Lance Fortnow

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PROFESSIONAL EXPERIENCE

Illinois Institute of Technology, Chicago

Professor, Department of Computer Science, August 2019 - Present
Founding Dean, College of Computing, June 2020-June 2025
Dean, College of Science, August 2019 - May 2020

- Created College of Computing and grew it to the largest on campus by student degrees
- Oversaw 64 faculty, 14 staff, $15M budget, $4.3M in research expenditures and over 3000 on-campus students
- Founded Endowed Grainger Computing Innovation Prize, leading to multiple startups
- Developed an active advisory board and strategic plan for the college
- Established partnerships with community colleges and high schools to broaden student representation

Oxford University, Oxford, United Kingdom

Visiting Fellow, Magdalen College, January 2026-March 2026

Georgia Institute of Technology, Atlanta

Professor and Chair, School of Computer Science, July 2012 - August 2019

- Oversaw 35 faculty, 12 staff, and a $6M budget
- Hired 17 new faculty, dramatically increasing junior faculty representation
- Promoted interdisciplinary research by recruiting faculty spanning multiple areas
- Assisted in teaching the OMSCS online master's program
- Developed "ML for Systems, Systems for ML" policy to focus on AI's role in computing

Toyota Technological Institute at Chicago, Chicago

Adjoint Professor, February 2007 - August 2018

- Led TTI-Chicago local academic advisory committee from 2006 until 2012

Northwestern University, Evanston

Professor, Electrical Engineering and Computer Science, January 2008 - June 2012
Professor, Kellogg Graduate School of Management (Courtesy), (January 2008 - June 2012

University of Chicago, Chicago

Professor, Computer Science, September 2003 - December 2007
Associate Professor, Computer Science, July 1994 - August 1999

Assistant Professor, Computer Science, July 1989 - June 1994

NEC Research Institute, Princeton — *Senior Research Scientist*

Senior Research Scientist, September 1999 - September 2003

EDUCATION

Massachusetts Institute of Technology, Cambridge

Ph.D. in Applied Mathematics, June 1989

- Thesis: *Complexity Theoretic Aspects of Interactive Proof Systems*
- Advisor: Michael Sipser

Cornell University, Ithaca

Bachelor of Arts in Computer Science and Mathematics, May 1985

- Summa Cum Laude in Mathematics, Cum Laude in Computer Science
- Kieval Prize for Best Graduating Mathematics Major, Phi Beta Kappa and Phi Kappa Phi Honor Societies

AWARDS

FOCS Test of Time Awards, 2020 for two 1990 papers

EATCS-IPEC Nerode Prize, 2014

ACM SIGACT Distinguished Service Award, 2014.

ACM Fellow, 2007

NSF Presidential Faculty Fellow, 1992

Fulbright Scholar in The Netherlands, 1996.

Office of Naval Research Graduate Fellow, 1985.

Kieval Prize for best graduating mathematics major at Cornell, 1985.

Phi Beta Kappa and **Phi Kappa Phi** honor fraternities.

STUDENTS ADVISED

Graduates have secured positions at Oxford, University of Colorado, University of Wisconsin, Université Paris Cité, Rochester Institute of Technology, and Google.

- **PhD Students Advised**: Arefin Huq (Georgia Tech, May 2016), Joshua Grochow (Chicago, June 2012), Varsha Dani (Chicago, March 2008), Jason Teutsch (Indiana, January 2007), Rahul Santhanam (Chicago, June 2005), Dieter van Melkebeek (Chicago, June 1999, ACM Doctoral Dissertation Award), Sophie Laplante (Chicago, December 1997), Lide Li (Chicago, August 1993), Carsten Lund (Chicago, March 1991, ACM Doctoral Dissertation Series Winner)
- **Joint research included in Ph.D. Theses**: André Souto (Porto, March 2011), Luis Antunes (Porto, February 2002), Tuğkan Batu (Cornell, August 2001), John Rogers (Chicago, June 1995), Stephen Fenner (Chicago, June 1991).

