

Christino Tamon

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EDUCATION

- 1993-1996 Ph.D., Computer Science, University of Calgary, AB, Canada
- 1990-1992 M.Sc., Computer Science, University of Toronto, ON, Canada
- 1986-1990 B.Sc., Computer Science and Applied Mathematics, University of Calgary, AB, Canada

EMPLOYMENT

- 2002- *Associate Professor*
Department of Mathematics and Computer Science, Clarkson University
- 1996-2002 *Assistant Professor*
Department of Mathematics and Computer Science, Clarkson University
- 1993-1996 *Teaching and Research Assistant*
Department of Computer Science, University of Calgary
- 1991 *Teaching Assistant and Library Staff*
Department of Computer Science, University of Toronto
- 1990 *Summer Undergraduate Researcher*
Department of Computer Science, University of Calgary

ACTIVITIES AND SERVICE

- Program Committee member:
 - *18th International Conference on Algorithmic Learning Theory*, Sendai, Japan, 2007.
 - *19th Conference on Computational Learning Theory*, Carnegie Mellon University, Pittsburgh, PA, 2006.
 - *14th International Conference on Algorithmic Learning Theory*, Sapporo, Japan, 2003.
 - *12th International Conference on Algorithmic Learning Theory*, Washington D.C., 2001.
 - *13th ACM Conference on Computational Learning Theory*, Stanford University, Palo Alto, CA, 2000.

- Editorial Board member: "Algorithms" (open-access journal)

- Reviewer and Referee:

Journals: *Computational Complexity*, *SIAM Journal on Discrete Mathematics*, *SIAM Journal on Computing*, *Quantum Information and Computation*, *Information and Computation*, *Information Processing Letters*, *International Journal of Quantum Information*, *Journal of Computer and System Sciences*, *Journal of Machine Learning Research*, *Machine Learning*, *New Journal of Physics*, *Theoretical Computer Science*, *Theory of Computing*.

Conferences: *13th ACM Conference on Computational Learning Theory* (COLT 2000), *12th International Conference on Algorithmic Learning Theory* (ALT 2001), *16th Conference on Computational Learning Theory* (COLT 2003), *14th International Conference on Algorithmic Learning Theory* (ALT 2003), *26th ACM Symposium on Theory of Computing* (STOC 2004). *18th International Conference on Algorithmic Learning Theory* (ALT 2007)

- Panel Reviewer, *National Science Foundation* (Theory of Computing).

- Faculty advisor, Clarkson-Potsdam Mathematics NSF-funded *Research Experience for Undergraduates* (REU), State University of New York (SUNY) at Potsdam, New York (2000-present).

GRANTS AND AWARDS

- NSA grant 42642, *Research Experience for Undergraduates in Mathematics*, PI: Joel Foisy; coPI: Christino Tamon. Amount: \$25,853.00
- NSF grant DMS-0646847, *Mathematics Research Experience for Undergraduates*, PI: Joel Foisy; coPI: Christino Tamon. Amount: \$58,402.00
- NSF grant DMS-0353050, *Undergraduate Mathematics Summer Research Institute*, PI (current): Joel Foisy; coPI: Christino Tamon. Amount: \$163,922.00
- NSF grant DMR-0121146, *Center for Modeling of Quantum Dynamics, Relaxation and Decoherence in Solid-state Physics for Information-technology Applications*, PI: Vladimir Privman; co-PIs: Ming-Cheng Cheng, M. Lawrence Glasser, Dima Mozysky, and Christino Tamon. Amount: \$1,054,000.00
- NSF grant DMS-0097113, *Undergraduate Mathematics Summer Research Institute*, PI: Kazem Mahdavi; coPI: Christino Tamon. Amount: \$162,039.00
- *Outstanding New Teacher*, Clarkson University, 2000.

PUBLICATIONS

Book Chapter

1. Christino Tamon, "Learning with the Aid of an Oracle," *Encyclopedia of Algorithms*, M.-Y. Kao, editor, Springer (2008), 423-425.

