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1 Personal

Citizen of Norway. Permanent resident of the United States.

Transliterated form of name: *Bjoern Kjos-Hanssen*.

2 Employment

University of Hawai'i at Mānoa, Department of Mathematics

Professor, since 2015.

Associate professor, 2010–2015.

Assistant professor, 2007–2010.

Cornell University, Department of Mathematics

Visiting assistant professor, 2006–2007.

University of Connecticut, Storrs, Department of Mathematics

Postdoctoral fellow, 2004–2006.

Universität Heidelberg, Institut für Informatik

Marie Curie fellow of the European Community Programme "Improving Human Potential", 2002–2004.

3 Education

University of California, Berkeley

Doctor of Philosophy (PhD), Logic and the methodology of science, 2002. Dissertation: *Lattice initial segments of the Turing degrees*. Adviser: Theodore A. Slaman.

Universitetet i Oslo

Candidatus scientiarum (Master), Mathematics, 1997.

Candidatus magisterii (Bachelor), Mathematics, 1996.

4 Visiting positions

Sabbatical visitor, University of Oslo, Fall 2013.

Visiting associate professor, Department of Mathematics, University of California, San Diego, Winter and Spring 2011.

Member, Institute for Mathematical Sciences, National University of Singapore, Summer 2005.

5 Selected awards and grants

2015 **NSF conference grant**. Title: "11th International Conference on Computability, Complexity and Randomness". Principal Investigator. Award Number: 1545707. Total cost: $22,480. Dates: November 1, 2015 – October 31, 2016. Dates of the conference: January 4–8, 2016.

2014 **Simons Foundation: Collaboration Grants For Mathematicians**. Title: "Automatic complexity". Principal investigator. Award Number: 315188. Total cost: $35,000. Dates: September 1, 2014 – August 31, 2019.

2009 **NSF standard grant** "Computability and probability". Principal investigator, NSF-DMS-0901020. Total cost: $199,892. Dates: 2009-08-15 – 2013-07-31.

2007 **Focused Research Group** - Collaborative Research: Algorithmic Randomness. Co-PI with Eric W. Allender, Douglas A. Cenzer, Peter Cholak, Lance Fortnow, Denis R. Hirschfeldt, John M. Hitchcock, Jack Lutz, R. Daniel Mauldin, Joseph S. Miller, Theodore A. Slaman, Stephen G. Simpson, and Rebecca Weber, NSF-DMS-0652669. Total Cost: $500,000. Travel and overhead for Kjos-Hanssen: $27,000. Dates: 2007-07-01 – 2010-06-30.

2002 **Marie Curie Fellowship** of the European Community Programme "Improving Human Potential", Contract No. HPMF-CT-2002-01888, University of Heidelberg, Germany, awarded 2002-09-13 to 2004-09-12 but only served until Jan. 2004. Title: "Computability theory, effective forcing constructions, and applications to degree structures". Two-year full time research fellowship, total cost EUR 139,950.

6 Research interests

Mathematical logic, computability theory, algorithmic randomness, combinatorics, finance, formal language theory.

7 Service

7.1 *Department of Mathematics*

2010 Webmaster (since November 18, 2010).

2012 Grant coordinator (since August 2012).

2014 Temporary assistant professor hiring committee (2013–2014; and 2014–2016 as committee chair).

2015 Policy committee (workload policy).

2015 Assessment committee (math major assessment via the Senior Seminar, MATH 480).

7.2 *College of Natural Sciences*

2014–2017 Program and Curriculum Committee.

7.3 *University of Hawaii at Manoa*

2012–2014 Foundations Board.

7.4 *The profession*

Served on one Tenure and Promotion Review Committee and served as External Reviewer for one tenure case.

8 Conference organization

Chair of the organizing committee for CCR (Computability, Complexity and Randomness) 2016, Honolulu, HI, January 4–8, 2016 (also Program Committee member).