- Supervised Illinois Math and Science Academy high school student Adam Kalinich 2010-2011. Kalinich chosen as an Intel Science Finalist in 2012 for this research.

EDITORIAL POSITIONS

- **Founding Editor-in-Chief**, ACM Transactions on Computation Theory (2007-2010)
- **Editor,** Journal of the ACM (2005-2010)
- **Editor,** Lecture Notes in Logic (2003-2008)
- **Editor,** Information and Computation (2001-2009)
- Communications of the ACM **News Board** (2024-)
- **Scientific Board**, Electronic Colloquium on Computational Complexity (2005-2008)
- **Computational Complexity Columnist**, Bulletin of the European Association for Theoretical Computer Science (2000-2004)

SERVICE AND LEADERSHIP

- **CRA Board** (2012-2015)
- **Council of the CRA Computing Community Consortium** (2010-2013)
- **ACM SIGACT Chair** (2009-2012), Vice-Chair (2005-2009)
- **Chair**, Local Academic Advisory Committee, TTI-Chicago (2006-2012)
- **External Review Committees**: Iowa State CS (2019), University of Michigan CSE (2019), Governors State CS (2022), National University of Singapore (Chair, 2023)
- **Panelist** for NSF and other funding agencies

PROGRAM COMMITTEES AND CONFERENCE ORGANIZATION

- **Steering Committee Chair**, IEEE Conference on Computational Complexity (2000-2006)
- **General Chair**, ACM Conference on Electronic Commerce (2008)
- **Organizer**, DIMACS Special Focus on Computation and the Socio-Economic Sciences (2004-2007)
- **Workshop Organizer**, Dagstuhl (2002, 2004, 2007, 2009)
- **Program Committee**, IEEE Conference on Computational Complexity (1995, 1999 - Chair, 2008, 2014)
- **Program Committee**, ACM Conference on Electronic Commerce (2004, 2006, 2009 - Co-Chair)
- **Program Committee**, IEEE Symposium on the Foundations of Computer Science (2002, 2006)
- **Program Committee**, ACM Symposium on the Theory of Computing (1997, 2013)

PUBLICATIONS AND OUTREACH

- **Over 130 journal and conference publications**
- **12,000+ citations, H-index:** 49
- **Author** of *The Golden Ticket: P, NP, and the Search for the Impossible*
- **Blogger and Social Media Presence**
    - Computational Complexity Blog founded in 2002 with thousands of followers

Major Invited Talks

"The Death of Expertise," TEDx Illinois Tech, November 23, 2024.

"The Early Days of Interactive Proofs," Computer Science Research Week, National University of Singapore, January 6, 2020.

"Computer Science in Six-Tenths of a Second," Distinguished Lecture, University of Massachusetts at Amherst College of Information and Computer Sciences, October 30, 2018.

"Computer Science in Six-Tenths of a Second: What Happens After Hitting ENTER in a Google Search," Frontiers in Science Lecture, Georgia Institute of Technology, April 19, 2018.

"Bounding Rationality with Computation," Computability, Complexity and Randomness Conference, University of Hawaii, January 4-8, 2016.

"The P v NP Problem in the Era of Fast Computing," London Mathematical Society 150th Anniversary Computer Science Colloquium, September 17, 2015.

"Nondeterministic Separations," Invited Speaker, 12th Annual Conference on Theory and Applications of Models of Computation, Singapore, May 20, 2015

"Bounding Rationality by Computational Complexity," Hitachi Distinguished Lecture, University of Oklahoma Computer Science, February 6, 2015.

"Bounding Rationality with Computational Complexity," University at Buffalo Computer Science and Engineering Distinguished Speaker, April 3, 2014.

"A Personal View of the P versus NP Problem," Stony Brook University Computer Science Distinguished Lecturer, November 18, 2013.

"A Personal View of the P versus NP Problem," Clay Research Conference, Oxford, England, October 2, 2013.

