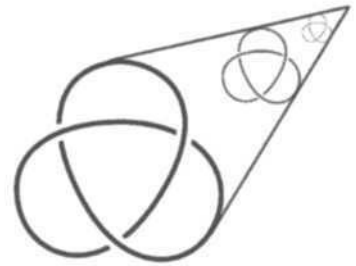


Greg Friedman

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Updated January 14, 2010



RESEARCH AREAS: Geometric and algebraic topology, particularly stratified spaces, intersection homology theory, stratified knot theory, and disk knot theory

RESEARCH AND TEACHING APPOINTMENTS

Department of Mathematics, Texas Christian University, Fort Worth, TX

Assistant Professor (tenure-track) and Graduate Faculty: 7/05-present

Current Courses (Spring 2010):, Abstract Algebra II, Calculus I

Past Courses: Precalculus with Trigonometry, Calculus I (twice), Calculus II (thrice), Calculus III (twice), Differential Equations (thrice), Survey of Mathematical Problems I, Topology of Spaces and Knots, Abstract Algebra I

Department of Mathematics, Vanderbilt University, Nashville, TN

NSF-RTG Assistant Professor (non-tenure-track): 7/05 -7/06

Courses Taught: Linear Algebra, Introduction to Abstract Algebra

Department of Mathematics, Yale University, New Haven, CT

Gibbs Assistant Professor (non-tenure-track): 6/04-7/05

NSF VIGRE/Gibbs Instructor (non-tenure-track): 5/01-6/04

Courses Taught: Calculus of Functions of One Variable II; Calculus of Functions of Several Variables; Vector Calculus and Linear Algebra (two semesters, three times each); Introduction to Complex Analysis; Intersection Homology and Related Topics (graduate course)

Organizer and Lecturer: Yale University 2003 Summer Topology Seminar

Creator and Organizer: Yale University Graduate Student Summer Mathematics Colloquium

Courant Institute of Mathematical Sciences, New York University, New York, NY

Graduate Assistant: 9/96-7/01

Courses Taught: Calculus I (twice), Mathematical Thinking, Business Calculus, Discrete Mathematics

Teaching Assistant: Calculus II (twice), Pre-calculus (twice), Business Calculus, Advanced Calculus (graduate)

Morse Academic Plan of the College of Arts and Sciences, New York University, New York, NY

Preceptor: 9/00-12/00

Laboratory Instructor: Quantitative Reasoning - Math and the Computer

Stevens Institute of Technology, Hoboken, NJ

Instructor - Stevens Technical Enrichment Program: 6/99-7/99

Courses taught: Calculus

NSF-Research Experience for Undergraduates at Indiana University, Bloomington, IN

Researcher: Summer, 1995

Research Project: "Wavelets and their applications to the approximation of simple functions and data using Mathematica" (advisor: Prof. Joseph Stampfli)

VISITING POSITIONS

Einstein Institute of Mathematics, Hebrew University, Jerusalem, Israel

Visitor: 6/05

EDUCATION

Courant Institute of Mathematical Sciences, New York University, New York, NY

Ph.D. - Mathematics, 5/01 - MS - Mathematics, 9/98

4.0/4.0 GPA

Dissertation: "*Polynomial invariants of non-locally-flat knots*" (advisor: Prof. Sylvain Cappell)

Honors: Perfect Score on Written Comprehensive Examination

Brown University, Providence, RI

Sc.B. Magna Cum Laude - Mathematics and Math-Physics (each with honors), 5/96

3.97/4.0 GPA

Awards: *David Howell Premium for Outstanding Achievement in Mathematics*, 5/96

Phi Beta Kappa Honor Society, 4/96 (elected)

Sigma Xi Science Honor Society, 4/96 (elected)

PROFESSIONAL AFFILIATIONS

American Mathematical Society

Mathematical Association of America

PUBLICATIONS (All papers available at <http://faculty.tcu.edu/gfriedman>)

