

# Jacqueline A. Jensen

## Curriculum Vitae

### Campus Address

Department of Mathematics & Statistics  
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### Education

**University of Oregon, Eugene.** Dissertation, “Finding  $\pi_2$ -Generators for Exotic Homotopy Types of Two-Complexes,” under the direction of Professor Micheal Dyer. Ph.D. in Mathematics, August 2002.

**University of Oregon, Eugene.** M.S. in Mathematics, June 1998.

**University of Connecticut, Storrs.** B.A. in Mathematics December 1995.

**University of Connecticut, Storrs.** B.A. in Psychology, December 1995.

### Research Interests

Low Dimensional Topology  
Combinatorial Group Theory  
Diversity in the Mathematical Sciences

### Academic Positions

**Assistant Professor of Mathematics.** Sam Houston State University. Fall, 2002 – present.

**Visiting Assistant Professor.** University of Nebraska - Lincoln. Summer 2005.

**Graduate Teaching Fellow.** University of Oregon. Fall, 1996 – Spring 2002.

### Honors and Awards

**Faculty Award for Outstanding Contributions to Students.** Texas Section of the Mathematical Association of America, April 2006.

**Recognized by Alpha Chi for “Outstanding contributions to the academic success of Leslie Pacher.”** December 2005.

**Recognized for Outstanding Contributions to the College of Arts & Sciences.** by Dean Brian Chapman, 2003 - 2004.

### Teaching Experience

As an Assistant Professor at Sam Houston State University, I have taught College Mathematics, Trigonometry, Business Mathematics, Knot Theory for non-majors, Calculus I, Calculus II, Calculus III, Introduction to Mathematical Thought, Foundations of Mathematics (for middle school certification), Modern Algebra, Evolution of Mathematics (i.e., mathematics history), Advanced Calculus I and II (calculus on  $\mathbb{R}^n$ ), and Algebraic Topology. I also developed two new courses - a Methods of Research course for upper level mathematics majors and an Honors Liberal Arts Mathematics Course.

As a visiting professor at University of Nebraska - Lincoln during the IMMERSE program, I co-taught a graduate level abstract algebra course based on the paper “Reversible Group Rings” by M. Gutan and A. Kisielewicz.

As a Graduate Teaching Fellow at the University of Oregon I was an independent instructor for courses including Calculus I and II (for traditional math and science students, and another course with a focus on Biology, Business Calculus I and Business Statistics, College Algebra and Elementary Functions, University Math I and II (courses for non-math majors), and Fundamentals of Elementary Mathematics I, II, and III (courses for Prospective Educators).

**Publications**

Crouch, Christy Sue and Jensen, J.A. **An Interview with the Natural Logarithm**, in preparation.

Crouch, Christy Sue and Jensen, J.A. **Which came first:  $e$  or  $\ln$ ?**, in preparation.

Brittenham, Mark and Jensen, J.A. **Canonical Genus and Whitehead Doubles of Arborescent Knots**, under revision.

Garcia, Rebecca and Jensen, J.A. **Encouraging Women in Mathematics and Science**, submitted.

Brittenham, Mark and Jensen, J.A. **Families of Knots for which Morton's Inequality is Strict**, to appear, *Communications in Analysis and Geometry*, December 2007.

Harlander, Jens and Jensen, J.A. **Exotic relation modules and homotopy types for the (2,3)-Baumslag-Solitar Group**, *Algebraic & Geometric Topology* **6** (2006), 2163 - 3173.

Agre, Keith; Hamilton, Tracy; Jensen, J.A.; and Kornelson, Keri. **Our Experiences as IMMERSE Faculty**, *Focus*, Vol 25 Issue 9 (December, 2005), 20-21.

Jensen, J.A. **Surprising Effects of Inquiry Based Learning**, *Texas College Mathematics Journal*, Volume 3, Number 1, 1-9.

Harlander, Jens and Jensen, J.A. **On the Homotopy Type of CW-Complexes with Aspherical Fundamental Group**, *Topology and Its Applications*, **153**, 3000 - 3006.