"A Personal View of the P versus NP Problem," Computability in Europe European Association for Computer Science Logic Plenary Lecture, Milan, Italy, July 1, 2013.

"Bounding Rationality by Computational Complexity," Noonan Distinguished Lecture, Georgia Tech, April 19, 2012.

"Bounding Rationality by Computational Complexity," Computer Science and Engineering Distinguished Lecture, Texas A& M, February 15, 2012.

"P Versus NP: An Epic Struggle", Class of 1960 Scholars Lecture in Computer Science, Williams College, December 2, 2010.

"Bounding Rationality by Computational Complexity," Inaugural workshop of the Center for Research in the Foundations of Electronic Markets in Aarhus, Denmark, October 13, 2010.

"Peer Review in Computer Science", Panelist, CRA Conference at Snowbird, July 19, 2010.

"Hardness of Instance Compression and Its Applications", Keynote Speaker, Logical Approaches to Barriers in Computing and Complexity, Greifswald, February 20, 2010.

"Bounding Rationality by Computational Complexity", Distinguished Lecturer, University of Alberta, January 25, 2010.

"Computational Awareness", Keynote Speaker, First Asian Association for Algorithms and Computation Annual Meeting, Hong Kong, April 27, 2008.

"Beyond NP: The Work and Legacy of Larry Stockmeyer", Keynote Address, 37th ACM Symposium on Theory of Computing, Baltimore, May 22, 2005.

"My Favorite Ten Complexity Theorems of the Past Decade II", Invited Talk, Workshop on Hew Horizons in Computing (NHC)—Recent Trends in Theoretical Computer Science, Kyoto, March 3, 2005.

"Church, Kolmogorov and von Neumann: Their Legacy Lives in Complexity", Netherlands Theory Day, Utrecht, March 7, 2003.

"History of Complexity," 17th IEEE Conference on Computational Complexity, Montreal, May 22, 2002.

"Perspectives on Lower Bounds: Diagonalization," DIMACS Workshop on Computational Intractability, New Brunswick, April 13, 2000.

"One Complexity Theorist's View of Quantum Computation," Computing: The Australasian Theory Symposium, Canberra, February 1, 2000.

"Separating Classes," Logic Colloquium '98, Prague, August 10, 1998.

"25 Years of P versus NP," The 25th Anniversary Celebration for Paul Vitanyi at CWI, Amsterdam, November 15, 1996.

"My Favorite Ten Complexity Theorems of the Past Decade," The 14th Conference on the Foundations of Software Technology and Theoretical Computer Science, Madras, India, December 17, 1994.

"The Isomorphism Conjecture Holds Relative to an Oracle," Annual Meeting of the Association of Symbolic Logic, South Bend, Indiana, March 11, 1993.

Various seminars at universities and research labs throughout the United States and around the world.

Publications

All of these papers are downloadable at
http://papers.fortnow.com

Book

[1] L. Fortnow. *The Golden Ticket: P, NP and the search for the impossible*. Princeton University Press, Princeton, 2013.

Refereed Journal Publications

[1] L. Fortnow and R. Santhanam. Robust simulations and significant separations. *Information and Computation*, 256(Supplement C):149 – 159, 2017.

[2] K. Chung and L. Fortnow. Loopholes. *The Economic Journal*, 126(595):1774–1797, 2016.

[3] Tuğkan Batu, Lance Fortnow, Ronitt Rubinfeld, Warren D. Smith, and Patrick White. Testing closeness of discrete distributions. *Journal of the ACM*, 60(1):4:1–4:25, February 2013.

[4] L. Fortnow, J. Lutz, and E. Mayordomo. Inseparability and strong hypotheses for disjoint NP pairs. *Theory of Computing Systems*, 51:229–247, 2012.