Journal articles

1. Ana Best, Markus Kliegl, Shawn Mead-Gluchacki, and Christino Tamon, "Mixing of quantum walks on generalized hypercubes," accepted to appear in *International Journal of Quantum Information*.
2. William Adamczak, Kevin Andrew, Leon Berger, Dillon Ethier, Peter Hernberg, Jennifer Lin, and Christino Tamon, "Non-uniform mixing of quantum walk on cycles," *International Journal of Quantum Information* **5**(6):781-793, 2007.
3. William Carlson, Allison Ford, Elizabeth Harris, Julian Rosen, Christino Tamon, and Kathleen Wrobel, "Universal Mixing for Quantum Walk on Graphs," *Quantum Information and Computation* **7**(8):738-751, 2007.
4. Peter Lo, Siddharth Rajaram, Diana Schepens, Daniel Sullivan, Christino Tamon, and Jeffrey Ward, "Mixing of Quantum Walk on Circulant Bunkbeds," *Quantum Information and Computation* **6**(4&5):370-381, 2006.
5. Leonid Fedichkin, Dmitry Solenov, and Christino Tamon, "Mixing and Decoherence in Continuous-Time Quantum Walks on Cycles," *Quantum Information and Computation* **6**(3):263-276, 2006.
6. Nader H. Bshouty, Jeffrey C. Jackson, and Christino Tamon, "Exploring learnability between exact and PAC," *Journal of Computer and System Sciences* **70**(4):471-484, 2005.
7. Daniel ben-Avraham, Erik M. Bollt, and Christino Tamon, "One-dimensional continuous-time quantum walks," *Quantum Information Processing* **3**(1-5):295-308, 2004.
8. Nader H. Bshouty, Jeffrey C. Jackson, and Christino Tamon, "More Efficient PAC-learning of DNF with Membership Queries under the Uniform Distribution," *Journal of Computer and System Sciences* **68**(1):205-234, 2004.

9. Amir Ahmadi, Ryan Belk, Christino Tamon, and Carolyn Wendler, "On Mixing in Continuous-Time Quantum Walks on Some Circulant Graphs," *Quantum Information and Computation* **3**(6):611-618, 2003.
10. Nader H. Bshouty, Jeffrey C. Jackson, and Christino Tamon, "Uniform-Distribution Attribute Noise Learnability," *Information and Computation* **187**(2):277-290, 2003.
11. Nader H. Bshouty, Christino Tamon, and David K. Wilson, "Learning Matrix Functions over Rings," *Algorithmica* **22**(1/2):91-111, 1998.
12. Nader H. Bshouty, Christino Tamon, and David K. Wilson, "On Learning Width Two Branching Programs," *Information Processing Letters* **65**(4):217-222, 1998.
13. Nader H. Bshouty, Christino Tamon, and David K. Wilson, "On Learning Decision Trees with Large Output Domains," *Algorithmica* **20**(1):77-100, 1998.
14. Nader H. Bshouty and Christino Tamon, "On the Fourier Spectrum of Monotone Functions," *Journal of the Association for Computing Machinery* **43**(4):747-770, 1996.
15. Nader H. Bshouty, Richard E. Cleve, Ricard Gavaldà, Sampath Kannan, and Christino Tamon, "Oracles and Queries that are Sufficient for Exact Learning," *Journal of Computer and System Sciences* **52**(3):421-433, 1996.

Conference articles

1. Jeffrey C. Jackson, Christino Tamon, and Tomoyuki Yamakami, "Quantum DNF Learnability Revisited," *Proceedings of 8th International Conference on Computing and Combinatorics*, Oscar H. Ibarra and Louxin Zhang (eds.), Lecture Notes in Computer Science **2387**, Springer (2002), 595-604.
2. Nader H. Bshouty, Jeffrey C. Jackson, and Christino Tamon, "Exploring learnability between exact and PAC," *Proceedings of the 15th Annual Conference on Computational Learning Theory*, Jyrki Kivinen and Robert A. Sloan (eds.), Lecture Notes in Computer Science **2375**, Springer (2002), 244-254.
3. Christino Tamon and Tomoyuki Yamakami, "Quantum Computation Relative to Oracles," *Proceedings of 2nd Conference on Unconventional Models of Computation*, Ioannis Antoniou, Cristian S. Calude, and Michael J. Dinneen (eds.), Springer (2000), 273-288.
4. Christino Tamon and Jie Xiang, "On the Boosting Pruning problem," *Proceedings of 11th European Conference on Machine Learning*, Ramon Lopez de Mantaras and Enric Plaza (eds.), Lecture Notes in Computer Science **1810**, Springer (2000), 404-412.
5. Nader H. Bshouty, Jeffrey C. Jackson, and Christino Tamon, "More Efficient PAC-Learning of DNF with Membership Queries under the Uniform Distribution," *Proceedings of the 12th Annual Conference on Computational Learning Theory*, ACM Press (1999), 286-295.
6. Nader H. Bshouty, Jeffrey C. Jackson, and Christino Tamon, "Uniform-Distribution Attribute Noise Learnability," *Proceedings of the 12th Annual Conference on Computational Learning Theory*, ACM Press (1999), 75-80.
7. Francesco Bergadano, Nader H. Bshouty, Christino Tamon, and Stefano Varricchio, "On Learning Branching Programs and Small Depth Circuits," *Proceedings of 3rd European Conference on Computational Learning Theory*, Shai Ben-David (ed.), Lecture Notes in Computer Science **1208**, Springer (1997), 50-161.
8. Nader H. Bshouty, Christino Tamon, and David K. Wilson, "Learning Matrix Functions over Rings," *Proceedings of 3rd European Conference on Computational Learning Theory*, Shai Ben-David (ed.), Lecture Notes in Computer Science **1208**, Springer (1997), 27-37.

