

R. Sean Bowman

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Department of Mathematics
Oklahoma State University
Stillwater, OK 74078

Education

University of Texas, Austin, TX
Ph.D. in Mathematics, May 2012

Washington University, St. Louis, MO
A.B. degree in Mathematics, May 2000

University of Arkansas, Fayetteville, AR
*Graduate study in Computer Science and Math,
2002–2005*

Research Interests

Topology and geometry in 3 dimensions, Dehn surgery, topological data analysis

Submitted

R. Sean Bowman. Knots in handlebodies with nontrivial handlebody surgeries.

Publications

R. Sean Bowman and Stephen B. McCaul. Fast Searching for Andrews-Curtis Trivializations. *Experimental Mathematics*, 15(2), 2006.

J. C. Lusth and R. S. Bowman. A Minimalist Approach to Objects. *Computer Languages, Systems, and Structures*, 32(1), 2006.

Kyle Cranmer and R. Sean Bowman. PhysicsGP: A Genetic Programming Approach to Event Selection. *Computer Physics Communications*, 167(3), 2005.

R. Sean Bowman and Henry Hexmoor. Agent Collaboration and Social Networks. In *Proceedings of Knowledge Intensive Multiagent Systems (KIMAS)*, 2005.

Teaching

2005–2011, University of Texas

- Teaching assistant for the Supplemental Instruction program, which aims to increase retention and graduation of first generation and historically underrepresented college students (three semesters)
- Teaching assistant for honors differential equations (one semester) and Assistant Instructor for Emerging Scholars calculus, a challenging adjunct to the traditional calculus sequence (two semesters)
- Teaching assistant for calculus, differential equations, and precalculus
- Adjunct at Texas International Education Consortium, teaching math and math vocabulary to ESL students from Asia and the Middle East

2002–2005, University of Arkansas

- Teaching assistant for college algebra and discrete math

Professional Activities

Talks

- Caltech Topology Seminar, February 2012
- Joint Meetings of the AMS/MAA, January 2012
- University of Texas Topology Seminar, October 2011
- University of Arkansas Topology Seminar, March 2011
- Austin Math Circle, September 2010 (audience of elementary through high school students)

Recent conference participation

- AMS Mathematical Research Communities workshop on Computational and Applied Topology, 2011
- Joint meetings AMS Mini course: Computational Topology, 2011
- Jacofest, OSU, 2010

Other Work Experience

Rocket Software
Software Developer

Bentonville, AR
Summer 2004

- Worked on what became the Rocket Provisioning Expert for Linux on zSeries, a server consolidation and configuration tool for IBM mainframes
- Wrote software in C++, C, and Python

Open Software Services, LLC
Software Developer

Little Rock, AR
2000–2002

- Developed software, especially dynamic websites, as a consultant