# Christina Eubanks-Turner

Department of Mathematics Loyola Marymount University

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EDUCATION University of Nebraska-Lincoln

Ph.D., Mathematics, Advisor: Sylvia Wiegand May 2008 M.S., Mathematics August 2004

Xavier University of Louisiana

B.S., Mathematics, cum laude May 2002

ACADEMIC EMPLOYMENT Department of Mathematics, Loyola Marymount University, Los Angeles, CA.

Director, Secondary Teacher Preparation Program in Mathematics Aug. 2015-present Assistant Professor of Mathematics Aug. 2013 - present

Department of Mathematics, University of Louisiana at Lafayette, Lafayette,

LA.

Assistant Professor of Mathematics

Aug. 2008 - May 2013

TEACHING EXPERIENCE

Loyola Marymount University

Instructor Aug. 2013 - present

MATH 106: Math for Elementary Teachers I (Fall 2013)

MATH 107: Math for Elementary Teachers II (Spring 2014)

MATH 112: Mathematical Analysis for Business II (Fall 2014, Spring 2015)

MATH 331: Elements of Group Theory (Spring 2015)

MATH 548: Methods of Proofs for Teachers (Summer 2015)

MATH 102/103: Quantitive Skills for the Modern World (Summer 2015)

MATH 122: Calculus for the Life Sciences I (Fall 2015) MATH 248: Introduction to Methods of Proof (Fall 2015)

University of Louisiana at Lafayette

Instructor Aug. 2008 - May 2013

Intro to Coding Theory, summer course

Graph Polynomials, independent study course

Intro to Graph Theory, independent study course

Applied Calculus, traditional; online course designer

Calculus I

Calculus II

Number Theory and Abstract Algebra for High School Teachers

Linear Algebra, graduate credit course

Modern Algebra I, graduate credit course; independent study

Modern Algebra II, graduate credit course

Number Theory, graduate credit course

Number Theory for Middle School Teachers, graduate course

Algebra and Functions for Middle School Teachers, graduate course

Louisiana State University

Instructor, Louisiana Math and Science Teacher Institute

Jun. 2010 - Jul. 2010

Pre-Thesis Seminar

Leadership Seminar (Guest Lecturer)

### University of Nebraska-Lincoln

Instructor Aug. 2002 - Aug. 2008

Functions of Algebra and Geometry for High School Teachers

Intermediate Algebra

College Algebra

Mathematics Matters (course for pre-service elementary teachers)

Teaching Fellow, Project Fulcrum

Aug. 2004 - May 2005

Middle school math and science curriculum development and implementation

 $Recitation\ Instructor$ 

Jul. 2002 - Aug. 2007

Abstract Algebra

Calculus I

Calculus II

### Advising and Mentoring

### Loyola Marymount University

Carlos Cruz, Sarah Yoseph, McNair Scholar,
Jack Polerecky, Noyce Internship,
Jun. 2015-present
Jonathan Isozaki, Kyle Casto, SURP,
Alyssa Tomlinson, RAINS Research Assistant,
Claire Summers, RAINS Research Assistant,
First To Go Mentor

Aug. 2015-present
Jun. 2015-present
Assistant,
Sep. 2014-present
Sep. 2013-Jan. 2014
Sep. 2014-present

