

KURT W VINHAGE

103 Ferguson Hall
White Course Apartments
University Park, PA 16802

EDUCATION

FLORIDA STATE UNIVERSITY
B.S. in Mathematics, Summa cum Laude
June 2006 - May 2010
G.P.A.: 3.98

PENNSYLVANIA STATE UNIVERSITY
PhD in Mathematics
August 2010 - Present, Spring 2016 Expected Graduation

WORK EXPERIENCE

FLORIDA STATE UNIVERSITY, DEPARTMENT OF COMMUNICATION
Assistant to the Graduate Program Coordinator
October 2006 - May 2009

PENNSYLVANIA STATE UNIVERSITY, DEPARTMENT OF MATHEMATICS
Undergraduate Course Instructor
Fall 2011 - MATH018, Elementary Linear Algebra
Summer 2012 - REU Program Assistant and Group Coordinator
Fall 2012 - MATH497C, Teaching Assistant in the PSU MASS Program
Fall 2013 & Spring 2014 - MATH017, Finite Mathematics
Fall 2014 - MATH497B, Teaching Assistant in the PSU MASS Program
Fall 2015 - MATH250, Ordinary Differential Equations
August 2011 - Present

ORGANIZATIONAL EXPERIENCE

DYNAMICAL SYSTEMS STUDENT SEMINAR
Pennsylvania State University
Founder and Organizer
Fall 2012 - Present

RESEARCH INTERESTS

Dynamical Systems, Algebraic and Homogeneous actions, Higher-rank abelian actions, Smooth Invariants of Dynamical Systems

RESEARCH PAPERS

ON THE RIGIDITY OF WEYL CHAMBER FLOWS AND SCHUR MULTIPLIERS AS TOPOLOGICAL GROUPS

Journal of Modern Dynamics, Volume 9 (2015), Pages 25-49

LOCAL RIGIDITY OF HIGHER RANK HOMOGENEOUS ABELIAN ACTIONS: A COMPLETE SOLUTION VIA THE GEOMETRIC METHOD

Preprint

Joint with Zhenqi Jenny Wang

ON THE GENERIC REALIZATIONS OF ODOMETERS

In Preparation

Joint with Anatole Katok

UNDERGRADUATE PROJECTS

AN INVESTIGATION INTO SMALL GROUP STABILITY WITH RESPECT TO PARITY

FLORIDA STATE UNIVERSITY, HONORS IN THE MAJOR THESIS

January 2007 - June 2009

Advisor: Dr. Mike Mesterton-Gibbons

SUPER EDGE-GRACEFUL LABELINGS OF TOTAL GRAPHS AND TOTAL CYCLES

UNIVERSITY OF WEST GEORGIA, SUMMER REU PROGRAM

June 2009 - August 2009

Journal of Combinatorial Mathematics and Combinatorial Computing, Vol 76, February 2011

TALKS

DYNAMICS SEMINAR

University of Chicago

October 5, 2015

Title: *Extending Cases of Smooth Rigidity by New Technology*

ROCKY MOUNTAIN DYNAMICAL SYSTEMS CONFERENCE, 2015

Brigham Young University

June 8, 2015

Title: *Local Rigidity of Homogeneous Actions*

ERGODIC THEORY AND DYNAMICAL SYSTEMS CONFERENCE, 2014

Toruń, Poland

May 12, 2014

Title: *Local Rigidity of Partially Hyperbolic Actions*

2014 WORKSHOP ON DYNAMICAL SYSTEMS AND RELATED TOPICS

University of Maryland

April 13, 2014

Title: *Smooth Rigidity for Restrictions of Weyl Chamber Flows*

DYNAMICS SEMINAR

University of Houston

November 18, 2013

Title: *Local Rigidity of Algebraic Partially Hyperbolic Actions*

GRADUATE STUDENT GEOMETRY AND TOPOLOGY CONFERENCE, 2011

Michigan State University

April 2, 2011

Title: *The Crofton Formula and Around*

INTEGERS CONFERENCE, 2009

University of West Georgia

October 14 - 17

Title: *Van der Waerden Numbers on Finite Gap Sets*

SPECIAL PROGRAMS ATTENDED

Modern Dynamics and its Interaction with Analysis, Geometry and Number Theory

3-week Advanced Course Summer School

June - July 2011

Penn State-Göttingen International Summer School in Dynamical Systems
3-week Summer School and 1 week conference in dynamical systems
July - August 2011

HONORS

Pritchard Dissertation Fellowship: Spring 2015

The PSU math department awards this fellowship to recognize very high quality of the recipients' thesis work

PSU Mathematics Teaching Award: Fall 2014

ZZRQ Award, PSU: 2013

The PSU math department awards this fellowship to a doctoral candidate who has contributed to the sense of community within the department

University Graduate Fellowship, PSU: Fall, 2010

PSU Awards a fellowship to provide additional funding for outstanding first-year graduate students

Marion Jewell Hay Award, Φ BK: Spring, 2010

Phi Beta Kappa awards this to an inductee with an emphasis on research

Outstanding Senior Scholar, FSU: Spring, 2010

FSU awards 10 seniors with this award each year, recognizing scholarship and academic leadership

Pennsylvania State University MASS Program: Fall, 2009

- Best Performance in Geometry
- Best Performance in Analysis
- Best Performance in Algebra
- Merit Scholarship

Kenneth G Boback Scholarship for an Outstanding Mathematics Undergraduate: Received May, 2009

This scholarship is awarded once every two years to a single undergraduate majoring in Mathematics

Golden Key Honors Society: Inducted Spring 2009

Phi Kappa Phi: Inducted Spring, 2008

Pi Mu Epsilon Mathematics Fraternity: Inducted Spring, 2008

Phi Beta Kappa: Inducted Spring, 2010

Cultaptation: Social Learning Strategies Tournament: Summer, 2008

The Social Learning Strategies Tournament was directed by Biologists and Computer Scientists, and accepted game-theoretic strategies to compete against other submissions. My strategy, "Wait for Something Better," ranked 35 out of 104 entries

COMPUTER SKILLS

Mathematica Proficiency

C++ Proficiency

L^AT_EX Proficiency

Linux and Unix Proficiency