

Russell G. Miller

Work Address

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Personal Data

Citizenship: United States
Birthdate: 27 January 1968
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Degrees:

Ph.D., Mathematics, University of Chicago, June 2000; Advisor: Prof. Robert Soare.

M.S., Mathematics, University of Chicago, August 1991.

A.B. *magna cum laude*, Mathematics, Princeton University, June 1990.

Teaching Experience:

Doctoral Faculty member, Mathematics Program, CUNY Graduate Center,
2007 – present.

Doctoral Faculty member, Computer Science Program, CUNY Graduate Center,
2005 – present.

Associate Professor, Mathematics Dept., Queens College, CUNY, 2009 – present.

Assistant Professor, Mathematics Dept., Queens College, CUNY, 2003 – 2008.

VIGRE Assistant Professor, Cornell University, 2000–2003.

Lecturer in the College, University of Chicago, 1999–2000 & 1992–1993.

Lecturer & Staff Writer, S.E.S.A.M.E., University of Chicago, 1997–99.

Research Articles and Book Chapters:

(Most articles available at qcpages.qc.cuny.edu/~rmiller/research.html.)

1. “The Δ_2^0 -Spectrum of a Linear Order,” *Journal of Symbolic Logic* **66** (2001) 470–486.
2. “Definable Incompleteness and Friedberg Splittings,” *Journal of Symbolic Logic* **67** (2002) 679–696.
3. “Orbits of Computably Enumerable Sets: Low Sets Can Avoid an Upper Cone,” *Annals of Pure and Applied Logic* **118** (2002) 61–85.
4. “The $\forall\exists$ -Theory of $\mathcal{R}(\leq, \vee, \wedge)$ is Undecidable,” with A. Nies & R. Shore, *Transactions of the American Mathematical Society* **356** (2004) 8, 3025–3067.

5. “The Computable Dimension of I -Trees of Infinite Height,” with N. Kogabaev & O. Kudinov, *Algebra and Logic* **43** (2004) 6, 393–407.
6. “The Computable Dimension of Trees of Infinite Height,” *Journal of Symbolic Logic* **70** (2005) 111–141.
7. “Computable Categoricity of Trees of Finite Height,” with S. Lempp, C. McCoy, & R. Solomon, *Journal of Symbolic Logic* **70** (2005) 151–215.
8. “Enumerations in Computable Structure Theory,” with S. Goncharov, V. Harizanov, J. Knight, C. McCoy, & R. Solomon, *Annals of Pure and Applied Logic* **136** (2005) 3, 219–246.
9. “An Introduction to Infinite Time Computable Model Theory,” with J. Hamkins, D. Seabold, & S. Warner, in *New Computational Paradigms: Changing Conceptions of What is Computable*, eds. S.B. Cooper, B. Löwe, & A. Sorbi (New York: Springer-Verlag, 2007), 521–557.
10. “Spectra of Structures and Relations,” with V. Harizanov, *The Journal of Symbolic Logic* **72** (2007) 1, 324–348.
11. “Order-computable Sets,” with D. Hirschfeldt & S. Podzorov, *The Notre Dame Journal of Formal Logic* **48** (2007) 3, 317–347.
12. “Post’s Problem for Ordinal Register Machines: An Explicit Approach,” with J. Hamkins, *Annals of Pure and Applied Logic* **160** (2009) 3, 302–309 (expanded version of Research Abstract 2 below).
13. “ \mathbf{d} -Computable Categoricity for Algebraic Fields,” *The Journal of Symbolic Logic* **74** (2009) 4, 1325–1351.
14. “The Basic Theory of Infinite Time Register Machines,” with M. Carl, T. Fischbach, P. Koepke, M. Nasfi, & G. Weckbecker, to appear in the *Archive for Mathematical Logic* (expanded version of Research Abstract 4 below).
15. “Is It Easier to Factor a Polynomial or to Find a Root?” to appear in the *Transactions of the American Mathematical Society*.
16. “Degrees of Categoricity of Computable Structures,” with E. Fokina & I. Kalimullin, to appear in the *Archive for Mathematical Logic*.
17. “Simple Structures with Complex Symmetry,” with V. Harizanov & A. Morozov, to appear in *Algebra and Logic*.
18. “Computability of Fraïssé Limits,” with B. Csima, V. Harizanov & A. Montalbán, submitted for publication.
19. “Computably Categorical Fields via Fermat’s Last Theorem,” with H. Schoutens, submitted for publication.