Jensen, J.A. and Jones, Julie. **What We Have Learned From Our Undergraduate Research Program**, *Focus*, Vol 24 Issue 9 (December, 2004), p. 16.

Jensen, J.A. **A Magnus Embedding Theorem for Second Homotopy Modules**, *Texas Project NExT Journal*, Volume 2 (2004), Number 1, Pages 1-10.

Jones, Julie and Jensen, J.A. **Starting an Undergraduate Research Program**. *Focus*, Vol 23 Issue 8 (November 2003), pp. 6-7.

Jensen, J.A. **Finding  $\pi_2$ -generators for Exotic Homotopy Types of Two-Complexes** Ph.D. Dissertation 2002 (University of Oregon).

**Grant Applications**

**Fourth Annual Texas Undergraduate Mathematics Conference**, Application to MAA for Regional Undergraduate Mathematics Conference Grant, March, 2007. Application in progress.

**Piney Woods Lecture Series**, Application to MAA/Tensor Foundation grant for the enhancement of woman's participation in the mathematical sciences, February, 2007. Funded \$3000.

**Third Annual Texas Undergraduate Mathematics Conference**, Application to MAA for Regional Undergraduate Mathematics Conference Grant, March, 2007. Funded \$2500.

**MAA Diversity Initiative Travel Grant for Students to Attend the 2007 Joint Mathematics Meetings in New Orleans, LA**, December 2006. Funded \$804.

**Piney Woods Lecture Series**, Application to MAA/Tensor Foundation grant for the enhancement of woman's participation in the mathematical sciences, February, 2006. Funded \$3000.

**Second Annual Texas Undergraduate Mathematics Conference**, Application to MAA for Regional Undergraduate Mathematics Conference Grant, January, 2006. Funded \$2000.

**MAA Diversity Initiative Travel Grant for Students to Attend the 2006 Joint Mathematics Meetings in San Antonio, TX**, December 2005. Funded \$1500.

**Women's Travel Grant**, Application to MAA/Tensor Foundation grant for the enhancement of woman's participation in the mathematical sciences. February, 2005. Funded \$2000.

**Inaugural Texas Undergraduate Mathematics Conference**, Application to MAA for Undergraduate Mathematics Conference Grant, October, 2004. Funded June 2005, \$2000.

**Women's Travel Grant**, Application to MAA / Tensor Foundation grant for the enhancement of woman's participation in the mathematical sciences. Funded \$3500.

**MAA Diversity Initiative Travel Grant for Students to Attend the 2005 Joint Mathematics Meetings in Atlanta, GA**, December 2004. Funded \$500.

**Thinking About Graduate School**, Application to MAA for Undergraduate Mathematics Conference Grant, October, 2004.

**Application for the SHSU Enhancement Grant for Research**, October, 2004.

**MAA Diversity Initiative Travel Grant for Students to Attend the 2004 Joint Mathematics Meetings in Phoenix, AZ**, December 2003. Funded \$500.