Service on committees.

[1] Computability in Europe, Milano, Italy, June 2013. Program committee member.

[2] Bjørn Kjos-Hanssen and Adolf Mader (local organizers), Western Sectional Meeting of the American Mathematical Society, University of Hawai'i at Mānoa, March 2012.

[3] 6th Conference on Complexity, Computability and Randomness, Cape Town, South Africa, January 2011. Program committee member.

[4] 5th Conference on Logic, Computability and Randomness, Notre Dame, Indiana, May 2010. Program committee member.

[5] NSF Focused Research Group in Algorithmic Randomness, *Informal Gathering*, University of Hawai'i at Mānoa, January 2010. Chair of local and scientific arrangements.

[6] Winter Meeting, Association of Symbolic Logic (Joint Mathematics Meetings), San Francisco, January 2010. Program committee member.

Organizing special sessions.

[1] Doug Cenzer and Bjørn Kjos-Hanssen (organizers), *Special Session on Classical Computability Theory*, Computability in Europe, Sofia, Bulgaria, June 2011.

[2] Cameron E. Freer and Bjørn Kjos-Hanssen (organizers), *Special Session on Computability and Complexity*, American Mathematical Society Sectional Meeting, University of Hawai'at Mānoa, March 2012.

9 Publications

9.1 *Journal articles*

[1] Bjørn Kjos-Hanssen, *Local initial segments of the Turing degrees*, Bull. Symbolic Logic **9** (2003), no. 1, 26–36. MR1959967 (2003m:03063)

[2] Klaus Ambos-Spies, Bjørn Kjos-Hanssen, Steffen Lempp, and Theodore A. Slaman, *Comparing DNR and WWKL*, J. Symbolic Logic **69** (2004), no. 4, 1089–1104. MR2135656 (2006c:03061)

[3] Bjørn Kjos-Hanssen, André Nies, and Frank Stephan, *Lowness for the class of Schnorr random reals*, SIAM J. Comput. **35** (2005), no. 3, 647–657 (electronic). MR2201451 (2006j:68051)

[4] Stephen Binns, Bjørn Kjos-Hanssen, Manuel Lerman, and Reed Solomon, *On a conjecture of Dobrinen and Simpson concerning almost everywhere domination*, J. Symbolic Logic **71** (2006), no. 1, 119–136. MR2210058 (2006m:03070)

[5] Bjørn Kjos-Hanssen, *Low for random reals and positive-measure domination*, Proc. Amer. Math. Soc. **135** (2007), no. 11, 3703–3709 (electronic). MR2336587 (2008g:03070)

[6] Stephen Binns, Bjørn Kjos-Hanssen, Manuel Lerman, James H. Schmerl, and Reed Solomon, *Self-embeddings of computable trees*, Notre Dame J. Form. Log. **49** (2008), no. 1, 1–37. MR2376778 (2008m:03093)

[7] Denis R. Hirschfeldt, Carl G. Jockusch Jr., Bjørn Kjos-Hanssen, Steffen Lempp, and Theodore A. Slaman, *The strength of some combinatorial principles related to Ramsey's theorem for pairs*, Computational prospects of infinity. Part II. Presented talks, Lect. Notes Ser. Inst. Math. Sci. Natl. Univ. Singap., vol. 15, World Sci. Publ., Hackensack, NJ, 2008, pp. 143–161. MR2449463 (2009i:03038)

[8] Stephen Binns and Bjørn Kjos-Hanssen, *Finding paths through narrow and wide trees*, J. Symbolic Logic **74** (2009), no. 1, 349–360. MR2499434 (2010b:03012)

[9] Bjørn Kjos-Hanssen, *Infinite subsets of random sets of integers*, Math. Res. Lett. **16** (2009), no. 1, 103–110. MR2480564 (2010b:03051)