20. “Computing the Fundamental Group of an \mathbb{R} -computable Manifold,” with W. Calvert, submitted for publication (expanded version of Research Abstract 7 below).
21. “Local Computability and Uncountable Structures,” book chapter, submitted.
22. “Degree Spectra of High_n and Non-low_n Degrees,” with A. Frolov, V. Harizanov, I. Kalimullin, & O. Kudinov, submitted for publication.
23. “Spectra of Algebraic Fields and Subfields,” with A. Frolov & I. Kalimullin, in preparation (expanded version of Research Abstract 6 below).
24. “Computable Categoricity for Algebraic Fields,” with A. Shlapentokh, in preparation.
25. “Noncomputable Functions in the Blum-Shub-Smale Model,” with W. Calvert, in preparation.

Peer-Reviewed Extended Research Abstracts:

(Most abstracts available at qcpages.qc.cuny.edu/~rmiller/research.html.)

1. “Locally Computable Structures,” in *Computation and Logic in the Real World - Third Conference on Computability in Europe, CiE 2007*, eds. S.B. Cooper, B. Löwe, & A. Sorbi, *Lecture Notes in Computer Science* **4497** (Berlin: Springer-Verlag, 2007), 575–584.
2. “Post’s Problem for Ordinal Register Machines,” with J. Hamkins, in *Computation and Logic in the Real World - Third Conference on Computability in Europe, CiE 2007*, eds. S.B. Cooper, B. Löwe, & A. Sorbi, *Lecture Notes in Computer Science* **4497** (Berlin: Springer-Verlag, 2007), 358–367. (See also item 12 above, under Research Articles.)
3. “The Complexity of Quickly ORM-Decidable Sets,” with J. Hamkins & D. Linetsky, in *Computation and Logic in the Real World - Third Conference on Computability in Europe, CiE 2007*, eds. S.B. Cooper, B. Löwe, & A. Sorbi, *Lecture Notes in Computer Science* **4497** (Berlin: Springer-Verlag, 2007), 488–496.
4. “An Enhanced Theory of Infinite Time Register Machines,” with P. Koepke, in *Logic and Theory of Algorithms, Fourth Conference on Computability in Europe, CiE 2008*, eds. A. Beckmann, C. Dimitracopoulos, & B. Löwe, *Lecture Notes in Computer Science* **5028** (Berlin: Springer-Verlag, 2008), 265–274. (See also item 14 above, under Research Articles.)
5. “Perfect Local Computability and Computable Simulations,” with D. Mulcahey, in *Logic and Theory of Algorithms, Fourth Conference on Computability in Europe, CiE 2008*, eds. A. Beckmann, C. Dimitracopoulos, & B. Löwe, *Lecture Notes in Computer Science* **5028** (Berlin: Springer-Verlag, 2008), 388–397.

6. “Spectra of Algebraic Fields and Subfields,” with A. Frolov & I. Kalimullin, in *Mathematical Theory and Computational Practice: Fifth Conference on Computability in Europe, CiE 2009*, eds. K. Ambos-Spies, B. Löwe, & W. Merkle, *Lecture Notes in Computer Science* **5635** (Berlin: Springer-Verlag, 2009), 232–241. (See also item 23 above, under Research Articles.)
7. “Real Computable Manifolds and Homotopy Groups,” with W. Calvert, in *Unconventional Computation, 8th International Conference, UC 2009, Proceedings*, eds. C. Calude, J. Costa, N. Dershowitz, E. Freire, & G. Rozenberg, *Lecture Notes in Computer Science* **5715** (Berlin: Springer-Verlag, 2009), 98–109. (See also item 20 above, under Research Articles.)

