

Mikhail Anufriev

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Current Positions

- from 05/2008 **Assistant Professor**
Faculty of Economics and Business, University of Amsterdam
- from 08/2009 **Junior Research Fellow**
Tinbergen Institute, the Netherlands
- from 05/2008 **External Member**
Laboratory of Economics and Management, Pisa, Italy

Previous Positions

- 10/2005 – 04/2008 **PostDoc Researcher**
Center for Nonlinear Dynamics in Economics and Finance (CeNDEF),
Faculty of Economics and Business, University of Amsterdam
- 09/2001 – 07/2005 **Graduate Researcher**
Laboratory of Economics and Management,
Sant'Anna School of Advanced Studies, Pisa, Italy

Education

- 09/2001 – 07/2005 **Ph.D. in Economics**
Sant'Anna School of Advanced Studies, Pisa, Italy
Dissertation: Heterogeneous Agent Models of Simple Exchange Economies:
on the Role of Investment Horizons and Wealth Dynamics
- 09/2000 – 07/2001 **MA in Economics** (with Honors)
Consortium for Research and Continuing Education in
Economics (CORIPE Piemonte), Moncalieri (TO), Italy
- 09/1998 – 07/2000 **MA in Economics** (with Honors)
European University at St.Petersburg, Russia
- 09/1993 – 07/1998 **MSc in Mathematics** (with Honors)
St.Petersburg State University, Russia
Major: differential equations

Refereed Publications

1. “Wealth-driven Selection in a Financial Market with Heterogeneous Agents”, (with Pietro Dindo), *Journal of Economic Behavior and Organization*, forthcoming.

2. “Evolution of Market Heuristic”, (with Cars Hommes), *Knowledge Engineering Review*, forthcoming.
3. “Asset Prices, Traders’ Behavior and Market Design”, (with Valentyn Panchenko), *Journal of Economic Dynamics and Control*, Vol. 33, pp. 1073–1090, 2009.
4. “Introduction to Special Issue on Complexity in Economics and Finance”, (with William Branch), *Journal of Economic Dynamics and Control*, Vol. 33, pp. 1019–1022, 2009.
5. “Wealth-Driven Competition in a Speculative Financial Market: Examples with Maximizing Agents”, *Quantitative Finance*, Vol. 8, pp. 363–380, 2008.
6. “Evolutionary Switching between Forecasting Heuristics: An Explanation of an Asset-Pricing Experiment” (with Cars Hommes), pp. 41-53 in K.Schredelseker and F.Hauser (ed.) *Complexity and Artificial Markets*, Springer-Verlag, Berlin, 2008.
7. “Equilibria, Stability and Asymptotic Dominance in a Speculative Market with Heterogeneous Agents” (with Giulio Bottazzi and Francesca Pancotto), *Journal of Economic Dynamics and Control*, Vol. 30, pp. 1787–1835, 2006.
8. “Heterogeneous Beliefs under Different Market Architectures” (with Valentyn Panchenko), pp. 269–282 in C.Bruun (ed.) *Advances in Artificial Economics*, Springer-Verlag, Berlin, 2006.
9. “Equilibrium Return and Agents Survival in a Multiperiod Asset Market: Analytic Support of a Simulation Model” (with Pietro Dindo), pp. 3–15 in C.Bruun (ed.) *Advances in Artificial Economics*, Springer-Verlag, Berlin, 2006.
10. “Noisy Trading in the Large Market Limit” (with Giulio Bottazzi), pp. 137–146 in P.Mathieu, B.Beauflis and O.Brandouy (ed.) *Artificial Economics*, Springer-Verlag, Berlin, 2006.
11. “Speculative equilibria and asymptotic dominance in a market with adaptive CRRA traders” (with Giulio Bottazzi and Francesca Pancotto), in Proceedings of SPIE Conference “Noise and fluctuations in econophysics and finance”, vol. 5848, 2005.

Grants and Awards

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|-------------------|---|
| 04/2008 – 04/2011 | FP7-SSH-2007-1.3.1 grant for European Union collaborative project “Polhia” (coordinator D. Delli-Gatti, UCSC, Milano). |
| 11/2009 | research grant of the Paul Woolley Centre for Capital Market Dysfunctionality at the University of Technology, Sydney. |
| 11/2005 | 1st Student Price for the paper presented in 12th International Meeting ASCEG 2005, Aix-en-Provence, France. |
| 09/2001 | 3-years full-time scholarship for the Ph.D. in Economics and Management, Sant’ Anna School of Advanced Studies. |
| 09/2000 | full-time scholarship for Master in Economics program in Consortium for Research and Continuing Education in Economics (CORIPE Piemonte). |
| 09/1998 – 07/2000 | full-time scholarship for Master in Economics program in European University at St.Petersburg. |

