

Catherine Lynn Crockett

MICS Department
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EDUCATION

- Ph.D. in Mathematics, University of California, Riverside, December 2006
Dissertation Advisor: Xiao-Song Lin
Dissertation Topic: *On the Topology, Combinatorics, and Geometry of Circle and Spherical Orders*
- M.S. in Mathematics with concentration in Applied Math, California State Polytechnic University, Pomona, March 1998
- B.S. in Mathematics with concentration in Applied Math, California State Polytechnic University, Pomona, December 1995

CURRENT POSITION

Associate Professor of Mathematics, Point Loma Nazarene University, Fall 2016 - present

PREVIOUS POSITIONS

- Assistant Professor of Mathematics, Point Loma Nazarene University, 2008-2016
- Adjunct Faculty in mathematics, Riverside City College, Fall 2005 – Fall 2008
- Research Assistant, University of California, Riverside, Summer 2006
- Graduate Teaching Assistant, University of California, Riverside, Fall 2000 - Spring 2004 and Fall 2005 - Winter 2006
- Teaching Associate in Mathematics, University of California, Riverside, Summers 2001- 2003 and 2005
- Instructor in Mathematics, California State Polytechnic University, Pomona, Winter 1996 - Summer 2000
- Lecturer in Mathematics, University of California, Riverside, Fall 1998 - Spring 2000

COURSES TAUGHT AT POINT LOMA NAZARENE UNIVERSITY

- Math 099: Elementary Algebra
- Math 113: Intermediate Algebra
- Math 121: Calculus and Modeling
- Math 123: Elementary Functions
- Math 131: Computer Aided Calculus
- Math 123/133: Pre-Calculus
- Math 144: Calculus with Applications

- Math 153: Business Math
- Math 164: Calculus I
- Math 173: Business Calculus
- Math 174: Calculus II
- Math 203: Introduction to Statistics
- Math 213: Fundamentals of Elementary Mathematics I
- Math 223: Fundamentals of Elementary Mathematics II
- Math 274: Calculus III
- Math 303: Problem Solving
- Math 382: Mathematical Statistics
- Math 383 Mathematically Probability and Statistics
- Math 392: Mathematical Probability
- Math 402: Topics in Geometry
- Math 413: Complex Analysis
- Math 424: Real Analysis I
- Math 444: Abstract Algebra I
- Math 452: Abstract Algebra II
- Math 492: Special Topics in Mathematics
- Math 481/CSC 481: Senior Seminar in Mathematics/ Computer Science

PUBLICATIONS

IN TOPOLOGY:

- C. Crockett (2010) “Unwind with Knots”, Paper published in ACMS conference proceedings at Wheaton College, Wheaton, IL May 27-30, pp. 50-60.

IN MATHEMATICS EDUCATION/QUANTITATIVE LITERACY:

- L. Carter and **C. Crockett** (2018) “Preparing K-12 Teachers to Inspire Future Coders: It Doesn’t Have to be Complex” Paper published in the 2018 Frontiers in Education Conference refereed proceedings, San Jose, CA.
- L. Carter, R. Botts and **C. Crockett** (2018) “Hybrid courses across the curriculum: what works and what doesn’t”, Paper published in the 2017 ACMS Conference refereed proceeding, Charleston, SC
- L. Carter, R. Botts and **C. Crockett** (2015) “Using the Blended Learning Approach in a Quantitative Literacy Course”, Primus, Vol. 28: 3, pages 236-265
- C. Crockett (2013) “A Different Approach”, Paper published in ACMS conference proceedings at Bethel University, St. Paul, MN May 29-June 1.
- L. Carter, R. Botts and **C. Crockett** (2012) “Computational Science Program: The Background Research”, Paper published in the 2012 Frontiers in Education Conference refereed proceedings, Seattle, Washington October 3-6, pp.1091-1096.

TALKS

IN TOPOLOGY:

- C. Crockett, April 2003, “Torus Knots”, Topology Seminar, University of California, Riverside
- C. Crockett, October 2005, “Braids and Loop Braids”, Graduate Student Seminar, University of California, Riverside
- C. Crockett, April 2006, “Loop Braid Category”, AMS Sectional Meeting, Special Session on Quantum Invariants, University of New Hampshire.
- C. Crockett, May 2009, “Unwind with Knots”, Conference of the ACMS at Wheaton College, Wheaton, IL.

