Christopher Stover

Curriculum Vitae

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Education

In Progress **PhD, Mathematics**, Florida State University (FSU). Current GPA: 3.843/4.0.
ADVISOR: Dr. Sérgio Fenley

2015–2016 **Visiting Graduate Student**, Princeton University / Institute for Advanced Study.

2012–2013 **MS, Mathematics**, FSU. GPA: 3.81/4.0.

2010–2012 **MA, Mathematics**, Bowling Green State University. GPA: 3.71/4.0.

Research Interests

Primarily low-dimensional geometric topology and foliation theory. Also:

- contact geometry & symplectic topology
- differential geometry (DG)
- complex & hypercomplex geometry
- Clifford analysis (Dirac operators, Spin & $\mathrm{Spin}^{\mathbb{C}}$ manifolds,...)
- logic and the foundations of math
- category theory & synthetic DG
- functional analysis
- applications of the above (mathematical physics, topological quantum computing...)

Awards, Honors, & Recognitions

2016 Teaching Training Recognition, *FSU's Program for Instructional Excellence (PIE)*.

2015 Evelyn Baugh Scholarship

Uhrhan Scholarship

2012–2013 FSU Dean's Scholarship

Publications

2009 "Investigation of the Qualitative Behavior of the Equilibrium Points for a Modified Lotka-Volterra Model." *Georgia Journal of Science* **67** (3), 46–59, 2009. With Jemal Mohammed-Awel and Andreas Lazari.

Preprints & Other Works

2016 *Foliations and Contact Structures in Manifold Theory*.

2014 *Sutured 3-Manifolds, Finite-Depth Foliations, and Related Topics*.
DOI: 10.13140/2.1.4212.8965

Topics in Complex and Hypercomplex Geometry.
DOI: 10.13140/2.1.4406.4324

2013 *A Survey of Quaternionic Analysis*.
DOI: 10.13140/2.1.3357.8560

2012 Content contributions to Dr. Craig Zirbel's Math 5910 Wiki. Accessible online at `http://tinyurl.com/mwtosl8`.

Presentations

Invited

2015 Visualizing the Limiting Behavior of Iterated Conformal Mappings
Department Lectures
Department of Mathematics & Computer Science, Rhode Island College

Local & Miscellaneous

2016 Transverse Laminations on a Certain Class of 3-Manifolds

3-Manifolds, Taut Foliations, and Universal Circles

2015 The FunctionSpaces Project:
(A Step Towards) Making Abstraction Computable

Computability in Pure Mathematics:
An Entity-Property Framework for Function Spaces

2014 The Quest for Reebless Foliations in Sutured 3-Manifolds

Sutured Manifold Hierarchies and Finite-Depth Foliations

Curvature and the Shape of Space

Type Inferencing and Predictability:
Probabilistic Models and the Wolfram Demonstrations Project

An Introduction to Generalized (Complex) Geometry

Limit Sets and Applications to Foliation Theory

Limit Sets and Their Applications

2013 Hyperkähler Manifolds

Foliations of Riemannian Manifolds

Constructing Complex Manifolds Using Lie Groups

Complex Structures on Manifolds

2012 Function Theory in Polydiscs I & II

Major Projects

2014–2016 **Function Spaces**, *Lead curator and co-lead architect*, Wolfram Research, Inc.
This was a multi-year project in which various function-analytic and topological aspects of function spaces were encoded in a semi-computable format. The end result was presented at the 2016 Wolfram Technology Conference and was made commercially accessible in Mathematica and Wolfram|Alpha. See: `https://goo.gl/wDXeMf`.

2013–2014 **eCF**, *Research intern and co-lead curator*, Wolfram Research, Inc.
This was a multi-year project in which various theoretical and applied aspects of continued fractions were curated and were made commercially accessible in Mathematica and Wolfram|Alpha. See: `https://goo.gl/yHXbWj`.

Teaching Experience

FSU **Instructor of Record**.
Calculus III (Sp'16), Calculus II (Fa'16), Pre-Calculus (Sp'14).

BGSU **Instructor of Record**.
Business Calculus (Fa'10), Precalculus (Spr'11), Calculus IA & IB (Fa'11 & Sp'12).

Conferences Attended

† *denotes conferences for which funding was received*

2017 Georgia International Topology Conference (Tentative)
G^3: Geometric Group Theory on the Gulf (Tentative)
Joint Math Meetings (JMM)†
2016 31st Geometry Festival
2015 IAS Workshop on Flows, Foliations and Contact Structures
IAS Workshop on Geometric Structures on 3-Manifolds
40th Spring Lecture Series†
2014 Clifford Analysis and Related Topics
4th annual Tech Topology Conference†
Ahlfors-Bers Colloquium VI†
29th Summer Conference on Topology and Applications
What's Next? The Mathematical Legacy of Bill Thurston†
G^3: Geometric Group Theory on the Gulf†
2013 FSU-UF Topology Conference

Professional Development

Technical

2015 **First Chicago Summer School in Geometry and Topology**†, *University of Chicago*, June 22–June 26.
Diffeomorphism Groups Workshop†, *UC Berkeley*, June 8–June 12.
2014 **Wolfram Science Summer School**.
One of ≈60 participants chosen from 400+ international applicants.

Pedagogical

2016 Supervised Teaching
Internship in College Teaching
Program for Instructional Excellence Orientation / TA Conference

2011 Technology for the Mathematics Graduate Student
2010 Curriculum Analysis and Classroom Behavior
Overview of Collegiate Mathematics Teaching

Related Professional Experience

2014–2016 **Math Content Developer**, Wolfram Research.
2015–2016 **Webmaster**, FSU *Department of Mathematics*.
2015 **Grader**, FSU *Department of Mathematics*.
2013–2014 **Research Intern**, Wolfram Research.
Spring 2012 **Grader**, BGSU.

Related Technical Expertise

Advanced LaTeX, html
Intermediate C++, CSS, Geogebra, Java, Javascript, Linux (including Cygwin), Mathematica.
Basic C#, git, PHP, Python, Scheme (SCM and MIT/GNU Scheme), SQL, TeX, Unix (including Mac OS), VB6.

Professional & Community Service

2017 Co-Organizer, FSU Math's Grad Student Seminar
2015–Present Undergraduate Research Mentor
2014–2015 Judge, Capital Regional Science and Engineering Fair
2013–2014 Volunteer Grader, FSU High School Math Contest
Volunteer, FSU's Math Fun Day

Professional Memberships

Pi Mu Epsilon Math Honor Society (PME), American Mathematical Society (AMS), Society for Industrial and Applied Mathematics (SIAM), Association for Women in Science (AWIS), Golden Key International Honor Society

Professional References

Dr. Sérgio Fenley
Florida State University

Dr. Leonardo Pinheiro
Rhode Island College

Dr. Craig Nolder
Florida State University

Dr. Michael Trott
Chief Scientist, Wolfram|Alpha

Dr. Eric Weisstein
Senior Researcher, Wolfram Research

Dr. Alec Kercheval
Florida State University

Dr. So-Hsiang Chou
Bowling Green State University

Dr. Craig Zirbel
Teaching Reference
Bowling Green State University