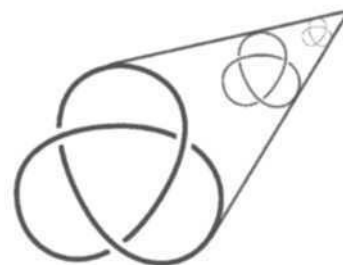


Greg Friedman

Texas Christian University • Department of Mathematics
TCU Box 298900 • Fort Worth • TX • 76129
Ph. (817) 257-6343 • greg.b.friedman@gmail.com
<http://faculty.tcu.edu/gfriedman>
Updated August 17, 2011



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

Associate Professor (tenured) and Graduate Faculty: 4/10-present

Assistant Professor and Graduate Faculty: 7/05-4/10

Current Courses (Fall 2011): Calculus III, Differential Equations

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

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

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

- Greg Friedman and James McClure, *The symmetric signature of a Witt space* – submitted
- Greg Friedman and James McClure, *Cup and cap product in intersection (co)homology* – submitted
- Greg Friedman, *An elementary illustrated introduction to simplicial sets* – submitted
- Greg Friedman and Eugénie Hunsicker, *Additivity and non-additivity for perverse signatures* – to appear in **Journal für die reine und angewandte Mathematik (Crelle's Journal)**
- Greg Friedman, Eugénie Hunsicker, Anatoly Libgober, Laurentiu Maxim (editors), **Topology of Stratified Spaces**, Mathematical Sciences Research Institute Publications 58, Cambridge University Press 2011
- Greg Friedman, *An introduction to intersection homology with general perversity functions*, in **Topology of Stratified Spaces**, Greg Friedman, Eugénie Hunsicker, Anatoly Libgober, Laurentiu Maxim (editors), Mathematical Sciences Research Institute Publications 58, Cambridge University Press 2011, 177-222
- Robert Doran, Greg Friedman, and Jonathan Rosenberg (editors), **Superstrings, Geometry, Topology, and C* Algebras**, Proceedings of Symposia in Pure Mathematics 81, Providence: American Mathematical Society, 2010
- Greg Friedman, *Intersection homology with general perversities*, **Geom. Dedicata** 148 (2010), 103-135
- 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

- Topology and Analysis in Interaction – Cortona, Italy – 6/11
- Geometric Topology Workshop – Park City, UT – 5/11
- Spring Topology and Dynamical Systems Conference – Tyler, TX - 3/11
- Dartmouth College Topology Seminar – Hanover, NH - 12/10
- Dartmouth College Mathematics Colloquium – Hanover, NH – 12/10
- Geometric Topology Workshop – Colorado Springs, CO - 6/10
- Purdue University Topology Seminar – West Lafayette, IN - 4/10
- 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-1137952 (with Bob Doran and Scott Nollet) for NSF/CBMS Regional Conference in the Mathematical Sciences on Hodge Theory, Complex Geometry, and Representation Theory, June 18-22, 2012, Fort Worth, TX
- Simons Foundation: Mathematics Collaboration Grant, Topology of Stratified Spaces, \$35,000
- 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 ACADEMIC PROFESSIONAL ACTIVITIES

Ongoing

- TCU Faculty Senator - 2008 – present (two terms)
- Member TCU Faculty Senate Academic Excellence Committee – 2008-present
- Chair TCU Faculty Senate Academic Excellence Committee – 2010-present
- TCU Faculty Senate liaison to University Evaluation Committee - 2010-present
- TCU student advisor - 2008 - present
- Member - TCU Mathematics Graduate Program Committee – 2009-present
- Member - TCU Mathematics Graduate Program Qualifying Exam Committee – 2010-present
- Participant/Organizer -Metroplex Geometry and Geometric Analysis Seminar - 2006- present
- Member of Phi Beta Kappa Members in Course Committee at TCU - 2007- present

Completed

- TCU Faculty Senate liaison to ad hoc Chair Training Committee – 2010-2011
- Coordinating Editor (with coeditors Eugénie Hunsicker, Anatoly Libgober, and Laurentiu Maxim)– **Proceedings of the Workshop on the Topology of Stratified Spaces**
- Member – TCU Mathematics tenured faculty review committee – 2010
- Member TCU Academic Appeals Committee – 2007-2010
- Chair – Math Department calculus textbook selection committee – 2010-2011
- Reviewer – Math Reviews (ten 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
- Poster Judge – TCU College of Science and Engineering Student Research Symposium – 2010, 2011
- Member – Pi Day faculty robot fighting team - March, 2010
- Mathematics Judge - Fort Worth Regional Science and Engineering Fair – 2009, 2010, 2011