Expository Publications:

1. “Computable Fields and Galois Theory,” *Notices of the AMS* **55** (August 2008) 7, 798-807.
2. “Computability and Differential Fields: a Tutorial,” to appear in *Differential Algebra and Related Topics: Proceedings of the Second International Workshop*, eds. L. Guo & W. Sit.

Presentations:

“Real computability and roots of polynomials,” 30 October 2009, invited talk in the Special Session on Constructive Mathematics, American Mathematical Society sectional meeting, Florida Atlantic University, Boca Raton, FL.

“Is it Harder to Factor a Polynomial or to Find a Root?” 23 September 2009, Queens College Mathematics Department Colloquium, Flushing, NY.

“Real Computable Manifolds and Homotopy Groups,” 10 September 2009, contributed talk at the Eighth International Conference on Unconventional Computation, University of Azores, Ponta Delgada, Portugal.

“BSS Machines: Computability without Search Procedures,” 19 August 2009, at the Second CUNY Workshop on Effective Mathematics of the Uncountable, CUNY Graduate Center, New York.

Survey of Degree Spectra of High_n and Non-low_n Degrees, 31 July 2009, contributed talk at the European summer meeting of the Association for Symbolic Logic, Sofia, Bulgaria.

“Spectra of Algebraic Fields and Subfields,” 20 July 2009, invited talk in the Special Session on Computational Model Theory at the Computability in Europe conference, Ruprecht-Karls-Universität Heidelberg, Germany.

“Computationally Categorical Fields via Fermat’s Last Theorem,” 22 May 2009, invited talk in the Computability Theory Special Session at the ASL Annual Meeting, Notre Dame University, South Bend, IN.

- “Difficulty of Factoring Polynomials and Finding Roots,” 14 April 2009, Mathematics Department Colloquium, Murray State University, Murray, KY.
- “Difficulty of Factoring Polynomials and Finding Roots,” 14 January 2009, Mathematics Department Colloquium, East Carolina University, Greenville, NC.
- “Real Computability and Manifolds,” 8 January 2009, invited talk in the Special Session on Orderings in Logic and Topology, American Mathematical Society national meeting, Washington, DC.
- “Spectra of Algebraic Fields,” 12 October 2008, invited talk in the Special Session on Computability Theory and Effective Algebra, American Mathematical Society sectional meeting, Wesleyan University, Middletown, CT.
- “Stream-Computable Structures,” 22 August 2008, contributed talk at the First CUNY Workshop on Effective Mathematics of the Uncountable, CUNY Graduate Center, New York.
- “Local Computability,” 20 August 2008, at the First CUNY Workshop on Effective Mathematics of the Uncountable, CUNY Graduate Center, New York.
- “Automorphism Spectra and Tree-Definability,” 3 July 2008, contributed talk at the European summer meeting of the Association for Symbolic Logic, Bern, Switzerland.
- “Perfect Local Computability and Computable Simulations,” 18 June 2008, contributed talk at the Computability in Europe conference, National and Kapodistrian University of Athens, Greece.
- “The Degree of Categoricity for an Algebraic Number Field,” 8 January 2008, contributed talk at the annual meeting of the Association for Symbolic Logic, San Diego, CA.
- “Algorithms on Computable Fields,” 30 October 2007, Mathematics Department Colloquium, Bronx Community College, Bronx, NY.
- “Local Computability and Uncountable Structures,” 13 September 2007, Computer Science Department Colloquium, University of Western Ontario, London, ON.
- “The Complexity of Quickly ORM-Decidable Sets,” 22 June 2007, contributed talk at the Computability in Europe conference, Università di Siena, Italy.
- “Locally Computable Structures,” 21 June 2007, contributed talk at the Computability in Europe conference, Università di Siena, Italy.
- “Post’s Problem for Ordinal Register Machines,” 19 June 2007, contributed talk at the Computability in Europe conference, Università di Siena, Italy.
- “Computable Model Theory and Differential Algebra,” 12 April 2007, invited tutorial at DART II, the Second International Workshop and AMS Special Session on Differential Algebra and Related Topics, Rutgers University at Newark, NJ.

