

KYLE W. BURKE

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SUMMARY

Ph.D. student in theoretical computer science, looking for an academic position with an emphasis on teaching after planned graduation in Spring 2009.

EDUCATION

Current Ph.D. candidate, Computer Science, Boston University. Research interests: computational game theory, impartial games, randomized algorithms, computational geometry. Research Advisor: Dr. Shang-Hua Teng.

Bachelor of Arts, Computer Science (with Honors), Mathematics (with Recognition), Colby College. Graduated May 2003 Phi Beta Kappa and Summa Cum Laude with 3.76 GPA.

TEACHING EXPERIENCE

Instructor, Geometric Algorithms, Boston University, 1/2008-5/2008. Designed schedule, projects and homework assignments. Lectured three times per week. Wrote exams and quizzes.

Instructor, Combinatoric Structures, Boston University, 9/2007-12/2007. Designed schedule and homework assignments. Lectured twice a week. Wrote exams and quizzes.

Teaching Fellow, Geometric Algorithms, Boston University, 1/2007-5/2007. Ran and prepared discussion sections. Provided Matlab tutelage. Graded homework and held office hours for students. Dr. Shang-Hua Teng, Department of Computer Science.

Lab Assistant, Introduction to Programming, Colby College, 2/2003-5/2003. Helped students code in Java in a laboratory setting. Graded homework and projects and provided guidance outside of class. Dr. Randolph Jones, Department of Computer Science.

Teaching Assistant, Linear Algebra, Colby College, 2/2001 - 5/2003. Ran homework discussions and graded homeworks for students. Aided in proctoring oral examinations and directed study sessions. Dr. Otto Bretscher, Department of Mathematics.

Teaching Assistant, Foundations of Computer Science, Center for Talented Youth (Saratoga), 6/2002 - 8/2002. Prepared and delivered lectures. Provided assistance to students while programming in Scheme, Java and C++. Proofread homework assignments before distributing them to students, then graded them afterwards.

PUBLICATIONS

Burke, K. and S. H. Teng. A PSPACE-complete Sperner Triangle Game. Workshop on Internet and Network Economics, 2007.

Bretscher, O. and K. Burke. Linear Algebra with Applications Instructor's Solutions Manual. Pearson Education, 2005.

Smith, M. L, C. E. Hughes, K. Burke. The Denotational Semantics of View-Centric Reasoning. Communicating Process Architectures - 2003. The University of Twente (Enschede, the Netherlands). September 7-10, 2003.

Burke, K. and M. L. Smith. Extending CSP to Investigate Linda Ambiguities. Journal of Computing in Small Colleges, Vol. 18, Issue 5, 2003.

INTERNSHIPS

Performed summer internship at the Jülich Supercomputing Centre (in Forschungszentrum Jülich). Worked under Ivo Kabadshow on parallel implementation of the fast multipole method for particle-particle interactions.

PRESENTATIONS

“A Sperner Triangle Game”, Combinatorics Seminar, Dartmouth College, 12/2008; presented at interviews during Fall 2008 and Spring 2009 semesters.

“A Game on the Sperner Triangle”, Mathematics Colloquium, Colby College, 02/2007; Center for Computational Sciences Colloquium, Boston University, 04/2007; 3rd Annual Workshop on Internet and Network Economics (WINE) 12/2007

Regular contributor to departmental Theory Seminar. Topics presented: “The Linial-Saks Decomposition Algorithm”, 10/2004; “MAX-CUT Approximation Algorithm and Hardness of Approximation Result”, 10/2005; “A Group-Theoretic Approach to Matrix Multiplication”, 2/2006; “Games on the Sperner Triangle”, 11/2006

Regular contributor to annual departmental Industrial Affiliates Program poster session. Topics presented: “Optimal Aggregation Location of Grid Sensor Networks”(2004); “Building Low-stretch Spanning Trees”(2006); “Games on the Sperner Triangle” (2007); “Matchmaking: Stable Marriage Game” (2008)

“Optimal Aggregation Location of Grid Sensor Networks” poster presented at Sensor Network Technical Workshop hosted by B. U. Center for Information and Systems Engineering, 05/2004.

AWARDS

Awarded Advanced Computation in Engineering and Science (ACES) traineeship for 9/2005 - 8/2007 by Center for Computational Sciences, Boston University.

Awarded Graduate Assistance in Areas of National Need (GAANN) fellowship for 9/2003 - 8/2005 by Boston University Computer Science department.

Won Best Poster award at Boston University Computer Science Industrial Affiliates Program, 2007 for “Games on the Sperner Triangle”.

SKILLS

Skilled in Java, Matlab, HTML, LaTeX, Prolog, psql, Scheme, Linux. Experience with C, C++, Fortran, Windows, MacOS.