[5] L. Fortnow and R. Santhanam. Infeasibility of instance compression and succinct PCPs for NP. *Journal of Computer and System Sciences*, 77(1):91–106, January 2011. Co-winner of the 2014 EATCS-IPEC Nerode Prize. JCSS Special issue celebrating Karp's Kyoto Prize.

[6] L. Fortnow, J. Hitchcock, A. Pavan, N.V. Vinodchandran, and F. Wang. Extracting Kolmogorov complexity with applications to dimension zero-one laws. *Information and Computation*, 209(4):627–636, April 2011.

[7] L. Fortnow and J. Grochow. Complexity classes of equivalence problems revisited. *Information and Computation*, 209(4):748–763, April 2011.

[8] Y. Chen, S. Dimitrov, R. Sami, D. Reeves, D. Pennock, R. Hanson, L. Fortnow, and R. Gonen. Gaming prediction markets: Equilibrium strategies with a market maker. *Algorithmica*, 58(4):930–969, December 2010.

[9] H. Buhrman, L. Fortnow, M. Koucký, J. Rogers, and N. Vereshchagin. Does the polynomial hierarchy collapse if onto functions are invertible? *Theory of Computing Systems*, 46(1):143–156, January 2010.

[10] L. Fortnow and R. Vohra. The complexity of forecast testing. *Econometrica*, 77(1):93–105, 2009.

[11] L. Fortnow and A. Klivans. Efficient learning algorithms yield circuit lower bounds. *Journal of Computer and System Sciences*, 75:27–36, January 2009. Special issue for selected papers from the 19th Annual Conference on Computational Learning Theory.

[12] L. Fortnow. A simple proof of Toda's theorem. *Theory of Computing*, 5(7):135–140, 2009.

[13] L. Antunes and L. Fortnow. Sophistication revisited. *Theory of Computing Systems*, 45(1):150–161, June 2009.

[14] L. Fortnow, A. Pavan, and S. Sengupta. Proving SAT does not have small circuits with an application to the two queries problem. *Journal of Computer and System Sciences*, 74(3):358–363, May 2008. Special issue for selected papers from the 18th IEEE Conference on Computational Complexity.

[15] L. Fortnow, R. Impagliazzo, V. Kabanets, and C. Umans. On the complexity of succinct zero-sum games. *Computational Complexity*, 17(3):353–376, October 2008.

[16] H. Buhrman, L. Fortnow, I. Newman, and H. Röhrig. Quantum property testing. *SIAM Journal on Computing*, 37(5):1387–1400, 2008.

[17] E. Fischer and L. Fortnow. Tolerant versus intolerant testing for Boolean properties. *Theory of Computing*, 2(9):173–183, 2006.

[18] R. Beigel, L. Fortnow, and F. Stephan. Infinitely-often autoreducible sets. *SIAM Journal on Computing*, 36(3):595–608, 2006.

[19] R. Beigel, L. Fortnow, and W. Gasarch. A tight lower bound for restricted PIR protocols. *Computational Complexity*, 15(1):82–91, May 2006.

[20] R. Beigel, H. Buhrman, P. Fejer, L. Fortnow, P. Grabowski, L. Longpré, A. Muchnik, F. Stephan, and L. Torenvliet. Enumerations of the Kolmogorov function. *Journal of Symbolic Logic*, 71(2):501–528, June 2006.

[21] L. Antunes, L. Fortnow, D. van Melkebeek, and N. Vinodchandran. Computational depth: Concept and applications. *Theoretical Computer Science*, 354(3):391–404, April 2006. Special issue of selected papers from Foundations of Computation Theory (FCT 2003).

[22] L. Fortnow and J. Lutz. Prediction and dimension. *Journal of Computer and System Sciences*, 70(4):570–589, June 2005. Special issue for selected papers from the 15th Annual Conference on Computational Learning Theory.

[23] L. Fortnow, R. Lipton, D. van Melkebeek, and A. Viglas. Time-space lower bounds for satisfiability. *Journal of the ACM*, 52(6):835–865, November 2005.

