Curriculum Vitae

May 2012

SVETLANA BOYARCHENKO

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EDUCATION

University of Pennsylvania, Philadelphia, PA - Ph.D. (Economics) 2001
Dissertation: "Essays in financial and monetary economics"
Dissertation committee: David Cass, Rafael Rob, and Randall Wright
Central European University, Budapest, Hungary - M. A. (Economics) 1997
Rostov State University, Rostov-on-Don, Russia
Ph.D. (Math) 1983
Dissertation: "Stability problems of non-homogeneous elastic bodies"
M. Sc. (Math) with honors 1978

RESEARCH INTERESTS

Financial Economics, Mathematical and Quantitative Methods, Real Options

HONORS AND AWARDS

Who's Who in the World since 2010
Who's Who in America since 2009
Who's Who Among American Teachers 2006-2007
NSF grant #DMS-0631628
"Firm dynamics with exogenous and endogenous regime shifts," Oct. 2006, 24 months, $48,000 (Co-PI: S. Levendorskiĭ)
University of Texas at Austin
2006-07 Big XII Faculty Fellowship
Faculty Development Program Summer Research Assignment award, 2005
Murray S. Johnson Chair in Economics fellowship, Fall 2003
Faculty Development Program Summer Research Assignment award, 2002
Murray S. Johnson Chair in Economics fellowship, 2001

Economic Education and Research Consortium- Russia (EERC) awards

"A 3-sector model of the Russian virtual economy," 2001, $14,000, (PI: S. Levendorskiĭ, co-PI: S. Agapov)

Griliches Excellence Award for the best research project paper, 2000

"Money-search-and-barter models of financial stabilization," 1999, $12,000, (PI: S. Levendorskiĭ)

"A model of investment under uncertainty: the case of non-Gaussian distributions," 1997 $ 7,800 (PI: S. Levendorskiĭ)

University of Pennsylvania Fellowships: Fall 1997 and 1998, Spring 1998

Central European University

Lucent Technologies Scholarships: Fall 1996, Spring 1997

Fellowship, Fall 1995-Spring 1997

Supplementary grant, June 1997

Russian Humanitarian Scientific Foundation grants

"Regional studies," 1996-1997 (PI: V.S. Zolotarev, co-PI: S. Levendorskiĭ)

"Investment under uncertainty," 1996-1997 (PI: S. Levendorskiĭ)

PROFESSIONAL EXPERIENCE

University of Texas at Austin

Associate Professor, Fall 2007 - present

Assistant Professor, Fall 2001 – Spring 2007

University of Pennsylvania, Teaching Assistant and Instructor, 1999-2001

Don State Technical University, Rostov-on-Don, Russia

Associate Professor, Spring 1992 - Spring 1995

Senior Lecturer, Spring 1989 - Spring 1992

Assistant Professor, Fall 1985 - Spring 1989

Rostov State University, Scientific Research Institute of Mechanics and Applied mathematics

Junior researcher, Fall 1981- Fall 1985

PUBLICATIONS

Monographs

1. Irreversible Decisions under Uncertainty (Optimal Stopping made Easy) (joint with S. Levendorskiĭ), Berlin-Heidelberg-New York: Springer-Verlag, 2007, xvi+285 pp.

2. Non-Gaussian Merton-Black-Scholes theory (joint with S. Levendorskiĭ), New Jersey-London-Singapore-Hong Kong: World Scientific, 2002, xxi+398 pp.

Chapters in Books

3. "Option pricing and hedging under regular Lévy processes of exponential type" (joint with S. Levendorskiĭ), in M. Kohlmann and S. Tang (eds) Mathematical Finance. Workshop of the Mathematical Finance Research Project, Konstanz, Germany, October 5-7, 2000, Basel-Boston-Berlin: Birkhauser (2001), pp. 121-130

4. "Entry and exit strategies under non-Gaussian distributions" (joint with S. Levendorskiĭ), in M.J. Brennan and L. Trigeorgis (eds.) Project Flexibility, Agency, and Competition, Oxford. New York: Oxford University Press, (2000), pp. 71-84

Recent Economics and Finance Journal Publications

5. "American options in the Heston model with stochastic interest rates" (joint with S. Levendorskiĭ), to appear in Applied Mathematical Finance