- Robert Doran, Greg Friedman, and Jonathan Rosenberg (editors), **Proceedings of the NSF/CBMS Conference on Topology, C* Algebras, and String Theory, TCU, May 18-22, 2009** (co-editor) – in preparation – to be published by the AMS
- Greg Friedman, Eugénie Hunsicker, Anatoly Libgober, and Laurentiu Maxim (editors), **Proceedings of the Workshop on the Topology of Stratified Spaces, MSRI, September, 2008** (co-editor) – in preparation – to be published by Cambridge University Press
- Greg Friedman and James McClure, *Cup and cap product in intersection (co)homology* – in preparation
- Greg Friedman, *An elementary illustrated introduction to simplicial sets* – in preparation
- Greg Friedman and Eugénie Hunsicker, *Additivity and non-additivity for perverse signatures* - submitted
- Greg Friedman, *Intersection homology with general perversities* - submitted
- Greg Friedman, *An Introduction to intersection homology with general perversities* – to appear in the **Proceedings of the Workshop on the Topology of Stratified Spaces, MSRI, September, 2008**
- Greg Friedman, *Intersection homology with field coefficients: K-Witt spaces and K-Witt bordism*, **Comm. Pure Appl. Math.** 62 (2009), 1265-1292
- Greg Friedman, *On the chain-level intersection pairing for PL pseudomanifolds*, **Homology, Homotopy Appl.** 11 (2009), 261-314
- Greg Friedman, *Intersection homology and Poincare duality on homotopically stratified spaces*, **Geom. Topol.** 13 (2009), 2163-2204
- Greg Friedman, *Intersection homology Künneth theorems*, **Math. Ann.** 343 (2009), 371-395
- Greg Friedman, *Cobordism of disk knots*, **Israel J. Math.** 163 (2008), 139-188
- Greg Friedman, *Intersection homology of stratified fibrations and neighborhoods*, **Advances in Math.** 215 (2007), 24-65
- Greg Friedman, *There exist non-trivial PL knots whose complements are homotopy circles*, **Fund. Math.** 193 (2007), 1-6
- Greg Friedman and Gil Kalai, *A multiperversity generalization of intersection homology*, **Pure Appl. Math. Q.** 3 (2007), Special Issue: In honor of Robert MacPherson, Part 3 of 3, 205-224
- Greg Friedman, *Singular chain intersection homology for traditional and super-perversities*, **Trans. Amer. Math. Soc.** Vol. 359 (2007), 1977-2019.

- Greg Friedman, *Superperverse intersection cohomology: stratification (in)dependence*, **Math. Z.** Vol. 252 (2006), 49-70
- Greg Friedman, *Spinning constructions for higher-dimensional knots*, Chapter 4 of the **Handbook of Knot Theory** (Menasco and Thistlethwaite eds.), Amsterdam: Elsevier, 2005
- Greg Friedman, *Intersection homology of regular and cylindrical neighborhoods*, **Topology Appl.** Vol. 149 (2005), 97-148
- Greg Friedman, *Groups of locally-flat disk knots and non-locally-flat sphere knots*, **J. Knot Theory Ramifications** Vol. 14 (2005), 189-215
- Greg Friedman, *Intersection Alexander polynomials*, **Topology** Vol. 43 (2004), 71-117
- Greg Friedman, *All frame-spun knots are slice*, **Proc. Amer. Math. Soc.** Vol. 132 (2004), 3103-3109
- Markus Banagl and Greg Friedman, *Triangulations of 3-dimensional pseudomanifolds with an application to state-sum invariants*, **Algebraic and Geometric Topology** Vol. 4 (2004), 521-542
- Greg Friedman, *Alexander polynomials of non-locally-flat knots*, **Indiana Univ. Math. J.** Vol. 52 (2003), 1479-1578
- Greg Friedman, *Stratified fibrations and the intersection homology of the regular neighborhoods of bottom strata*, **Topology Appl.** Vol. 134 (2003), 69-109