[24] L. Fortnow, J. Kilian, D. Pennock, and M. Wellman. Betting Boolean-style: A framework for trading in securities based on logical formulas. *Decision Support Systems*, 39(1):87–104, 2005. Special Issue on the Fourth ACM Conference on Electronic Commerce.

[25] J. Feigenbaum, L. Fortnow, D. Pennock, and R. Sami. Computation in a distributed information market. *Theoretical Computer Science*, 343(1-2):114–132, October 2005. Special issue on Game Theory Meets Theoretical Computer Science.

[26] Artur Czumaj, Funda Ergün, Lance Fortnow, Avner Magen, Ilan Newman, Ronitt Rubinfeld, and Christian Sohler. Approximating the weight of the euclidean minimum spanning tree in sublinear time. *SIAM Journal on Computing*, 35(1):91–109, 2005.

[27] H. Buhrman, L. Fortnow, and A. Pavan. Some results on derandomization. *Theory of Computing Systems*, 38(2):211–227, February 2005. Special issue on the 20th Symposium on Theoretical Aspects of Computer Science.

[28] S. Fenner, L. Fortnow, A. Naik, and J. Rogers. Inverting onto functions. *Information and Computation*, 186(1):90–103, October 2003.

[29] S. Fenner, L. Fortnow, S. Kurtz, and L. Li. An oracle builder's toolkit. *Information and Computation*, 182(2):95–136, 2003.

[30] R. Downey and L. Fortnow. Uniformly hard languages. *Theoretical Computer Science*, 298(2):303–315, 2003.

[31] Y. Zheng, J. Szustakowski, L. Fortnow, R. Roberts, and S. Kasif. Computational identification of operons in microbial genomes. *Genome Research*, 12(8):1221–1230, August 2002.

[32] L. Fortnow and J. Rogers. Separability and one-way functions. *Computational Complexity*, 11(3-4):137–157, June 2002.

[33] H. Buhrman, L. Fortnow, and S. Laplante. Resource-bounded Kolmogorov complexity revisited. *SIAM Journal on Computing*, 31(3):887–905, 2002.

[34] L. Fortnow, A. Pavan, and A. Selman. Distributionally hard languages. *Theory of Computing Systems*, 34(3):245–262, 2001.

[35] H. Buhrman, S. Fenner, L. Fortnow, and L. Torenvliet. Two oracles that force a big crunch. *Computational Complexity*, 10(2):93–116, 2001.

[36] L. Fortnow. Time-space tradeoffs for satisfiability. *Journal of Computer and System Sciences*, 60(2):337–353, April 2000. Special issue for selected papers from the 12th IEEE Conference on Computational Complexity.

[37] H. Buhrman, L. Fortnow, D. van Melkebeek, and L. Torenvliet. Separating complexity classes using autoreducibility. *SIAM Journal on Computing*, 29(5):1497–1520, 2000.

[38] L. Fortnow and J. Rogers. Complexity limitations on quantum computation. *Journal of Computer and System Sciences*, 59(2):240–252, 1999. Special issue for selected papers from the 13th IEEE Conference on Computational Complexity.

[39] L. Fortnow, J. Goldsmith, M. Levy, and S. Mahaney. L-printable sets. *SIAM Journal on Computing*, 28(1):137–151, 1999.

[40] L. Fortnow. Relativized worlds with an infinite hierarchy. *Information Processing Letters*, 69(6):309–313, 1999.

[41] H. Buhrman and L. Fortnow. Two queries. *Journal of Computer and System Sciences*, 59(2):182–194, 1999. Special issue for selected papers from the 13th IEEE Conference on Computational Complexity.

[42] L. Fortnow, R. Freivalds, W. Gasarch, M. Kummer, S. Kurtz, C. Smith, and F. Stephan. On the relative sizes of learnable sets. *Theoretical Computer Science*, 197:139–156, 1998.

[43] J. Feigenbaum, L. Fortnow, S. Laplante, and A. Naik. On coherence, random-self-reducibility, and self-correction. *Computational Complexity*, 7(2):174–191, 1998.