[10] Bjørn Kjos-Hanssen and Anil Nerode, *Effective dimension of points visited by Brownian motion*, Theoret. Comput. Sci. **410** (2009), no. 4-5, 347–354. MR2493984 (2009k:68100)

[11] Bjørn Kjos-Hanssen and André Nies, *Superhighness*, Notre Dame J. Form. Log. **50** (2009), no. 4, 445–452 (2010), DOI 10.1215/00294527-2009-020. MR2598873

[12] Bjørn Kjos-Hanssen, *The probability distribution as a computational resource for randomness testing*, J. Log. Anal. **2** (2010), Paper 10, 13. MR2737709

[13] Bjørn Kjos-Hanssen, André Nies, Frank Stephan, and Liang Yu, *Higher Kurtz randomness*, Ann. Pure Appl. Logic **161** (2010), no. 10, 1280–1290, DOI 10.1016/j.apal.2010.04.001. MR2652197

[14] Richard A. Shore and Bjørn Kjos-Hanssen, *Lattice initial segments of the hyperdegrees*, J. Symbolic Logic **75** (2010), no. 1, 103–130. MR2605884

[15] Bjørn Kjos-Hanssen and Tamás Szabados, *Kolmogorov complexity and strong approximation of Brownian motion*, Proceedings of the American Mathematical Society **139** (2011), no. 9, 3307–3316.

[16] Bjørn Kjos-Hanssen, Wolfgang Merkle, and Frank Stephan, *Kolmogorov complexity and the recursion theorem*, Transactions of the American Mathematical Society **363** (2011), no. 10, 5465–5480.

[17] Bjørn Kjos-Hanssen, *A strong law of computationally weak subsets*, Journal of Mathematical Logic **11** (2011), 1–10.

[18] David Diamondstone and Bjørn Kjos-Hanssen, *Martin-Löf randomness and Galton-Watson processes*, Ann. Pure Appl. Logic **163** (2012), no. 5, 144–153.

[19] Bjørn Kjos-Hanssen, Joseph S. Miller, and D. Reed Solomon, *Lowness notions, measure, and domination*, Journal of the London Mathematical Society **85** (2012), no. 3, 869–888.

[20] Bjørn Kjos-Hanssen, Jason R. Teutsch, and Frank Stephan, *Arithmetic complexity via effective names for random sequences*, ACM Transactions on Computational Logic **13** (2012), no. 3, Art. 24, 18 pp.

[21] Cameron Freer and Bjørn Kjos-Hanssen, *Randomness extraction and asymptotic Hamming distance*, Logical Methods in Computer Science **9** (2013), no. 3, Paper 27, 1–14.

[22] Cameron Freer, Bjørn Kjos-Hanssen, André Nies, and Frank Stephan, *Algorithmic aspects of Lipschitz functions*, Computability **3** (2014), no. 1, 45–61.

[23] Bjørn Kjos-Hanssen, Antoine Taveneaux, and Neil Thapen, *How much randomness is needed for statistics?*, Annals of Pure and Applied Logic **165** (2014), no. 9, 1470–1483.

[24] Bjørn Kjos-Hanssen, Paul Kim Long V. Nguyen, and Jason Rute, *Algorithmic randomness for Doob's martingale convergence theorem in continuous time*, Logical Methods in Computer Science **10** (2014), no. 4, Paper 12, 1–35.

[25] Kayleigh Hyde and Bjørn Kjos-Hanssen, *Nondeterministic automatic complexity of overlap-free and almost square-free words*, Electronic Journal of Combinatorics **22** (2015), no. 3, Paper 3.22. 18 pp.

[26] Bjørn Kjos-Hanssen, *Kolmogorov structure functions for automatic complexity*, Theoretical Computer Science **607** (2015), no. 3, 435–445, to appear.