Working Papers and Work in Progress

- 2010 “Expectations and Learning Behavior in Positive and Negative Feedback Markets” (with Cars Hommes and Raoul Philippe), in preparation.
- 2010 “The Impact of Short-Selling Constraints on Financial Market Stability in a Model with Heterogeneous Agents” (with Jan Tuinstra), CeNDEF Working paper 10-03, University of Amsterdam.
- 2010 “Individual evolutionary learning in the double auction market with full or limited information” (with Jasmina Arifovic and Valentyn Panchenko), CeNDEF Working paper 10-01, University of Amsterdam.
- 2010 “Empirical Covariance and Excess Stock Comovement: Micro-economic Explanation” (with Giulio Bottazzi, Matteo Marsili and Paolo Pin), in preparation.
- 2009 “Evolutionary Selection of Individual Expectations and Aggregate Outcomes” (with Cars Hommes), CeNDEF Working paper 09-09, University of Amsterdam.
- 2008 “Interest Rate Rules with Heterogeneous Expectations” (with Tiziana Assenza, Cars Hommes, and Domenico Massaro), CeNDEF Working paper 08-08, University of Amsterdam.
- 2007 “Market Equilibria under Procedural Rationality” (with Giulio Bottazzi), revised version of CeNDEF Working Paper 06-02.
- 2007 “Asset Pricing Model with Heterogeneous Investment Horizons” (with Giulio Bottazzi), revised version of LEM Working Paper 04-22, Sant’Anna School of Advanced Studies.

Organization Activities

- 2005 - 2009 co-organizer of the weekly seminar series “Economics Colloquia” at the University of Amsterdam.
- 10/2007 co-organizer of the one-week workshop “Complexity in Economics and Finance” in Lorentz Center, Leiden.
- 2006 co-organizer of the biweekly seminar series “Institutions and Decision Analysis” at the Tinbergen Institute, Amsterdam.

Editorial Activity

co-editor of the special issue of the *Journal of Economic Dynamics and Control* on “Complexity in Economics and Finance”

Referee for:

Journal of Economic Dynamics and Control
Journal of Economic Behavior and Organization
Quantitative Finance
Journal of Evolutionary Economics
The European Physical Journal B

Macroeconomic Dynamics
Journal of International Financial Markets, Institutions and Money
Journal of Economic Interaction and Coordination
Eastern Economic Journal
Industrial and Corporate Change
Knowledge Engineering Review

Main Research Interests

Economic Theory
Heterogeneous Agent Models
Expectation Formation and Learning
Agent-Based Models
Dynamics of Financial Markets
Market Microstructure
Nonlinear Dynamical Systems

Teaching Experience

- 2009/2010 University of Amsterdam
Lecturer for courses
- *Micro-Economie*: 1st year of BSc program, 14 hours
 - *Analyse A*: 1st year of BSc program, 40 hours
 - *Wiskunde V*: 2nd year of BSc program, 14 hours
 - *Bounded Rationality*: M.Phil. program, 28 hours
- 2008/2009 University of Amsterdam
Lecturer for courses
- *Micro-Economie*: 1st year of BSc program, 14 hours
 - *Analyse A*: 1st year of BSc program, 40 hours
 - *Wiskunde V*: 2nd year of BSc program, 14 hours
 - *Bounded Rationality*: M.Phil. program, 28 hours
- 2007/2008 University of Amsterdam
Lecturer for course
- *Nonlinear Economic Dynamics*: M.Phil. program, 35 hours
- 2006/2007 University of Amsterdam
Lecturer for courses
- *Nonlinear Economic Dynamics*: M.Phil. program, 35 hours

- *Bounded Rationality*: M.Phil. program, 14 hours
- 2003/2004 Sant'Anna School of Advanced Studies
Lecturer for course
- *Mathematics for Economists* on Ph.D. program, 35 hours
- 1998/1999 Saint Petersburg Electrotechnical University
Lecturer for course
- *Linear Algebra and Calculus* on BSc program, 34 hours
- 1996/1997 St. Petersburg Polytechnical University
Teaching Assistant for course
- *Linear Algebra and Calculus* on BSc program, 34 hours
- 1995 – 2000 **Teacher of mathematics**
High School “Lyceum Physical and Technical School n.566”, St.Petersburg.

