SCOTT ALLEN TAYLOR

CURRICULUM VITAE

email: sataylor@colby.edu
homepage: http://www.colby.edu/personal/s/sataylor

EDUCATION

Ph.D. (Mathematics) September, 2008	University of California, Santa Barbara. Santa Barbara, California. Dissertation: *Boring split links and unknots* Committee: Martin Scharlemann (chair), Daryl Cooper, Jon McCammond
M.A. (Mathematics) 2000	The Pennsylvania State University. State College, Pennsylvania. Master's Paper: *Recent work on linear representations of braid groups* Advisor: Edward Formanek
B.S. (Mathematics) *Summa Cum Laude* minors in Music and English 1998	Gordon College. Wenham, Massachusetts. Advisor: Richard Stout

MATHEMATICS RESEARCH PAPERS

Comparing 2-handle additions to a genus 2 boundary component
Preprint available on my webpage.

Band-taut sutured manifolds
Preprint available on my webpage.

Essential surfaces in (3-manifold, graph) pairs and leveling edges of Heegaard spines (with Maggy Tomova)
Preprint available at arXiv: 0910.3251. Submitted.

Heegaard splittings for certain graphs in compressionbodies (with Maggy Tomova)
Preprint available at arXiv: 0910.3019.
To be published by *Revista Matemática Complutense*.

Boring split links Pacific Journal of Mathematics, (**241**) 2009, No. 1, 127 – 167.

On non-compact Heegaard splittings Algebraic & Geometric Topology, (**7**) 2007, 603 – 672.

TEACHING APPOINTMENTS

Colby College Waterville, Maine.	Assistant Professor Faculty Fellow Visiting Assistant Professor	2010 – present. 2009 – 2010. 2008 – 2009.
Westmont College Santa Barbara, California	Instructor Adjunct Instructor	2006 – 2007. 2004 – 2005, Fall 2007.
University of California Santa Barbara, California	Teaching Assistant Teaching Associate	2002 – 2006, Fall 2007. Summer 2004, Winter 2006
New England Institute of Art (Formerly, New England Institute of Art and Communications) Brookline, Massachusetts.	Instructor	2000 – 2002.
Pennsylvania State University State College, Pennsylvania.	Teaching Assistant	1998 – 2000.

RESEARCH APPOINTMENTS

University of California Santa Barbara, California	Research Assistant	Winter, Spring 2008 Summers 2004 – 2007

COURSES TAUGHT AT COLBY

(*) indicates that the course was co-taught with another faculty member.

Semester	Course Number	Course Title	Final Enrollment
Fall 2008	MA 121 B	Single Variable Calculus	25
Fall 2008	MA 253 A	Linear Algebra	15
Spring 2009	MA 111 A	Mathematics as a Liberal Art	26
Spring 2009	MA 111 B	Mathematics as a Liberal Art	26
Spring 2009	MA 331 A	Topology	7
Fall 2009	MA 122 B	Series and Multivariable Calculus	20
Fall 2009	MA 122 C	Series and Multivariable Calculus	20
Spring 2010	MA 111 A	Mathematics as a Liberal Art	29
Spring 2010	MA 302 A	Vector Calculus	17
Fall 2010	MA 194 A*	Mathematics Seminar	15
Fall 2010	MA 274 A	Introduction to Abstract Mathematical Thought	24
Fall 2010	MA 302 A	Vector Calculus	12
January 2011	MA 91 A	Independent Study (Sarah Kirker)	1
Spring 2011	MA 194 A*	Mathematics Seminar	10
Spring 2011	MA 121 A	Single Variable Calculus	15
Spring 2011	MA 302 B	Vector Calculus	20

STUDENT RESEARCH SUPERVISED

Heegaard Splittings for Non-compact 3-manifolds related to the Cantor Set
Sarah Kirker, Honors Thesis
Spring 2011

Vector Calculus and Low-Dimensional Topology
Jennie Buskin, Philip Prosapio, Jimmy Pershken (high school student)
Summer 2011

MATHEMATICS RESEARCH PRESENTATIONS, SEPTEMBER 2008 - PRESENT

Thin Position for Graphs in 3-Manifolds
Special Session on Thin Position. April 9, 2011.
Spring AMS Eastern Sectional Meeting.
Worcester, Massachusetts.