**Application for NSF Grant under the Gender Diversity in Science and Engineering program**, January 2003.

**Application for AWM SK Workshop Days Grant (co-PI)**, January 2003.

**Application for NSF Grant under the EMSW21 program (co-PI)**, September 2003.

**Application for the SHSU Enhancement Grant for Research**, January 2003.

- Invited Talks**
- Whitehead Doubles of Certain Knots**, Colloquium, Texas A&M - Galveston, Galveston, TX, Spring 2008.
- Whitehead Doubles of Knots with Certain Underlying Polyhedra**, Special Session on Geometric Group Theory, AMS Southeastern Section Meeting, Baton Rouge, LA, March 2008.
- Whitehead Doubles of Arborescent Knots**, Topology Seminar, Rice University, Houston, TX, 28 January 2008.
- The Canonical Genus of Whitehead Doubles of Pretzel Knots**, Colloquium, Sam Houston State University, Huntsville, TX, 5 September 2007.
- The Canonical Genus of Whitehead Doubles of Certain Knots**, Summer Mathematics Program (REU), Carleton College, Northfield, MN, 3 July 2007.
- What Can a Math Degree Do For You** at the Blinn College Mu Alpha Theta Induction ceremony. Blinn College, Brenham, TX, 11 April 2007.
- Mathematically Celtic Knots.** University of Dallas Colloquium, Irving, TX, March 2006.
- On the Homotopy Type of CW-Complexes with Aspherical Fundamental Group.** Meeting of the AMS Southeastern Section, Bowling Green, KY, March 2005.
- Building Two-complexes From Group Presentations.** Colloquium, Texas State University - San Marcos, San Marcos, TX, 28 January, 2005.
- Undergraduate Research.** Fall Meeting of Texas Project NExT Fellows, Sam Houston State University, Huntsville, TX, 16 October, 2004.
- Generators of Certain Second Homotopy Modules.** Mathematics Lectureship Series, Texas Christian University, Fort Worth, TX, 14 September, 2004.
- Classifying Celtic Knots.** Parabola (Undergraduate Mathematics Forum), Texas Christian University, Fort Worth, TX, 14 September, 2004.
- On the Homotopy Classification of 2-Complexes.** Topology Seminar, Rice University, Houston, TX, March 2004.
- On the Homotopy Classification of 2-Complexes.** AMS Special Session on Low Dimensional Topology, Joint Mathematics Meetings, 9 January, 2004.
- Further Examples of Homotopy Inequivalent 2-Complexes.** AMS Special Session on Low Dimensional Topology, Joint Mathematics Meetings, 7 January, 2002.
- Applications of the Magnus Embedding Theorem.** U of O Topology / Geometry Seminar, 17 October, 2001.

**Contributed  
Talks**

**The Benefit of Locally Hosted Undergraduate Conferences and Speaker Series.** MAA Session on Research and Professional Development Activities for Math Majors Joint Mathematics Meetings, San Diego, CA, 6 January 2008.

**An Honors Liberal Arts Mathematics Course.** Meeting of the Texas Section of the MAA, Edinburg, TX, 13 April 2007.

**Canonical genus and the Whitehead doubles of pretzel knots.** (Joint with Mark Brittenham.) AMS Contributed Paper Session on Topology and Geometry III. Joint Mathematics Meetings, New Orleans, LA, 7 January 2007.

**Designing a “Methods of Research” Course.** MAA Session “Research and Other Mathematical Experiences for Students Outside the Classroom.” Joint Mathematics Meetings, New Orleans, LA, 5 January, 2007.

**Encouraging Women in Mathematics and Science** (Joint with Rebecca Garcia) AU-DEM (Alliance of Universities for Democracy) Conference, Katowice, Poland, November 2006.

**Surprising Effects of Inquiry-Based Learning.** MathFest 2005, Albuquerque, NM, August, 2005.

**Two Approaches to Teaching Calculus III.** Meeting of the Texas Section of the MAA, Arlington, TX, April, 2005.

**Two-Complexes with Aspherical Fundamental Group.** Contributed Paper Session, Joint Mathematics Meetings, Atlanta, GA, 6 January, 2005.

**Starting an Undergraduate Research Program.** MAA General contributed paper session, Math Fest 2004, Providence, RI, August, 2004.

**On the Homotopy Classification of 2-Complexes.** Texas NExT Research Session, Meeting of the Texas Section of the MAA, Corpus Christi, TX, 2 April, 2004.

**A Magnus Embedding Theorem for Second Homotopy Modules.** Texas NExT Research Session, Meeting of the Texas Section of the MAA, Huntsville, TX, 4 April, 2003.