6. "Optimal Stopping in Levy Models, for Non-Monotone Discontinuous Payoffs" (joint with S. Levendorskiĭ), SIAM Journal on Control and Optimization, **49**:5 (2011), pp. 2062–2082

7. "Double Barrier Options in Regime-Switching Hyper-Exponential Jump-Diffusion Models" (joint with M. Boyarchenko), International Journal of Theoretical and Applied Finance, **14**:7 (2011), pp. 1005–1043

8. "American options in regime-switching models with stochastic interest rates" (joint with S. Levendorskiĭ), Journal of Computational Finance, **12**:4 (2009), pp. 51-89

9. "American options in regime-switching models," (joint with S. Levendorskiĭ), SIAM Journal on Control and Optimization, **48**:3 (2009), pp. 1353-1376

10. "Exit problems in regime-switching models" (joint with S. Levendorskiĭ), Journal of Mathematical Economics, **44**:2 (2008), pp. 180-206

11. "Carr's randomization for American options in regime-switching models" (joint with S. Levendorskiĭ), Proceedings in Applied Mathematics and Mechanics, **7**:1 (2007), pp. 1081303-1081304

12. "Optimal stopping made easy" (joint with S. Levendorskiĭ), Journal of Mathematical Economics, **43**:2 (2007), pp. 201-217

13. "Practical guide to real options in discrete time" (joint with S. Levendorskiĭ), International Economic Review, **48**:1 (2007), pp. 311-342

14. "General option exercise rules, with applications to embedded options and monopolistic expansion" (joint with S. Levendorskiĭ), Contributions to Theoretical Economics, **6**:1, article 2 (2006)

15. "American options: the EPV pricing model" (joint with S. Levendorskiĭ), Annals of Finance, **1**:3 (2005), pp. 267-292

16. "Irreversible decisions and record setting news principles," American Economic Review, **94**:3 (2004), pp. 557-568

17. "Arrow's equivalency theorem in a model with neoclassical firms," Economic Theory, **23**:4 (2004), pp. 739-775

18. "Pricing of perpetual Bermudan options" (joint with S. Levendorskiĭ), Quantitative Finance, **2**:6 (2002), pp. 432-442

19. "Barrier options and touch-and-out options under regular Lévy processes of exponential type" (joint with S. Levendorskiĭ), Annals of Applied Probability, **12**:4 (2002), pp. 1261-1298

20. "Perpetual American options under Lévy processes" (joint with S. Levendorskiĭ), SIAM Journal on Control and Optimization, **40**:6 (2002), pp. 1663-1696

21. "Option pricing for truncated Lévy processes" (joint with S. Levendorskiĭ), International Journal of Theoretical and Applied Finance, **3**:3 (2000), pp. 549-552

Earlier Publications

22. "Spectral asymptotics of the Newmann Laplacian on oscillating horns" (joint with S. Levendorskiĭ), Russian Journal of Mathematical Physics, **7**:1 (2000), pp. 1-14

23. "Spectral asymptotics of Laplacians on horns: the case of a rapidly growing counting function" (joint with S. Levendorskiĭ), (Russian) Funktsional'nyi Analys i Prilozhenija, **32**:3 (1998), pp. 70--73; translation in Functional Analysis and its Applications, **32**:3 (1998), pp. 198—200

24. "Spectral asymptotics with a remainder estimate of the Neumann Laplacian on horns: the case of the rapidly growing counting function" (joint with S. Levendorskiĭ), Proceedings of the Royal Society of Edinburgh, Section A, **128**:1 (1998), pp. 11-22

25. "Precise spectral asymptotics for perturbed magnetic Schrödinger operators" (joint with S. Levendorskiĭ), Journal de Mathématiques Pures et Appliquées, 76 (1997), pp. 211-236

26. "An asymptotic formula for the number of eigenvalue branches of a divergence form operator $A+\lambda B$ in a spectral gap of A" (joint with S. Levendorskiĭ), Communications in Partial Differential Equations, **22**:11-12 (1997), pp.1771—1786

27. "On affine Yangians" (joint with S. Levendorskiĭ), Letters in Mathematical Physics, 32 (1994), pp. 269-274