SELECTED TALKS

- Midwest Topology Seminar – West Lafayette, IN – 2/09
- NSF-CBMS Conference on Knots and Topological Quantum Computing - Edmond, OK - 7/08
- Singularities in Geometry and Topology in honor of the 60th birthday of Sylvain Cappell – New York, NY - 3/08
- Rice University Topology Seminar - Houston, TX - 11/07
- Spring Topology and Dynamics Conference - Rolla, MO - 3/07
- Texas Geometry and Topology Conference - Fort Worth, TX - 3/07
- Purdue University Topology Seminar – West Lafayette, IN - 10/06
- Frank Stone Research Lecture at TCU – Fort Worth, TX - 9/06
- Courant Institute of Mathematical Sciences at NYU - New York, NY - 4/06
- Vanderbilt University Math Club - Nashville, TN - 3/06
- Union College Mathematics Conference - Schenectady, NY - 12/05, 11/03
- Vanderbilt University Topology and Group Theory Seminar - Nashville, TN - 12/05, 11/05, 10/05, 11/04, 12/03
- Tennessee State University Mathematics Seminar - Nashville, TN - 11/05
- Hebrew University Topology Seminar - Jerusalem, Israel - 6/05
- Bowdoin College Mathematics Seminar - Brunswick, ME - 4/05
- Conference on "Submanifolds, Singular Varieties, and Stratified Spaces" - New York, NY - 3/05
- University of Waterloo Mathematics Colloquium - Waterloo, Ontario, Canada - 2/05
- North Dakota State University Mathematics Colloquium - Fargo, ND - 2/05
- Cleveland State University Mathematics Colloquium - Cleveland, OH - 2/05
- United States Naval Academy Mathematics Colloquium - Annapolis, MD - 2/05
- Texas Christian University Mathematics Colloquium - Fort Worth, TX - 2/05
- Vanderbilt University Mathematics Colloquium - Nashville, TN - 1/05
- Yale University Topology Seminar - New Haven, CT - 9/04, 9/03, 10/02, 11/01, 10/01
- Lehigh Geometry/Topology Conference - Bethlehem, PA - 6/03 and 6/04
- Valley Geometry Seminar - University of Massachusetts - Amherst, MA - 4/04
- Wesleyan University Topology Seminar - Middletown, CT - 4/04
- Workshop on Topology of Manifolds and Homotopy Theory - Banff International Research Station, Banff, Canada - 3/04
- Kansas State University Mathematics Colloquium - Manhattan, KS - 12/03
- Northeastern University Geometry-Algebra-Singularities-Combinatorics Seminar - Boston, MA - 11/03
- AMS Special Session on Singularities of Complex Hypersurfaces - New York, NY - 5/03
- Brandeis University Topology Seminar - Waltham, MA - 4/02
- University of Wisconsin Topology Seminar - Madison, WI - 3/02
- Workshop on Topology of Manifolds and Group Actions - Centre de Recherches Mathématiques, Montréal, Quebec, Canada - 8/01

AWARDS, HONORS, AND GRANT SUPPORT

- NSF Grant DMS-0735233 (with Bob Doran) for NSF/CBMS Conference on Topology, C* Algebras, and String Theory, May 18-22, 2009, Fort Worth, TX
- MSRI Award (with Eugénie Hunsicker, Anatoly Libgober, and Laurentiu Maxim) for Workshop on the Topology of Stratified Spaces, September 8-12, 2008, Berkeley, CA
- NSF-RTG Assistant Professorship at Vanderbilt University: 7/05 -7/06
- NSF VIGRE Instructorship at Yale University: 5/01-6/04
- David Howell Premium for Outstanding Achievement in Mathematics, Brown University, 5/96
- Phi Beta Kappa Honor Society, 4/96 (elected)
- Sigma Xi Science Honor Society, 4/96 (elected)
- Valedictorian, Madison Central High School, Old Bridge, NJ, 6/92
- Star Ledger Scholar for Middlesex County – 1992

PROFESSIONAL CONSULTING ACTIVITIES

- Editor and proofreader for **Algorithms in Real Algebraic Geometry** by Saugata Basu, Richard Pollack, and Marie-Francoise Roy, Springer, Berlin (2003)
- Textbook Reviewer - **Multivariable Mathematics** by Theodore Shifrin, John Wiley & Sons, Inc.
- Figure proofreader for Briggs-Cochran calculus book for Pearson publishing
- Chapter class-tester for Briggs-Cochran calculus book for Pearson publishing