#### University of Louisiana at Lafayette

L. Bruno, P. Robin, R. Wilburn, T. Thomas, undergraduate research assistant, Jun.  $2013\text{-}\mathrm{Aug}\ 2013$ 

E. Reynoso, B. Thibodeaux, A. Urquiza, A. Wheatley, D. Young, undergraduate research assistant, Jun. 2012-Aug 2012

I. Fene, M. Gonzalez, J. Johnson, M. Lennon, K. Pr'Out, undergraduate research assistant, Jun. 2011-Aug 2011

Matthew Lennon, graduate research assistant,

Summer

2011, 2012, 2013

Louis Stokes Louisiana Alliance for Minority Participation

Oct. 2009-May 2013

#### **PUBLICATIONS**

- 10 C. Eubanks-Turner, P. Beaulieu, N. Pal, A. Vatsala, Smooth Transition for Advancement to Graduate Education (STAGE) for Underrepresented Groups in Mathematical Sciences Pilot Project: The Benefits and Challenges of Mentoring (accepted, PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies).
- 9 B. Baker Swart, K. Beck, S. Crook, C. Eubanks-Turner, H. Grundman, M. Mei, L. Zack, *Augmented Generalized Happy Functions* (accepted, Rocky Mountain Journal of Mathematics, arxiv.org/abs/1410.0297).
- 8 A. Kreide, C. Eubanks-Turner, A. Tomlinson, Preservice teachers' development of questioning skills through Common Core aligned exemplar videotaped math lessons, Proceedings of the Hawaii University International Conferences, (2015), 13 pages http://www.huichawaii.org/steam2015p.html
- 7 C. Eubanks-Turner, M. Lennon, E. Reynoso, B. Thibodeaux, A. Urquiza, A. Wheatley, D. Young, *Using the Division Algorithm to Decode Reed-Solomon Codes, Journal of Shanghai Normal University (Natural Sciences)* (2015), 44:3, 262-269.

 $<sup>^1\</sup>mathrm{Work}$  originating from an undergraduate research project.

6 C. Eubanks-Turner, N. Hajj, Mardi Gras Math, Mathematics Teaching in the Middle School (2015), 20:8, 492-498.

- 5 **C. Eubanks-Turner**, A. Li, Graphical Properties of the Bipartite Graph of Spec( $\mathbb{Z}[x]$ )\ {0}, Journal of Algebra Combinatorics, Discrete Structures and Applications (2015), 2:1, 65-73.
- 4 E. Celikbas, **C. Eubanks-Turner**, S. Wiegand, Prime Ideals in Power Series Rings and Polynomial Rings over Noetherian Domains, *Recent Advances in Commutative Rings, Integer-Valued Polynomials, and Polynomial Functions*, Springer (2014), 55-82.
- 3 C. Eubanks-Turner, The W.I.P.E. Rubric: Assessing Student Presentations of Mathematical Proofs, *Proceedings of the Lilly Conference on College and University Teaching and Learning*, (2014), 10-14.
- 2 C. Eubanks-Turner, M. Luckas, and S. Saydam, Prime Ideals in Birational Extensions of Two-Dimensional Power Series Rings, Communications in Algebra (2013), 41: 2, 703-735.
- 1 E. Celikbas, C. Eubanks-Turner, The Projective Line Over the Integers, *Progress in Commutative Algebra 2*, De Gruyter (2012), 221-240.

Grants
AWARDED

Seaver College Graduate Assistantship Grant Loyola Marymount University  Jun. 2015-	- Jun. 2016 \$12,337
Academic Technology Summer Grant Loyola Marymount University	May 2015 \$1,000
New Faculty Grant Loyola Marymount University	Dec. 2013 \$6,000
RAINS Research Assistantship Loyola Marymount University  2013,	2014, 2015 \$3, 200
Louisiana Mathematics Masters in the Middle (LaM³) (Co-PI) National Science Foundation, DUE-1240054	Jul. 2012 \$1,868,895
Supervised Undergraduate Research Experiences Louisiana Board of Regents (support for two undergraduate researchers)	May 2012 \$8,000
MSRI Math Circles Seed Grant Mathematical Sciences Research Institute	Oct. 2011 \$2,000
The Louisiana Noyce Teaching Fellows/Master Teaching Fellows Project National Science Foundation, DUE-1136417	Planning Aug. 2011 \$127,449
AWM Mentoring Travel Grant Association for Women in Mathematics	Aug. 2011 \$3,300
A TEAM (Tactile Experiences with Algebraic Models) Approach ciency in the Middle Grades) (Co-PI)	a <b>to Profi</b> - April 2011

Smooth Transition for Advancement to Graduate Education (STAGE) for Underrepresented Minorities in Mathematical Sciences: A Pilot Project