28. "Buckling of multi-layered plates with sliding layers," (joint with S. Moiseenko), (Russian) Akademiia nauk SSSR. Izvestiia. Mekhanika tverdogo tela, translation in Izvestiya of the Academy of Sciences USSR, Mechanics of Solids, 1 (1990), pp. 175-181

29. "Surface instability of a heavy non-homogeneous half-space" (joint with L. Zubov), (Russian) Akademiia nauk SSSR. Izvestiia. Fizika Zemli, 1 (1984), translation in Izvestiya, Academy of Sciences, USSR. Physics of the Solid Earth, 1 (1984), pp. 11-19

30. "Method of averaging in the problems of stability of elastic plates possessing fine periodic structure" (joint with L. Zubov), (Russian) Prikladnaya Matematika I Mekhanika, **46**:4 (1982) pp.647-654; translation in Journal of Applied Mathematics and Mechanics **46**: 4 (1982), pp. 513-519

31. "Buckling of non-homogeneous elastic plate," (Russian) Izvestija Akademii nauk ArmSSR. Mekhanika (Izvestiya of the Academy of Sciences ArmSSR, Mechanics), **34**: 2 (1981), pp. 58-68

32. "To the theory of folding on the surface of a non-homogeneous half-space" (joint with L. Zubov), Izvestiya Severo-Kavkazskogo Nauchnogo Tsentra Vysshej Shkoly. Estestvennye nauki (Izvestiya of the North-Caucasus Scientific Center. Natural Sciences), 4, (1980)

Conference Proceedings

33. "American options in regime-switching models with non-semibounded stochastic interest rates," (joint with S. Levendorskiĭ) Proceedings of the IEEE 2008 American Control Conference, pp. 1023-1028

Working papers

34. "Preemption Games under Levy Uncertainty" (joint with S. Levendorskiĭ), Games and Economic Behavior, revised version submitted
35. "Efficient Laplace Inversion, Wiener-Hopf Factorization and Pricing Lookbacks" (joint with S. Levendorskiĭ), submitted to International Journal of Theoretical and Applied Finance
36. "Review of FT method in option pricing and new efficient variations" (joint with S. Levendorskiĭ), Journal of Computational Finance, revised version submitted
37. "Discounting when Income is Stochastic and Climate Change Policies" (joint with S.

Levendorskiĭ) submitted to Journal of Mathematical Economics

38. "Snowball Effect of a CDS Market" (joint with S. Levendorskiĭ) submitted to Macroeconomic Dynamics

Work in progress

"Effects of ambiguity on strategic investment" (joint with S. Levendorskiĭ)
Monograph Fourier transform and Wiener-Hopf factorization in asset pricing (subtitle: Computational Finance as a subfield of Complex Analysis) (joint with S. Levendorskiĭ)
Under preparation for Springer Finance

RESEARCH PRESENTATIONS (since 1995)

Research seminar, Department of Industrial Engineering & Logistics Management, Hong Kong University of Science and Technology, scheduled for May 24, 2012, Hong Kong
Research seminar, Department of Economics, National Taiwan University, March 15, 2012, Taipei, Taiwan
Two invited lectures, workshop on Stochastic Processes and Applications, National Center for Theoretical Sciences, March 8, 9, 2012, Hsinchu, Taiwan
Research seminar, Department of Economics, University of Arizona, January 25, 2012, Tucson AZ
NSF/NBER Math Econ/GE Conference, University of Iowa, October 7-9, 2011, Iowa City IA
Research seminar, Department of Finance, Durham Business School, October 4, 2011, Durham, UK
European Economic Association & Econometric Society 2011 Parallel Meetings, August 25 – 29 2011, Oslo, Norway
"Recent Advances in Finance -Workshop Week," Warwick Business School, University of Warwick, United Kingdom, July 4-8, 2011
10th SAET Conference on Current Trends in Economics, June 26-July1, 2011, Ancao (Faro), Portugal
SIAM Conference on Financial Mathematics and Engineering, San Francisco, CA, November 19-21, 2010
Expectations, Asset Bubbles and Financial Crises, Erasmus School of Economics, Rotterdam, the Netherlands, September 16-17, 2010
6th World Congress of the Bachelier Finance Society, Toronto, Canada, June 22-26, 2010
19th International Symposium on Mathematical Theory of Networks and Systems, MTNS 2010, Budapest, Hungary, July 5-9, 2010
Nature-Investment Interaction, University of Leicester, Leicester UK, June 20-21,2010
Canadian Economic Theory Conference, McGill University, Montreal, Canada, May 21-23, 2010
Spring 2010 Midwest Economic Theory Meeting, Northwestern University, Evanston, IL, May 14-16, 2010
64th European meeting of the Econometric Society, Barcelona, Spain, August 23-27, 2009

