Huy Dinh

Contact Information

Huy Dinh
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Education

Ph.D. Mathematics, University of Utah — **Expected May 2020**

Advisor: Distingushed Professor Kenneth Golden

Research Topics: simulations of floe scale dynamics in the polar sea ice pack, modeling anomalous diffusion in sea ice dynamics, numerical methods for nonlocal PDEs.

M.St. Statistics, University of Utah — **Expected August 2019**

Advisor: Assistant Professor Tom Alberts

Research Topics: fractional Brownian motion (fBM), fractional autoregressive integrated moving average (fARIMA) time series, Continuous Time Random Walks (CTRWs), Hurst exponent estimation.

B.S. Mathematics, University of Houston — **May 2014**

Minor: Physics

Research Topics: mathematical image processsing, applied algebraic topology, inverse problems, machine learning methods.

Employment

Graduate Research and Teaching Assistant, University of Utah — **August 2014–current**
Undergradaute Research Assistant, University of Houston — **Spring 2010–May 2014**

Honors and Awards

NSF Graduate Research Fellowship Program Honorable Mention — **2016**

Travel Award to attend Joint Mathematics Meetings, Seattle, WA — **2016**

Travel Award to attend Pacific Institute for the Mathematical Sciences Conference on the Mathematics of Sea Ice, Vancouver, BC — **2015**

NSF Graduate Research Fellowship Program Honorable Mention — **2015**

Provost's Undergraduate Research Scholarship — **2013**

Publications

H. Dinh, E. Cherkaev, C. Strong and K. M. Golden, Floe scale model of anomalous diffusion in sea ice dynamics, in preparation, 2019.

H. Dinh, H. Antil, Y. Chen, E. Cherkaev and A. Narayan, Model reduction for fractional elliptic problems using Kato's formula, *IMA Journal of Numerical Analysis*, submitted, 2019.

Attended Conferences

Second SIAM Wasatch Student Chapters Conference, Logan, UT — **April 2019**

Joint Mathematics Meeting, Seattle, WA — **January 2016**

Mathematics Research Communities on Differential Equations, Probability and Sea Ice, Snowbird, UT — **June 2015**

Pacific Institute for the Mathematical Sciences Conference on the Mathematics of Sea Ice, Vancouver, BC — **September 2015**

37th Annual Texas PDE Conference, Denton, TX — **March 2014**

Society for Neuroscience Annual Meeting, New Orleans, LA — **October 2012**

Presentations

Anomalous Diffusion in Sea Ice
SIAM Wasatch Student Chapters Conference, Utah State University **April 2019**

Eigenfaces, a Perspective on a Machine's Perspective
Applied Math Collective, University of Utah **April 2019**

Factorization of Functions
Applied Math Collective, University of Utah **July 2018**

Fractional Brownian Motion: Formulation and Applications
Applied Math Collective, University of Utah **Feburary 2018**

Diffusion on Fractals
Graduate Student Colloquium, University of Utah **Feburary 2016**

Vibration Suppression in Coupled Spring and Mass System (poster)
37th Annual Texas PDE Conference, University of North Texas **March 2014**

Vibration Suppression in Coupled Spring and Mass System (poster)
Undergradaute Research Day, University of Houston **October 2013**

Automated quantitative image analysis of voltage-gated Na+ channels at the AIS (poster)
Society for Neuroscience Annual Meeting **October 2012**

Soma Detection and Persistent Homology (poster)
Spring Academic Showcase, University of Houston **April 2013**

Self-Assembled Nano-Patterns by Off-Normal Gas Cluster Ion Beam Bombardment for Biological Applications (poster)
Undergraduate Research Day, University of Houston **October 2012**

Research Mentoring

Undergraduate students

Jacqueline Rich (co-advised with Kenneth Golden) **Fall 2018**
Research Topic: Stochastic differential equations model of sea ice thickness

Everest Fang (co-advised with Kenneth Golden) **Spring 2015 – Fall 2015**
Research Topic: Simulation of advective diffusive processes

Professional Services and Outreach

University of Utah SIAM Student Chapter President **Fall 2014–Summer 2018**

The First SIAM Wasatch Student Chapters Conference, organizer
University of Utah **April 2018**

SIAM SC Interdepartmental BBQ, organizer
University of Utah **June 2018**

UU and Westminister COMAP Solutions Presentation, organizer
University of Utah **Feburary 2016**

UU Graduate Alumni Panel, organizer
University of Utah **October 2015**

Outreach and Volunteering

Peer Mentoring Program
University of Utah **Fall 2018–Spring 2019**

ACCESS Program for Women in Science and Mathematics Panel Member
ACCESS program, University of Utah **Summer 2018**

Math Demonstrations Table
Red, White and U Day, University of Utah **Summer 2018**

Superconducting Cable Demonstration
Physics Outreach, Harmony School of Technology- Houston **December 2011**

Physics Demonstrations
Physics Outreach, Quail Valley Middle School **May 2011**

Computer Skills LaTeX, MatLab, Mathematica, R, Excel, HTML, Python, Git, C++, Java, Windows, Linux.

Teaching Experience

Instructor, University of Utah (full course responsiblities)

Math 3070: Applied Statistics I	**Fall 2019**
Math 3150: Partial Differential Equation for Engineers	**Summer 2019**
Math 1070: Introduction to Statistical Inference	**Spring 2019**
Math 1070: Introduction to Statistical Inference	**Fall 2018**
Math 3160: Applied Complex Variables	**Summer 2018**
Math 1090: Business Algebra	**Fall 2017**
Math 3160: Applied Complex Variables	**Summer 2017**
Math 1060: Trigonometry	**Spring 2017**
Math 1090: Business Algebra	**Fall 2016**
Math 1090: Business Algebra	**Spring 2016**

Substitute Teaching Lectures, University of Utah

Math 3140: Vector Calculus and PDEs, one lecture	**Summer 2018**
Math 2210: Calculus III, two lectures	**Spring 2018**
Math 5750/6880: Mathematics and Climate, one lecture	**Fall 2017**
Math 1060: Trigonometry, one lecture	**Spring 2017**
Math 2210: Calculus III, one lecture	**Fall 2015**

Lab/Teaching Assistant, University of Utah

Math 2250: Differential Equation and Linear Algebra, Lab	**Spring 2018**
Math 2210: Calculus III, TA	**Fall 2015**
Math 1210: Calculus I, Lab	**Spring 2015**
Math 2250: Differential Equation and Linear Algebra, Lab	**Fall 2014**