

R. Sean Bowman

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Department of Mathematics
Oklahoma State University
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Employment

- **Oklahoma State University**, Visiting Assistant Professor, 2012–present
- **University of Texas, Austin**, Graduate student, 2005–2012

Education

- **University of Texas, Austin**, Ph.D. in Mathematics, May 2012. Advisor: John Luecke
- **University of Arkansas, Fayetteville**, graduate study in Computer Science and Mathematics, 2002–2005.
- **Washington University**, A.B. in Mathematics, May 2000.

Research Interests

Topology and geometry in 3 dimensions, Dehn surgery, bridge number of knots and links, topological data analysis

Publications

R. Sean Bowman. Knots in handlebodies with nontrivial handlebody surgeries. *Journal of Topology*, to appear.

Ken Baker, R. Sean Bowman, and John Luecke. Bridge number and boundary reducing surgeries. In preparation.

R. Sean Bowman and Jesse Johnson. Bridge number of knots in the page of an open book. In preparation.

R. Sean Bowman, Scott Taylor, and Alex Zupan. Bridge spectra of twisted torus knots. In preparation.

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

2012–present, Oklahoma State University

- Instructor for Calculus I

2005–2011, University of Texas

- Instructor of record for Emerging Scholars calculus adjunct class, teaching assistant for calculus I and II, 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

Conference talks

- AMS sectional meeting, Boston College, April 2013, *Dehn surgery and bridge number of knots in handlebodies*
- AMS sectional meeting, Iowa State University, April 2013, *Dehn surgery and bridge number of knots in handlebodies*

Colloquium and Seminar talks

- University of Texas Topology Seminar, October 2013, *Bridge numbers of twisted torus knots.*
- Oklahoma State Topology Seminar, September 2013, *Bridge numbers of twisted torus knots.*
- University of Arkansas Topology Seminar, October 2012, *Dehn surgery and bridge number of knots in handlebodies*
- Oklahoma State University Colloquium, September 2012, *Dehn surgery and bridge number of knots in handlebodies*
- Caltech Topology Seminar, February 2012, *Knots in handlebodies with handlebody surgeries*
- Joint Meetings of the AMS/MAA, January 2012, *Knots in handlebodies with handlebody surgeries*
- University of Texas Topology Seminar, October 2011, *Knots in handlebodies with handlebody surgeries*
- University of Arkansas Topology Seminar, March 2011, *Knots in handlebodies with handlebody surgeries*

General audience talks

- Oklahoma State Math club, October 2013
- Austin Math Circle, September 2010 (audience of elementary through high school students)

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