

Education

Ph.D. in Mathematics, In Progress, Bryn Mawr College, Bryn Mawr, Pennsylvania, USA

Advisor: Paul Melvin

M.A. in Mathematics, 2018, Bryn Mawr College, Bryn Mawr, Pennsylvania, USA

Thesis title: On fibering 3-manifolds

Advisor: Paul Melvin

B.S. in Mathematics, 2016, University of Wisconsin La Crosse, La Crosse, Wisconsin, USA

Research Interests

Low-dimensional topology: Khovanov homology, Kirby calculus, knot concordance, knot traces, smooth 4-manifolds, spectral sequences

Publications

Robert F. Allen and Isaac M. Craig, *Multiplication operators on weighted Banach spaces of a tree*, Bulletin of the Korean Mathematical Society, 54:3 (2017), 747-761

Teaching

Instructor of Record, Department of Mathematics, Bryn Mawr College, Spring 2020

Courses: Calculus I

Teaching Assistant, Department of Mathematics, Bryn Mawr College, 2016-Present

Courses: Abstract Algebra I & II, History of Math, Theory of Probability, Topology

Responsibilities: Grade all course material, regularly hold problem sessions to review lecture material and discuss assignments, meet individually with students, assist with lectures and lecture occasionally

Substitute Lecturer, Department of Mathematics, Bryn Mawr College, 2016-2019

Courses: Abstract Algebra I, Algebraic Topology, History of Math, Topology

Responsibilities: Prepare and give one or more lectures for the planned absence of an instructor

Tutor in Mathematics, Murphy Learning Center, UW La Crosse, 2013-2016

Courses: College Algebra, Pre-calculus and Trigonometry, Calculus I, II, & III, Differential Equations

Responsibilities: Assist students with homework, review lecture material, train new tutors

Service

Directed Reading Program, Bryn Mawr College

Co-founder (2019), Co-organizer (2019-Present), Mentor (2019-Present)

Graduate Research Seminar, Bryn Mawr College

Founder (2019), Organizer (2019-Present)

Graduate Student Association (GSA), Bryn Mawr College

Co-chair (appointed 2017-2019), Mathematics Department Representative (appointed 2019-2020),

Representative to the Graduate Council of Bryn Mawr College (appointed 2017-2020)

Professional Development Seminar, Bryn Mawr College

Organizer (2018-2019)

AMS Graduate Student Chapter, Bryn Mawr College

President (2018-Present)

UW La Crosse Mathematics & Statistics Club, UW La Crosse

President (appointed 2015-2016)

FastTrack Remedial Mathematics Camp, UW La Crosse

Tutor and staff (2015)

Girls in Science Day Camp, UW La Crosse

Teaching Assistant and Staff (2015)

Awards & Honors

Bryn Mawr Community Building Honor Roll, Bryn Mawr College, 2019

Convocation Speaker Representing the Graduate Student Association, Bryn Mawr College, 2018

McPherson Graduate Award for Excellence, Bryn Mawr College, 2018

Department of Mathematics Outstanding Service Award, UW La Crosse, 2016

SIAM Outstanding Efforts & Accomplishments in the Chapter, UW La Crosse, 2016

Conferences & Workshops

Graduate Student Topology and Geometry Conference (GSTGC)

Invited speaker, UI Urbana-Champaign, 2019 [⊕]

MSRI Summer Graduate School on H-Principles

Participant, Tambara Institute, University of Tokyo, Jun-Jul 2018 [⊕]

Summer 2018 Geometry/Topology RTG mini-conference

Participant, Princeton University, 2018

Topology Student Workshop

Participant, Georgia Institute of Technology, 2018 [⊕]

Graduate Student Conference in Algebra, Geometry, & Topology

Participant, Temple University, 2018, 2019

EPaDel MAA Section Meeting

Contributing speaker, King's College, 2019

Contributing speaker, Temple University, 2018

Joint Mathematics Meeting

AMS Session on Undergraduate Research speaker, Seattle, WA, 2016

[⊕]Received partial or full funding by program.

Talks

Khovanov Homology and TQFTs

Graduate Research Seminar, Bryn Mawr College, Nov 2019

The Mazur Cork

Graduate Research Seminar, Bryn Mawr College, Sep 2019

The Ins and Outs of Eversions

Graduate Student Research Symposium, Bryn Mawr College, Apr 2019

Knot Traces and Sliceness

GSTGC2019, UI Urbana-Champaign, Mar 2019 [⊗]

EPaDel, King's College, Mar 2019

An Introduction to Manifolds

UWL Mathematics & Statistics Club, UW La Crosse, Nov 2018 [⊗]

[⊗]Invited speaker

On Fiberings 3-manifolds

Master's defense, Bryn Mawr College, Apr 2018
EPaDel, Temple University, Mar 2018

Your Daily Dose of Fiber (Bundles)

Graduate Student Research Symposium, Bryn Mawr College, Mar 2018

Brouwer Fixed Point Theorem

Distressing Math Seminar, Bryn Mawr, Feb 2017 [⊗]
UWL Mathematics & Statistics Colloquium, UW La Crosse, Apr 2016 [⊗]

Multiplication Operators on Weighted Banach Spaces of a Tree

Creativity Research Symposium, UW La Crosse, Mar 2016
AMS Session on Undergraduate Research, JMM Seattle, Jan 2016
UWL Mathematics & Statistics Colloquium, UW La Crosse, Oct 2015 [⊗]

On the Classification of Surfaces

UWL Mathematics & Statistics Colloquium, UW La Crosse, Dec 2015 [⊗]

On the Theory of Real Numbers

"Keeping it Real" Seminar, UW La Crosse, Apr 2015

[⊗]Invited speaker

Research Seminars

Philadelphia Area Contact Topology (PACT)

Bryn Mawr College, 2016-Present

Philadelphia Area Topology Contact/Hyperbolic (PATCH)

Bryn Mawr College, Haverford College, Temple University, University of Pennsylvania, 2016-Present

References

Paul Melvin (Advisor), pmelvin@brynmawr.edu
Lisa Traynor, ltraynor@brynmawr.edu