IN MATHEMATICS EDUCATION/QUANTITATIVE LITERACY:

- L. Carter and C. Crockett, August 2017, “Preparing Teachers to Inspire Future Coders”, Faculty Scholarship Day at Point Loma Nazarene University, San Diego, CA.
- C. Crockett, June 2017, “Hybrid Courses Across the Curriculum: What works and what doesn’t”, Conference of the ACMS at Charleston Southern University in Charleston, SC.
- C. Crockett, August 2016, “Researching and Implementing Best Practices in Quantitative Literacy”, Faculty Scholarship Day at Point Loma Nazarene University, San Diego, CA
- C. Crockett, August 2016, “Quantitative Literacy at Post-Secondary Level: Future Directions in Research”, Panel Discussion, MAA MathFest at Columbus, Ohio.
- C. Crockett, January 2015, “The Impact of a Blended Course Format on Student Learning and Attitudes in a Quantitative Literacy Course”, Joint Mathematics Meeting, San Antonio, TX.
- C. Crockett, May 2015, “Quantitative Literacy- What is it and what can we do with it?” Conference of the ACMS at Redeemer University College, Hamilton, Ontario, Canada.
- C. Crockett, May 2015, “Hybrid Classes in Mathematics and Computer Science”, Panel Discussion, Conference of the ACMS at Hamilton, Ontario, Canada.
- C. Crockett, April 2012, “Interdisciplinary work with Computers and Knot Theory”, Celebration of Women in Computing-Southern California, Santa Ana, CA.
- C. Crockett, May 2013, “A Difference Approach”, Conference of the ACMS at Bethel University, St. Paul, MN.

WORKSHOPS GIVEN:

- L. Carter and C. Crockett, July 10-14, “Preparing Teachers to Inspire Future Coders”, at Point Loma Nazarene University, San Diego, CA.

TALKS ORGAINZED:

- C. Crockett, A. Miller and V. Piercy, MAA Contributed Paper session on “*Quantitative Literacy Across the Curriculum*” at the Joint Mathematics Meeting held January 2018 in San Diego, CA.
- C. Crockett, G. Franchy and A. Miller, MAA Invited Paper Session on “*New Directions in Quantitative Literacy for General Education, in Honor of Lynn Steen*” at the Joint Mathematics Meeting held January 2017 in Atlanta, GA.

UNDERGRADUATE STUDENT RESERCH SUPERVISED:

- Joy Chen, May 2012-May 2013, Title of Honors project “On the Alexander Polynomial and Related Invariants”.
- Amy Hinds, May 2012- July 2012, Topic: Finding the connection between the degrees of Alexander polynomials and unknotting numbers.
- Wileen Chiu, May 2011 – August 2011, Topic: Researching the ingredients necessary to make a strong computational science program.
- Antony Wright, May 2010-August 2010, Topic: Using a computer to search for patterns in Brunnian links and braid words
- Kristen LoPresti, May 2009- May 2010, Title of Honors project “Searching for Patterns in Brunnian links”.

PROFESSIONAL AFFILIATIONS

- American Mathematical Society
- Mathematical Association of America
- Association of Christians in Mathematical Sciences
- National Numeracy Network
- SIGMAA QL
 - Secretary/treasurer of SIGMMA QL 2016- current.

CONFERENCES and MINICOURSES ATTENDED:

- Joint Mathematics Meetings, January 2017, 2016, 2015, 2014, 2013, 2012, 2011, 2010, 2009, 2008, 2007
- Inquiry-Based Learning Forum, 19 th Annual Legacy of R. L. Moore Conference”, August 2, 2016 at the Math Fest conference in Columbus, OH.
- Celebration of Women in Computing (CWIC) in Southern California, April 2012
- Math fest, August 2012 & 2016
- MAA Southern California-Nevada Section Spring Meeting, 2016, 2014, 2013, 2011, 2010
- 2011 National Academies Summer Institute on Undergraduate Education in Biology

- 2010 PKAL/Kreck National Colloquium on Leadership in Interdisciplinary STEM Learning, October 2010
- Association of Christians in Mathematical Sciences, Biennial Meeting, May 2015, 2013, 2011 and 2009
- AMS Sectional Meeting, Special Session on Quantum Invariants, University of New Hampshire, April 2006
- MSRI Summer Graduate Program: "Knot Theory", University of British Columbia, Summer 2004

AWARDS and HONORS:

- National Academics Education Fellow in the Life Sciences 2011-2012

GRANTS:

- L. Carter and C. Crockett, PLNU Alumni Faculty Grant, for the project: "Preparing Teachers to Inspire Future Coders", April, 2017