[44] L. Fortnow and T. Yamakami. Generic separations. *Journal of Computer and System Sciences*, 52(1):191–197, 1996.

[45] L. Fortnow and N. Reingold. PP is closed under truth-table reductions. *Information and Computation*, 124(1):1–6, 1996.

[46] L. Fortnow and M. Kummer. On resource-bounded instance complexity. *Theoretical Computer Science*, 161:123–140, 1996.

[47] S. Fenner, L. Fortnow, and L. Li. Gap-definability as a closure property. *Information and Computation*, 130(1):1–17, 1996.

[48] S. Fenner, L. Fortnow, and S. Kurtz. The isomorphism conjecture holds relative to an oracle. *SIAM Journal on Computing*, 25(1):193–206, 1996.

[49] L. Fortnow and S. Laplante. Circuit lower bounds *a la* Kolmogorov. *Information and Computation*, 123(1):121–126, 1995.

[50] L. Fortnow, J. Rompel, and M. Sipser. On the power of multi-prover interactive protocols. *Theoretical Computer Science*, 134:545–557, 1994.

[51] L. Fortnow, W. Gasarch, S. Jain, E. Kinber, M. Kummer, S. Kurtz, M. Pleszkoch, T. Slaman, R. Solovay, and F. Stephan. Extremes in the degrees of inferability. *Annals of Pure and Applied Logic*, 66:231–276, 1994.

[52] S. Fenner, L. Fortnow, and S. Kurtz. Gap-definable counting classes. *Journal of Computer and System Sciences*, 48(1):116–148, 1994. Special issue for selected papers from the 6th IEEE Structure in Complexity Theory Conference.

[53] J. Feigenbaum, L. Fortnow, C. Lund, and D. Spielman. The power of adaptiveness and additional queries in random-self-reductions. *Computational Complexity*, 4:158–174, 1994.

[54] L. Fortnow and C. Lund. Interactive proof systems and alternating time-space complexity. *Theoretical Computer Science*, 113:55–73, 1993.

[55] J. Feigenbaum and L. Fortnow. On the random-self-reducibility of complete sets. *SIAM Journal on Computing*, 22:994–1005, 1993.

[56] L. Babai, L. Fortnow, N. Nisan, and A. Wigderson. BPP has subexponential simulations unless EXPTIME has publishable proofs. *Computational Complexity*, 3:307–318, 1993.

[57] C. Lund, L. Fortnow, H. Karloff, and N. Nisan. Algebraic methods for interactive proof systems. *Journal of the ACM*, 39(4):859–868, 1992. FOCS 2020 Test of Time Award for 1990 conference paper.

[58] L. Fortnow and M. Szegedy. On the power of two-local random reductions. *Information Processing Letters*, 44(6):303–306, 1992.

[59] L. Babai, L. Fortnow, and C. Lund. Nondeterministic exponential time has two-prover interactive protocols. *Computational Complexity*, 1(1):3–40, 1991. 2020 FOCS Test of Time Award for 1990 conference paper.

[60] L. Babai and L. Fortnow. Arithmetization: A new method in structural complexity theory. *Computational Complexity*, 1(1):41–66, 1991.

[61] L. Fortnow. The complexity of perfect zero-knowledge. In S. Micali, editor, *Randomness and Computation*, volume 5 of *Advances in Computing Research*, pages 327–343. JAI Press, Greenwich, 1989.

[62] L. Fortnow and M. Sipser. Are there interactive protocols for co-NP languages? *Information Processing Letters*, 28:249–251, 1988.

Reviewed Conference Publications

[1] Liang Liu, Long Gong, Sen Yang, Jim Xu, and Lance Fortnow. 2-Hop Eclipse: A fast algorithm for bandwidth-efficient data center switching. In Min Luo and Liang-Jie Zhang, editors, *Cloud Computing – CLOUD 2018*, pages 69–83. Springer International Publishing, 2018. Best Student Paper Award winner.