Louisiana Board of Regents

National Science Foundation, DMS-1043223

\$259,629

Feb. 2011

\$548,880

Acadiana Math Teachers' Circle 2011 Summer Retreat	Jan. 2011
Community Foundation of Acadiana - Pugh Family Fund	\$12,000
Electronic Course Design Grant	Oct. 2010
University of Louisiana at Lafayette	\$2,500
Travel Grant for Emerging Faculty	Apr. 2010
Louisiana Board of Regents	\$1,200
Travel Grant for Emerging Faculty	Jan. 2009
Louisiana Board of Regents	\$1,200
Summer Research Grant	Jun. 2009
University of Louisiana at Lafayette	\$4,800

PEER-REVIEWED OR INVITED PRESENTATIONS

## Attending to Precision in Statistics

minute workshop presentation).

ening Participation through Mentoring

Apr. 2016

May 2015

2016 National Council of Teachers of Mathematics (NCTM) Research Conference, San Francisco, CA .

# Using Video to Prepare Preservice Teachers to Pose Purposeful Questions $\mbox{\rm Apr.}\ 2016$

2016 National Council of Teachers of Mathematics (NCTM) Research Conference, San Francisco, CA .

# Engaging Teachers in Math Practices in a Statistics Professional Development Apr. 2016

48th National Council of Supervisors of Mathematics (NCSM) Annual Conference, San Francisco, CA (60-minute presentation).

# Loyola Marymount University's Masters of Arts in Teaching Mathematics Program Jan. 2016

AMS Special Session on Graduate Mathematics Courses and Programs for Secondary Mathematics Teachers, Joint Mathematics Meetings, Seattle, WA.

# Interlace Polynomials of the Friendship Graph and other Triangular Graphs $\operatorname{Nov.}\ 2015$

9th Annual Symposium for Women in Mathematics in Southern California, Pomona, CA.

# Pre-Service Teachers' Development of Questioning Skills through Common Core Aligned Videotaped Math Lessons June 2015

Hawaii University International S.T.E.A.M. Education Conference, Honolulu, HI.

# Using Webb's Depth of Knowledge to Reach 21st Century Skills Seen in the Common Core Mathematical Practices and Science and Engineering Practices in the Next Generation Science Standards June 2015 Hawaii University International S.T.E.A.M. Education Conference, Honolulu, HI (50-

Setting the STAGE (Smooth Transition for Advancement to Graduate Education) for Underrepresented Students in Mathematical Sciences: Broad-

Understanding Interventions that Broaden Participation in STEM Careers, San Diego, CA (poster presentation).

Lessons Learned from the Pilot Project 'Smooth Transition for Advancement to Graduate Education (STAGE) for Underrepresented Students in Mathematical Sciences'

MAA Session on Perspectives and Experiences on Mentoring Undergraduate Students in Research, Joint Mathematics Meetings, San Antonio, TX.

Prospective teachers' development of questioning skills inspired by authentic mathematical classroom dialogue from videotaped lessons Oct. 2014 Scientific Symposium on Current Research Trends in Mathematics Education: Issues That Matter, SACNAS, Los Angeles, CA.

Coloring Outside the Lines: The colorful impact of math on the world  $\operatorname{Apr}$ . 2014

Preparing Undergraduates through Mentoring towards PhDs (PUMP) Research Symposium, California State Polytechnic University, Pomona, Pomona, CA.

The W.I.P.E. Rubric: Assessing Student Presentations of Mathematical Proofs Feb. 2014

Lilly Conference on College and University Teaching and Learning, Hyatt Regency Newport Beach, Newport Beach, CA.

Taking the STAGE: Preparing for Graduate School or STEM Careers Jun. 2013

University of Louisiana at Lafayette, Lafayette, LA.

Commutative Algebra and the Algebraic Reasoning of Teachers Feb. 2013 University of Texas at Dallas, Dallas, TX.

The Mathematical Practices of the Mad Veterinarian Feb. 2013 Loyola Marymount University, Los Angeles, CA.