Thin Position for Graphs in 3-Manifolds (Invited)
Special Session on Thin Position. March 18, 2011.
Spring AMS Central Sectional Meeting.
Iowa City, Iowa.

A Knot Theorist's Guide to Being Thin (Invited)
Colby College Mathematics Colloquium. February 11, 2010.

It's Good to be Thin: Knots, Graphs, and 3-Manifolds (Invited)
Bowdoin College Mathematics Seminar. November 10, 2009.

Leveling Heegaard Spines (Invited)
Boston College Topology Seminar. October 22, 2009.

Combinatorial Sutured Manifold Theory: Past and Present (Invited)
U. Iowa Mathematics Colloquium. April 23, 2009.

Boring Split Links and Unknots (Invited)
U. Iowa, LSU, Rice U. Joint Topology Seminar. April 22, 2009.

Interesting Surfaces in Knot Exteriors After Rational Tangle Replacement (Invited)
Colby-Bates-Bowdoin Mathematics Seminar. November 14, 2008.

Adding 2–Handles to Sutured Manifolds (Invited)
Boston College Topology Seminar. September 25, 2008.

GENERAL AUDIENCE PAPERS AND PRESENTATIONS, SEPTEMBER 2008 - PRESENT

Terry Winters, Knot Theory, and In Blue
Noontime Art Talk, Colby College Museum of Art, March 17, 2011.

What is … *the Hopf Fibration?*
Mathematics and Statistics Colloquium, Colby College. September 21, 2009.

(Not so) boring knots: An introduction to combinatorial methods in knot theory
Mathematics and Statistics Colloquium, Colby College. March 12, 2008.

FUNDED GRANTS

Colby College Natural Sciences Division Research Grant 2010 – 2011.

CBB-Mellon Grant for "Crossing Boundaries: Fostering Communication and Collaboration Among Algebraists, Number Theorists, and Topologists". January, 2011 – June, 2012
with Thomas Pietraho (Bowdoin), Jennifer Taback (Bowdoin), and Peter Wong (Bates)

American Institute of Mathematics SQuAREs Grant "Applications of Thin Position to Uniqueness Problems".
with Ryan Blair (U. Penn.), Marion Moore Campisi (U. Texas Austin), Jesse Johnson (U. Oklahoma), and Maggy Tomova (U. Iowa). Grant period begins December, 2010.

CONFERENCE ORGANIZATION

Co-organizer of Special Session on Topological, Geometric, and Quantum Invariants of 3--Manifolds at the 2011 Spring AMS Eastern Sectional Meeting, April 9-10, 2011.
College of the Holy Cross, Worcester, Massachusetts.

SERVICE, SEPTEMBER 2008 - PRESENT

Outside member of Psychology Department search for Faculty Fellow.

Colby College Mathematics and Statistics Department Webmaster, 2009 – 2011.

Colby College Mathematics and Statistics Department Social Organizer (with Jim Scott), 2010-2011

Reviewer for *Math Reviews* at maa.org.

Referee for *Transactions of the American Mathematical Society*.

Referee for *Algebraic & Geometric Topology*.

Referee for *Topology and Its Applications.*

Co-organizer of the Colby College Mathematics and Statistics Colloquium, 2008 – 2010.

Organized (with the assistance of Carole Evans) the 2009 – 2010 Colby College IBM Lecture and visit by Keith Devlin.

COURSES TAUGHT AT OTHER INSTITUTIONS

Westmont College
Calculus I and II, Multivariable Calculus, Introduction to Statistics, Finite Mathematics.

University of California, Santa Barbara
Calculus and Differential Equations B, A Transition to Higher Mathematics.

New England Institute of Art
Basic Math, Algebra I and II, Geometry, Patterns in Mathematics.

The Pennsylvania State University
Algebra II, Trigonometry, Calculus I, Linear Algebra, Mathematics for Elementary School Teachers.

COURSES ASSISTED AT OTHER INSTITUTIONS

University of California, Santa Barbara (Teaching Assistant)

Calculus for the Social Sciences A and B; Calculus and Differential Equations A, B, and C;
Differential Equations and Linear Algebra A and B;
graded for the introductory graduate topology sequence.