9. Nader H. Bshouty, Christino Tamon, and David K. Wilson, "On Learning Width Two Branching Programs," *Proceedings of the 9th Annual Conference on Computational Learning Theory*, ACM Press (1996), 224-227.
10. Nader H. Bshouty, Christino Tamon, and David K. Wilson, "On Learning Decision Trees with Large Output Domains," *Proceedings of the 8th Annual Conference on Computational Learning Theory*, ACM Press (1995), 190-197.
11. Nader H. Bshouty and Christino Tamon, "On the Fourier Spectrum of Monotone Functions," *Proceedings of the 27th Annual ACM Symposium on the Theory of Computing*, ACM Press (1995), 219-228.
12. Nader H. Bshouty, Richard E. Cleve, Sampath Kannan, and Christino Tamon, "Oracles and Queries that are Sufficient for Exact Learning," *Proceedings of the 7th Annual ACM Conference on Computational Learning Theory*, ACM Press (1994), 130-139.

POSTER AND TALKS

- "On Quantum Walks on Graphs," Session on Nanostructures for Quantum Device Technology, *79th ACS Colloid and Surface Science Symposium*, Potsdam, NY, June 12-15, 2005.
- "A note on graphs resistant to quantum uniform mixing," *7th Workshop on Quantum Information Processing (QIP 2004)*, Waterloo, Canada, January 17, 2004.
- "Non-uniform Mixing in Continuous Quantum Walks," Department of Physics, Clarkson University, November 8, 2002.
- "Quantum DNF Learnability Revisited," *8th International Conference on Computing and Combinatorics (COCOON 2002)*, Singapore, August 17, 2002.
- "How Fast Can DNF Be Learned?" School of Information Technology and Engineering, University of Ottawa, March 22, 2002.
- "Cryptographic Algorithms in Machine Learning," Department of Computer Science, University of Vermont, February 28, 2002.
- "Uniform-distribution Attribute Noise Learnability," *12th ACM Conference on Computational Learning Theory (COLT 1999)*, Santa Cruz, CA, 1999.
- "Probabilistic Methods in Graph Theory," Department of Mathematics, State University of New York at Potsdam, Summer 1999.
- "The KM Algorithm Revisited," Department of Computer Science, University of Calgary, 1998.
- "Fourier Analysis in Machine Learning," joint tutorial with Jeffrey C. Jackson, *10th ACM Conference on Computational Learning Theory (COLT 1997)* and *14th International Conference on Machine Learning (ICML 1997)*, Vanderbilt University, Nashville, TN, 1997.
- "On the Fourier Spectrum of Monotone Functions," *27th ACM Symposium on Theory of Computing (STOC 1995)*, Las Vegas, NV, 1995.

TEACHING AND ADVISING

- Courses taught:

Introductory computer science, Symbolic computation, Automata theory and formal languages, Programming languages, Compiler construction, Cryptography, Computer algorithms, Machine learning, Quantum computation

- Supervised several graduate students (MSc) and undergraduate Honors students. Served as advisor for undergraduates in the NSF Clarkson-Potsdam Research Experience for Undergraduates in Mathematics program and for the Clarkson's McNair program for first-generation college students from low-income backgrounds or under-represented groups.

EXTRA-CURRICULARS

- Volunteer worker, *Potsdam Food Co-Op*, Potsdam, NY.
- Faculty advisor, *Clarkson Chess Club*.