

Logan Stokols, PhD

Curriculum Vitae

PERSONAL DETAILS

Department University of Texas at Austin
Position Teaching Assistant
Advisor Alexis Vasseur
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EDUCATION

PhD in Mathematics (University of Texas at Austin) 2014-2020
Graduated spring 2020.

BA in Mathematics (University of California at Berkeley) 2010-2014
Graduated with Honors.

PUBLICATIONS

L^2 -type Contraction of Viscous Shocks for Large Family of Scalar Conservation Laws
(L F Stokols) 2019
Preprint

Hölder Regularity up to the Boundary for Critical SQG on Bounded Domains
(L F Stokols, A Vasseur) 2019
Accepted, Archive for Rational Mechanics and Analysis

Hölder Continuity for a Family of Nonlocal Hypoelliptic Kinetic Equations
(L F Stokols) 2018
Accepted, SIAM Journal on Mathematical Analysis

De Giorgi Method Applied to Hamilton-Jacobi Equations with Unbounded Right-Hand Side
(L F Stokols, A Vasseur) 2018
Published in Communications in Mathematical Sciences

On Structural Decompositions of Finite Frames
(A Chan, M Copenhaver, S Narayan, L F Stokols, A Theobald) 2016
Published in Advances in Computational Mathematics

AWARDS AND HONORS

Research and Training Grant (RTG) Fellowship 2019
UT Austin

Frank Gerth III Graduate Excellence Award 2016
UT Austin

Percy Lionel Davis Award for Excellence in Scholarship in Mathematics 2014
UC Berkeley

TALKS

N.B. Talks with dates struckthrough have been postponed due to the Covid-19 pandemic

Atlanta, Georgia (*Special Session on Nonlinear Models in Kinetic Theory, AIMS Conference on Dynamical Systems, Differential Equations and Applications*) ~~June 2020~~
“Regularity of Nonlocal Hypocoelliptic Equations”

Purdue (*Special Session on Analysis of PDE in Fluid Dynamics, AMS Sectional Meeting*) ~~April 2020~~
“Surface Quasigeostrophic Equation on Bounded Domains”

University of Virginia (*Special Session on Nonlocal PDE, AMS Sectional Meeting*) ~~March 2020~~
“Surface Quasigeostrophic Equation on Bounded Domains”

Iowa State University (*Computational and Applied Mathematics Seminar*) February 2020
“SQG on Bounded Domains”

University of Florida (*Special Session on Fluid Dynamics, AMS Sectional Meeting*) November 2019
“Surface Quasigeostrophic Equation (SQG) on Bounded Domains”

Cetraro, Italy (*CIME Summer School on Progress in Mathematical Fluid Dynamics*) June 2019
“SQG on Bounded Domains: continuity at the boundary”

The University of Ohio (*Contributed Talk, AMS Sectional Meeting*) March 2018
“De Giorgi Method: Applications to Highly Non-linear Equations”

UT Austin (*Candidacy Talk, Analysis Seminar*) October 2016
“An Application of De Giorgi Method to Superquadratic Hamilton Jacobi equations”

Baltimore, Maryland (*Joint Mathematics Meeting*) January 2014
“Combinatorial Structure of Finite Frames”

UT Austin (*Graduate Analysis Seminar*) Fall 2015 - Fall 2019
One talk per semester, typically on my own research, for audience of UT graduate students in related fields

TEACHING

Teaching Assistant Fall 2014-Spring 2019

Taught for 7 semesters in 5 years, including calculus 5 times, differential equations, and graduate functional analysis. Responsibilities included leading discussion sections 4 hours per week, grading homeworks and exams, holding office hours and proctoring exams. Have experience with “flipped classroom” approach.

DRP Reading Courses Fall 2015 - Fall 2019

Mentored four different undergraduate students through one-on-one reading courses on undergraduate and early graduate level mathematics. Each course lasted between one semester and two years, culminating each semester in a public presentation at special undergraduate symposium.

Supplemental Instruction Leader Spring 2018

Weekly collaboration with peer instructors and education specialists to discuss teaching methods in practice and theory. Emphasis on inclusive and collaborative learning strategies in calculus. Activities included teaching observations, reading and discussing modern pedagogical research, experimenting with and discussing specific unfamiliar teaching techniques, and soliciting in-depth student feedback.

Sanger ReviewSeptember 2018, December 2018

Led beginning- and end-of-semester calculus reviews, 6 hours each with ~20-50 students. Attended by students from many different classes with non-standardized curricula.

Inclusive Classrooms Leadership CertificateNovember 2019

Participated in week-long seminar with discussions about strategies for developing and sustaining an inclusive classroom climate. Explored elements of course design and processes that can broaden the intellectual scopes of students.

OUTREACH AND SERVICE

Organizer: Directed Reading ProgramSpring 2016 - Spring 2019

Ran program which paired UT math graduate students with motivated undergrads for a semester-long mentorship and reading course, the largest program of its kind in the country. Oversaw a significant expansion of the program (~50% more participants), and worked with administrators to help secure funding and write grants related to the project. The program is dedicated to fostering diversity and equal opportunity within the mathematics community.

Graduate Student Assembly RepresentativeFall 2018 - Spring 2020

Represented math department in biweekly meetings, disseminating information about programs and organizations to the graduate students and responding to their complaints and interests. GSA appropriates a ~\$60k budget per year and directs the administration to issues of concern for the graduate student body.

DRPN conferenceMay 2018

Represented UT at conference to help other schools across the country create and maintain their own DRPN programs. Led several group discussions.

Outreach TalkMarch 2016

Gave lecture entitled "An Ode to Holder's Inequality" to UT's undergraduate Math Club. Concentrated on how to think about functions from an abstract functional-analytic perspective, aimed at students with little background in analysis.

CONFERENCES

University of Florida November 2019

AMS Fall Southeastern Sectional Meeting

ICMAT June 2019

Summer School on Fluid Mechanics

Cetraro, Italy June 2019

CIME Summer School on Progress in Mathematical Fluid Dynamics

Penn State June 2018

XVII International Conference on Hyperbolic Problems

MIT May 2018

DRP Workshop

The University of Ohio March 2018

AMS Spring Central Sectional Meeting

Northwestern University July 2017

Summer Northwestern Analysis Program 2017: Partial Differential Equations

University of Chicago	<u>June 2017</u>
<u>Chicago Summer School in Analysis</u>	
UC Berkeley	<u>May 2017</u>
<u>Calculus of Variations and Nonlinear Partial Differential Equations</u>	
ICERM	<u>January 2017</u>
<u>Current Developments in Mathematical Fluid Dynamics</u>	
Fields Institute	<u>Summer 2016</u>
<u>Focus Program on Nonlocal PDE</u>	
University of Minho, Portugal	<u>December 2015</u>
<u>Particle Systems and PDEs IV</u>	
San Antonio, Texas	<u>January 2015</u>
<u>Joint Mathematics Meeting</u>	
Baltimore, Maryland	<u>January 2014</u>
<u>Joint Mathematics Meeting</u>	