- “Computable Model Theory and Differential Algebra,” three parts: 16, 23, 30 March 2007, Kolchin Seminar in Differential Algebra, C.U.N.Y. Graduate Center, New York, NY.
- “Post’s Problem for Ordinal Register Machines,” 25 January 2007, invited talk at the Bonn International Workshop on Ordinal Computability, Rheinische Friedrich-Wilhelms-Universität Bonn, Germany.
- “Automorphism Spectra of Computable Structures,” 28 October 2006, invited talk in the “Special Session on Computability Theory in Honor of Manuel Lerman’s Retirement,” American Mathematical Society sectional meeting, Storrs, CT.
- “Noncomputable Sets and Unsolvable Problems,” 26 October 2006, Mathematics Department Colloquium, New York City College of Technology, Brooklyn, NY.
- “Computable Categoricity and Fields,” 31 July 2006, contributed talk at the European summer meeting of the Association for Symbolic Logic, Nijmegen, Netherlands.
- “Infinite-Time Computable Model Theory,” 20 May 2006, contributed talk at the Association for Symbolic Logic annual meeting, Montréal, QC.
- “Hrushovski’s Proof of the Mordell-Lang Conjecture, Part 2: Differential Algebra,” 18 March 2006, Kolchin Seminar in Differential Algebra, Hunter College, New York, NY, two-part joint talk with Prof. Hans Schoutens.
- “Spectra of Turing Degrees,” 15 January 2006, invited hour address at Joint Mathematical Meetings, San Antonio, TX, for the Association for Symbolic Logic.
- “Coding Information into Structures,” 29 October 2004, Mathematics Department Colloquium, George Washington University, Washington, DC.
- “Spectra of Relations on the Random Graph,” 24 October 2004, invited talk in the special session “Computability theory and applications,” at the American Mathematical Society sectional meeting, Evanston, IL.
- “The Curious Case of Order-Computable Sets,” 21 May 2004, contributed talk at the Association for Symbolic Logic annual meeting, Pittsburgh, PA.
- “Computably Universal Structures,” 6 March 2004, invited address at the Mid-Atlantic Mathematical Logic Seminar spring meeting, Hofstra University, Hempstead, NY.
- “Computable Categoricity of Trees II,” 23 June 2003, invited talk at the Workshop on Computability and Logic, Ruprecht-Karls-Universität Heidelberg, Germany.
- “Spectra of Structures and Relations,” 3 June 2003, special session of the Association for Symbolic Logic annual meeting, Chicago, IL.
- “Characterizing Computability Through Model Theory,” 18 March 2003, Mathematics Department Colloquium, Western Illinois University, Macomb, IL.

- “Characterizing Computability Through Model Theory,” 24 February 2003, Mathematics Department Colloquium, Queens College - C.U.N.Y.
- “Characterizing Computability Through Model Theory,” 21 February 2003, Mathematics Department seminar, University of Massachusetts - Boston.
- “Undecidability of Lattices of Ideals in \mathcal{R} ,” 15 January 2003, invited talk in special session of the American Mathematical Society annual meeting, Baltimore, MD.
- “Characterizing Computability through Model Theory,” 18 October 2002, Mathematics Department Colloquium, George Washington University, Washington, DC.
- “Computationally Categorical Trees of Finite Height II,” 6 January 2002, invited talk in special session of the American Mathematical Society annual meeting, San Diego, CA.
- “Definable Incompleteness and Friedberg Splittings,” 10 March 2001, contributed talk at the annual meeting of the Association for Symbolic Logic, Philadelphia, PA.
- “The Computable Dimension of Trees of Height ω ,” 11 January 2001, contributed talk at the winter meeting of the Association for Symbolic Logic, New Orleans, LA.
- “Noncomputable Sets and Unsolvable Problems,” 9 September 1999, Mathematics Department Colloquium, City College of New York, New York, NY.
- “The Δ_2^0 -Spectrum of a Linear Order,” 13 March 1999, invited talk in special session of the A.M.S. regional conference in Gainesville, FL.

