Geoffrey Scott

CONTACT INFORMATION

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RESEARCH INTERESTS

Symplectic and poisson geometry, hamiltonian actions, toric geometry, gauge theory

EDUCATION

University of Michigan

Doctor of Philosophy, Mathematics **2008 – 2014**

Thesis title: *Torus Actions and Singularities in Symplectic Geometry*
Thesis advisor: Daniel Burns

Dartmouth College

Bachelor of Arts, Mathematics (minor in Engineering) **2004 – 2008**

EMPLOYMENT

University of Toronto

Postdoctoral Fellow **2014 – 2017**

AWARDS

Frederick V. Atkinson teaching award **2015**
Awarded to two postdoctoral fellows in math with the best student evaluations

NSF RTG fellowships **2011 – 2013**

Outstanding mathematics graduate student instructor award **2011**

Golden stapler award **2011**
Awarded to the math graduate student instructor with the best student evaluations

Summa Cum Laude **2008**
Awarded to the top 5% of the graduating class at Dartmouth College

PUBLICATIONS

Deformation of Dirac structures via L_∞ algebras
With Marco Gualtieri and Mykola Matviichuk
Preprint avalable on ArXiV

Action-angle Variables and a KAM Theorem for b-Poisson Manifolds
With Eva Miranda and Anna Kiesenhofer
In *Journal de Mathématiques Pures et Appliquées*, 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 instructors on teaching techniques

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

An Introduction to Gerbes in Classical Field Theory (four-lecture master course)
Winter School in Mathematical Physics, Les Diablerets, Switzerland **2017**

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

Lie Algebroids on Pinched S^1 Bundles
Geometry Seminar, McMaster University **2016**

Poisson 2016, ETH Zürich **2016**

Symplectic Geometry Seminar, University of Toronto **2016**

Action-Angle Coordinates on Log-Symplectic Manifolds
Symplectic Geometry Seminar, University of Toronto **2015**

Geometry Seminar, University of Waterloo **2015**

Introduction to b-Symplectic Geometry
Geometry Seminar, University of Dakar Cheikh Anta Diop **2014**

Toric Actions on b-Symplectic Manifolds
Geometry Seminar, University of Michigan **2013**

Lie Groups Seminar, Cornell University **2013**

GESTA Itinerante, Universitat Politcnica de Catalunya **2013**

Torus invariant curves
Lie Groups Seminar, Cornell University **2013**

Algebraic Geometry Seminar, Universitat de Barcelona **2013**

Integrable Systems on Log-Symplectic Manifolds
Fields Institute, University of Toronto **2013**

Sheaf Cohomology on T-Varieties
Algebraic Geometry Seminar, Freie Universität Berlin **2012**

Counting Distinct Squares in Partial Words
International Conference on Automata and Formal Languages, Hungary **2009**

Expository Talks

Mini-course: Poisson Geometry (teaching assistant to Eckhard Meinrenken)
Poisson 2016, University of Geneva **2016**

Mini-course: Poisson Geometry (teaching assistant to Eva Miranda)
Poisson 2014, University of Illinois at Urbana-Champaign **2014**

Mini-course: Hamiltonian actions in Poisson Geometry (joint with Eva Miranda)
GESTA 2014 summer school, ICMAT Madrid **2012**

Geometry of T-Varieties
Baby Algebraic Geometry Seminar, Harvard University **2012**

Mini-course on Floer Homologies
Summer Mini-course, University of Michigan **2011**

Toric Varieties
Student Geometry and Topology Seminar, University of Michigan **2011**

Symplectic Toric Manifolds
Student Geometry and Topology Seminar, University of Michigan **2010**

Spines and Turaev-Viro Invariants
Student Geometry and Topology Seminar, University of Michigan **2009**

Administration

Helped organize
Geometric Structures Laboratory, 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**

Tutor, Michigan Science Learning Center
Tutored math at a drop-in tutoring center at the University of Michigan **2009**

Guest Lecturer, State College area high school
Taught recreational mathematics to high school students **2008**

Programming

C, MATLAB, LaTeX.

Languages

English (native)
German (intermediate)