Efforts to Improve the Algebraic Content Knowledge of Middle Grade Teachers

Jan. 2013

Mathematics Seminar, Kennesaw State University, Kennesaw, GA.

STAGE: A Pilot Project in Mentoring Underrepresented Undergraduate Students Jan. 2013

MAA Session on Effective Strategies and Programs for Mentoring Women and Minorities in Mathematics, Joint Mathematics Meetings, San Diego, CA.

Graphical Properties of the Bipartite Subgraph of  $\operatorname{Spec}(\mathbb{Z}[x])$  Oct. 2012 Special Session on Algebraic Structures over Commutative Rings, American Mathematical Society Fall Sectional Meeting, Tulane University, New Orleans, LA.

Prime Ideals in Quotients of Low-Dimensional Mixed Polynomial/Power Series Rings Mar. 2012

The Consortium for Order in Algebra and Logic, University of Florida, Gainesville, FL.

Making Myself Useful...

Oct. 2011

Mathematics Education Seminar, University of Nebraska-Lincoln, Lincoln, NE.

**Error Detection and Correction** 

Mar. 2011

Center for Undergraduate Research in Mathematics Spring Research Conference, Brigham Young University, Provo, UT.

Prime Spectra of Birational Extension Rings

Jan. 2011

Association for Women in Mathematics Workshop, Joint Mathematics Meetings, New Orleans, LA.

Mad Veterinarian Jun. 2010

Acadiana Math Teachers' Circle Summer Retreat, Lafayette, LA.

Prime Ideals in Birational Extensions of Power Series Rings Apr. 2010 Special Session in Commutative Ring Theory, American Mathematical Society Spring Sectional Meeting, Macalester College, St. Paul, MN.

Prime Ideals in Birational Extensions of Power Series Rings Mar. 2010 - Apr. 2010

Algebra Seminar, University of Louisiana at Lafayette, Lafayette, LA (presentation consisted of four one hour expository talks).

Prime Ideals in Mixed Polynomial/Power Series Rings Jan. 2009

The Granville-Brown-Hayes Session of Presentations by Recent Doctoral Recipients, The Joint Mathematics Meetings, Washington, D.C.

Spectacular Skeletons: Prime ideals in rings of power series over the integers

Jan. 2008

Association for Women in Mathematics Workshop, Joint Mathematics Meetings, San Diego, CA (Poster Presentation).

Manuscripts Under Review & In Progress

A. Bargagliotti, C. Eubanks-Turner, Attending to Precision in Statistics (submitted).

- **C. Eubanks-Turner**, A. Kreide, Preparing Preservice Teachers to Pose Purposeful Questions Through Common Core Aligned Videotaped Math Lessons (submitted).
- B. Baker Swart, K. Beck, S. Crook, C. Eubanks-Turner, H. Grundman, M. Mei, L. Zack, Fixed Points of Augmented Generalized Happy Numbers (in preparation).
- **C. Eubanks-Turner**, I. Fene, A. Li, B. Thibodeaux, *Interlace Polynomials of the Friendship Graph and other triangulated graaphs* (in preparation).<sup>2</sup>
- E. Celikbas, C. Eubanks-Turner, S. Wiegand, *Prime Ideals of Two-Dimensional Quotients of Mixed Power Series/Polynomial Rings* (in preparation).

OTHER PRESENTATIONS

### Coloring Outside the Lines

Apr. 2014

Junior Faculty Seminar, Loyola Marymount University, Los Angeles, CA.

Forming a Math Circle

May 2011

Oct. 2010

Enhancing Content for Comprehension in Undergraduate Mathematics Workshop, University of Louisiana at Lafayette, Lafayette, LA.

Prime Ideals in Extensions of Power Series Rings

Southern Regional Algebra Conference, University of Louisiana at Lafayette, Lafayette, LA.

Spectacular Specs: Prime ideals of rings over the integers Mar. 2007 Mathematical Association of America Sectional Meeting, Dakota State University, Madison, SD.