9th SAET Conference on Current Trends in Economics, Ischia, Italy, June 29-July 5, 2009
International Research Workshop "Spectral and Cubature Methods in Finance and Econometrics" at the University of Leicester, UK, June 18- 20, 2009
The North American Summer Meetings of the Econometric Society, Boston, MA, June 4-7 2009
58th Annual Meeting Midwest Finance Association, Chicago, IL, March 4-7, 2009
35th EFA Annual Meeting, Athens, Greece, August 27-30, 2008
23nd Annual EEA Congress, Milan, Italy, August 27-31, 2008
2007 American Control Conference, Seattle, June 11, 2008
14th Conference on Computing in Economics and Finance, Universite de la Sorbonne, Paris, June 26-28, 2008
57th Annual Meeting Midwest Finance Association, San Antonio, Texas, February 27-March 1, 2008
Research seminar, department of Risk Management and Insurance, J. Mack Robinson College of Business, Georgia State University, January 15, 2008
Research seminar, Finance department, the Belk College of Business, University of North Carolina at Charlotte, November 2, 2007
Frequency Domain Conclave, University of Illinois at Urbana-Champaign, October 26-27, 2007
62nd European meeting of the Econometric Society, Budapest, Hungary, August 26-31, 2007
22nd Annual EEA Congress, Budapest, Hungary, August 26-31, 2007
Computational Methods in Finance Conference, July 26-27, 2007, University of Waterloo, Canada
2007 American Control Conference, New York City, July 11-13, 2007
2007 CMMSE Conference, Illinois Institute of Technology, Chicago, June 23, 2007
The North American Summer Meetings of the Econometric Society, Durham, NC, June 21-24, 2007
8th SAET Conference on Current Trends in Economics, Kos, Greece, June 18-24, 2007
2007 Decision and Risk Analysis Conference, Dallas, May 21-22, 2007
Midwest Economic Theory Conference, Minneapolis, MN, April 20-22, 2007
A series of research seminars, Kansas University, Lawrence, KS, October 16-29, 2006
Midwest Economic Theory Conference, West Lafayette, IN, October 13-15, 2006
61st European meeting of the Econometric Society, Vienna, Austria, August 2006
21st Annual EEA Congress, Vienna, Austria, August 2006
North American Summer Meetings of the Econometric Society, Minneapolis, June 22-25, 2006
Economic Theory Seminar, University of Texas, Austin, TX, March 29, 2006
Research Seminar, Kansas University, Lawrence, KS, March 17, 2006
Economic Theory Seminar, University of Pennsylvania, Philadelphia, March 3, 2006
Economic Theory Seminar, Rice University, Texas, January 12, 2006
Economic Theory Seminar, Brown University, Providence, October 31, 2005
Conference in honor of Roko Aliprantis, Purdue University, West Lafayette, IN, Oct. 17-18, 2005
Midwest Economic Theory Conference, Lawrence, KS, October 14-16, 2005
Macroeconomics Seminar, University of Illinois at Urbana-Champaign, September 26, 2005
7th SAET Conference on Current Trends in Economics, Vigo, Spain, June 27-July 3, 2005
Canadian Economic Theory Conference, Vancouver, Canada, May 2005
ASSA Meetings, Philadelphia, 2005

