

RANTHONY A.C. EDMONDS

Department of Mathematics
University of Iowa
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EDUCATION

Ph.D. Mathematics: University of Iowa, Iowa City, IA
Thesis: *Factorization in Polynomial Rings with Zero Divisors*
Advisor: Dr. Daniel D. Anderson
Anticipated Date of Completion: August 2018

Certificate in College Teaching: University of Iowa, Iowa City, IA
Office of Graduate Teaching Excellence
Completion Date: December 2017

Certificate in Online Teaching: University of Iowa, Iowa City, IA
Department of Psychological & Quantitative Foundations
Completion Date: December 2017

M.S. Mathematics: University of Iowa, Iowa City, IA
Completion Date: May 2015

M.S. Mathematical Sciences: Eastern Kentucky University, Richmond, KY
Thesis: *Amicable Pairs in the Gaussian Integers*
Advisor: Dr. Patrick Costello
Completion Date: May 2013

B.S. Mathematics: University of Kentucky, Lexington, KY
Completion Date: May 2011

B.A. English: University of Kentucky, Lexington, KY
Minor: African-American Studies
Completion Date: May 2011

RESEARCH INTERESTS

- Commutative Ring Theory.
- Mathematics Education.

AWARDS AND HONORS

- Graduate Student Senate Travel Award, University of Iowa – Spring 2018
\$750 award to attend Joint Mathematics Meeting in San Diego, CA
- Sloan Mini-Grant Recipient, University of Iowa Sloan Center – Spring 2018
\$500 award for commutative algebra textbooks

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- Outstanding Teaching Assistant Award, University of Iowa Council on Teaching – 2017
Selected as 1 of 31 from approximately 1400 teaching assistants across all disciplines.
- Teaching as Research (TAR) Fellow, CIRTL at Iowa, University of Iowa – 2017
\$1000 award to support the implementation of a partially flipped classroom.
- Sloan Mini-Grant Recipient, University of Iowa Sloan Center – Fall 2017
\$500 Travel funding for 2018 Joint Mathematics Meetings in San Diego, CA
- Sloan Mini-Grant Recipient, University of Iowa Sloan Center – Summer 2017
\$500 Travel funding for mini-sabbatical to Eastern Kentucky University.
- Graduate Teaching Fellowship, University of Iowa Center for Teaching – 2016 to 2017
Selected as 1 of 4 graduate students campus-wide for the inaugural cohort.
- Iowa Section NeXT Fellow – 2016, 2017
- Sloan Mini-Grant Recipient, University of Iowa Sloan Center – Spring 2017
\$500 Travel funding for 2017 MAA MathFest in Chicago, IL
- Sloan Mini-Grant Recipient, University of Iowa Sloan Center – Fall 2016
\$500 towards an iPad Pro
- Sloan Mini-Grant Recipient, University of Iowa Sloan Center – Spring 2016
\$500 Travel funding for 2016 MAA MathFest in Columbus, Ohio
- Dean's Graduate Research Fellowship, University of Iowa – 2013 to 2018
- GAANN Fellowship, University of Iowa – 2014 to 2015
- Selected for the EDGE Program, New College – Summer 2013

TEACHING EXPERIENCE

UNIVERSITY OF IOWA

Instructor:

Responsible for all course-related duties

- Trigonometry (partially flipped classroom) – Spring 2017
- Basic Algebra – Fall 2016

Teaching Assistant:

- Math for Business (head TA) – Spring 2016
- Calculus and Matrix Algebra for Business (head TA) – Fall 2015

Teaching Practica:

Completed for Graduate Certificate in College Teaching. Responsibilities included weekly meetings with the professor and a session of observed teaching.

- Discrete Mathematics (IBL classroom) – Fall 2017
- Educational Psychology – Summer 2016

Tutoring:

- Mathematics Tutorial Lab – Fall 2015 to May 2017
- Mathematics Tutorial Lab Review Session Leader: Fractions – September 2016

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- Mathematics Tutorial Lab Review Session Leader: Functions – September 2016
- Private tutor (High school: Geometry, Algebra 2, AP Calculus BC) – Fall 2015 to Dec 2017

BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE

Adjunct Faculty:

- Developmental Math – Summer 2013
- Developmental Math (two sections) – Spring 2013

EASTERN KENTUCKY UNIVERSITY

Instructor:

Responsible for all course-related duties

- Developmental Algebra 1 – Spring 2013

Teaching Assistant:

- Developmental Algebra 1 – Fall 2011, Fall 2012
- College Algebra – Fall 2011, Spring 2012

Tutoring:

- Mathematics and Statistics Tutoring Center – Fall 2011 to May 2013

UNIVERSITY OF KENTUCKY

Tutoring:

- Center for Academic Resources and Enrichment Services (Prealgebra through Calculus) – August 2007 to May 2011
- The Study at Academic Enhancement (Statistics) – August 2010 to May 2011
- Freshman Summer Program (College Algebra) – June, July 2008

THE ACADEMY FOR SCHOLASTIC AND PERSONAL SUCCESS – CEDAR RAPIDS, IA

Math and Science Instructor:

Responsible for all course-related duties

- Algebra 2, Geometry, Physics – June, July 2016
- Trigonometry, Algebra 1, Physics – June, July 2015

UPWARD BOUND – BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE

Instructor:

Responsible for all course-related duties for first two weeks of program.

