

Christopher M. Bourke

Department of Computer Science & Engineering Phone: (402) 472-4679
123C Avery Hall Fax: (402) 472-7767
Box #29 cbourke@cse.unl.edu
University of Nebraska–Lincoln <http://www.cse.unl.edu/~cbourke>
Lincoln, NE 68588-0115

Education

Ph.D. Computer Science, *University of Nebraska–Lincoln*, August 2009 (Expected)

M.S. Computer Science, *University of Nebraska–Lincoln*, May 2004.

B.S. Computer Science & Mathematics, *University of Nebraska–Lincoln*, May 2002 (minors: Japanese & Asian Studies).

Research Experience

Research Assistant 2002–current
University of Nebraska–Lincoln
Research in Computational Complexity Theory and Machine Learning under the supervision of Dr. Vinodchandran Variyam (advisor). Supported by National Science Foundation grant CCF-0430991.

Assistant Coordinator 2007–current
Dr. Sharad C. Seth University of Nebraska–Lincoln
Assistant Coordinator for the development of the Graduate Admissions & Management System (GAMES) for graduate admissions at the University of Nebraska–Lincoln.

Teaching Experience

Lecturer, CSCE251k Introduction to C Programming, University of Nebraska–Lincoln, Spring 2008.

Lecturer, CSCE235 Discrete Mathematics, University of Nebraska–Lincoln, Fall 2005.

Lecturer, CSCE310 Data Structures & Algorithms, University of Nebraska–Lincoln, Summer 2004.

Teaching Assistant, CSCE101, 235, 310, University of Nebraska–Lincoln, Fall 2002–current.

Honors and Awards

Hazel V. Emley Fellowship 2007–2008.

National Science Foundation Award No. OISE-0611220, “NSF East Asia and Pacific Summer Institutes for US Graduate Students,” Summer 2006.

Outstanding Graduate Teacher Award, UNL, 2006.

Eastman Memorial Scholarship – UNL Mathematics Department, 2001.

Bridging Scholarship – Association of Teachers of Japanese, 2000.

M. & S. Wagner Scholarship – UNL Modern Languages Department, 1999.

James Canfield Scholarship – UNL, 1997.

Christopher M. Bourke

Service

Reviewer for journals *Information and Computation*, *Theory of Computing Systems* and conference Foundations of Software Technology and Theoretical Computer Science 2007.

List of Collaborators

Dr. Vinodchandran Variyam, *University of Nebraska–Lincoln*.

Dr. Stephen Scott, *University of Nebraska–Lincoln*.

Dr. John Hitchcock, *University of Wyoming*.

Dr. Robert Schapire, *Princeton University*.

Publications

Journals

Chris Bourke, Raghunath Tewari, and N. V. Vinodchandran. Directed planar reachability is in unambiguous log-space. Under review, *Journal of the ACM*, 2008.

Chris Bourke, Kun Deng, Stephen D. Scott, Robert E. Schapire, and N. V. Vinodchandran. On reoptimizing multi-class classifiers. *Machine Learning*, 2008. To appear.

Chris Bourke, John M. Hitchcock, and N. V. Vinodchandran. Entropy rates and finite-state dimension. *Theoretical Computer Science*, 349(3):392–406, 2005.

Conferences

Chris Bourke, Raghunath Tewari, and N. V. Vinodchandran. Directed planar reachability is in unambiguous log-space. In *Proceedings of the 22nd Annual IEEE Conference on Computational Complexity*, pages 217–221, 2007.

Deng Kun, Chris Bourke, Stephen Scott, Julie Sunderman, and Yaling Zheng. Bandit-based algorithms for budgeted learning. In *Proceedings of IEEE International Conference on Data Mining (ICDM)*, pages 463–468, 2007.

Deng Kun, Chris Bourke, Stephen Scott, and N. V. Vinodchandran. New algorithms for optimizing multi-class classifiers via ROC surfaces. In *Proceedings of the 3rd International Workshop ROC Analysis in Machine Learning (ROCML-2006)*, pages 17–24, June 2006. Held within the 23rd International Conference on Machine Learning (ICML'06).

Manuscripts

Chris Bourke. A note on the Karp-Lipton collapse for the exponential hierarchy. Technical Report UNL-CSE-2007-0004, University of Nebraska–Lincoln, 2007.

Chris Bourke. Finite-state dimension of individual sequences. Master's thesis, University of Nebraska–Lincoln, May 2004.