Prime Ideals in Birational Extensions of Two-Dimensional Power Series Rings  $$\operatorname{Mar.}\ 2007$$ 

Graduate Student Seminar, University of Nebraska-Lincoln, Lincoln, NE.

<sup>&</sup>lt;sup>2</sup>Work originating from an undergraduate research project.

University	&
DEPARTMENT	ΓAL
Service	

# Loyola Marymount University Member, LMU Multiethnic Taskforce,

Member, Mathematics Department Seminar Committee,

Summer Faculty Associate, McNair Scholars Program,

Member, Math & Science Teacher Education Preparation Committee,
Present
Invited Speaker, McNair Program,
Dec. 2013
Member, CREATE-STEM Education Group,
Aug. 2013 - Present
Member, Mathematics Department Education Committee,
Member, Mathematics Department Sophomore Scholarship Committee,
Aug. 2013 - Aug. 2014

Invited Speaker, LMU ACCESS Program,

Aug. 2013

Jun. 2014

Jan. 2015 - Present

Aug. 2014 - Aug. 2015

### University of Louisiana at Lafayette

Organizer , Algebra Seminar, Aug. 2011 - Dec. 2011

Member, Math Department Online Courses Committee, Aug. 2010 - May 2013

Member, Graduate Faculty, Aug. 2010 - May 2013

Member, Graduate Faculty, Sep. 2008 - May 2013

Member, Math Department Graduate Recruitment Committee, Sep. 2008 - May 2013

Member, Mathematics Education Committee, Sep. 2008 - May 2013

### University of Nebraska-Lincoln

Facilitator, Math 804T, 807T Orientation Workshop, Sep. 2011, Jan. 2008

Member, Hiring Committee, Oct. 2007 - Jan. 2008

Board Member, Graduate Student Advisory Board, Aug. 2005 - May 2008

### Professional Service

#### Committees and Boards

Associate Editor, MAA Classroom Resource Materials Editorial Board Program Coordinator, MAA SIGMAA on Undergraduate Research

 ${\it Organizing~Member},$  Association for Women in Mathematics Teacher Partnership Program

Member, Pacific Math Alliance, Pacific Region

Member, Gulf States Math Alliance Advisory Board, Gulf States Region

#### Referee

Journal of Algebra and its Applications

PRIMUS

SIGMAA on RUME Conference Proceeding

AMS Mathematical Reviews

### Founder and Organizer

Acadiana Math Teachers' Circle,

Sep. 2009 - May 2013

### Organizer

AMS Special Session on Outreach for Mathematically Talented Youth, (Chair)  $\,$  Jan  $\,$  2014

Louisiana Noyce Capacity Building Summit,

AMS Special Session on Commutative Algebra, (Chair)

Southern Regional Algebra Conference,

Nebraska Black Leadership Symposium Special Session on Leadership,

Jan. 2012

Oct. 2011

Oct. 2010

Panelist

Impressing the Tenure-Track Faculty Search Committee, Nov. 2014
Alliance Ph.D.'s Tell Their Stories, Field of Dreams Conference, Nov. 2012
Center for Undergraduate Research in Mathematics Spring Research Conference, Mar.

2011

The Gallup Leadership Summer Institute, May 2007

30th Annual Big XII Conference on Black Student Government,

Feb. 2007

Mentor

LMU McNair Scholars,

LMU Noyce Internship,

LMU SURP,

National Alliance for Doctoral Studies in Mathematics,

Aug. 2015-present

Jun. 2015-present

May 2015-present

Oct. 2009 - Present

Poster Judge

The MAA 11th Annual Garden State Undergraduate Mathematics Conference, Apr. 2014

**Facilitator** 

Xavier University Math Science Institute,

Jul. 2008

COMMUNITY SERVICE

Grader

Hands on Exposure to Algebraic Topics (HEAT) middle school math competition, Apr. 2010

Math in the Middle Alternate Assessment Project,

May 2007

Volunteer Coordinator

Allen J. Celestine Foundation Festival of Virtues, Oct. 2009, Oct. 2010 Woodvale Elementary School Math Symposium, Nov. 2008

