William E. Olsen

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EDUCATION

University of Georgia
Ph.D, Mathematics, 2020
Dissertation title: Trisections and Ozsváth-Szabó Four-Manifold Invariants
Advised by David T. Gay

University of North Florida
M.Sc., Mathematics, 2014
Thesis title: Transitions in Line Bitangency Submanifolds for a One-Parameter
Family of Immersion Pairs
Advised by Daniel Dreibelbis

University of North Florida
B.Sc., Mathematics, 2012.

RESEARCH

Low-dimensional topology
Trisections of four-manifolds, Floer homology theories, microlocal sheaf theory

AWARDS AND
FELLOWSHIPS

University of Virginia
RTG Research Associate and Lecturer

University of Georgia
University Outstanding Teaching Assistant Award
MATH 2250, 2017

GRSC 7770 Teaching Assistanceship
Fall 2017
Fall 2018

B.J. Ball Scholarship
Summer 2016
Summer 2017
Summer 2018

PUBLICATIONS AND PREPRINTS

Structure and transitions for line bitangencies from a one-parameter family of surface pairs, joint with Daniel Dreibelbis.
Journal of Geometry

Trisecting Ozsváth-Szabó Four-manifold Invariants
University of Georgia Pro Quest Dissertations Publishing

Trisections and Ozsváth-Szabó Cobordism Invariants
(Submitted)

Trisecting Engel four-manifolds
(in-progress)

Singular fibrations and open-closed maps
(in-progress)

Microlocal sheaves and bridge-trisections
(in-progress)

On the Alexander invariants of bridge-trisected 2-knots, joint with E. Clelland, A. Emmons, L. Grisales, C. Godfrey
(in-progress)

EXTERNAL TALKS

University of Georgia Topology Seminar, **November 21, 2022**

AMS Sectional Meeting at University of Tennessee
Special session in low-dimensional topology, **October 14 - 16, 2022**

AMS Sectional Meeting at Purdue University
Special session in low-dimensional topology, **March 26 - 27, 2022**

MIT Geometry and Topology Seminar, **May 10, 2021**

Princeton Topology Seminar, **April 29, 2021**

Virtual Trisector's Seminar, **July 30, 2021**

Max Planck Institute for Mathematics, Topology Seminar, **December 16, 2019**

Max Planck Institute for Mathematics Oberseminar, **October 23, 2019**

Workshop on 4-manifolds 'picture show', **September 16-20, 2019**

Virginia Topology Conference, **December 12-14, 2018**

Georgia Tech Topology Conference 'lightning talk', **December 7-9, 2018**

AMS Northeastern Sectional Meeting, Special Session on Connections Between Trisections of 4-manifolds and Low-dimensional Topology, **April 21-22, 2018**

TEACHING | **University of Virginia**
Instructor, MATH 2310 Multi-variable calculus, Fall 2020
Instructor, MATH 2310 Multi-variable calculus, Spring 2021
Instructor, MATH 8750 Topology of Manifolds, Fall 2021
Instructor, MATH 2310 Multi-variable calculus, Spring 2022

University of Georgia
Instructor, GRSC 7770 Graduate Teaching Seminar, Fall 2018
Instructor, MATH 1113 Precalculus, Fall 2018
Instructor, GRSC 7770 Graduate Teaching Seminar, Fall 2017
Instructor, MATH 1113 Precalculus, Fall 2017

SERVICE | **University of Virginia**
REU Topology group mentor, Summer 2021

University of Georgia
Organizer, Graduate Student Topology Seminar, Fall 2016 - Present

References | David T. Gay
Department of Mathematics
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Tom E. Mark
Department of Mathematics
University of Virginia
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Peter Lambert-Cole
Department of Mathematics
University of Georgia
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Jim Rolf
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jsr2pz@virginia.edu