[2] L. Liu, J. Xu, and L. Fortnow. Quantized BvND: A better solution for optical and hybrid switching in data center networks. In *IEEE/ACM 11th International Conference on Utility and Cloud Computing*, pages 237–246. IEEE, New York, 2018.

[3] L. Liu, L. Gong, S. Yang, J. Xu, and L. Fortnow. Best first fit (BFF): An approach to partially reconfigurable hybrid circuit and packet switching. In *2018 IEEE 11th International Conference on Cloud Computing (CLOUD)*, pages 426–433. IEEE, Jul 2018.

[4] L. Liu, Y. Wang, L. Fortnow, J. Li, and J. Xu. Randomized algorithms for dynamic storage load-balancing. In *Proceedings of the Seventh ACM Symposium on Cloud Computing*, SoCC '16, pages 210–222. ACM, New York, NY, USA, 2016.

[5] L. Liu, Y. Wang, L. Fortnow, J. Li, and J. Xu. Freestyle dancing: Randomized algorithms for dynamic storage load-balancing. In *Proceedings of the 2016 ACM SIGMETRICS International Conference on Measurement and Modeling of Computer Science*, SIGMETRICS '16, pages 381–382. ACM, New York, NY, USA, 2016. Poster.

[6] L. Fortnow and Rahul Santhanam. New Non-Uniform Lower Bounds for Uniform Classes. In Ran Raz, editor, *31st Conference on Computational Complexity (CCC 2016)*, volume 50 of *Leibniz International Proceedings in Informatics (LIPIcs)*, pages 19:1–19:14. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, Dagstuhl, Germany, 2016.

[7] H. Buhrman, L. Fortnow, J. Hitchcock, and B. Loff. Learning reductions to sparse sets. In *Proceedings of the 38th International Symposium on Mathematical Foundations of Computer Science*, volume 8087 of *Lecture Notes in Computer Science*, pages 243–253. Springer, Berlin, 2013.

[8] L. Fortnow and R. Santhanam. Robust simulations and significant separations. In L. Aceto, M. Henzinger, and J. Sgall, editors, *Proceedings of the 38th International Colloquium on Automata, Languages and Programming*, volume 6755 of *Lecture Notes in Computer Science*, pages 569–580. Springer Berlin / Heidelberg, 2011.

[9] L. Fortnow and M. Budinich. Repeated matching pennies with limited randomness. In *Proceedings of the 12th ACM Conference on Electronic Commerce*, pages 111–118. ACM, New York, 2011.

[10] L. Fortnow and R. Santhanam. Bounding rationality by discounting time. In *Proceedings of The First Symposium on Innovations in Computer Science*, pages 143–156. Tsinghua University Press, Beijing, 2010.

[11] L. Fortnow, J. Lutz, and E. Mayordomo. Inseparability and strong hypotheses for disjoint NP pairs. In Jean-Yves Marion and Thomas Schwentick, editors, *Proceedings of the 27th Symposium on Theoretical Aspects of Computer Science*, volume 5 of *Leibniz International Proceedings in Informatics (LIPIcs)*, pages 395–404. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, Dagstuhl, Germany, 2010.

[12] H. Buhrman, L. Fortnow, M. Koucký, and B. Loff. Derandomizing from random strings. In *Proceedings of the 25th IEEE Conference on Computational Complexity*, pages 58–63. IEEE, 2010.

[13] L. Fortnow, R. Santhanam, and R. Williams. Fixed-polynomial size circuit bounds. In *Proceedings of the 24th IEEE Conference on Computational Complexity*, pages 19–26. IEEE, 2009.

[14] L. Fortnow. Program equilibria and discounted computation time. In *Proceedings of the 12th Conference on Theoretical Aspects of Rationality and Knowledge*, pages 128–133. ACM, 2009.