[27] Malihe Alikhani, Bjørn Kjos-Hanssen, Amirarsalan Pakravan, and Babak Saadat, *Pricing complexity options*, Algorithmic Finance **4** (2015), no. 3-4, 127–137, DOI 10.3233/AF-150050. MR3454815

[28] Katie Brodhead, Mushfeq Khan, Bjørn Kjos-Hanssen, William A. Lampe, Paul Kim Long V. Nguyen, and Richard A. Shore, *The strength of the Grätzer–Schmidt theorem*, Archive for Mathematical Logic **5–6** (2016), to appear, DOI 10.1007/s00153-016-0488-5.

9.2 *Conference papers*

These are of two types:

A. Published articles that have not yet been superseded by journal articles:

[1] Paul Brodhead and Bjørn Kjos-Hanssen, *Numberings and randomness*, Mathematical theory and computational practice, Lecture Notes in Comput. Sci., vol. 5635, Springer, Berlin, 2009, pp. 49–58. MR2545879

[2] Bjørn Kjos-Hanssen and Jan Reimann, *The strength of the Besicovitch-Davies theorem*, Programs, proofs, processes, Lecture Notes in Comput. Sci., vol. 6158, Springer, Berlin, 2010, pp. 229–238, DOI 10.1007/978-3-642-13962-8_26. MR2678134

[3] Bjørn Kjos-Hanssen, Frank Stephan, and Sebastiaan A. Terwijn, *Covering the recursive sets*, Evolving computability, Lecture Notes in Comput. Sci., vol. 9136, Springer, Cham, 2015, pp. 44–53, DOI 10.1007/978-3-319-20028-6_5. MR3382344

[4] Bjørn Kjos-Hanssen, *Permutations of the integers induce only the trivial automorphisms of the Turing degrees*, Downey Festschrift, Lecture Notes in Comput. Sci., Springer, 2016.

[5] ———, *A rigid cone in the truth-table degrees with jump*, Downey Festschrift, Lecture Notes in Comput. Sci., Springer, 2016.

B. Published articles that have been superseded by journal articles:

[1] Bjørn Kjos-Hanssen, Wolfgang Merkle, and Frank Stephan, *Kolmogorov complexity and the recursion theorem*, STACS 2006, Lecture Notes in Comput. Sci., vol. 3884, Springer, Berlin, 2006, pp. 149–161. MR2249365 (2008a:68100)

[2] Bjørn Kjos-Hanssen and Anil Nerode, *The law of the iterated logarithm for algorithmically random Brownian motion*, Logical foundations of computer science, Lecture Notes in Comput. Sci., vol. 4514, Springer, Berlin, 2007, pp. 310–317. MR2389734 (2009a:60030)

[3] Paul Brodhead and Bjørn Kjos-Hanssen, *The strength of the Grätzer-Schmidt theorem*, Mathematical theory and computational practice, Lecture Notes in Comput. Sci., vol. 5635, Springer, Berlin, 2009, pp. 59–67. MR2545880

[4] David Diamondstone and Bjørn Kjos-Hanssen, *Members of random closed sets*, Mathematical theory and computational practice, Lecture Notes in Comput. Sci., vol. 5635, Springer, Berlin, 2009, pp. 144–153. MR2545889

[5] Bjørn Kjos-Hanssen, Antoine Taveneaux, and Neil Thapen, *How much randomness is needed for statistics?*, Computability in Europe, Lecture Notes in Comput. Sci., vol. 7318, Springer, Berlin, 2012, pp. 395–404.

[6] Kayleigh K. Hyde and Bjørn Kjos-Hanssen, *Nondeterministic automatic complexity of almost square-free and strongly cube-free words*, The 20th International Computing and Combinatorics Conference (COCOON 2014), Lecture Notes in Comput. Sci., vol. 8591, Springer, Berlin, 2014, pp. 61–70.

[7] Bjørn Kjos-Hanssen, *Kolmogorov structure functions for automatic complexity in computational statistics*, The 8th International Conference on Combinatorial Optimization (COCOA 2014), Lecture Notes in Comput. Sci., vol. 8881, Springer, Berlin, 2014, pp. 652–665.