Seminars and Conference Presentations

- 2003, September 16 IWAMEM (International Workshop on Data Mining and Adaptive Modeling Methods for Economics and Management) in Porto, Portugal
Asset Pricing Model with Heterogeneous Time Horizons
- 2003, December 2 Seminar at Scuola Superiore Sant'Anna, Pisa
Heterogeneous Time Horizons in an Asset Pricing Model
- 2004, February 4 Seminar at the University of Amsterdam, Amsterdam
Asset Pricing Model with Heterogeneous Time Horizons
- 2004, May 28 WEHIA-2004 (Annual Workshop on Economics with Heterogeneous Interacting Agents), Kyoto, Japan
Heterogeneous Investment Horizons in a Simple Asset Pricing Model
- 2004, June 29 Seminar at the University of Amsterdam, Amsterdam
Price and Wealth Dynamics in an Agent-Based Trading Models
- 2004, July 9 10th International Conference on Computing in Economics and Finance, Amsterdam
Heterogeneous Investment Horizons in a Simple Asset Pricing Model
- 2004, July 9 10th International Conference on Computing in Economics and Finance, Amsterdam
Price and Wealth Dynamics in Agent-Based Trading Model with Heterogeneous Evolving Strategies
- 2005, April 26 Seminar at the University of Amsterdam, Amsterdam
Endogenous Model of a Speculative Market with an Arbitrary Number of Generic Technical Traders
- 2005, June 24 11th International Conference on Computing in Economics and Finance, Washington, USA

- Price and Wealth Dynamics in a Speculative Market with an Arbitrary Number of Generic Technical Trading Strategies*
- 2005, July 21 Workshop “Microscopic Stochastic Dynamics in Economics”, ZiF (Center for Interdisciplinary Research), Bielefeld, Germany
Equilibria and Asymptotic Dominance in a Speculative Market with an Arbitrary Number of Generic Technical Traders
- 2005, August 27 20th Annual Congress of the European Economic Association (EEA), Amsterdam
Price and Wealth Dynamics in a Speculative Market with an Arbitrary Number of Generic Technical Trading Strategies
- 2005, October 7 Workshop on Bubbles, Herding and Market Crashes, Kiel, Germany
Price and Wealth Dynamics in a Speculative Market with an Arbitrary Number of Generic Technical Traders
- 2005, November 18 12th International Meeting: Connectionist Approaches in Economics and Management, ASCEG 2005, Aix-en-Provence, France
Wealth-Driven Competition in a Speculative Financial Market: Example with “Rational” Strategies
- 2005, December 06 Seminar at the University of Amsterdam, Amsterdam
Wealth-Driven Competition in a Speculative Financial Market: General Model and Applications
- 2006, March 06 Seminar at the University of Amsterdam, Amsterdam
Behavioral Consistent Market Equilibria under Procedural Rationality
- 2006, June 13 Seminar at Scuola Superiore Sant’Anna, Pisa
Heterogeneous Beliefs under Different Market Architectures
- 2006, June 24 12th International Conference on Computing in Economics and Finance, Limassol, Cyprus
Behavioral Consistent Market Equilibria under Procedural Rationality
- 2006, September 14 Symposium on Agent-Based Computational Methods in Economics and Finance, Aalborg, Denmark
Heterogeneous Beliefs under Different Market Architectures
- 2006, September 15 Symposium on Agent-Based Computational Methods in Economics and Finance, Aalborg, Denmark
Equilibrium Return and Agents’ Survival in a Multiperiod Asset Market: Analytical Support of a Simulation Model
- 2006, September 30 Seminar at the Università Ca’ Foscari, Venice, Italy
Behavioral Consistent Market Equilibria under Procedural Rationality
- 2006, October 5 “Complex Markets” Meeting, Marseille, France
Equilibrium Return and Agents’ Survival in a Multiperiod Asset Market: Analytical Support of a Simulation Model
- 2007, March 7 Seminar at the University of New South Wales, Sydney, Australia
Heterogeneous Beliefs under Different Market Architectures