**A New Magnus Embedding Theorem.** Contributed Paper Session, Joint Mathematics Meetings, 17 January, 2003.

- Panel Presentations**
- Panelist, “Session for Math Club Advisors”** MAA Panel, Joint Mathematics Meetings, San Diego, CA, January 2008
- Panelist, “Help for undergraduates: Negotiating the Joint Meetings”**, MAA Special Presentation at the Joint Mathematics Meets, San Diego, CA, 6 January 2008.
- Panelist, “Getting Tenure Without Going Insane: Advice From Those That Have Gone Before”** Project NExT Panel, Math Fest, Knoxville, TN, August 2006.
- Panelist, “Building Effective Student Groups”** Meeting of the Texas Section of the MAA, Wichita Falls, TX, April 2006.
- Panelist, “You Have a Job, Now What? Professional Development Opportunities”**. Young Mathematicians Network / Project NExT Panel, Joint Mathematics Meetings, San Antonio, TX, January, 2006.
- Panelist, “Recruiting Women to Mathematics”**. Fall TAAAMS (Texas Association of Academic Administrators in the Mathematical Sciences) Meeting, Waco, TX, October 2005.
- Actor in mini-course “The Moore Method - A Demonstration” at the Meeting of the Texas Section of the MAA.** Arlington, TX, March 2005. Was an actor in a skit demonstrating the Moore method during the mini-course.
- Panelist, “Tips on Interviewing”**. Young Mathematicians Network / Project NExT Graduate Student Panel, Math Fest, Providence, RI, August 2004.
- Poster Presentations**
- Integrating Students into the Mathematics Community** in “Special Mathematical Outreach Programs” poster session. Joint Mathematics Meetings, San Antonio, TX, January 2006.
- Forming a Community of Mathematicians** in “Special Programs and Strategies to Reach Underrepresented Populations” poster session. Joint Mathematics Meetings, Atlanta, GA, January 2007.
- Professional Development**
- AMS Short Course on Applications of Knot Theory. January 2008. Joint Mathematics Meetings, San Diego, CA.
- MAA PREP Workshop on Beginning an Emerging Scholar’s Program (ESP). June 2007. Austin, TX.
- Participation in IMMERSE-Nebraska Program. Summer 2005.
- Attendee of 6th, 7th, 8th, and 9th Annual Legacy of R. L. Moore Conferences. March 2003, March 2004, April 2005, and May 2006. Austin, TX.
- SHSU Grant Writing Workshop. September 2003. Huntsville, TX.
- MAA PREP Workshop on Knot Theory. June 2003. Wake Forest University, NC.
- SHSU Advanced Grant Writing Workshop. May 2003. Huntsville, TX.
- SHSU Grant Writing Workshop. November 2002. Willis, TX.
- Professional Organizations**
- Mathematical Association of America
- American Mathematical Society
- Association for Women in Mathematics
- American Association of University Women

**Academic  
Service  
to the  
Department**

**Assistant Department Chair of the Department of Mathematics & Statistics.** Primary responsibility is for scheduling classes for the Department of Mathematics & Statistics. Fall 2007 - present.

**Undergraduate Mathematics Advisor.** Fall 2005 – present.

**Editor of *Integral News*, Newsletter for the Department of Mathematics & Statistics.** Spring 2006 - present.

**Advisor of the SHSU Student Chapter of the MAA.** 2002 – present.

**Co-advisor of the SHSU Ruth Lane Mathematical Society.** 2002 – present.

**Chair of the Hiring Committee.** Fall 2007 - Spring 2008.

**Member of the Faculty Evaluation Advisory Committee.** Spring 2007.

**Member of Trigonometry Textbook Committee.** Spring 2007.

**Member of Honors Committee.** Spring 2003 – present. (Chair in 2005, 2006.)

**Chair of Hiring Committee for Mathematics Faculty Member.** Fall 2006 – Spring 2007.

**Member of Hiring Committee.** Fall 2005 – Spring 2006.

**Helped create exchange program for students at SHSU and Pädagogische Hochschule Karlsruhe in Karlsruhe, Germany.** Visited Karlsruhe in Summer 2006 to begin the exchange. We had one student from Karlsruhe at SHSU in 2006-2007, and have one student from Karlsruhe during the 2007-2008 school year.

**Co-ordinator of *Who Wants to be a Mathematician* Visit to SHSU.** Fall 2005. Students from area high schools were invited to campus for the AMS sponsored game - winners had a chance to compete at the 2006 Joint Mathematics Meetings.