- Algebra 1 (two sections), Pre-Calculus – June 2011

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Tutor Counselor:

Assisted primary instructor, tutored students during evening study hours, and served as a mentor.

- Algebra 1, Pre-Calculus – June, July 2010; June, July 2011

PUBLICATIONS

Patrick Costello and Ranthony A.C. Edmonds. *Gaussian Amicable Pairs*. [submitted], 2018.

Ranthony A. Clark. *Gaussian Amicable Pairs*. Master's Thesis. Eastern Kentucky University, 2013.

PRESENTATIONS

“Atoms in Mathematics: A Brief Introduction to Factorization Theory”

- [invited] Colloquium: Reed College, Portland, OR – April 26, 2018

“Factorization in Polynomial Rings with Zero Divisors”

- [invited] Ring Theory Seminar: The Ohio State University, Columbus, OH – April 16, 2018

“Unique Factorization in Polynomial Rings with Zero Divisors”

- Joint Mathematics Meetings: San Diego, CA – January 12, 2018

“A Case for a Partial Flip: A Blended Model for a College Trigonometry Course”

- Joint Mathematics Meetings: San Diego, CA – January 10, 2018
- MAA Iowa Section Meeting: Loras College, Dubuque, IA – October 21, 2017

“Some Remarks on Uniqueness: Polynomial Rings and My Journey in Pure Mathematics”

- [invited] Seminar: William Penn University, Oskaloosa, IA – November 30, 2017

“The Hilbert Series of the Stanley Reisner Ring”

- Commutative Ring Theory Seminar: University of Iowa, Iowa City, IA – October 18, 2017

“Characterizing Stanley Reisner Ideals using Simplicial Complexes”

- Commutative Ring Theory Seminar: University of Iowa, Iowa City, IA – October 11, 2017

“A Partially Flipped Model for a College Trigonometry Course”

- MathFest: Chicago, IL – July 28, 2017
- CIRTIL at UIOWA TAR Presentation: University of Iowa, Iowa City, IA – June 28, 2017

“Enhancing a Partially Flipped Trigonometry Classroom with Inquiry Based Learning”

- Constructing the Future of IBL Poster Session: Chicago, IL – July 28, 2017

“Graduate Teaching Fellows: Transforming Teaching at the University of Iowa”

- Graduate Teaching Fellows Showcase: Center for Teaching, University of Iowa, Iowa City, IA – April 14, 2017
- 19th Annual Jakobsen Conference: University of Iowa, Iowa City, IA – March 25, 2017

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“Universal Design for Learning (UDL) in the College Classroom”

- Center for Teaching Workshop Leader: University of Iowa, Iowa City, IA – March 30, 2017

“Factorization in Commutative Rings with Zero Divisors”

- Commutative Ring Theory Seminar: University of Iowa, Iowa City, IA – October 19, 2016

“Gaussian Amicable Pairs: Friendly Imaginary Numbers”

- AMS Sectional Meeting: Transylvania University, Lexington, KY – April 6, 2013
- Colloquium: Eastern Kentucky University, Richmond, KY – April 29, 2013
- 26th Annual EKU Symposium in the Mathematical, Statistical, and Computer Sciences: Eastern Kentucky University, Richmond, KY – March 29, 2013

PROFESSIONAL DEVELOPMENT

CIRTL Scholar: University of Iowa, Iowa City, IA

Center for the Integration of Research, Teaching and Learning at Iowa
Anticipated Date of Completion: May 2018

CIRTL Practitioner: University of Iowa, Iowa City, IA

Center for the Integration of Research, Teaching and Learning at Iowa
Anticipated Date of Completion Date: May 2018

CIRTL Associate: University of Iowa, Iowa City, IA

Center for the Integration of Research, Teaching and Learning at Iowa
Completion Date: June 2016

Graduate Education Courses:

- Web Based Learning – Fall 2017
- ePortfolio in College Teaching – Fall 2017
- Practicum in College Teaching – Fall 2017
- Tools and Utilities for Online Teaching – Fall 2016
- Practicum in College Teaching – Summer 2016
- Seminar in College Teaching – Spring 2016
- Universal Design & Accessibility Online – Spring 2016
- Design of Instruction – Fall 2015

“Iowa Section NeXT Workshop” - attendee

- MAA Iowa Section Meeting: Loras College, Dubuque, IA – October 2017
- MAA Iowa Section Meeting: Grand View University, Des Moines, IA – October 2016

“Effective Teaching Institute” - attendee

- Center for Teaching, University of Iowa – January 2016

“Teaching Linear Algebra: Learning Concepts Often Difficult to Understand” - attendee