SELECTED PROFESSIONAL ACTIVITIES

- Co-organizer – Texas Geometry and Topology Conference, Spring 2010
- Helped edit TCU Math. Department faculty review and evaluation policies – Fall, 2009
- Assistant Math Dept. Webmaster for Current Events – Fall 2009-present
- Participant/Organizer – TCU K-theory seminar, Fall 2009
- Beta Tester for TCU grant profile software – Summer 2009 – present
- Co-organizer (with Robert Doran) – NSF/CBMS Conference on Topology, C* Algebras, and String Theory, May 18-22, 2009 at Texas Christian University
- Editor (with Robert Doran) – **Proceedings of the NSF/CBMS Conference on Topology, C* Algebras, and String Theory** – in process
- Coordinating Editor (with Eugénie Hunsicker, Anatoly Libgober, and Laurentiu Maxim)– **Proceedings of the Workshop on the Topology of Stratified Spaces** – in process
- Member - TCU Mathematics Graduate Program Committee - 2009-present
- Member – TCU Provost's Climate Change Curriculum Committee
- Co-organizer (with Eugénie Hunsicker, Anatoly Libgober, and Laurentiu Maxim) – Workshop on the Topology of Stratified Spaces, September, 2008, at the Mathematical Sciences Research Institute, Berkeley, CA
- TCU Faculty Senator - 2008 - present
- Member TCU Faculty Senate Academic Excellence Committee – 2008-present
- TCU student advisor - 2008 - present
- Member - TCU Academic Appeals Committee - 2007-present
- Led TCU Common Reading Section for entering students – 2007, 2008, 2009
- Member - TCU Mathematics Hiring Committee - 2007-2008, 2008-2009
- Member - TCU Mathematics Graduate Program Proposal Committee - 2007-2009
- Participant/Organizer -Metroplex Geometry and Geometric Analysis Seminar - 2006- present
- Participant/Organizer - TCU Lie Groups Seminar - 2007-2009
- Member of Phi Beta Kappa Members in Course Committee at TCU - 2007- present
- Mathematics Judge - Fort Worth Regional Science and Engineering Fair - 2009
- Judge - Como Montessori School Science Fair - 2009
- Volunteer Grader - MATHCOUNTS, 2007, 2008, 2009
- Math Department Representative – TCU Major/Minor Fair – 2007, 2008, 2009
- Grader - TCU Calculus Bee – 2007, 2009
- Participant/Organizer - TCU Quillen K-theory Seminar - 2007- 2008
- Organizer – Texas Geometry and Topology Conference - 3/07

- Reviewer – Math Reviews (eight reviews)
- Journal referee – Lecture Notes in Mathematics; Proceedings of the Workshop on the Topology of Stratified Spaces; Homology, Homotopy and Applications; Journal of Knot Theory and Its Ramifications; Algebraic and Geometric Topology; Illinois Journal of Mathematics; Topology and Its Applications (twice); International Journal of Mathematics; Discrete and Computational Geometry
- Judge - Wilbur Cross High School Science Fair, New Haven, CT – 02/04
- Conceived and organized *Yale University Graduate Student Summer Colloquium* - 6/04-8/04
- Conceived, organized, and lectured in *Yale University Summer Topology Seminar* (7 lectures) - 6/03-8/03
- College Fellow - Calhoun College, Yale University - 2002-2005
- Freshman Advisor - Yale University - 2003-2005
- Senior Project Review Committee Member - Yale University Dept. of Mathematics - 2002, 2003, 2004
- Speaker - Yale University Undergraduate Math Club – 5/03
- Treasurer – Courant Student Organization – approx. 1999-2001

CONFERENCES AND WORKSHOPS ATTENDED

- NSF/CBMS Conference on Algebraic Topology in Applied Mathematics, August 3-7, 2009, Cleveland, OH
- NSF/CBMS Conference on Topology, C* Algebras, and String Theory, May 18-22, 2009, Fort Worth, TX
- Conference in Honor of the 60th Birthday of Steve Ferry – Chicago, IL – 3/09
- Midwest Topology Seminar – West Lafayette, IN – 2/09 (invited talk)
- Joint AMS/MAA/SIAM National Meeting – Washington, DC – 1/09
- MSRI Workshop on the Topology of Stratified Spaces - Berkeley, CA - 9/08 (co-organizer)
- NSF-CBMS Conference on Knots and Topological Quantum Computing - Edmond, OK - 7/08 (semi-invited talk)
- Singularities in Geometry and Topology in honor of the 60th birthday of Sylvain Cappell – New York, NY – 3/08 (invited talk)
- Texas Geometry and Topology Conference – Lubbock, TX - 2/08
- Joint AMS/MAA/SIAM National Meeting - San Diego, CA - 1/08
- Geometry and the Imagination: A conference in honor of Bill Thurston's 60th Birthday - Princeton, NJ - 6/07
- Spring Topology and Dynamics Conference - Rolla, MO - 3/07 (invited talk)
- Texas Geometry and Topology Conference – Fort Worth, TX - 3/07 (invited talk)
- Texas Geometry and Topology Conference – Houston, TX - 10/06
- Noncommutative Geometry and Operator Algebras Conference – Nashville, TN - 5/06
- Graduate Student Topology Conference – Bloomington, IN - 4/06
- Union College Mathematics Conference – Schenectady, NY – 11/03, 12/05 (contributed talks)
- Conference on "Submanifolds, Singular Varieties, and Stratified Spaces" in honor of Julius Shaneson - New York, NY – 3/05 (invited talk)
- Cornell Topology Festival – Ithaca, NY – 5/03, 5/04, 5/05
- Joint AMS/MAA/SIAM National Meeting – Atlanta, GA – 1/05
- Geometry, Combinatorics, and Algebraic Groups – conference in honor of Robert MacPherson – Princeton, NJ - 10/04
- Knots in Vancouver – Vancouver, BC, Canada – 7/04
- Lehigh Geometry/Topology Conference - Bethlehem, PA - 6/03, 6/04 (contributed talks)
- Workshop on Topology of Manifolds and Homotopy Theory - Banff International Research Station, Banff, Canada – 3/04 (invited talk)
- Cassonfest – Conference in honor of Andrew Casson – Austin, TX - 5/03
- AMS Sectional Meeting - New York, NY – 4/03 (invited talk)
- Workshop on Topology of Manifolds and Group Actions - Centre de Recherches Mathématiques, Montréal, Quebec, Canada - 8/01 (invited talk)