Preprints

[1] Bjørn Kjos-Hanssen, *Lattice initial segments of the Turing degrees below* $0'$, arXiv 0901.3876.

10 Reviewing and refereeing

Referee for many journals including Proceedings of the AMS, Journal of Symbolic Logic, Bulletin of Symbolic Logic, Notre Dame Journal of Formal Logic, Journal of Mathematical Logic, Mathematical Logic Quarterly, and Lecture Notes in Computer Science.

Reviewer of grant proposals for various agencies.

11 Courses taught

11.1 *Graduate courses*

Kolmogorov complexity (Fall 2006),

Set theory (Fall 2006),

PDEs and stochastic calculus (Fall 2012),

Recursive functions and complexity (Spring 2014),

Stochastic processes (Spring 2014)

11.2 *Undergraduate courses*

Probability, Statistical inference, Mathematical logic, Set theory, Honors Analysis II, Mathematical modeling, Geometry, Abstract algebra, Calculus I–IV, Linear algebra and differential equations, Discrete mathematics, Survey of Mathematics, Fundamentals of algebra and geometry.

12 Mentoring activity

12.1 *Mentoring of undergraduate students*

1. Alberto J. Evangelista

   Undergraduate research: Google Distance Between Words, presented at *Frontiers in Undergraduate Research*, University of Connecticut, 2006

2. Travis Hee Wai

   Undergraduate research assistant (funded by NSF grant DMS-0901020), UH-Mānoa, Fall 2010

12.2 *Mentoring of graduate students*

PhD

1. Paul Kim Long V. Nguyen

   PhD in Mathematics

   Dissertation title: Complexity of index sets of computable lattices

   Date of completion: July 3, 2014

   Subsequent position: University of Hawai'i – Leeward Community College (tenure-track)

Master

1. Quinn Culver

   Master of Arts in Mathematics, UH-Mānoa, Master's committee: Bjørn Kjos-Hanssen (chair) and Ralph Freese

   Title: *Polynomial clone reducibility* (published in *Archive for Mathematical Logic*, 2013)

   Graduate research assistant (funded by NSF grant DMS-0901020), Spring 2010

   Subsequent position: PhD program, University of Notre Dame

   Date of completion: 2010

   Paper published in *Archive for Mathematical Logic*

2. Kayleigh Hyde

   Master of Arts in Mathematics, UH-Mānoa, Master's committee: Bjørn Kjos-Hanssen (chair) and Mia Minnes (UCSD)

   Title: *Nondeterministic finite state complexity*

   Date of completion: 2013

   Subsequent position: PhD program, Chapman University

   Joint paper published in COCOON 2014 and *Electronic J. of Combinatorics*

3. Amirarsalan Pakravan

   Master of Science in Financial Engineering

   Title: *Pricing a perpetual option based on nondeterministic automatic complexity*

   Subsequent position: Student in George Washington University Master of Finance program

   Date of completion: 2013

   Joint paper published in *Algorithmic Finance*

4. Babak Saadat

   Master of Science in Financial Engineering

   Title: *Pricing a perpetual option based on nondeterministic automatic complexity*

   Date of completion: 2013

   Joint paper published in *Algorithmic Finance*

5. Malihe Alikhani

MA in Mathematics
Title: *American option pricing and optimal stopping for success runs*
Date of completion: 2014
Subsequent position: PhD program, Rutgers
Joint paper published in *Algorithmic Finance*

Committee member

2012 Erin Caulfield

Master of Arts in Mathematics, UH-Mānoa, Master's committee: David A. Ross (chair) and Bjørn Kjos-Hanssen, 2012.

2013 Nematollah Iri

Master of Science in Electrical Engineering, UH-Mānoa, 2013. Master's committee consisted of Narayana P. Santhanam (EE), Gürdal Arslan (EE), N. Gaarder (EE), and myself.

