

# CONSTANCE LEIDY

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## EDUCATION

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|-----------|--|-----------------|
| 1998-2004 | Rice University  | Houston, TX     |
|           | <ul style="list-style-type: none"><li>• Doctor of Philosophy, Mathematics, May 2004.</li><li>• Thesis advisor: Tim Cochran</li></ul> |                 |
| 1994-1998 | Tulane University  | New Orleans, LA |
|           | <ul style="list-style-type: none"><li>• Bachelor of Science, Mathematics and Philosophy, May 1998, Magna Cum Laude.</li></ul>        |                 |

## EMPLOYMENT

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| 2007-present | Wesleyan University  | Middletown, CT   |
|              | <ul style="list-style-type: none"><li>• Assistant Professor.</li></ul>   |                  |
| 2004-2007    | University of Pennsylvania   | Philadelphia, PA |
|              | <ul style="list-style-type: none"><li>• Rademacher Instructor.</li></ul> |                  |

## RESEARCH SUPPORT

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National Science Foundation Grant (Principal Investigator), Noncommutative Low-Dimensional Topology, DMS-0805867, 2008-2011.

## PUBLICATIONS

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- C. Leidy, Higher-order linking forms for knots, *Commentarii Mathematici Helvetici* 81 (2006), 755-781.
- C. Leidy and L. Maxim, Higher-order Alexander invariants of plane algebraic curves, *International Mathematics Research Notices*, article ID 12976 (2006), 23 pages.
- C. Leidy and L. Maxim, Obstructions on fundamental groups of plane curve complements, *Real and Complex Singularities, Contemporary Mathematics*, 459 (2008), 117-130.
- T. Cochran, S. Harvey, and C. Leidy, Link concordance and generalized doubling operators, *Algebraic & Geometric Topology*, 8 (2008), 1593-1646.
- S. Friedl, C. Leidy, and L. Maxim,  $L^{(2)}$ -Betti numbers of plane algebraic curves, to appear in *Michigan Mathematical Journal*, arXiv: 0704.3388.
- T. Cochran, S. Harvey, and C. Leidy, Knot concordance and higher-order Blanchfield duality, to appear in *Geometry & Topology*, arXiv: 0710.3082.
- T. Cochran, S. Harvey, and C. Leidy, Derivatives of knots and second-order signatures, submitted, arXiv: 0808.1432.

## COURSES TAUGHT

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- Topology I, Part II, Wesleyan University, Spring 2009.
- Introductory Calculus, Wesleyan University, Fall 2008.
- Topology, Knot Theory, Wesleyan University, Fall 2008.
- Calculus I, Part II, Wesleyan University, Spring 2008, Spring 2009.
- Topology II, Algebraic Topology and Low Dimensional Topology, Wesleyan University, Spring 2008.
- Calculus I, Part I, Wesleyan University, Fall 2007.
- Topology I, Part I, Wesleyan University, Fall 2007.
- University of Pennsylvania: Introduction to Calculus, Calculus I, Calculus II, Ideas in Math, Geometry-Topology, Differential Topology.
- Rice University: Calculus II, Ordinary Differential Equations and Linear Algebra, Linear Algebra

RESEARCH SUPERVISION

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- Thesis advisor for John Burke, Spring 2008-present.  
 Supervisor of Lauren Alpert's undergraduate research project, Spring 2008.  
 Co-supervisor of Nathan Fieldsteel's and Erik Holum's undergraduate research project, Fall 2008-present.

PROFESSIONAL ACTIVITIES

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- Co-organizer of the *Low-dimensional Topology* Special Session at AMS sectional meeting, October 2008.  
 Instructor for Rice University Mathematical Institute for Young Women, Summer 2008.  
 Instructor for Expanding Your Horizons math and science program for middle school girls, Spring 2006 and Spring 2008.  
 Panel member for the Institute for Advanced Study's Women and Mathematics program, Spring 2006 and Spring 2008.  
 Panel member for *How to get a job: A panel discussion directed toward graduate students*, Eastern Pennsylvania and Delaware Section of the MAA, November 2004.

SELECTED RESEARCH TALKS

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- The complexity of the structure of the knot concordance group*, University of Pennsylvania, Geometry-Topology seminar, January 2009.  
*The complexity of the structure of the knot concordance group*, University of Massachusetts Amherst, Valley Geometry Seminar, November 2008.  
*The complexity of the structure of the knot concordance group*, The Graduate Center, City University of New York, Topology seminar, October 2008.  
*Knot Concordance and Higher-Order Blanchfield Duality*, Mathematical Sciences Research Institute, Low Dimensional Topology Workshop, August 2008.  
*Second-order signatures*, Knot Theory: Fifty Years Since Fox and Milnor, Brandeis University, June 2008.  
*Higher-order degrees and obstructions on the fundamental group of algebraic curve complements*, Singularities in Geometry and Topology Conference at Courant, March 2008.  
*Knot concordance and Blanchfield duality*, Boston College, Geometry and Topology Seminar, March 2008.  
*Higher-order degrees and obstructions on the fundamental group of algebraic curve complements*, Columbia University, Geometric Topology Seminar, April 2007.  
*Knots and the fourth dimension*, Bryn Mawr Colloquium, January 2007.  
*Calculating the higher-order degrees*, National AMS Conference at New Orleans, January 2007.  
*Higher-order Alexander invariants of knots, 3-manifolds, and plane algebraic curves*, University of California at Davis, Geometry/Topology Seminar, February 2006.  
*Higher-order Alexander invariants of plane algebraic curves*, Georgia Institute of Technology, Topology Seminar, February 2006.  
*Algebraic Invariants of Knots (Oops! – Knots): Why non-commutativity is a good thing*, Swarthmore College Colloquium, November 2005.  
*Higher-order Alexander invariants of plane algebraic curves*, University of Illinois at Chicago, Algebraic Geometry Seminar, October 2005.  
*Higher-Order Linking Forms: Theorem and Conjecture*, Indiana University Topology Seminar, July 2005.  
*Algebraic Invariants of Knots (Oops! – Knots): Why non-commutativity is a good thing*, Lafayette-Lehigh Geometry/Topology Seminar, April 2005.  
*Algebraic Invariants of Knots (Oops! – Knots): Why non-commutativity is a good thing*, Claremont Topology-Geometry Seminar, March 2005.  
*Higher-Order Linking Forms*, Knots and Their Manifold Stories Conference at Banff, May 2004.  
*New Linking Form Invariants of 3-Manifolds*, National AMS Conference at Phoenix, January 2004.  
*Higher-Order Linking Forms for 3-Manifolds and Knots*, Borders in 3-Dim Topology Conference at Ohio State University, December 2003.  
*Generalized Blanchfield Forms for Knots and 3-Manifolds*, Sectional AMS Conference at Louisiana State University, March 2003.