microeconomics	A
ECON 2010C	Economic Theory: Macroeconomics	A
ECON 2010D	Economic Theory: Macroeconomics	A−
ECON 2120	Principles of Econometrics	A−
ECON 2140	Econometric Methods	A−
ECON 2030	Psychology and Economics	B+
ECON 2040	Experimental Economics	A
ECON 2052	Game Theory I: Equilibrium Theory	A
ECON 2060	Contract Theory	A
MIT 14.281	Contract Economics	A
MIT 6.7700	Fundamentals of Probability	A
MIT 6.7720	Discrete Probability and Stochastic Processes	A
KOREAN BA	Elementary Korean	A
KOREAN BB	Elementary Korean	A
KOREAN 120A	Intermediate Korean (in progress)	