2013 Jason M. Rute (Carnegie Mellon University)

Junior Researcher, 100% funded by NSF grant DMS-0901020, Spring 2013, UH-Mānoa.

Subsequent position: Postdoc, Penn State, Mathematics.

Dissertation committee consisted of Jeremy Avigad (CMU Philosophy and Math, chair), James W. Cummings (CMU Math, large cardinals), Richard Statman (CMU Math, lambda calculus), and myself.

2015 Tristan Holmes

Dissertation committee consisted of Nation (chair), Freese, Manes, myself, and Anders Høst-Madsen.

2016 Jared Mukai

Dissertation committee consisted of Ramsey (chair), David Ross, Daisuke Takagi, and Lynne Wilkens.

2016 Meysam Asadi

Dissertation committee consisted of Narayana Prasad Santhanam (chair), myself, Alek Kavcic, Anders Høst-Madsen, and Anthony Kuh.

2017 Alejandro Guillen

Dissertation committee consisted of Ralph Freese (chair), myself, J.B. Nation, and others.

12.3 *Mentoring of postdocs*

1. Katie Brodhead

   Lecturer, Spring 2008 and Temporary Assistant Professor, Fall 2008 - Spring 2009, UH-Mānoa

   Subsequent position: Virginia State University, 2009-2010

   Current position: Florida Atlantic University (visiting assistant professor), 2013-

2. Cameron E. Freer

   Junior Researcher, 75% funded by NSF grant DMS-0901020, Fall 2010 and Spring 2011, UH-Mānoa

   Subsequent position: Massachusetts Institute of Technology, 2011-2013, postdoctoral fellowship funded 100% by the John Templeton Foundation.

3. Jason M. Rute

   Junior Researcher, 100% funded by NSF grant DMS-0901020, Spring 2013, UH-Mānoa

   Subsequent position: Penn State postdoc

PhD from Carnegie Mellon University in Summer 2013; listed here because the position was held right before conferral of PhD

4. Mushfeq Khan

   Temporary Assistant Professor, 2014 – 2017

   Subsequent position: TBD

   PhD from University of Wisconsin, 2014

5. Achilles Beros

   Temporary Assistant Professor, 2015 – 2017

   Subsequent position: TBD

   PhD from University of Wisconsin, 2013

13 Talks

13.1 *Plenary Speaker at Conferences and Workshops*

The titles given are the titles of the talks.

[1] *Kolmogorov structure functions for automatic complexity in computational statistics*, The 8th Annual International Conference on Combinatorial Optimization and Applications, Maui, Hawai'i, December 19, 2014. Plenary speaker.

[2] *Nondeterministic automatic complexity of almost square-free and strongly cube-free words*, 9th International Conference on Computability, Complexity, and Randomness, National University of Singapore, June 13, 2014. Plenary speaker.

[3] *Brownian motion and Kolmogorov complexity / Teaching asset pricing using GTP*, Workshop on game-theoretic probability and related topics, University of Tokyo, Japan, November 14, 2012. Plenary speaker.

[4] *Recovering randomness from an asymptotic Hamming distance*, Workshop on Computability Theory, University of San Francisco, CA, March 2011. Plenary speaker.

[5] *Democracy is the best form of randomness extraction*, 5th Conference of Logic, Computability, and Randomness, Notre Dame, IN, May 2010. Plenary speaker.

[6] *Democracy is the best form of randomness extraction*, Annual Meeting, Association of Symbolic Logic, Washington, DC, March 2010. Plenary speaker.

[7] *Feeble subsets*, 4th Conference on Logic, Computability and Randomness, Marseille, France, July 1, 2009. Plenary speaker.

[8] *Members of random closed sets*, Effective Randomness NSF Focused Research Group Workshop, University of Wisconsin-Madison, May 30, 2009. Plenary speaker.

