Kathryn Bryant
Department of Mathematics
Bryn Mawr College

Fall 2015
kbryant01@brynmawr.edu
Bryn Mawr, Pennsylvania

Education

- **Bryn Mawr College**
  Bryn Mawr, PA

  Doctor of Philosophy, Mathematics 2010 – Present

  ◇ Advisor: Paul Melvin

  ◇ Dissertation:
  Slice Implies Mutant Ribbon for Odd, 5-Stranded Pretzel Knots

  ◇ Comprehensive examination topics: Algebra, Analysis, & Topology

  Master of Arts, Mathematics 2010–2013

  ◇ Advisor: Paul Melvin

  ◇ Thesis:
  Lens Spaces: Constructions, Classification, and Mapping Class Groups

- **Northern Arizona University**
  Flagstaff, AZ

  Bachelor of Science, Mathematics 2005 – 2010

  ◇ Graduated Magna Cum Laude with honors

  ◇ 3.72 GPA (4.0 scale) in Mathematics; 3.86 GPA overall

  ◇ Active member of the Chi Omega Fraternity and NAU Math Club

  Bachelor of Arts, Spanish 2005 – 2010

  ◇ Graduated Cum Laude with honors

  ◇ 4.0 GPA in Spanish (4.0 scale)

  ◇ Studied at the Universidad del Valle de Guatemala
  Guatemala City, Guatemala, June - Dec. 2007

Awards, Grants & Honors

Dean's Fellowship . . . . . 2015 - 16
Carland Prize for Teaching Excellence . . . . . 2014 - 15
Nora M. and Patrick J. Healy Fund Scholar . . . . . 2013 - 14
Mathematics Research Fellowship, Bryn Mawr College . . . . . 2012 - 13
Bryn Mawr College Tuition Scholarship . . . . . 2010 - 15
J. Harvey Butchart Achievement in Mathematics Scholarship . . . . . 2009 - 10
Stuart E. Little Mathematics Education Scholarship . . . . . 2008 - 09
Merit Tuition Scholarship, NAU . . . . . 2005 - 09

Papers

- Kathryn A. Bryant, *Slice Implies Mutant Ribbon for Odd, 5-Stranded Pretzel Knots*, preprint: arXiv:1511.07009.
- Kathryn A. Bryant and Paul Melvin, *Montesinos Knots and Definite Plumbings*, in preparation.

Research Presentations

- **Sliceness and Mutation in Odd Pretzel Knots** January 2016
  Joint Mathematics Meetings
  AMS & MAA, *Seattle, WA*
- **Determining Sliceness in Odd, 5-Stranded Pretzel Knots** December 2015
  Knots in Washington Conference
  George Washington University, *Washington, D.C.*
- **Sliceness in Odd Pretzel Knots** October 2015
  Philadelphia Area Contact/Topology (PACT) Seminar
  Bryn Mawr College, *Bryn Mawr, PA*
- **Revolutionary Results in 4 - Manifold Topology** October 2015
  Philadelphia Area Contact/Topology (PACT) Seminar
  Bryn Mawr College, *Bryn Mawr, PA*
- **Why We Love Smooth, Definite 4 - Manifolds** October 2015
  Temple University Graduation Student Seminar
  Temple University, *Philadelphia, PA*
- **Obstructing Sliceness in 5-Stranded Pretzel Knots** May 2015
  Graduate Student Conference in Algebra, Geometry, and Topology
  Temple University, *Philadelphia, PA*
- **Lens Spaces: Constructions & Classifications (4-Talk Series)** Feb – Mar 2013
  Philadelphia Area Contact/Topology (PACT) Seminar
  Bryn Mawr College, *Bryn Mawr, PA*
- **Recent Developments in Numerical Semigroups** January 2010
  Nebraska Conference for Undergraduate Women in Mathematics
  University of Nebraska Lincoln, *Lincoln, NE*
- **Recent Developments in Numerical Semigroups** March 2010
  Southwestern Undergraduate Mathematics Research Conference
  University of Texas El Paso, *El Paso, TX*
- **Introduction to Numerical Semigroups** February 2009
  Southwestern Undergraduate Mathematics Research Conference
  University of New Mexico, *Albuquerque, NM*

Funded Participation in Conferences and Workshops

- **Joint Mathematics Meetings** — January 2016
  AMS & MAA, *Seattle, WA*
- **Knots in Washington XLI** — December 2015
  George Washington University, *Washington, D.C.*
- **Temple University Graduate Student Conference** — May 2015
  Temple University, *Philadelphia, PA*
- **Association for Women in Mathematics Research Symposium** — April 2015
  University of Maryland, *College Park, MD*
- **BIRS Workshop in Parameterized Morse Theory** — March 2014
  Banff International Research Station, *Banff, Canada*
- **Geometric Topology in New York** — August 2013
  Columbia University, *New York, NY*
- **Graduate Student Topology and Geometry Conference** — April 2013
  University Notre Dame, *South Bend, IN*
- **Topology Students Workshop** — June 2012
  Georgia Institute of Technology, *Atlanta, GA*
- **Park City Mathematics Institute** — July 2011
  Institute for Advanced Study, *Park City, UT*
- **Southwestern Undergraduate Mathematics Research Conference** — March 2011
  Northern Arizona University, *Flagstaff, AZ*
  $*$ Guest Speaker on the Graduate Student Panel
- **Graduate Bridge Program** — June – July 2010
  Texas A&M University, *College Station, TX*
- **Southwestern Undergraduate Mathematics Research Conference** — March 2010
  University of Texas El Paso, *El Paso, TX*
- **Nebraska Conference for Undergraduate Women in Mathematics** — January 2010
  University of Nebraska Lincoln, *Lincoln, Nebraska*
- **Southwestern Undergraduate Mathematics Research Conference** — March 2009
  University of New Mexico, *Albuquerque, AZ*

Teaching Experience

- **Instructor, Yavapai College** — June - July 2015
  Calculus & Analytic Geometry I
  Intermediate Algebra

- **Teaching Assistant, Bryn Mawr College** 2010 – 2015
  - Abstract Algebra I & II
  - Real Analysis I & II
  - Transitions to Higher Mathematics
  - Probability and Combinatorics
  - Differential Equations
  - Multivariable Calculus
- **Tutor, Inspirica** 2012 – Present
  - SAT and ACT Prep
  - College Calculus and Precalculus
  - High school math and Spanish (all levels)
- **Teaching Assistant, Center for Talented Youth, Johns Hopkins University** 2014
  - Class: Mathematical Logic
- **Private Tutor** 2004 – 2013
  - Pre-algebra, Algebra I, Algebra II, College Algebra
  - Euclidean Geometry
  - Precalculus, Calculus I, Calculus II, Multivariable Calculus

Service

- **Graduate Group in Sciences and Math Co-Chair** Jan 2014 – Aug 2015
- **Graduate Student Association Mathematics Representative** Aug 2011 – Aug 2013
  - Bryn Mawr College Budget Committee Representative
- **Distressing Math Collective Speaker**
  - Nets for Topology Feb 2011
  - Uncovering Covering Spaces Jan 2012
  - The Glorious Torus Sept 2012
  - Calculus Monsters: Everywhere-continuous, Nowhere-differentiable functions Feb 2013
  - Parrondo's Paradox Dec 2014
- **Temple Math Circle** March 2014
  - Activity: Tilings in the Plane

Computer Skills

- Programming Languages
  - Experienced with LaTeX
  - Familiar with Mathematica, HTML, CSS, JavaScript, Python, and R