SELECTED NON-PROFESSIONAL ACTIVITIES

- Student Interviewer- Brown Alumni Schools Committees – 2009-present
- Webmaster - Fort Worth Swing Dance Syndicate - 2007-present
- Member - Fort Worth Swing Dance Syndicate - 2007-present
- Player, Ice Dogs ice hockey team, Euless, TX - 2006-2009
- Member - Grants Committee of the Saint Anthony Educational Foundation - 2008-present

- Vice-President, Saint Anthony Trust of Rhode Island - 2008-present
- Secretary, Saint Anthony Trust of Rhode Island - 2002-2008
- Grants Committee Chair, Saint Anthony Trust of Rhode Island - 2000-present
- By-laws Committee Chair, Saint Anthony Trust of Rhode Island - 2002-2008
- Trustee, Saint Anthony Trust of Rhode Island - 1998-present
- Treasurer, Saint Anthony Trust of Rhode Island - 2000-2002
- Precinct 4230 Delegate – Texas Democratic Party Senate District 10 Convention - 3/08
- Player, D'Leafs ice hockey team, Grapevine, TX – 2006-2007
- Trombonist - TCU Community Band - 2007
- Lead trombonist, Cheshire Community Band, Cheshire, CT - 2001-2005
- Trombonist, Stardusters Swing Band, New Haven, CT - 2003-2005
- Player, Chiefs ice hockey team, Nashville, TN - 2005-2006
- Player, Goobers ice hockey team, Nashville, TN - 2005-2006
- Player, Falcons ice hockey team, Cromwell, CT - 2001-2005 (captain 2004-2005)
- Member, St. Anthony Hall coed literary fraternity, Providence, RI - 1994-1996
- Historian, St. Anthony Hall coed literary fraternity, Providence, RI - 1996
- Literary co-Chair, St. Anthony Hall coed literary fraternity, Providence, RI - 1995
- Rush co-Chair, St. Anthony Hall coed literary fraternity, Providence, RI - 1995
- Trombonist, New York University Band - 1996-2001 (intermittent)
- Trombonist, Lusitana Band, Pawtucket, RI - summer 1996
- Conductor, Brown Band, Providence, RI - 1994-1996
- Trombonist, Brown Band, Providence, RI - 1992-1996
- Trombonist, Brown University Wind Symphony - 1994-1996
- Trombonist, Bloomington Brass Band - summer 1995
- Trombonist/Baritone, Brown University Commencement Band, 1993 - present (excluding 1996, 1998, and 2000)
- Amateur Radio Novice License KA2ZID - 1985-present

SELECTED ACKNOWLEDGMENTS FOR EDITING SUGGESTIONS IN OTHER ACADEMIC WORKS

- Efton Park, **Complex Topological K-Theory**, Cambridge University Press, Cambridge (2008)
- Andrew Browder, **Mathematical Analysis: An Introduction**, Springer, New York (1996)
- Saugata Basu, Richard Pollack, and Marie-Francoise Roy, **Algorithms in Real Algebraic Geometry**, Springer, Berlin (2003)
- Markus Banagl, **Topological Invariants of Stratified Spaces**, Springer, Berlin (2007)
- James McClure, *On the chain-level intersection pairing for PL manifolds*, *Geometry and Topology* 10 (2006), 1391-1424
- Jeffrey M. Lee, **Manifolds and Differential Geometry** – (anticipated)

ERDOS NUMBER: 3

BACON NUMBER (including television programming): 3