- Chair, Mathematics Judging Panel - Fort Worth Regional Science and Engineering Fair - 2011
- Co-organizer – Texas Geometry and Topology Conference, Spring 2010
- Volunteer Grader - MATHCOUNTS, 2007, 2008, 2009, 2010, 2011
- TCU Commencement Banner Bearer – Spring, 2009; Spring, 2010
- Helped edit TCU Math. Department faculty review and evaluation policies – Fall, 2009
- Assistant Math Dept. Webmaster for Current Events – Fall 2009
- Participant/Organizer – TCU K-theory seminar, Fall 2009
- Beta Tester for TCU grant profile software – 2009
- Co-organizer (with Robert Doran) – NSF/CBMS Conference on Topology, C* Algebras, and String Theory, May 18-22, 2009 at Texas Christian University
- Member – TCU Provost's Climate Change Curriculum Committee - 2009
- Led TCU Common Reading Section for entering students – 2007, 2008, 2009, 2010
- Member - TCU Mathematics Hiring Committee - 2007-2008, 2008-2009
- Member - TCU Mathematics Graduate Program Proposal Committee - 2007-2009
- Participant/Organizer - TCU Lie Groups Seminar - 2007-2009
- Judge - Como Montessori School Science Fair - 2009
- Math Department Representative – TCU Major/Minor Fair – 2007, 2008, 2009
- Grader - TCU Calculus Bee – 2007, 2009
- 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
- Participant/Organizer - TCU Quillen K-theory Seminar - 2007- 2008
- Organizer – Texas Geometry and Topology Conference – 3/07
- College Fellow - Calhoun College, Yale University - 2002-2005
- Freshman Advisor - Yale University - 2003-2005
- 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
- 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

- Topology and Analysis in Interaction – Cortona, Italy – 6/11 (invited talk)
- Geometric Topology Workshop – Park City, UT – 5/11 (contributed talk)
- Spring Topology and Dynamical Systems Conference – Tyler, TX – 3/11 (invited talk)
- Texas Geometry and Topology Conference – Lubbock, TX - 2/11
- Geometric Topology Workshop – Colorado Springs, CO – 6/10 (contributed talk)
- Georgia Topology Conference – Athens, GA – 5/10
- Midwest Topology Seminar – Evanston, IL – 4/10
- Texas Geometry and Topology Conference – Fort Worth, TX – 2/10 (co-organizer)
- NSF/CBMS Conference on Algebraic Topology in Applied Mathematics – Cleveland, OH - 8/09
- NSF/CBMS Conference on Topology, C* Algebras, and String Theory - Fort Worth, TX – 5/09 (co-organizer)
- 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 (co-organizer, 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 talk)

- 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 talk)
- 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)

ACTIVITIES RELATED TO ΔΨ/SAINT ANTHONY HALL CO-ED LITERARY FRATERNITY

- President, Saint Anthony Trust of Rhode Island – 2010-present
- Trustee, Saint Anthony Educational Foundation – 2011-present
- Chair, Grants Committee of the Saint Anthony Educational Foundation – 2011-present
- Member, Grants Committee of the Saint Anthony Educational Foundation – 2008-present
- Member, Saint Anthony Educational Foundation – 2011-present
- Member, Grants Committee, Saint Anthony Trust of Rhode Island - 2000-present
- Chair, Grants Committee, Saint Anthony Trust of Rhode Island - 2000-2011
- Vice-President, Saint Anthony Trust of Rhode Island – 2008-2010
- Secretary, Saint Anthony Trust of Rhode Island - 2002-2008
- By-laws Committee Chair, Saint Anthony Trust of Rhode Island - 2002-2008
- Treasurer, Saint Anthony Trust of Rhode Island – 2000-2002
- Trustee, Saint Anthony Trust of Rhode Island - 1998-present
- Member Saint Anthony Trust of Rhode Island - 1996-present
- Kappa Chapter Undergraduate Representative to Saint Anthony Trust of Rhode Island - 1995-1996
- Kappa Chapter Historian – Spring 1996
- Kappa Chapter Literary Cochair – Fall 1996
- Kappa Chapter Rush Cochair – Spring 1995
- Member Kappa Chapter at Brown University – 1994-present

SELECT NON-ACADEMIC 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
- Precinct 4230 Delegate – Texas Democratic Party Senate District 10 Convention - 3/08
- Player, Ice Dogs ice hockey team, Euless, TX - 2006-2009
- 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)
- 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 - 2008 (excluding 1996, 1998, 2000)
- Amateur Radio Novice License KA2ZID - 1985-present

SELECTED ACKNOWLEDGMENTS FOR EDITING SUGGESTIONS IN OTHER ACADEMIC WORKS

- Jeffrey M. Lee, **Manifolds and Differential Geometry**, American Mathematical Society (2009)
- 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

ERDOS NUMBER: 3

BACON NUMBER (including television programming): 3