

## Curriculum Vitae – Jonathan D. Williams – April 2022

### Contact

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### Education

University of Texas at Austin	Mathematics	B.S., May 2003
University of Texas at Austin	Mathematics	Ph.D., May 2010

### Appointments

Fall 2016 -	Assistant Professor, Binghamton University
Fall 2015 - Spring 2016	Visitor, University of Texas at Austin
Fall 2014 - Spring 2015	Part-time assistant professor, University of Georgia
May 2012	Visiting researcher, Max Planck Institute for Mathematics
Fall 2011 - Spring 2014	Postdoctoral fellow, University of Georgia
February 2011	Institute for Advanced Study Short-term scholar.
December 2010	Institute for Advanced Study Short-term scholar.
Fall 2010-Spring 2011	NSF/IAS Mathematical Sciences Research Institutes Postdoctoral Researcher, UC Berkeley (DMS-0635607).
Spring 2010	Graduate research assistant under Prof. Robert Gompf (DMS-0636643)
Fall 2009	Instructor for precalculus.
Spring 2009	Graduate research assistant under Prof. Robert Gompf (DMS-0636643)
Fall 2008	Instructor for precalculus.
Spring 2008	Grader for an advanced algebraic topology subject course.
Fall 2007-Spring 2008	Graduate research assistant under Prof. Robert Gompf (DMS-0636643)
Spring 2007	Grader for an advanced algebraic topology subject course.
Spring 2003-Spring 2007	Teaching assistant for linear algebra, differential equations and calculus.

### Accepted Publications

1. [The  \$h\$ -principle for broken Lefschetz fibrations](#), *Geom. Topol.* **14** no. 2 (2010), 1015-1061. doi:10.2140/gt.2010.14.1015
2. [Topology of surface diagrams of smooth 4-manifolds](#), *Proc. Nat. Ac. Sci.* **108**(20) (2011), 8126-8130 2011. doi:10.1073/pnas.1016952108
3. [Existence of 2-parameter crossings, with applications](#), *Geom. Ded.* **207** (2020), 265–286. doi:10.48550/arXiv.1411.1742
4. [Depicting a generalized shift move in crown diagrams](#), 2021, accepted at *Top. Proc.*, C. Guilbault managing ed.

### Submitted Publications

1. [Uniqueness of surface diagrams of smooth 4-manifolds](#), 2011 preprint submitted to *Geom. Topol.*, R. Kirby managing ed.
2. [The salient crossings of a crown diagram](#), 2022 preprint submitted to *J. Topol.*, A. Blumberg managing ed.

### Publications In Preparation

1. The salient crossings of a crown multisection.
2. A combinatorial dga for stacked links.

### **Selected Invited Talks**

November 2014	Michigan State University
October 2014	University of Arkansas
March 2014	Banff (BIRS conference 14w5119)
April 2013	Boston College
May/June 2012	19 <sup>th</sup> Gökova Geometry/Topology conference
May 2012	Max Planck Institute for Mathematics
November 2011	University of Texas at Austin
October 2011	Georgia Institute of Technology
April 2011	Simons Center for Geometry and Physics
February 2011	University of Minnesota
December 2010	Institute for Advanced Study
October 2010	University of California, Davis
October 2010	University of California, Berkeley
April 2010	Michigan State University

### **External Funding**

NSF MSRI Postdoctoral Fellowship, DMS-0635607/7454-3110

### **Professional Service**

Referee for Algebraic & Geometric Topology, Topology and its Applications.

#### **2021-2022**

LSAMP mentor for Alexandria Lee-Robinson  
MA exam coordinator  
undergrad advising committee  
covid consultant volunteering  
admitted Harpur undergrad reception 4/23

#### **2020-2021**

Worked with James Pitarresi to help equip math instructors for BingFlex learning  
Remote education committee

#### **2019-2020**

Worked with J. Pitarresi to equip faculty for remote teaching during COVID-19

#### **Before 2019**

Undergraduate Committee, 2016-present  
Organizer, *The topology and geometry of low-dimensional manifolds: a celebration of the mathematics of Bob Gompf*, July 12-15, 2018  
Organizer, *Peter Hilton Memorial Lecture*, 2017, 2018  
Organizer, Binghamton Geometry/Topology Seminar, Fall 2017-Spring 2018  
Started and organized an A-infinity structures seminar, August 2013  
Organizer, Georgia Topology Conference, May 2012, May 2013, May 2014

### **Professional Training**

Mathematicians Educating Future Teachers. (MEFT is a two-semester program that is designed to help mathematics graduate students and postdoctoral fellows learn to teach mathematics courses for prospective elementary or middle grades teachers. See <http://www.math.uga.edu/vigre/meft.html>.)