

Curriculum Vitae

Ryan Szypowski

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Department of Mathematics
University of California at San Diego
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Education

- 2002 - 2008 **Doctor of Philosophy, Department of Mathematics**
University of California at San Diego
Research focus: Constrained Evolution Systems
- 2000 - 2002 **Master of Science, Department of Computer Science**
University of Illinois at Urbana-Champaign
Thesis: A Parallel Implementation of the Adaptive Chebyshev Algorithm
- 1996 - 2000 **Bachelor of Computer Science - Honours, First Class Honours**
University of Manitoba
Honours project: Simulation of Black Holes

Awards and Distinctions

- 2001 - 2002 **Siebel Scholar**, University of Illinois at Urbana-Champaign
For academic achievement and excellence
- 2000 **NSERC Postgraduate Scholarship**
For graduate funding at Canadian institutions
- 1998 - 1999 **Dr. Maxwell S. Rady Scholarship**, University of Manitoba
For highest standing in Second Year Science
- 1997 - 1998 **Rosabelle Searle Leach Scholarship**, University of Manitoba
For highest standing in First Year Science
- 1996 - 1997 **University of Manitoba Queen Elizabeth II Entrance Scholarship**, University of Manitoba
For high standing on admission to the Faculty of Science

Teaching and Research Experience

- 2005 - present **Research Assistant**, University of California at San Diego
Advisor: Michael Holst
Project: Constrained evolution systems
- 2007 **Lecturer**, University of California at San Diego
Course: Calculus
- 2003 - 2005 **Teaching Assistant**, University of California at San Diego
Professors: Li-Tien Cheng, Randy Bank, Michael Leonard, Sergey Kitaev
Courses: Calculus, Numerical Linear Algebra, Numerical Analysis, Numerical Ordinary Differential Equations, Numerical Optimization, Scientific Programming
- 2003 & 2004 **Technical Scholar**, Lawrence Livermore National Laboratory
Advisor: Ulrike Meier Yang
Project: Parallel algebraic multigrid for systems
- 2002 - 2003 **Research Assistant**, University of California at San Diego
Advisor: Scott Baden
Project: Use of asynchronous global communication for improved scalability of parallel FFTs
- 2001 - 2002 **Research Assistant**, University of Illinois at Urbana-Champaign
Advisor: Paul Saylor
Project: Parallel numerical solution of large sparse linear systems
- 2000 **Graduate Assistant**, University of Illinois at Urbana-Champaign
Professor: Ralph Johnson
Course: Software Engineering I
- 1999 **NSERC Undergraduate Research Student**, University of Manitoba
Advisor: William Kocay
Project: Algorithms for graph isomorphism and graph embedding
- 1998 **Faculty of Science Undergraduate Research Student**, University of Manitoba
Advisor: William Kocay
Project: Graph theory algorithms
- 1997 & 1998 **Teaching Assistant**, University of Manitoba
Professor: Lynn Batten, Thomas Berry
Course: Introduction to Calculus, Applied Finite Mathematics

Publications

Reynolds, D. R., Szypowski, R., "Panel Discusses Research Directions and Enabling Technologies for the Future of CS&E", *SIAM News*, vol. 40, no. 4, 2007.

Saylor, P., Szypowski, R., and Tolliver, J., "Bill Gear Honored for Three Decades of Achievements at Illinois", *SIAM News*, vol. 35, no. 3, 2002.

Kocay, W., Neilson, D., and Szypowski, R., "Drawing graphs on the torus," *Ars Combinatoria*, vol. 59, 2001.

Kocay, W. and Szypowski, R., "The application of determining sets to projective configurations," *Ars Combinatoria*, vol. 53, pp. 197-212, 1999.