

# R. Sean Bowman

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## Education

**University of Texas**, Austin, TX  
*Ph.D. in Mathematics expected 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

## Publications in preparation

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