[9] *Birth-death processes, bushy trees, and a law of weak subsets*, Computability, Combinatorics, and Reverse Mathematics, Banff, Canada, December 10, 2008. Plenary speaker.

[10] *Effective Fourier dimension*, 3rd Conference on Logic, Computability, and Randomness, Nanjing, China, May 19, 2008. Plenary speaker.

[11] *Infinite subsets of random sets*, Effective Randomness NSF Focused Research Group Workshop, University of Chicago, September 15, 2007. Plenary speaker.

[12] *Brownian motion and Kolmogorov complexity*, Summer Meeting ("Logic Colloquium"), Association of Symbolic Logic, Wroclaw, Poland, July 14, 2007. Plenary speaker.

[13] *Eventually different functions*, Kolmogorov Complexity and Applications, Dagstuhl, Germany, February 2, 2006. Plenary speaker.

[14] *Positive-measure domination*, Program on Computational Prospects of Infinity, National University of Singapore, July 29, 2005. Plenary speaker.

[15] *A rigid cone in the truth-table degrees with jump*, Workshop on Computability and Logic, Heidelberg, Germany, June 25, 2003. Plenary speaker.

13.2 *Special session talks*

The titles given are the titles of the special sessions.

[1] *Computability theory and its applications*, AMS Sectional Meeting, Notre Dame, IN, October 2010.

[2] *Algorithmic randomness*, Computability in Europe, Heidelberg, Germany, July 20, 2009.

[3] *Computability*, 10th Asian Logic Conference, Kobe, Japan, September 5, 2008.

[4] *Computability theory and computable mathematics*, Annual Meeting, Association of Symbolic Logic, Irvine, California, March 29, 2008.

[5] *Computability theory*, Joint Meeting, American Mathematical Society and New Zealand Mathematical Society, Wellington, New Zealand, December 15, 2007.

[6] *Computability and randomness*, Theory and applications of models of computation, Fudan University, Shanghai, China, May 24, 2007.

[7] *Computability theory*, Annual Meeting, Association of Symbolic Logic, Gainesville, Florida, March 10, 2007.

[8] *Computability theory in honor of Manuel Lerman's retirement*, Sectional Meeting, American Mathematical Society, Storrs, Connecticut, October 27, 2006.

[9] *Computability theory*, European Summer Meeting ("Logic Colloquium"), Association of Symbolic Logic, Nijmegen, Netherlands, July 28, 2006.

[10] *Model theory and computability*, Sectional Meeting, American Mathematical Society, Notre Dame, April 9, 2006.

[11] *Computability and randomness*, Annual Meeting, Association of Symbolic Logic, Stanford, California, March 21, 2005.

13.3 Other presentations

[1] *Linear feedback state registers fool finite automata*, Society for Industrial and Applied Mathematics (SIAM) Conference on Discrete Mathematics, Atlanta, Georgia, June 9, 2016. Poster.

[2] *Obligations in a context*, North American Annual Meeting of the Association of Symbolic Logic, Storrs, Connecticut, May 23, 2016. Contributed talk, 20 minutes.

[3] *Permutations of the integers do not induce nontrivial automorphisms of the Turing degrees*, Computability, Complexity and Randomness, Heidelberg, Germany, June 25, 2015. Contributed talk, 30 minutes.

[4] *Kolmogorov structure functions for automatic complexity*, Varieties of Algorithmic Information, Heidelberg, Germany, June 16, 2015. Contributed talk, 45 minutes.

[5] *Automatic complexity*, College of Natural Sciences Dean's office Brown bag lunch talks series, Honolulu, Hawai'i, April 30, 2015.

[6] *Numberings and randomness*, Computability in Europe, Heidelberg, Germany, July 23, 2009. Contributed talk on a paper accepted for the conference proceedings.

[7] *The strength of the Grätzer-Schmidt theorem*, Computability in Europe, Heidelberg, Germany, July 21, 2009. Contributed talk on a paper accepted for the conference proceedings.

