

Biographical Sketch Kenneth W. Regan

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Professional Preparation

- Princeton University (Princeton, NJ USA), Mathematics, B.A. *summa cum laude*, 1981
- Oxford University (Oxford, UK), Mathematics, D.Phil., 1986.
- Oxford University (Oxford, UK), Junior Research Fellow, 1984–1986 and 1988
- Cornell University (Ithaca, NY USA), Postdoctoral Research Visitor, Mathematical Sciences Institute, 1986–1987 and 1988–1989.

Appointments

- 1999–: Associate Professor, Department of Computer Science and Engineering, University at Buffalo (official change after department merged with Computer Engineering).
- 1995–1999: Associate Professor, Department of Computer Science, University at Buffalo
- 1989–1995: Assistant Professor, Department of Computer Science, University at Buffalo

List of Relevant Products

1. R. Lipton and K. Regan and A. Rudra, “Symmetric functions capture general functions,” in the proceedings of MFCS 2011, Springer LNCS **6907**, 2011, pp 436–447.
2. S. Kalyanasundaram, R. Lipton, K. Regan, and F. Shokrieh, “Improved Simulation of Nondeterministic Turing Machines,” *Theoretical Computer Science* **417**, Feb. 2012, 66–73 (special issue for the MFCS 2010 conference).
3. M. Crasmaru and C. Glasser and K. Regan and S. Sengupta, “A protocol for serializing unique strategies,” in ”Proceedings of MFCS’04,” Lecture Notes in Computer Science 3153, pages 660-672, Springer-Verlag, 2004. /.../pdf/CGRS04.pdf
4. S. Aida and M. Crasmaru and K. Regan and O. Watanabe, “Games with Uniqueness Properties,” *Theoretical Computer Science* **37** (2004), 29–47. /.../pdf/ACRW03.pdf
5. M. Jansen and K. Regan, “A Non-Linear Lower Bound for Constant Depth Arithmetical Circuits via the Discrete Uncertainty Principle,” *Theoretical Computer Science* **409** (Issue 3, 28 December 2008), 617–622.

List of Other Significant Products

1. R. Lipton and K. Regan, *Quantum Algorithms via Linear Algebra*, MIT Press, Dec. 2014.

2. T. Biswas and K. Regan, “Approximation of Function Evaluation Over Sequence Arguments via Specialized Data Structures,” *Theoretical Computer Science*, special issue for the AAIM 2014 conference (In press; published online at <http://www.sciencedirect.com/science/article/pii/S0304397515003114>).
3. M. Jansen and K. Regan, “‘Resistant’ polynomials and stronger lower bounds for depth-3 arithmetical formulas,” in the proceedings of COCOON 2007, Banff, Canada, July 16–19, 2007, Springer LNCS **4598**, 2007, pp 470–481.
4. J.-Y. Cai, R. Lipton, L. Longpré, M. Ogihara, K. Regan, and D. Sivakumar, **Communication complexity of key agreement on small ranges**, Proceedings of STACS 1995, Lecture Notes in Computer Science **900**, Springer-Verlag, 1995, pp 38–49.
5. K. Regan, D. Sivakumar, and J.-Y. Cai, “Pseudorandom number generators, measure theory, and natural proofs,” in “Proceedings, 36th Ann. IEEE Symposium on Foundations of Computer Science,” Milwaukee, WI, October 1995, pp 26–35. /.../pdf/RSC95.pdf.

Synergistic Activities

- Collaboration on Richard Lipton’s weblog “Gödel’s Lost letter and P=NP,” <http://rjlipton.wordpress.com/> with full partner status since 1/2011, including over 130 joint articles (each 3–7 pages) and 80 singly authored.
- Advisor and past member of the World Chess Federation (FIDE) Anti-Cheating Committee.
- Public website <http://www.cse.buffalo.edu/~regan/chess/fidelity/> focusing on anti-cheating use of a separate research project on human decision-making at chess.
- National media coverage including NPR Weekend Edition Saturday (6/21/14 with Scott Simon), Slate’s “The Gist” (9/2/14 with Mike Pesca), “Data Skeptic” (5/22/15 with Kyle Polich), Chess Life Magazine (June 2014 cover story by Howard Goldowsky), New York Times (3/20/12 Science Tuesday, page D3, by Dylan McClain).
- Joint author of three book chapters with Eric W. Allender and Michael C. Loui for the CRC *Algorithms and Computation Theory Handbook*, 1999 and 2009 eds.

Graduate and Professional Advisors (3)

Dominic J.A. Welsh (D.Phil. and Junior Fellowship), Oxford University (then and current),
 Anil Nerode and Juris Hartmanis (MSI postdoc), Cornell University (then and current).

Supervision, last 5 years (6 PhD students, 0 postdocs)

Robert Surowka (defended May 2014)

Andrew Hughes (co-advised, defended July 2016)

Tamal Biswas (defended July 2016)

Chaowen Guan (current), Michael Wehar (current), James Clay (current, co-advisee).