Principal Research Visits:

- East Carolina University, Greenville, NC, 11-17 January 2009, by invitation of Prof. Alexandra Shlapentokh.
- Sobolev Institute of Mathematics, Novosibirsk, 17-25 July 2008, by invitation of the Siberian Branch of the Russian Academy of Sciences.
- Department of Algebra and Mathematical Logic, Kazan State University, Kazan, Tatarstan, 8-16 July 2008, by invitation of the Chebotarev Research Institute.
- Hausdorff Institut, 20-25 November & 6-16 December 2007, Rheinische Friedrich-Wilhelms-Universität Bonn, by invitation of Prof. Dr. Peter Koepke.
- Bonn International Workshop on Ordinal Computability, 23-25 January 2007, Rheinische Friedrich-Wilhelms-Universität Bonn, by invitation.
- Sobolev Institute of Mathematics, Novosibirsk, 8-23 July 2006, by invitation of the Siberian Branch of the Russian Academy of Sciences, supported by PSC-CUNY Research Award # 67182-00-36.
- Workshop on Computability and Logic, Universität Heidelberg, 23-27 June 2003, by invitation.

Sobolev Institute of Mathematics, Novosibirsk, 22-31 July 2002, by invitation of the Siberian Branch of the Russian Academy of Sciences, supported by NSF grant # 0075899.

Computability Theory meeting, Mathematisches Forschungsinstitut Oberwolfach, 21-27 January 2001, by invitation.

Teaching:

Nominated for *President's Award for Excellence in Teaching by Full-Time Faculty*, Queens College, 2006.

Doctoral courses taught at CUNY Graduate Center:

Math 71200, *Mathematical Logic II*, Spring 2009.

Computer Science 85020, *Topics in Computability Theory*, Autumn 2008.

Math 71200, *Mathematical Logic II*, Spring 2007.

Computer Science 85020, *Topics in Theoretical Computer Science: Introduction to Computability Theory*, Autumn 2006.

Math 71200, *Mathematical Logic II*, Spring 2005.

Service Activities:

Mathematics Community:

Referee for research articles/chapters submitted to:

Annals of Pure and Applied Logic

Archive for Mathematical Logic

Fundamenta Mathematicae

Israel Journal of Mathematics

Journal of Symbolic Logic

Notre Dame Journal of Formal Logic

Proceedings of the London Mathematical Society

Referee for abstracts submitted to conference proceedings volumes and books subsequently published:

Computability in Context: Computation and Logic in the Real World (book following the 2007 meeting of *Computability in Europe*).

Proceedings, *Computability in Europe*, Heidelberg, Germany, July 2009.

Proceedings, *Theory of Models and Computation*, Xi'an, China, April 2008.

Proceedings, *Computability in Europe*, Siena, Italy, June 2007.

Reviewer of research grant proposals submitted to:

National Science Foundation.

Marsden Fund, Royal Society of New Zealand.

CUNY Community College Collaborative Incentive Research Grants Program.

Member of the Programme Committee for the 2010 meeting of Computability in Europe, June-July 2010 in Ponta Delgada, the Azores, Portugal.

Member of the Organizing Committee for the First and Second *CUNY Workshops on Effective Mathematics of the Uncountable*, CUNY Graduate Center, New York, 18-22 August 2008 & 17-21 August 2009.

Member of the Organizing Committee for the meeting *Topics in Computability: A meeting in honor of Richard Shore*, Massachusetts Institute of Technology, 21-22 January 2007.

Member of the Organizing Committee for the *Stanley Tennenbaum Memorial Logic Conference*, sponsored by the Mid-Atlantic Mathematical Logic Seminar, CUNY Graduate Center, 7 April 2006.

Mathematics at CUNY:

PSC-CUNY Research Foundation Mathematics Panel member, 2009-10.

CUNY Graduate Center Logic Qualifying Exam committee member, 2009.

Lead organizer of the CUNY Logic Workshop, 2008-09.

Member of the Mathematics Department Personnel & Budget Committee, Queens College, CUNY, 2008-09.

Mentor for new faculty, Mathematics Department, Queens College, 2008-09.

CUNY Graduate Center Logic Qualifying Exam committee chairperson, 2007.

Mathematics Department Delegate, Academic Senate of Queens College, 2006-07, 2008-09.

