Michael J. Williams
Curriculum Vitae

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Department Address
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University of California
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Current Position

University of California President's Postdoctoral Fellow (2008-2010)
Department of Mathematics
University of California, Santa Barbara
Mentor: Professor Martin Scharlemann

Education

University of California, Davis
Ph.D. in Mathematics, June 2008.
Dissertation: *Lens space surgeries on tunnel number one knots*
Advisor: Professor Abigail Thompson

University of Georgia, Athens
M.A. in Mathematics, August 1999.
B.S. in Mathematics, March 1995.

Research Interests

I am interested in low dimensional topology, especially 3-manifold theory and the theory of knots and links. My current research focus is on Dehn surgery on links, genus 2 Heegaard splittings of link exteriors, and connections between these two concepts.

Papers

On nonsimple knots in lens spaces with tunnel number one, submitted.

Handle number one links and generalized property R, submitted.

Select Awards

University of California President's Postdoctoral Fellowship Department of Mathematics, UC Santa Barbara	07/2008–07/2010
GAANN Fellowship Department of Mathematics, UC Davis.	10/2006–06/2007
NSF VIGRE Summer Research Fellowship Department of Mathematics, UC Davis.	2004, 2006, 2007

Select Talks

Knotting Around Dimension Three: A Special Session in Memory of Xiao-Song Lin. American Mathematical Society Western Sectional Meeting. University of California, Riverside. November 8, 2009.

University of California President's Postdoctoral Fellowship Program Spring Meeting. Lake Arrowhead Conference Center. April 18, 2009.

Geometry/Topology Seminar. California Institute of Technology. March 13, 2009.

Topology Seminar. Yale University. March 3, 2009

Topology Seminar. University of Iowa, Iowa City. October 21, 2008

Topology Seminar. University of California, Santa Barbara. September 30, 2008.

Georgia Topology Conference. University of Georgia, Athens. May 18, 2008.

Mathematics Colloquium. Occidental College. March 26, 2008.

Claremont Topology Seminar. Pomona College. March 25, 2008.

Special Session in *Heegaard Splittings, Bridge Surfaces, and Low Dimensional Topology*. Joint AMS-MAA Meeting. San Diego, California. January 9, 2008.

Geometry/Topology Seminar. University of California, Davis. November 7, 2007.

Special Session in *Low Dimensional Topology*. Seventh Joint Meeting of la Sociedad Matemática Mexicana (SMM) and the American Mathematical Society (AMS). Zacatecas, Mexico. May 25, 2007.

Fifth Annual Graduate Student Topology Conference. Univerisity of Chicago. April 21, 2007.

Professional Service

Served as referee for the mathematics journal *Communications in Analysis and Geometry*.

Workshops	**Homology Theories of Knots and Links**	01/2010
	Introductory Workshop. MSRI. Berkeley, California.	
	Symplectic and Contact Geometry and Topology	08/2009
	Introductory Workshop. MSRI. Berkeley, California.	
	Aspects of Teichmüller Theory	04/2007
	University of Michigan. Ann Arbor, Michigan.	
	IAS/PCMI Low Dimensional Topology	06/2006–07/2006
	Graduate Summer School. Park City, Utah	
	PIMS/MSRI Knots and 3-manifolds	07/2004
	Graduate Summer School. University of British Columbia. Vancouver, Canada	

Select Conferences Attended

Geometric Topology in 3 and 4 Dimensions. University of California, Davis. June 2009.

40th *Texas Geometry and Topology Conference*. University of Texas, Austin. October 2008.

Low Dimensional Topology. Mathematical Sciences Research Institute (MSRI). Berkeley, California. August 2008.

Geometry and the Imagination. Princeton University. June 2007.

Conference on 3-manifold Topology. Centre de Recherches Mathématique. Montréal, Canada. June 2006.

Future Directions in 3-manifolds. University of Michigan. Ann Arbor, Michigan. October 2005.

3-manifolds and Knot Theory Conference. University of Texas. Austin, Texas. May 2005.

Complex of Curves Fest. California Institute of Technology. Pasadena, California. January 2005.

Cornell Topology Festival. Cornell University. Ithaca, New York. May 2004.

Teaching Experience

University of California, Santa Barbara   03/2009–06/2009
Department of Mathematics
Taught an Introduction to Topology course. This is a junior/senior level course designed for mathematics majors.

University of California, Davis   09/2003–06/2008
Department of Mathematics
Taught courses in Differential Equations and Multivariable Calculus.
Served as Mentor/Instructor for REU program in geometry/topology for six students.
Served as Teaching Assistant for Advanced Calculus and several lower division courses.

University of Minnesota, Twin Cities   01/2000–08/2003
Department of Mathematics
Taught courses in Calculus, Pre-Calculus, and College Algebra.
Served as Teaching Assistant for several courses including Linear Algebra, Vector Calculus, Differential Equations, and Counting/Probability for Teachers.

Multicultural Center for Academic Excellence
Managed mentoring/tutoring center and its student employees, held special events (e.g. math contests and review sessions) and gave talks to various campus organizations to promote the mentoring/tutoring center.

Citizenship   United States