**Member of the Faculty Evaluation Advisory Committee.** Spring 2005.

**Member of Calculus Textbook Committee.** Spring 2003.

**Chairperson of the Textbook Committee for College Mathematics.** Spring 2003.

**Member of Hiring Committee.** Fall 2002 – Spring 2003.

**Academic  
Service  
to the  
University**

**Member of the Women's Advisory Committee.** August 2007 - present.

**Member of the Honors Council.** August 2007 - present.

**Member of SHSU Homecoming Committee.** Summer 2004 - Fall 2007.

**Judge for Academic Challenge.** November 2004 and March 2007.

**Saturdays at Sam Liaison for the Department of Mathematics & Statistics.**  
November 2006.

**Saturdays at Sam Liaison for the Department of Mathematics & Statistics.**  
November 2004.

**Academic  
Service  
to the  
Mathematics  
Community**

**Member of the MAA Committee on Undergraduate Student Activities and Chapters (CUSAC).** January 2006 - present.

**Editor of the MAA Student Chapter Advisors' Newsletter.** January 2006 - present.

**Texas Section Project NExT (New Experiences in Teaching) Coordinator.** Fall 2005 - present.

**Web Master for the Texas Section of the MAA website.** April 2007 - present.

**Member of Young Mathematicians Network Editorial Board.** August 2005 - present.

**Co-organizer of AMS-MAA-SIAM Special Session on Research in Mathematics by Undergraduates at the 2008 Joint Mathematics Meetings.** Spring 2007 - January 2008.

**Review of Article for Texas College Mathematics Journal.** Fall 2007.

**Table Leader and Reader for the AP Calculus Exam.** June 2007.

**Pre-revision review of Thomas' Calculus (Chapters 6 - 10).** June 2007.

**Organizer of Events for Texas Project NExT Fellows at the Meeting of the Texas Section of the MAA.** Fall 2006 - Spring 2007.

**Organizer of the Fall 2007 Meeting of the Texas Project NExT Fellows.** Summer - Fall 2007.

**Organizer of Third Annual Texas Undergraduate Mathematics Conference.** Spring – Fall 2007.

**Organizer of the Spring 2007 Texas Section Project NExT Events at the meeting of the Texas Section of the MAA.** Spring 2007.

