

Geoffrey Scott

CONTACT INFORMATION	Department of Mathematics University of Toronto 40 St. George Street Toronto, ON M5S 2E4	gsscott.github.io gscott@math.toronto.edu (647)677-3307
EDUCATION	University of Michigan <i>Doctor of Philosophy, Mathematics</i> Thesis title: <i>Torus Actions and Singularities in Symplectic Geometry</i> Thesis advisor: Daniel Burns Dartmouth College <i>Bachelor of Arts, Mathematics (minor in Engineering)</i>	2008 – 2014 2004 – 2008
EMPLOYMENT	University of Toronto <i>Postdoctoral Fellow</i>	2014 – 2017
SKILLS (■ DENOTES PROFICIENCY)	Python ■■■■□□ HTML/CSS ■■■□□□ Matlab ■■■□□□	Javascript ■■□□□□ C ■■□□□□ L ^A T _E X ■■■■□□
PROJECTS	Sea Lion Counting , Kaggle competition Used tensorflow and transfer learning to re-train the VGG16 convolutional neural network to count sea lions in aerial photographs. Scored in the top 10% of competition participants Zillow Housing Price Estimation , Kaggle competition Used feature engineering, ensemble learning, and the scikit-learn library to predict housing prices Competition ongoing Carvana image segmentation , Kaggle competition Used neural networks and image processing tools for image segmentation on pictures of cars Competition ongoing Marathon data visualization Used the d3 javascript library to construct interactive web visualizations of the finishing times and pacing strategies of marathon runners Available at gsscott.github.io	
AWARDS	Frederick V. Atkinson teaching award Outstanding mathematics graduate student instructor award Golden stapler award Awarded to the math graduate student instructor with the best student evaluations Summa Cum Laude Awarded to the top 5% of the graduating class at Dartmouth College	2015 2011 2011 2008
PUBLICATIONS	Deformation of Dirac structures via L_∞ algebras With Marco Gualtieri and Mykola Matviichuk Preprint available on ArXiv Action-angle Variables and a KAM Theorem for b-Poisson Manifolds With Eva Miranda and Anna Kiesenhofer In <i>Journal de Mathématiques Pures et Appliquées</i> , 2016	

Convexity for Hamiltonian Torus Actions on b-Symplectic Manifolds
 With Victor Guillemin, Eva Miranda, and Ana Rita Pires
 In *Mathematical Research Letters*, 2016

The Geometry of b^k -manifolds
 In *Journal of Symplectic Geometry*, 2016

Toric Actions on b-symplectic Manifolds
 With Victor Guillemin, Eva Miranda, and Ana Rita Pires
 In *International Mathematics Research Notes*, 2014

Torus Invariant Curves
 Preprint available on arXiv

Graphs with Equal Chromatic Symmetric Functions
 With Rosa Orellana
 In *Discrete Mathematics*, 2014.

A Generalization of Thue Freeness for Partial Words
 With F. Blanchet-Sadri and Robert Mercas
 In *Theoretical Computer Science*, 2009.

Counting Distinct Squares in Partial Words
 With F. Blanchet-Sadri and Robert Mercas
 In *Proceedings of AFL*, 2008.

TEACHING

Postdoctoral Instructor, University of Toronto **2014 – 2016**
 Polynomial equations and fields (2 semesters)
 Linear algebra (3 semesters)
 Graph theory (1 semester)

Tutor, African Institute for Mathematical Sciences, Senegal **2014**
 Graph theory
 Quantum mechanics
 Symplectic geometry

Course Co-coordinator, University of Michigan **2011**
 Assisted in the administration of an integral calculus course
 Wrote exams taken by over 800 students and mentored new instructors

Graduate Student Instructor, University of Michigan **2008 – 2010**
 Integral calculus (3 semesters)
 Differential calculus (2 semesters)

Teaching Assistant, Dartmouth College **2006 – 2007**
 Introduction to programming
 Numerical analysis
 Recreational topology

RESEARCH TALKS

Deformations of Dirac Structures via L_∞ Algebras
 Geometric Structures on Lie Groupoids Workshop, Banff **2017**

Gerbes in Classical Field Theory (series of four lectures)
 Winter School in Mathematical Physics, Les Diablerets **2017**

The Dirac Geometry of Folded Symplectic and b-Symplectic Structures
 Joint Mathematics Meetings, Atlanta **2017**

	<i>Lie Algebroids on Pinched S^1 Bundles</i>	
	Geometry Seminar, McMaster University	2016
	Poisson 2016, ETH Zürich	2016
	Symplectic Geometry Seminar, University of Toronto	2016
	<i>Action-Angle Coordinates on Log-Symplectic Manifolds</i>	
	Symplectic Geometry Seminar, University of Toronto	2015
	Geometry Seminar, University of Waterloo	2015
	<i>Introduction to b-Symplectic Geometry</i>	
	Geometry Seminar, University of Dakar Cheikh Anta Diop	2014
	<i>Toric Actions on b-Symplectic Manifolds</i>	
	Geometry Seminar, University of Michigan	2013
	Lie Groups Seminar, Cornell University	2013
	GESTA Itinerante, Universitat Politcnica de Catalunya	2013
	<i>Torus invariant curves</i>	
	Lie Groups Seminar, Cornell University	2013
	Algebraic Geometry Seminar, Universitat de Barcelona	2013
	<i>Integrable Systems on Log-Symplectic Manifolds</i>	
	Fields Institute, University of Toronto	2013
	<i>Sheaf Cohomology on T-Varieties</i>	
	Algebraic Geometry Seminar, Freie Universität Berlin	2012
	<i>Counting Distinct Squares in Partial Words</i>	
	International Conference on Automata and Formal Languages, Hungary	2009
EXPOSITORY TALKS	<i>Mini-course: Poisson Geometry (teaching assistant to Eckhard Meinrenken)</i>	
	Poisson 2016, University of Geneva	2016
	<i>Mini-course: Poisson Geometry (teaching assistant to Eva Miranda)</i>	
	Poisson 2014, University of Illinois at Urbana-Champaign	2014
	<i>Mini-course: Hamiltonian actions in Poisson Geometry (joint with Eva Miranda)</i>	
	GESTA 2014 summer school, ICMAT Madrid	2012
	<i>Geometry of T-Varieties</i>	
	Baby Algebraic Geometry Seminar, Harvard University	2012
	<i>Mini-course on Floer Homologies</i>	
	Summer Mini-course, University of Michigan	2011
	<i>Toric Varieties</i>	
	Student Geometry and Topology Seminar, University of Michigan	2011
	<i>Symplectic Toric Manifolds</i>	
	Student Geometry and Topology Seminar, University of Michigan	2010
	<i>Spines and Turaev-Viro Invariants</i>	
	Student Geometry and Topology Seminar, University of Michigan	2009
ADMINISTRATION	Helped organize	
	Geometric Structures Laboratory Seminar, University of Toronto	2014 – 2016
	Student Geometry and Topology Seminar, University of Michigan	2010 – 2011
	Great Lakes Student Geometry and Topology Seminar, University of Michigan	2010
OUTREACH	Panel Speaker, The Politics of the Sciences	
	Spoke on a panel about the overproduction of science PhDs	2016
	Guest Lecturer, State College area high school	
	Taught recreational mathematics to high school students	2008