Christopher Stover

Curriculum Vitae

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(850) 339-0238
cstover@math.fsu.edu
www.math.fsu.edu/~cstover
LinkedIn | ResearchGate

Education

In Progress **Ph.D., Pure Math**, Florida State University (FSU), Tallahassee, FL, 32306. Current GPA – 3.831/4.0.
ADVISOR: Dr. Sérgio R. Fenley
ADVANCED TOPICS EXAM:
The Quest for Reebless Foliations in Sutured 3-Manifolds (Dec 1 2014)

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

2012–2013 **M.S., Pure Math**, FSU. GPA – 3.81/4.0.
QUALIFYING EXAM PASSED (Date Taken):
Complex Analysis I (Summer 2012).
QUALIFYING EXAMS EXEMPTED (Grade Attained):
Complex Analysis II (A); Measure and Integration I & II (A & A); Groups, Rings, and Vector Spaces I & II (A- & A-).

2010–2012 **M.A., Pure Math**, Bowling Green State University (BGSU), Bowling Green, OH, 43403. GPA – 3.71/4.0.
COMPREHENSIVE EXAMS PASSED (Date Taken):
Abstract Algebra, Real Analysis (Fall 2011).

2007–2010 **B.S. (Applied Math, 2009) & B.A. (Pure Math w/ CS Minor, 2010)**, Valdosta State University, Valdosta, GA, 31698. GPA – 3.77/4.0.
HONORS & AWARDS:
Cum Laude (B.S.) & Magna Cum Laude (B.A.); Dean's List (5 of 6 semesters); Outstanding Math Senior (2009); First Place - Pi Mu Epsilon Math Competition (2009).

Research Interests

I'm currently most active in the areas of low-dimensional geometric topology and foliation theory. I also maintain interest in hypercomplex geometry, Clifford analysis, differential geometry, functional analysis, category theory, and mathematical physics, as well as applications of these theories (e.g., topological quantum computing).

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

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`.

Honors & Awards

2015 Evelyn Baugh Scholarship

"*...recognizes students for their...excellence through activities such as research, peer mentoring, teaching, service, and/or participation in professional associations,*"
Math Department, Florida State University.

Uhrhan Scholarship

"*...to support students who are majors in programs associated with Foreign Language, Physics or Mathematics,*"
Florida State University (one of two math department recipients).

2012–2013 Dean's Scholarship
Florida State University.

Presentations & Posters

Invited

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

Local & Miscellaneous

2015 The FunctionSpaces Project:
(A Step Towards) Making Abstraction Computable
FunctionSpaces Team & UIUC Faculty. Presentation.

Computability in Pure Mathematics:
An Entity-Property Framework for Function Spaces
Wolfram|Alpha Scientific Content Group. Presentation.

2014 The Quest for Reebless Foliations in Sutured 3-Manifolds
Advanced Topics Exam, FSU. Presentation.

Sutured Manifold Hierarchies and Finite-Depth Foliations
Topology Seminar, FSU. Presentation.

Curvature and the Shape of Space
Math Fun Day 2014, FSU. Presentation.

Type Inferencing and Predictability:
Probabilistic Models and the Wolfram Demonstrations Project
Wolfram Science Summer School, Boston, MA. Presentation.

An Introduction to Generalized (Complex) Geometry
Complex Analysis Seminar, FSU. Presentation.

Limit Sets and Applications to Foliation Theory
Graduate Student Seminar, FSU. Presentation.

Limit Sets and Their Applications
Topology Seminar, FSU. Presentation.

2013 Hyperkähler Manifolds
FSU. Presentation.

Foliations of Riemannian Manifolds
FSU. Presentation.

Constructing Complex Manifolds Using Lie Groups
Complex Analysis Seminar, FSU. Presentation.

Complex Structures on Manifolds
Complex Analysis Seminar, FSU. Presentation.

Continued Fractions:
What They Are, Why They're Important, and Who Really Cares
Math Fun Day 2013, FSU. Poster.

2012 Function Theory in Polydiscs I & II
BGSU. Presentation

Conferences Attended

† *denotes conferences for which funding was received*

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**†.
One of ≈50 international participants. June 22–June 26, University of Chicago.

Diffeomorphism Groups Workshop†.
One of ≈25 international participants. June 8–June 12, UC Berkeley.

2014 **Wolfram Science Summer School**.
One of ≈60 participants chosen from 400+ international applicants. Completed and presented a guided research project using the Wolfram Language.

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.

Teaching Experience

FSU **Graduate Teaching Assistant**.
Instructor of Record:
Calculus II (Fa'16), Pre-Calculus (Sp'14).
Proctor for computer-aided instruction classes:
Liberal Arts Math (Sp'13), College Algebra (Fa'13, Fa'12), Pre-Calculus (Su'13, Fa'12), Trigonometry (Sp'13), Business Calculus (Fa'13, Sp'13).

BGSU **Graduate Teaching Assistant**.
Instructor of record:
Business Calculus (Fa'10), Precalculus (Spr'11), Calculus IA & IB (Fa'11 & Sp'12).

Related Professional Experience

2015–2016 **Webmaster**, FSU *Department of Mathematics*.
Oversaw complete backend restructuring + frontend updating of the FSU financial math page.

2015 **Grader**, FSU.
MAP 2302 (Ord. Diff. Eq.). Su'15. Instructor of Record: Justin Eilertsen.
MGF 3301 (Intro. to Adv. Math.). Sp'15. Instructor of Record: Brendon Ballenger.

Aug **Math Content Developer**, Wolfram Research.
2014–Present I work on a number of projects from within the Wolfram Alpha (W|A) Scientific Content team including MathWorld (MW) and documentation projects for the Wolfram Language.

Jul 2013–Aug **Research Intern**, Wolfram Research.
2014 Completed projects related to W|A, MW, etc., including those funded by various grant/fellowship organizations.

Spring 2012 **Grader**, BGSU.
Math 3130 and Math 4040/5040 (Elementary Mathematical Logic and Modern Algebra II, respectively). Instructor of Record: Elias Irmak.

Related Technical Expertise

Advanced LaTeX, Microsoft Office software including Word, PowerPoint, and Excel.

Intermediate The Wolfram Language, TeX, Linux & Cygwin, Java, C++, Visual Studio .net including C#, VB6, SQL, html, CSS, Javascript, Geogebra.

Basic Maple, Matlab, Minitab, XML.

Other ALEKS, Blackboard, eGrade, Mathzone.

Community Service, Outreach, & Service to the Profession

2015 Undergraduate Mentor
Worked with an FSU unergrad on topics related to topological quantum computing.
Judge, Capital Regional Science and Engineering Fair.

2014 Volunteer Grader, FSU High School Math Contest.
Volunteer, FSU's Math Fun Day.
Judge, Capital Regional Science and Engineering Fair.

2013 Volunteer Grader, FSU High School Math Contest.
Volunteer, FSU's Math Fun Day.

Professional Memberships

Pi Mu Epsilon Mathematics Honor Society
American Mathematical Society
Society for Industrial and Applied Mathematics
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