CURRICULUM VITA

LAWRENCE ROBERTS

Contact Information:

Department of Mathematics
The University of Alabama
Tuscaloosa, Al 35487

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Professional Preparation:

May 1997	B.A. Summa Cum Laude	Washington University in St. Louis
Dec 2004	Ph.D. Mathematics	University of California, Berkeley

Appointments:

Assistant Professor, The University of Alabama, Aug. 2009 –
Research Member, Homology theory of knots and links program, MSRI Jan 2010 – May 2010
Visiting Assistant Professor, Michigan State University, Aug. 2008 – Aug. 2009
Visiting Research Instructor, RTG program in Geometry/Topology
Michigan State University, Aug. 2005 - Aug. 2008

Awards and Honors:

National Science Foundation, Graduate Research Fellowship, 1998 - 2001
Arthur Holly Compton Fellowship, Washington University, St. Louis, 1993-1997
Outstanding Graduate Student Instructor, University of California, Berkeley, 2003

Research Interests: Differential topology, low dimensional topology, knot theory, gauge theory, Heegaard-Floer homology, Khovanov homology

Dissertation: "Heegaard-Floer homology and based links in three manifolds", written under Robion Kirby, University of California, Berkeley

Publications:

"Graphical discovery of a new identity for Jacobi polynomials" w. Brian Gerard, *American Mathematical Monthly*, vol. 105, no. 2. Feb 1998, p. 163 166.
"Heegaard-Floer homology and string links", *Algebraic & Geometric Topology* 9(2009):29-102
"Rational blow downs in Heegaard-Floer homology", *Communications in Contemporary Mathematics*. Vol 10, No. 4, August 2008. pgs. 491-522

"On knot Floer homology in double branched covers", math.GT/0706.0741, revised, *Geometry & Topology*
"On knot Floer homology for some fibered knots", math.GT/0706.0743, revised, *Communications in Contemporary Mathematics*
"Notes on the Heegaard-Floer link surgery spectral sequence", math.GT/0808.2817, submitted
"Extending Van Cott's bounds for the τ-invariant of satellite knots", *Journal of Knot Theory and its Ramifications*. Vol. 20, No. 9 (2011) 1237-1245.
"Some bounds for the knot-Floer τ-invariant of satellite knots", *Algebraic & Geometric Topology* 12(2012):449-467
"Totally twisted Khovanov homology", arXiv:math.GT/1109.0508, submitted
"Extensions of Spanning Tree Homology", in preparation
"Bordered Khovanov Homology", in preparation

Invited Talks:

Several talks in the topology/geometry seminar at Michigan State University, 2005-2008
Georgia Topology Conference, May 2008
Rice University Topology Seminar, October 2008
Gauge Theory and Topology Seminar, Harvard University, November 2008
Louisiana State University Topology Seminar, November 2008
University of Virginia Topology Seminar, November 2009
Special Session on Gauge Theory, Eastern Sectional Meeting of the American Mathematical Society, September 2011

Teaching:

Spring 2011	Math 126: Calculus II	The University of Alabama
	Math 466/566: Intro. to Algebraic Topology	The University of Alabama
Fall 2011	Math 125: Calculus I	The University of Alabama
	Math 474/574: Cryptography	The University of Alabama
Spring 2011	Math 126: Calculus II	The University of Alabama
	Math 466/566: Intro. to Algebraic Topology	The University of Alabama
Fall 2010	Math 125: Calculus I	The University of Alabama
	Math 465/565: Intro. to General Topology	The University of Alabama
Fall 2009	Math 125: Calculus I	The University of Alabama
	Math 465/565: Intro. to General Topology	The University of Alabama
Spring 2009	Math 320: Analysis I	Michigan State Univeristy
Fall 2008	Math 254H: Honors Multi-Variable Calculus	Michigan State University
Spring 2008	Math 864: Geometric Topology (graduate)	Michigan State University
Fall 2007	Math 461: Metric and Topological Spaces	Michigan State University
Spring 2007	Math 153H: Honors Calculus II	Michican State University
Fall 2007	Math 152H: Honors Calculus I	Michigan State University
Spring 2006	Math 234: Multi-Variable Calculus	Michigan State University
Fall 2005	Math 132: Calculus I	Michigan State University
Summer 2002	Math 16B: Applied Calculus II	University of California,Berkeley