Dave Cass Conference, University of Pennsylvania, Philadelphia, October 2004
The University of Texas at Austin and ITAM joint Economic Conference, Austin, October 2004
Micro Theory Seminar, Department of Economics, University of Texas at Austin, Austin, Oct. 2004
29th European meeting of the Econometric Society, Madrid, August 2004
10th International Conference on Computing in Economics and Finance, Amsterdam, July 2004
ASSA Meetings, San Diego, January 2004
18th Annual Congress of EEA, Stockholm, Sweden, August 2003
6th International Conference on Current Trends in Economics, Rhodes, Greece, July 2003
Econometric Society Summer Meetings, Evanston, June 2003
The Murray S. Johnson Memorial Conference, University of Texas at Austin, Austin, March 2003
The University of Texas at Austin and ITAM joint Economic Conference, Austin, November 2002
VIGRE Workshop Series in Financial Mathematics, University of Texas, Austin, October 2002
Micro Theory Seminar, Department of Economics, University of Texas at Austin, September 2002
ASSA Meetings, Atlanta, January 2002
Microeconomic Theory Workshop, Cowles Foundation, Yale University, New Haven, April 2001
Warwick Business School, University of Warwick, Coventry, UK, February 2001
School of Management, Boston University, Boston, January 2001
Department of Economics, University of Texas at Austin, Austin, January 2001
Conference on Economic Design SED 2000, Istanbul, Turkey, June 2000
University Student Conference, New York University, New York, May 2000
Young Economists Conference 2000, Oxford, UK, March, 2000
Department of Economics, Essex University, Colchester, UK, March 2000
EERC workshops: St. Petersburg, July 1998, and Moscow, November 1996, July 1997, July 2001
SSRC workshops: St. Petersburg, July 1996 and St. Petersburg, July 1995

PROFESSIONAL ACTIVITIES

Editorial Board: Annals of Finance (since 2004), Acta Applicandae Mathematicae (since 2005).

Journal Refereeing: Theoretical Economics, American Economic Journal: Microeconomics, Journal of Economic Dynamics and Control, International Journal of Theoretical and Applied Finance, Quantitative Finance, Mathematical Finance, SIAM Journal on Control and Optimization.

Conferences/Sections Organized:

A section organizer at 12th SAET Conference, June 30-July 3, 2012 University of Queensland, Australia

A section organizer at the 10th SAET Conference on Current Trends in Economics, Ancao (Faro), Portugal, June 2011

Nature-Investment Interaction, University of Leicester, Leicester UK, June 2010

2008 MFA Program Committee member

A section organizer at the 8th SAET Conference on Current Trends in Economics, Kos, Greece, June 2007

A committee member of 12th International Conference on Computing in Economics and Finance, Cyprus, June 2006

A section organizer at the 7th SAET Conference on Current Trends in Economics, Vigo, Spain, June-July 2005

The Murray S. Johnson Memorial Conference, University of Texas at Austin, March 2003

Memberships: American Economic Association, American Finance Association, Econometric Society, Society for Advancement of Economic Theory

DISSERTATIONS COMMITTEES

Chiang, Piin-hueih (Economics) – Doctoral Thesis Committee chair
Dehghani Mohammad Hossein (Economics) – Doctoral Thesis Committee chair
Wilson, Michael Scott (Economics) – Doctoral Thesis Committee chair
Moreno Gonzales, Othon (Economics) – Doctoral Thesis Committee member
Roeder, Oliver (Economics) – Doctoral Thesis Committee member
Kim, Donghyun (McCombs School of Business) – Master Thesis Committee member
Rebeiz, Paul Pierre (School of Engineering) – Master Thesis Committee co-chair

UT SERVICES

Member of the Research Policy Committee 2010 - 2012

DEPARTMENT SERVICES

Reading Committee for Dr. Mathevet's 3rd year review - 2011
Reading Committee for Dr. Wiseman's promotion - 2008
Executive Committee member -2005/06, 2011/12
Micro Theory Seminars organizer – Fall 2007, Fall 2004, Spring 2003
Graduate students Admissions Committee member – Spring 2007, 2008, 2010-2012

TEACHING (UT Austin only)

Undergraduate courses Intermediate Microeconomics (Summer 2004, 2008, Fall 2004, 2007-2011), Statistics (Summer 2009)

Graduate courses Microeconomics (Spring 2002- 2009, Fall 2009-11)
Adv. Microeconomic Analysis (Fall 2002, 2005, 2006, 2008, Spring 2012)