[8] *The law of the iterated logarithm for algorithmically random Brownian motion*, Logical Foundations of Computer Science, CUNY Graduate Center, New York City, June 5, 2007. Contributed talk on a paper accepted for the conference proceedings.

[9] *Some computably random series of functions*, Workshop on Harmonic and Geometric Analysis and Applications, Baton Rouge, Louisiana, January 4, 2007. Invited talk.

[10] *Almost everywhere domination and K-triviality*, Computability in Europe, Amsterdam, Netherlands, June 12, 2005. Contributed talk.

13.4 Departmental seminars

The list does not include talks in seminars where I was one of the principal organizers; expository talks given as part of collaborative seminar series; or talks given prior to submitting my doctoral dissertation.

[1] *Kolmogorov structure functions for automatic complexity*, Probability Seminar, University of Washington, Seattle, June 1, 2015. 50 minute lecture.

[2] *Nondeterministic finite state complexity*, Logic Seminar, Universitetet i Oslo, September 5, 2013. three 2-hour lectures, three separate weeks.

[3] *Recovering randomness from an asymptotic Hamming distance*, Berkeley Logic Colloquium, University of California, Berkeley, March 11, 2011.

[4] *Infinite subsets of random sets of natural numbers*, Probability seminar, University of Washington, December 5, 2008.

[5] *Asarin's theorem on incompressible random walk*, Recursion theory seminar, University of California, Berkeley, October 24, 2008.

[6] *Algorithmic dimension of points visited by Brownian motion*, analysis seminar, University of Hawai'i at Mānoa, October 10, 2007.

[7] *Percolation limit sets and other random closed sets*, Logic seminar, Nanjing University, May 29, 2007.

[8] *Brownian motion and Kolmogorov complexity*, public talk, Technische Universität Darmstadt, Germany, February 27, 2007.

[9] *Brownian motion and Kolmogorov complexity*, Logic seminar, George Washington University, January 29, 2007.

[10] Southern Wisconsin Logic Colloquium, University of Wisconsin, Madison, October 7, 2006.

[11] *Schnorr random paths of Brownian motion*, Logic seminar, Pennsylvania State University, University Park, October 3, 2006.

[12] *Computably random paths of Brownian motion*, Logic seminar, University of Waterloo, September 22, 2006.

[13] *Complex oscillations and the law of the iterated logarithm*, Logic seminar, Cornell University, September 6, 2006.

[14] *Complex oscillations and the law of the iterated logarithm*, Oberseminar, Mathematische Logik und Theoretische Informatik, University of Heidelberg, Germany, July 18, 2006.

[15] *Automatic meaning discovery using Google*, Σ seminar, Department of Mathematics, University of Connecticut, February 22, 2006.

[16] *Almost everywhere domination and K-triviality*, Oberseminar, Mathematische Logik und Theoretische Informatik, University of Heidelberg, Germany, June 14, 2005.

[17] Logic seminar, University of Notre Dame, April 12, 2005.

[18] *Weak recursive degrees*, Logic seminar, Cornell University, March 9, 2005.

[19] *Almost everywhere domination*, Logic seminar, Cornell University, March 8, 2005.

[20] *Eventually different functions*, Connecticut logic seminar, Wesleyan University, October 4, 2004.

[21] *Reverse mathematics and diagonally non-recursive functions*, Connecticut logic seminar, Wesleyan University, March 1, 2004.

[22] *Reverse mathematics and diagonally non-recursive functions*, Oberseminar, Mathematische Logik und Theoretische Informatik, University of Heidelberg, Germany, December 9, 2003.

[23] *Initial segments of the Turing degrees with a view toward automorphisms*, Oberseminar, Mathematische Logik und Theoretische Informatik, University of Heidelberg, Germany, September 24, 2002.

Last updated: June 20, 2016

`http://math.hawaii.edu/wordpress/bjoern/`