

Curriculum Vitae
BORIS SOLOMYAK
September 15, 2009

EDUCATION

Ph.D., St. Petersburg State University (Russia), 1986.

M.S. (with Honors), St. Petersburg State University (Russia), 1981.

PROFESSIONAL EXPERIENCE

Professor of Mathematics, University of Washington, 2001–

Associate Professor of Mathematics, University of Washington, 1997–2001

Assistant Professor of Mathematics, University of Washington, 1992–1997

Visiting Assistant Professor, University of Washington, 1990–1992

Research Associate and Instructor of Mathematics, St. Petersburg Electrotechnical University, 1986–1989

PH.D. STUDENTS SUPERVISED

Ilgar Eroğlu, Ph.D. 2007.

Pablo Shmerkin, Ph.D. 2006.

Christopher Hillman, Ph.D. 1998.

Michael Hollander, Ph.D. 1996.

AWARDS and GRANTS

Mathematics Department Excellence Award, 2001/02

Fulbright Award: Research Scholar at the Hebrew University of Jerusalem, 1998–99.

Individual NSF grants: 1992–1994 and 1995–2010.

VISITING POSITIONS

2005/06, Weizmann Institute of Science, Rosi and Max Varon Visiting Professor.

1998/99, The Hebrew University of Jerusalem, Visiting Professor.

June 1994, University of Paris 6, Visiting Professor.

SELECTED INVITED LECTURES 2005–PRESENT

1. International conference “Dynamical Numbers,” Invited Speaker, MPI, Bonn, Germany, July 2009.
2. School on Information and Randomness, University of Chile, Invited Speaker, December 2008.
3. Colloquium, Rice University, March 2008.

4. International conference on chaotic properties of dynamical systems, Main Speaker (lecture series), University of Warwick, UK, August 2007.
5. International conference “Mathematics on Fractals,” Plenary Speaker, Kyoto, Japan, September 2006.
6. Combinatorics, Automata & Number Theory, EMS Summer School, Main Speaker (lecture series), Liege, Belgium, May 2006.
7. International Conference “Dynamique et alea,” Main Speaker (mini-course), Merlimont-plage, France, May 2006.
8. Conference on Number Theory and Dynamical Systems, ETH, Zurich, January 2006.
9. Summer School in Aperiodic Order, Main Speaker, Victoria, Canada, 2005.
10. International Conference in Probability and Number Theory, Kanazawa, Japan, 2005.

PROFESSIONAL SERVICE

1. May 29–June 3, 2004, BIRS Workshop on Aperiodic Order: Dynamical Systems, Combinatorics, and Operators, Co-organizer.
2. June 28–July 3, 2003, BIRS Workshop on Joint Dynamics, Co-organizer.

SELECTED PUBLICATIONS

1. (with I. Benjamini and O. Gurel-Gurevich) Branching Random Walk with Exponentially Decreasing Steps, and Stochastically Self-Similar Measures, *Transactions of the Amer. Math. Soc.* **361** (2009), 1625–1643.
2. (with I. Benjamini) Spacings and pair correlations for finite Bernoulli convolutions, *Nonlinearity* **22** (2009), 381–393.
3. (with J.-Y. Lee) Pure point diffractive Delone sets have the Meyer property, *Discrete and Computational Geometry* **39** (2008), 319–338.
4. (with Y. Peres and K. Simon) Absolute continuity for random iterated function systems with overlaps, *Journal of the London Math. Soc. (2)* **74** (2006), 739–756.
5. (with R. Kenyon and L. Sadun) Topological mixing for substitutions on two letters, *Ergodic Theory and Dynam. Systems* **25** (2005), no. 6, 1919–1934.
6. On the “Mandelbrot set” for pairs of linear maps: asymptotic self-similarity, *Nonlinearity* **18** (2005), no. 5, 1927–1943.

7. Notes on Bernoulli convolutions, in *Fractal Geometry and Applications: A Jubilee of Benoît Mandelbrot: Analysis, Number Theory, and Dynamical Systems*(M. L. Lapidus and M. van Frankenhuysen, eds.), *Proceedings of Symposia in Pure Mathematics*, AMS, 2004, 207–230.
8. (with N. Sidorov) Spectra of Bernoulli convolutions as multipliers in L^p on the circle, *Duke Math. Journal* **120** (2003), 353–370.
9. (with J.-Y. Lee and R. V. Moody) Consequences of pure point diffraction spectra for multiset substitution systems, *Discrete and Computational Geometry* **29** (2003), 525–560.
10. (with M. Hollander) Two-symbol Pisot substitutions have pure discrete spectrum, *Ergodic Theory and Dynamical Systems* **23** (2003), 533–540.
11. (with J.-Y. Lee and R. V. Moody) Pure point dynamical and diffraction spectra, *Annales Henri Poincaré* **3** (2002), 1003–1018.
12. (with K. Simon and M. Urbański) Invariant measures for parabolic IFS with overlaps and random continued fractions, *Trans. Amer. Math. Soc.* **353** (2001), 5145–5164.
13. (with N. Priebe) Characterization of planar pseudo-self-similar tilings, *Discrete and Computational Geometry* **26** (2001), 289–306.
14. (with Y. Peres and W. Schlag) Sixty years of Bernoulli convolutions, *Fractals and Stochastics II*, (C. Bandt, S. Graf and M. Zähle, eds.), *Progress in Probability* **46**, 39–65. Birkhäuser, 2000.
15. (with Y. Peres) Approximation by polynomials with coefficients ± 1 , *J. of Number Theory* **84** (2000), 185–198.
16. (with K. Simon) Hausdorff dimension for horseshoes in \mathbf{R}^3 , *Ergodic Theory and Dynamical Systems* **19** (1999), 1343–1363.
17. Nonperiodicity implies unique composition for self-similar translationally finite tilings, *Discrete and Computational Geometry* **20** (1998), no. 2, 265–279.
18. (with Y. Peres) Self-similar measures and intersections of Cantor sets, *Transactions Amer. Math. Soc.* **350** (1998), no.10, 4065–4087.
19. Dynamics of self-similar tilings, *Ergodic Theory and Dynamical Systems* **17** (1997), 695–738.
20. On the random series $\sum \pm \lambda^i$ (an Erdős problem), *Annals of Math.* **142** (1995), 611–625.
21. Conjugates of beta-numbers and the zero-free domain for a class of analytic functions, *Proc. London Math. Soc.* **68** (1994), 477–498.
22. (with C. Frougny) Finite beta-expansions, *Ergodic Theory and Dynamical Systems* **12** (1992), 713–723.