

## 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, surfaces in 4-manifolds

## 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, 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

**Graduate Research Seminar**, Bryn Mawr College

Founder (2019), Organizer (2019)

**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**

**Graduate Research Assistantship**, Bryn Mawr College, 2020

**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 <sup>⊕</sup>

### **MSRI Summer Graduate School on H-Principles**

Participant, Tambara Institute, University of Tokyo, Jun-Jul 2018 <sup>⊕</sup>

### **Summer 2018 Geometry/Topology RTG mini-conference**

Participant, Princeton University, 2018

### **Topology Student Workshop**

Participant, Georgia Institute of Technology, 2018 <sup>⊕</sup>

### **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

<sup>⊕</sup>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 <sup>⊗</sup>

EPaDel, King's College, Mar 2019

### **An Introduction to Manifolds**

UWL Mathematics & Statistics Club, UW La Crosse, Nov 2018 <sup>⊗</sup>

<sup>⊗</sup>Invited speaker

# ISAAC SUNDBERG

[icraig@brynmawr.edu](mailto:icraig@brynmawr.edu) – [imsundberg.github.io](https://imsundberg.github.io)

May 2020

## 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  $\otimes$   
UWL Mathematics & Statistics Colloquium, UW La Crosse, Apr 2016  $\otimes$

## 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  $\otimes$

## On the Classification of Surfaces

UWL Mathematics & Statistics Colloquium, UW La Crosse, Dec 2015  $\otimes$

## On the Theory of Real Numbers

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

$\otimes$  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](mailto:pmelvin@brynmawr.edu)

**Lisa Traynor**, graduate professor, [ltraynor@brynmawr.edu](mailto:ltraynor@brynmawr.edu)