CUNY Graduate Center Logic Qualifying Exam committee member, 2005.

PSC-CUNY Research Foundation Mathematics Panel member, 2003-04.

General CUNY Service:

Member, Evaluation Committee for the President's Grants for Innovative Teaching Projects, Queens College, Spring 2009.

Panelist, Faculty Workshop for Submission of External Funding Proposals, Queens College, 31 March 2009.

Past, Current, and Pending Support:

PSC-CUNY Research Award Proposal # PSCREG-41-413, "Fields and Computable Categoricity," pending.

National Science Foundation Division of Mathematical Sciences Foundations Program proposal, "Computability Theory, Facing Outwards," pending.

PSC-CUNY Research Award # 62632-00 40, “Computable Fields and Transcendence Degree,” funded at \$2960 for 2009-10.

Queens College Research Enhancement Program Award #90927-08 08, “Effective Mathematics and Uncountable Structures” funded at \$6200 for 2009.

PSC-CUNY Research Award # 61467-00 39, “Computability and Fields,” funded at \$3525 for 2008-09.

Templeton Foundation grant #13397, “Effective Mathematics of the Uncountable,” joint with N. Greenberg, J. Hamkins, & D. Hirschfeldt, for the program *Exploring the Infinite Phase I: Mathematics and Mathematical Logic*, funded at \$98,258.60 for 2008-09.

PSC-CUNY Research Award # 69723-00 38, “Locally Computable Structures,” funded at \$4017 for 2007-08.

NSF grant # DMS 0554841, *Collaboration in Computability*, for collaboration between U.S. and Russian computability theorists, joint with many other researchers, funded at \$75,000 for 2006-09. Principal Investigators: Wesley Calvert, Murray State University; Valentina Harizanov, George Washington University; Julia Knight, University of Notre Dame.

PSC-CUNY Research Award # 68470-00 37, “Computability Theory and Spectra of Turing Degrees,” funded at \$2992 for 2006-07.

CUNY Collaborative Incentive Research Grant # 80209-04-12, *CUNY Collaboration in Mathematical Logic*, jointly with A. Apter, J. Hamkins, R. Kossak, G. Leibman, and H. Schoutens, funded at \$74,922 for 2005-07.

PSC-CUNY Research Award # 67182-00-36, “Computability Theory and Applications,” funded at \$3311.41 for 2005-06.

PSC-CUNY Research Award # 60095-34-35, “Computable Model Theory,” funded at \$4150 for 2004-05.

Travel and VIGRE postdoc 2000-2003 supported by NSF grant # 9983660 to Cornell University.

Travel and collaboration in 2002 supported by NSF grant # DMS 0075899 for joint work between researchers in Russia, U.S.A., and Kazakhstan. Principal Investigator: Steffen Lempp, University of Wisconsin.

Seminar Talks:

“BSS Machines: Computability Without Search Procedures,” 6 November 2009, George Washington University Logic Seminar.

“Degrees of Categoricity of Algebraic Fields,” 16 April 2009, Notre Dame Logic Seminar.

“Difficulty of Factoring Polynomials and Finding Roots,” 27 February 2009, New York Algebra Colloquium.

“Degrees of Categoricity of Algebraic Fields,” 12 February 2009, George Washington University Logic Seminar.

“Degrees of Categoricity of Algebraic Fields,” 1 October 2008, M.I.T. Logic Seminar.

“Local Computability and Uncountable Structures,” 29 September 2008, Connecticut Logic Seminar.

“Difficulty of Factoring Polynomials and Finding Roots,” 12 September 2008, C.U.N.Y. Logic Workshop.

“Survey of Local Computability and Results on Computable Fields,” 18 July 2008, Logic Seminar, Sobolev Institute of Mathematics, Novosibirsk.

“Survey of Results on Computable Fields,” 10 July 2008, Department Seminar, Department of Algebra and Mathematical Logic, Chebotarev Research Institute, Kazan State University.

“Locally Computable Structures,” 25 January 2008, George Washington University Logic Seminar.

“ \mathbf{d} -Computable Categoricity for Algebraic Number Fields,” 18 January 2008, University of Chicago Logic Seminar.