- Mini-Course #3: Part A – MAA MathFest 2016; Columbus, Ohio – August 2016

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“Alternatives to Traditional Grading to Enhance Student Learning” - attendee

- Mini-Course #2 – MAA MathFest 2011; Lexington, KY

SERVICE

Academic

Center for the Integration of Research Teaching and Learning (CIRTL) at UIOWA

- Graduate College Orientation CIRTL Sessions 1&2 Panelist: *Teaching as a Transferrable Skill for Your Career* – August 16, 2017
- CIRTL Ambassador: Introduced the CIRTL program to campus through presentations and workshops – 2016-2017
- CIRTL Steering Committee: Group of select faculty and students who provide input on CIRTL programming throughout the school year – 2016-2017

Graduate College

- Graduate College Orientation: Panelist for session with current graduate students. Shared my experiences in graduate school with a focus on finding funding for travel and balancing research with teaching – August 16, 2017
- New TA Orientation: Facilitated session for new TA's titled “TA Troubleshooting Case Studies” to discuss how to handle difficult situations that can arise in the classroom – August 19, 2016

Sonia Kovalevsky Day

- Event Organizer 2016 to 2017 – University of Iowa
- T-Shirt Designer 2017 – University of Iowa
- Career Panel Coordinator – April 2015; University of Iowa
- Volunteer: assisted with jeopardy game, helped with origami station, served lunch, and helped set up and take down rooms – October 2011; University of Kentucky

Iowa STEM Pre-Service Teacher Conference

- Networking Reception Participant: Discussed techniques and experiences teaching in higher education with pre-service teachers – March 3, 2017; Kirkwood at University of Iowa

Department of Mathematics

- New TA Seminar Panelist “*Teaching Experience in Graduate School*” – December 4, 2017
- Post Qual/Pre-Comp Panelist – November 16, 2017
- New TA Seminar Panelist “*Balancing Teaching and Research*” – December 5, 2016
- Prospective Student Weekend Panelist “*Being a Teaching Assistant*” – April 2016
- First Year Buddy: Served as mentor to first year graduate student – 2016

Field of Dreams Conference

- Panel Moderator: *Doctoral Experiences* – November 6, 2016; St. Louis, MO

Community

Adler Planetarium and DuSable Museum of African American History

- Hidden Figures Revealed: Panelist – March 23, 2017; Chicago, IL

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The Academy for Scholastic and Personal Success

- University of Iowa Black Math PhDs: Panelist – June 23, 2017; Cedar Rapids, IA
- University of Iowa Black Math PhDs: Organizer/Moderator – June 2016; Cedar Rapids, IA

YMCA Black Achievers

- ACT Workshop Leader – January 21, January 28, February 4 2012; Lexington, KY

Black Males Working (BMW) Academy

- Volunteer: led 1-2 hour sessions on Saturday mornings over ACT math, algebra review, final exam preparation, and college readiness – Fall 2011; Lexington, KY

Alpha Kappa Alpha Sorority, Incorporated

Tau Psi Omega Chapter, Iowa City, IA

- MLK Day of Service Organizer: Ronald McDonald House, Iowa City, IA – January 2016
- Corresponding Secretary, 2016
- March of Dimes Grant Proposal Coauthor, 2015
- Ivy Leaf Reporter, 2014

Beta Gamma Omega Chapter, Lexington, KY

- Scholarship Committee

Iota Sigma Chapter, University of Kentucky, Lexington, KY

- Sergeant of Arms, 2011
- Financial Secretary, 2011
- HOOP-for-a-CAUSE Program Committee – October 2010
(3 on 3 basketball tournament which raised \$500 to buy wigs for donation to the American Cancer Society)

CONFERENCES ATTENDED

- AMS Sectional Meeting, University of Michigan, Ann Arbor, Michigan (to attend) – October 2018
- MAA MathFest, Denver, CO (to attend) – July 2018
- Joint Mathematics Meetings, San Diego, CA – January 2018
- Field of Dreams, St. Louis, MO – November 2017
- MAA Iowa Section Meeting, Loras College, Dubuque, IA – October 2017
- MAA MathFest, Chicago, IL – July 2017
- Constructing the Future of IBL, Chicago, IL – July 2017
- 19th Annual Jakobsen Conference, Iowa City, IA – March 2017
- Field of Dreams, St. Louis, MO – November 2016
- MAA Iowa Section Meeting, Grandview University, Des Moines, IA – October 2016
- MAA MathFest, Columbus, OH – August 2016
- USTARS: *Underrepresented Students in Algebra and Topology Research Symposium*, Berkeley, CA – April 2014
- Field of Dreams, Phoenix, AZ – November 2014

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- AMS Sectional Meeting, Transylvania University, Lexington, KY – April 2013
- Joint Mathematics Meetings, Boston, MA – January 2012
- MAA MathFest, Lexington, KY – August 2011

PROFESSIONAL MEMBERSHIPS

- Association for Women in Mathematics
- Mathematical Association of America
- American Mathematical Society

REFERENCES

Available upon request.