# 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. K. Regan and G. Haworth, "Intrinsic Chess Ratings," in the proceedings of AAAI 2011, San Francisco, Aug. 7–11, 2011.

2. T. Biswas and K. Regan, "Quantifying Depth and Complexity of Thinking and Knowledge," in the proceedings of the 7th International Conference on Agents and Artificial Intelligence (ICAART 2015), Lisbon, Portugal, Jan. 10–12, 2015.

3. K. Regan and T. Biswas and J. Zhou, "Human and Computer Preferences at Chess," in the proceedings of the 8th Multidisciplinary Workshop on Advances in Preference Handling (MPREFS 2014), associated to AAAI 2014, Quebec City, July 2014.

4. K. Regan and T. Biswas, "Psychometric Modeling of Decision Making Via Game Play," in the proceedings of the 2013 IEEE Conference on Computational Intelligence in Games, Niagara Falls, Canada, August 2013.

5. K. Regan and B. Macieja and G. Haworth, "Understanding Distributions of Chess Performances," 13th ICGA *Advances in Computer Games* conference, Tilburg, Netherlands, November 2011. Final proceedings version published in *Advances in Computer Games*, Lecture Notes in Computer Science **7168**, Springer-Verlag, 2012, pp 230–243.

# List of Other Significant Products

1. T. Biswas, "Designing Intelligent Agents to Judge Intrinsic Quality of Human Decisions," in the proceedings of the 7th International Conference on Agents and Artificial Intelligence (ICAART 2015), Lisbon, Portugal, Jan. 10–12, 2015.

2. T. Biswas and K. Regan, "Measuring Level-K Reasoning, Satisficing, and Human Error in Game-Play Data," July 2015, submitted.

3. 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).

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

5. 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.

# 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 the chess model.

- 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.

# Collaborators (10, all within 48 months, no co-editorships)

Eric Allender (Rutgers), Amlan Chakrabarti (Univ. of Calcutta), Guy Haworth (Reading, UK), Subrahmanyam Kalyanasundararam (IIT Hyderabad), Richard Lipton (Georgia Tech), Michael Loui (UIUC), Bartlomiej Macieja (Univ. of Texas at Brownsville), Atri Rudra (Univ. at Buffalo), Farbod Shokrieh (Cornell). Also Christopher Chabris (Union College), prospective collaboration.

# Graduate and Professional Advisors

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 (4 PhD students, 0 postdocs):

Robert Surowka (defended May 2014)
Tamal Biswas (current), Michael Wehar (current), James Clay (current).