“Computable Structures and Computable Categoricity,” 10 December 2007, Oberseminar Mathematische Logik, Rheinische Friedrich-Wilhelms-Universität Bonn.

“Locally Computable Structures,” 11 September 2007, Cornell University Logic Seminar.

“Locally Computable Structures,” 14 June 2007, Oberseminar Mathematische Logik, Rheinische Friedrich-Wilhelms-Universität Bonn.

“Locally Computable Structures,” 9 April 2007, University of Waterloo Logic Seminar, Waterloo, ON.

“Locally Computable Structures,” 6 April 2007, University of Chicago Logic Seminar.

“Locally Computable Structures,” 23 February 2007, C.U.N.Y. Logic Workshop.

“Computability over Ordinal Time and Space,” 19 February 2007, Connecticut Logic Seminar.

“Post’s Problem for Infinite Time Turing Machines,” 10 January 2007, New York Tutorial on Infinitary Computation.

“The Automorphism Spectrum,” 8 September 2006, C.U.N.Y. Logic Workshop.

“Computable Categoricity and Spectra,” 17 July 2006, Logic Seminar, Sobolev Institute of Mathematics, Novosibirsk.

“Locally Computable Structures,” 13 July 2006, Logic Seminar, Sobolev Institute of Mathematics, Novosibirsk.

“Spectra of Turing Degrees,” 20 February 2006, Connecticut Logic Seminar.

“The Low_n Turing Degrees and Spectra of Structures,” 15 February 2006, George Washington University Logic Seminar.

“Spectra of Turing Degrees,” 20 January 2006, University of Chicago Logic Seminar.

“Differentially Closed Fields,” six parts, 4 & 11 May, 21 & 28 September, 19 & 26 October 2005, C.U.N.Y. Model Theory Seminar.

“Spectrally Universal Structures,” 25 March 2005, George Washington University Logic Seminar.

“Order-Computable Sets,” 18 February 2005, C.U.N.Y. Logic Workshop.

“Order-Computable Sets,” 29 October 2004, George Washington University Logic Seminar.

“Computable Categoricity,” 8 October 2004, C.U.N.Y. Logic Workshop.

“Computable Categoricity for Trees,” 23 April 2004, George Washington University Logic Seminar.

“Infinite-Time Turing Machines,” 7 April 2004, Cornell University Logic Seminar.

“Spectrally Universal Structures,” 6 April 2004, Cornell University Logic Seminar.

“Embedding a Structure While Preserving its Spectrum,” 26 January 2004, Connecticut Logic Seminar.

“Undecidability and the Lattice of C.E. Turing Degrees,” 19 September 2003, C.U.N.Y. Logic Workshop.

“Spectra of Structures and Relations,” 12 September 2003, C.U.N.Y. Logic Workshop.

“Games on Finite Graphs,” two parts, 19 November & 3 December 2002, Cornell University Logic Seminar.

“Order-Computable Sets,” two parts, 30 October & 6 November 2002, Cornell University Logic Seminar.

“The Δ_2^0 -Spectrum of a Linear Order,” 18 October 2002, George Washington University Logic Seminar.

- “Computable Categoricity for Trees,” 24 July 2002, Logic Seminar, Sobolev Institute of Mathematics, Novosibirsk.
- “Ritt’s Algorithm for Systems of Algebraic Differential Equations,” two parts, 3 & 11 April 2002, Cornell University Logic Seminar.
- “Introduction to O-Minimal Theory,” four parts, 6, 13, 20 & 27 February 2002, Cornell University Logic Seminar.
- “Some Automorphisms of the Lattice of C.E. Sets,” 4 October 2001, Cornell University Logic Seminar.
- “Definability of Incompleteness for Friedberg Splittings,” 24 October 2000, Cornell University Logic Seminar.
- “Computable Categoricity and Trees,” 12 September 2000, Cornell University Logic Seminar.
- “Definable Incompleteness and Friedberg Splittings,” 10 February 2000, Notre Dame Logic Seminar.
- “The Δ_2^0 -Spectrum of a Linear Order,” 1 February 2000, Southern Wisconsin Logic Colloquium.