- 2007, March 15 15th Annual Symposium of The Society for Nonlinear Dynamics and Econometrics, Paris, France
Equilibrium Return and Agents' Survival in a Multiperiod Asset Market: Analytical Support of a Simulation Model
- 2007, April 21 Workshop on "Statistical Physics and Financial Markets", Trieste, Italy
Heterogeneous Beliefs under Different Market Architectures
- 2007, June 14 13th International Conference on Computing in Economics and Finance, Montreal, Canada
An Evolutionary Explanation of an Asset-Pricing Experiment
- 2007, July 24 Workshop on "Perspectives in Nonlinear Dynamics", Trieste, Italy
Economic Applications of Nonlinear Dynamic Models
- 2007, October 24 Workshop on "Complexity in Economics and Finance", Lorentz Center, Leiden
Evolution of Market Heuristics
- 2007, October 24 Workshop on "Complexity in Economics and Finance", Lorentz Center, Leiden
Heterogeneous Beliefs under Different Market Architectures (poster presentation)
- 2007, December 5 Seminar at the University of New South Wales, Sydney, Australia
Evolution of Market Heuristics
- 2007, December 6 Workshop on "Agent-Based Modelling", UNSW, Sydney
Wealth Selection in a Financial Market with Heterogeneous Agents
- 2007, December 14 "Quantitative Methods in Finance" conference, UTS, Sydney
Behavioral Consistent Market Equilibria under Procedural Rationality
- 2008, January 30 Seminar at Scuola Superiore Sant'Anna, Pisa
Evolution of Market Heuristics
- 2008, March 10 Seminar at the University of Amsterdam
Evolution of Market Heuristics
- 2008, March 18 Seminar at the Università Cattolica del Sacro Cuore, Milan, Italy
Evolution of Market Heuristics
- 2008, April 4 Workshop on "Complex Markets" at the University of Warwick, UK
Evolution of Market Heuristics
- 2008, June 26 14th International Conference on Computing in Economics and Finance, Paris, France
Evolution of Market Heuristics
- 2008, September 12 Symposium on Agent-Based Computational Methods in Economics and Finance, Innsbruck, Austria
Evolutionary Switching between Forecasting Heuristics: an Explanation of an Asset-Pricing Experiment
- 2009, June 10 Seminar at the University of Amsterdam
The Impact of Short-Selling Constraints on Financial Market Stability

- 2009, June 22 Seminar in honour of Roger Guesneree at the Paris School of Economics, Paris
Evolution of Market Heuristics
- 2009, July 16 15th International Conference on Computing in Economics and Finance, Sydney, Australia
The Impact of Short-Selling Constraints on Financial Market Stability
- 2009, August 13 Summer workshop at Stanford Institute for Theoretical Economics, USA
Evolutionary Selection of Individual Expectations and Aggregate Outcomes
- 2009, October 2 Workshop on Evolutionary Finance at Centro di Ricerca Matematica Ennio De Giorgi, Pisa
Individual Evolutionary Learning in the double auction market with full or limited information
- 2009, October 22 Seminar at the University of Technology, Sydney, Australia
Interest Rate Rules and Macroeconomic Stability under Heterogeneous Expectations
- 2009, October 29 Annual conference for Capital Market Dysfunctionalities at The Paul Woolley Centre, UTS, Sydney
The Impact of Short-Selling Constraints on Financial Market Stability
- 2010, February 22 Seminar at the University of Amsterdam
Efficiency of Continuous Double Auction under Individual Evolutionary Learning with Full or Limited information
- 2010, March 5 Seminar at the Bank of Canada, Ottawa
The Impact of Short-Selling Constraints on Financial Market Stability
- 2010, March 8 Seminar at the Simon Fraser University, Vancouver, Canada
Interaction of Boundedly Rational Agents and Aggregate Behavior in Laboratory Experiments

Summer Schools and Special Courses

- 2007, July, 2-13 8th Trento Summer School on “Agent-Based Finance”, CEEL, Dipartimento di Economia Università degli Studi di Trento, Trento
Directors: Prof. Cars Hommes (University of Amsterdam) and Prof. Thomas Lux (University of Kiel)
- 2003, April, 7-18 SIME (Simulation in Evolutionary Economics) session Bureau d’Economie Théorique et Appliquée (BETA), Université Louis Pasteur, Strasbourg, France
Directors: Prof. Esben S. Andersen (Aalborg University) and Dr. Marco Valente (Università dell’Aquila)
- 2002, December, 17-20 CEEL and ROCK Winter School in Experimental Economics and Finance

- CEEL, Dipartimento di Economia Università degli Studi di Trento,
Trento, Italy
- 2002, July, 1-12 3rd Trento Summer School “Adaptive Economic Processes”,
CEEL, Dipartimento di Economia Università degli Studi di Trento,
Trento
Director: Prof. Peter Howitt (Brown University)
- 2000, October, 16-20 Intensive course “Theory of Stochastic Processes” in University of
Turin, Turin, Italy
Director: Prof. Yakov Nikitin (St.Petersburg State University)
- 2000, January, 17-21 Intensive course “Economic Growth Theory” in SITE, Stockholm
School of Economics, Stockholm, Sweden
Director: Prof. Philippe Aghion (Harvard University)

Skills

Languages	Russian (mother tongue), English (fluent), Dutch (advanced), Italian (basic)
Operational Systems	Linux, Windows
Programming Languages	C
Applications	LaTeX, XEmacs, Mathematica, gnuplot, DsTool, EFChaos, Mat- lab
Short Experience	STATA, Laboratory for Simulation Development (LSD)

March 5, 2010