Treasurer

Black Graduate Student Association,

Aug. 2006 - May 2008

HONORS, FELLOWSHIPS AND AWARDS

Understanding Interventions Travel Award

May 2015

May 2014

Understanding Interventions that Broaden Participation in STEM Careers

LMU President's Institute Loyola Marymount University

LA/MS Section NExT Fellow Mar. 2009 - Mar. 2010

Mathematical Association of America

Project NExT Fellow Jun. 2008 - Jun. 2010

Mathematical Association of America

Certificate of Recognition for Contributions to Students Feb. 2007

University of Nebraska-Lincoln

Mentoring Through Critical Transition Points Fellowship Jan. 2006 - Aug. 2006

University of Nebraska-Lincoln

Graduate Assistance in Areas of National Need Fellowship  $\operatorname{Aug.}\ 2005$  -  $\operatorname{Aug.}\ 2006$ 

University of Nebraska-Lincoln

### Project-Fulcrum Fellowship

Aug. 2004 - May 2005

University of Nebraska-Lincoln

Computer Science, Engineering and Mathematics Scholarship Aug. 2002 - Aug. 2004

University of Nebraska-Lincoln

### Larson Fellowship

Aug. 2002 - Aug. 2004

University of Nebraska-Lincoln

### Professional Development

# Loyola Marymount University

6th Annual Writing Retreat, Association of Black Women in Higher Education Feb. 2015

Unleashing the Power of Rubrics, CTE

Nov. 2014

Intercultural Pedagogy Workshops,

Fall 2014-Spring 2015

Writing Meaningful Learning Outcomes, CTE

Feb. 2014

Asking the Right Questions: Best Practices for Designing Exams, CTE Sep. 2013

## Workshop/Conference (Sponsored Participant)

2015 Western Conversations, University Council for Jesuit Mission, University of San Francisco,
Oct. 2015

Research Experiences for Undergraduate Faculty, AIM/ICERM,

Jul. 2015

Partnerships: A Workshop on Collaborations between the NSF and private foundations, NSF,

Mar. 2015

Research Experiences for Undergraduate Faculty, AIM

Jul. 2014

CIME 2014: The Role of the Mathematics Department in the Mathematical Preparation of Teachers, MSRI,

Mar. 2014

CIME 2013: Assessment of Mathematical Proficiencies in the Age of the Common Core,

How to start a Math Camp, AIM,

Apr. 2013 Mar. 2013

Combinatorial Commutative Algebra and Applications, MSRI,

Dec. 2012

Common Core State Standards Math Training for University Faculty, Lafayette, LA, Nov. 2012

IAS/PCMI Workshop for Mentors of Undergraduate Mathematics Research by Minority Students, Park City Math Institute,

Jul. 2012

Enacting Standards for Mathematical Practices Conference, University of Nebraska-Lincoln,

Oct. 2011

MSRI.

Mathematical Field of Dreams Conference, University of Iowa, Oct. 2010

PREP Workshop on Inquiry Based Learning, MAA,

May 2010

How to run a Math Teachers' Circle Workshop hosted by AIM, MAA,

Jul. 2009

Promoting Diversity at the Graduate Level in Mathematics: a National Forum, MSRI, Oct. 2008

Visiting Scholar, Educational Testing Services

Jun. 2008

Negotiating an Ideal Faculty Position Workshop, Rice University,

Oct. 2007

Summer School in Commutative Algebra, MSRI

Jun. 2005

Professional

 ${\it MEMBERSHIPS\,\& } \quad {\it American Association of University Professors} \ ({\it AAUP})$ 

AFFILIATIONS American Mathematical Society (AMS)

Association of Mathematics Teacher Educators (AMTE)

Association for Women in Mathematics (AWM) Mathematical Association of America (MAA) National Association of Mathematics (NAM)

CERTIFICATIONS

NIH Protecting Human Research Participants, No: 1498133 Mathematical Quality of Instruction Instrument, No: 11234