[15] N. Devanur and L. Fortnow. A computational theory of awareness and decision making. In *Proceedings of the 12th Conference on Theoretical Aspects of Rationality and Knowledge*, pages 99–107. ACM, 2009.

[16] H. Buhrman, L. Fortnow, and R. Santhanam. Unconditional lower bounds against advice. In *Proceedings of the 36th International Colloquium on Automata, Languages and Programming*, volume 5555, pages 195–209. Springer, 2009.

[17] L. Antunes and L. Fortnow. Worst-case running times for average-case algorithms. In *Proceedings of the 24th IEEE Conference on Computational Complexity*, pages 298–303. IEEE, 2009.

[18] L. Fortnow and R. Vohra. The complexity of forecast testing. In *Proceedings of the 9th ACM Conference on Electronic Commerce*, page 139. ACM, New York, 2008.

[19] L. Fortnow and R. Santhanam. Infeasibility of instance compression and succinct PCPs for NP. In *Proceedings of the 40th ACM Symposium on the Theory of Computing*, pages 133–142. ACM, New York, 2008.

[20] Y. Chen, L. Fortnow, N. Lambert, D. Pennock, and J. Wortman. Complexity of combinatorial market makers. In *Proceedings of the 9th ACM Conference on Electronic Commerce*, pages 190–199. ACM, New York, 2008.

[21] Y. Chen, D. Reeves, D. Pennock, R. Hanson, L. Fortnow, and R. Gonen. Bluffing and strategic reticence in prediction markets. In *The 3rd International Workshop On Internet And Network Economics*, volume 4858 of *Lecture Notes in Computer Science*, pages 70–81. Springer, Berlin, 2007.

[22] Y. Chen, L. Fortnow, E. Nikolova, and D. Pennock. Betting on permutations. In *Proceedings of the 8th ACM Conference on Electronic Commerce*, pages 326–335. ACM, New York, 2007.

[23] H. Buhrman, L. Fortnow, M. Koucký, J. Rogers, and N. Vereshchagin. Inverting onto functions and the polynomial hierarchy. In *Proceedings of the 2nd International Computer Science Symposium in Russia*, Lecture Notes in Computer Science, pages 92–103. Springer, 2007.

[24] L. Antunes, L. Fortnow, A. Pinto, and A. Souto. Low-depth witnesses are easy to find. In *Proceedings of the 22nd IEEE Conference on Computational Complexity*, pages 46–51. IEEE, New York, 2007.

[25] L. Fortnow and M. Ogihara. Very sparse leaf languages. In *Proceedings of the 31st International Symposium on Mathematical Foundations of Computer Science*, volume 4162 of *Lecture Notes in Computer Science*, pages 375–386. Springer, Berlin, 2006.

[26] L. Fortnow, T. Lee, and N. Vereshchagin. Kolmogorov complexity with error. In *Proceedings of the 23rd Symposium on Theoretical Aspects of Computer Science*, number 3884 in Lecture Notes in Computer Science, pages 137–148. Springer, Berlin, 2006.

[27] L. Fortnow and A. Klivans. Linear advice for randomized logarithmic space. In *Proceedings of the 23rd Symposium on Theoretical Aspects of Computer Science*, volume 3884 of *Lecture Notes in Computer Science*, pages 469–476. Springer, Berlin, 2006.

[28] L. Fortnow and A. Klivans. Efficient learning algorithms yield circuit lower bounds. In *Proceedings of the Nineteenth Annual Conference on Computational Learning Theory*, volume 4005 of *Lecture Notes in Computer Science*, pages 350–363. Springer, Berlin, 2006.

[29] L. Fortnow, J. Hitchcock, A. Pavan, N.V. Vinodchandran, and F. Wang. Extracting Kolmogorov complexity with applications to dimension zero-one laws. In *Proceedings of the 33rd International Colloquium on Automata, Languages and Programming*, number 4051 in Lecture Notes in Computer Science, pages 335–345. Springer, Berlin, 2006.

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