RESEARCH PRESENTATIONS, 2005 - AUGUST, 2008.

Sutured Manifold Theory and Rational Tangle Replacement
Teichmüller Theory & Low-dimensional Topology Mathematical Research Community.
Snowbird, Utah. June 14 – 20, 2008.

Boring Split Links and Unknots (Invited)
2008 Spring Sectional Meeting of the AMS.
Special Session on Knot Theory and the Topology of 3–Manifolds.
Claremont, California. May 3 – 4 , 2008.

Boring Split Links and Unknots
UCSB Topology Seminar. March 4, 2008.

Split Links & Unknots obtained by Refilling Meridians of Genus 2 Handlebodies (poster)
Graduate Student Poster Session.
MathFest. San Jose, California. August 5, 2007.

Unique Heegaard Splittings of Deleted Boundary 3–Manifolds (Invited)
Claremont Topology Seminar. October 10, 2006.

Non-compact Heegaard Splittings and a Theorem of Casson and Gordon
Park City Mathematics Institute Research Program.
Park City, Utah. July 10, 2006.

Non-compact Heegaard Splittings of Deleted Boundary 3–Manifolds
2006 Spring Sectional Meeting of the AMS.
Special Session on Geometric Methods in Group Theory and Topology.
Durham, New Hampshire. April 22 – 23, 2006.

Non-compact Heegaard Splittings
UCSB Topology Seminar. November 8, 2005.

GENERAL AUDIENCE PRESENTATIONS, 2001 - AUGUST, 2008.

Poincaré's Conjecture and Whitehead's Infinite Swindle
Mathematics and Statistics Colloquium, Colby College. November 3, 2008.
Natural and Behavioral Sciences Seminar, Westmont College. February 29, 2008.

Reading Flatland
Contributed Paper in "Mathematics & the Arts".
MathFest, San Jose, California. August 6, 2007.

Active Participant in the Graduate Topology Seminar
UCSB. 2002 – 2006.

The Well-Roundedness of Spheres
Graduate Seminar, California State University, Channel Islands. October 5, 2005.

The Quoolness of Quandles
Mathematics Student Seminar, UCSB. November 15, 2004.

Mathematics and the Love of God: An Introduction to the Thought of Simone Weil
Fourteenth Conference of the Association of Christians in the Mathematical Sciences.
May 29, 2004. Published in the conference proceedings.
Republished in inaugural issue of *The Journal of the ACMS*, 2004.

Topology and Division Algebras
Mathematics Student Seminar, UCSB. March 3, 2004.

Mathematics and Numerology in the Movie "Pi"
Undergraduate Math Club, UCSB. November 23, 2002.
Student Film Club, New England Institute of Art. October 15, 2001.

SERVICE AT OTHER INSTITUTIONS

Played in the Westmont College Orchestra
Westmont College, 2006 – 2007.

Organized the Graduate Student Topology Seminar
University of California, Santa Barbara, Spring 2004 – Winter 2005 (approximately).

Served on the Institutional Effectiveness Committee
New England Institute of Art and Communications, 2001 – 2002.

Served on the Library Committee
New England Institute of Art and Communications, 2001 – 2002.

HONORS AND AWARDS

2006	"Outstanding Professor" from UCSB Residence Halls Association and Office of Residential Life.
2003 – 2006, 2007 – 2008	Math Department Fee Fellowship, UCSB.
1998	Inducted into Phi Alpha Chi (Gordon College Honor Society).
1994 – 1998	A.J. Gordon Memorial Scholarship, Gordon College.
1995	Freshman Physics Award, Gordon College.

SUMMER SCHOOLS/WORKSHOPS ATTENDED

Junior Topologists' Research Retreat (Invited Participant)
Davis, California, June 23 – 29, 2009.

Teichmüller Theory & Low-dimensional Topology
Mathematical Research Community
Snowbird, Utah, June 14 – 20, 2008.

Institute for Advanced Study/Park City Mathematics Institute
Graduate Summer School in Low-Dimensional Topology
Park City, Utah, June 25 – July 15, 2006.

Mathematical Sciences Research Institute – Pacific Institute for the Mathematical Sciences
Summer Graduate Programme: "Knots and 3–Manifolds"
University of British Columbia, July, 2004.