**Review of Proposed Textbook for McGraw-Hill.** Fall 2006.

**Organizer of the Fall 2006 Meeting of the Texas Project NExT Fellows.** Summer – Fall 2006.

**Organizer of Second Annual Texas Undergraduate Mathematics Conference.** Spring – Fall 2006.

**Organizer of Spring 2006 Meeting of the Texas Project NExT Fellows.** Spring 2006.

**Co-organizer of Inaugural Texas Undergraduate Mathematics Conference.** Fall 2005.

**Co-organizer of Fall 2005 Meeting of the Texas Project NExT Fellows.** Summer 2005 - Fall 2005.

**Co-organizer of Project NExT / YMN panel “Negotiating with the Administration” at MathFest 2005.** Summer 2005.

**Review of Article for Texas College Mathematics Journal.** Summer - Fall 2005.

**Co-organizer of Fall 2004 Meeting of the Texas Project NExT Fellows.** Summer 2004 - Fall 2004.

**Co-organizer of YMN / Project NExT Panel “Negotiating with the Dean” at MathFest 2004.** Summer 2003 - Summer 2004.

**Co-organizer of YMN / Project NExT Panel “Tips on Interviewing” at MathFest 2004.** Summer 2003 - Summer 2004.

**Panelist for YMN / Project NExT Panel “Tips on Interviewing” at MathFest 2004.** Summer 2004.

**Co-organizer of MAA General Contributed Papers Session at the 2004 Joint Meetings.** Summer 2003 - January 2004.

**Texas Section Project NExT Fellow.** Fall 2002 – Spring 2004.

**National Project NExT Fellow.** Summer 2002 – Summer 2003.

**Reader for the AP Calculus Exam.** June 2003, June 2004, June 2005, and June 2006.

**Member of AMS Committee On Meetings and Conferences Focus Group.** Joint Meetings. Baltimore, MD. January 2003.

**Conferences  
Attended**

**Meeting of the Texas Section of the MAA.** April 2008, Stephenville, TX.  
**Tenth Annual Nebraska Conference for Undergraduate Women in Mathematics.** February 2008, Lincoln, NE.  
**Joint Mathematics Meetings.** January 2008, San Diego, CA.  
**Third Annual Texas Undergraduate Mathematics Conference.** November 2007, Huntsville, TX.  
**Texas Geometry and Topology Conference.** October 2007, College Station, TX.  
**Meeting of the Texas Section of the MAA.** April 2007, Edinburg, TX.  
**Texas Geometry and Topology Conference.** March 2007, Fort Worth, TX.  
**Nebraska Conference for Undergraduate Women in Mathematics.** February 2007, Lincoln, NE.  
**Joint Mathematics Meetings.** January 2007, New Orleans, LA.  
**Texas Geometry and Topology Conference.** October 2006, Houston, TX.  
**TUMC (Texas Undergraduate Mathematics Conference).** October 2006, Huntsville, TX.  
**Math Fest.** August 2006, Knoxville, TN.  
**The 9th Annual Legacy of R. L. Moore Conference.** May 2006, Austin, TX.  
**Meeting of the Texas Section of the MAA.** April 2006, Wichita Falls, TX.  
**Texas Geometry and Topology Conference.** March 2006, Houston, TX.  
**Nebraska Conference for Undergraduate Women in Mathematics.** February 2006, Lincoln, NE.  
**Joint Mathematics Meetings.** January, 2006, San Antonio, TX.  
**AMS Central Section Meeting.** October 2005, Lincoln, NE.  
**TUMC (Texas Undergraduate Mathematics Conference).** October 2005, Huntsville, TX.  
**Math Fest.** August 2005, Albuquerque, NM.  
**Nebraska Commutative Algebra Conference: WiegandFest.** May 2005, Lincoln, NE  
**The 8th Annual Legacy of R. L. Moore Conference.** April 2005, Austin, TX.  
**Meeting of the Texas Section of the MAA.** April 2005, Arlington, TX.  
**Meeting of the Southeastern Section of the AMS.** March 2005, Bowling Green, KY.  
**Joint Mathematics Meetings.** January, 2005, Atlanta, GA.  
**Texas Project NExT Fall Meeting.** November, 2004, Huntsville, TX.  
**Texas Geometry and Topology Conference.** October, 2004, Texas A & M University, College Station, TX.  
**Math Fest.** August, 2004, Providence, RI.  
**Meeting of the Texas Section of the MAA.** April, 2004, Corpus Christi, TX.  
**The 7th Annual Legacy of R. L. Moore Conference.** March, 2004, Austin, TX.  
**Texas Geometry and Topology Conference.** February, 2004, Texas Christian University, Fort Worth, TX.  
**Joint Mathematics Meetings.** January, 2004, Phoenix, AZ.  
**Texas Project NExT Fall Meeting.** November, 2003, Mesquite, TX.  
**Texas Geometry and Topology Conference.** October, 2003, Houston, TX.  
**Math Fest.** August, 2003, Boulder, CO.  
**Meeting of the Texas Section of the MAA.** April, 2003, Huntsville, TX.  
**6th Annual Legacy of R.L. Moore Conference.** March, 2003, Austin, TX.  
**Joint Mathematics Meetings.** January, 2003, Baltimore, MD.  
**Math Fest.** August, 2002, Burlington, VT.  
**Joint Mathematics Meetings.** January, 2002, San Diego, CA.  
**Cascade Topology Seminars.** May, 2002 – Seattle, WA; November, 2001 – Reno, NV; May, 2001 – Boise, ID; November, 2001 – Eugene, OR; and May, 2000 – Portland, OR.  
**Luttach 2001.** July 30 - August 8, 2001, Luttach, Italy.  
**PNW MAA Meeting.** April 6-7, 2001, Seattle, WA.