Patrick E. Donaghue

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Education

Oregon State University
Masters of Science in Mathematics, expected July 2019

Cleveland State University
Bachelors of Science *sum cum laude* in Mathematics, received May 2017.

Research Experience

Mathematics, Oregon State University
Advisor: Enrique Thomann
Project: *Non-uniqueness of Weak Navier-Stokes Solutions.*
  An overview of modern techniques and research in creating non-unique weak Naiver-Stokes solutions.

Mathematics, Cleveland State University
Advisor: Steven Gubkin
Project: *Stokes Theorem and Differential Forms*
  An introduction to differential forms as a consequence of Stokes theorem and limiting approximations. Elementary techniques and results from Homology and multi-variable calculus used.

Teaching

Mathematics, Oregon State University
Course Instructor
    (MTH 103) Algebraic Reasoning, 18 students, Fall 2018.
    (MTH 231) Discrete Mathematics, 14 students, Summer 2018.
Recitation Instructor
    (MTH 256) Differential Equations, 108 students, Spring 2018.
    (MTH 252) Integral Calculus, 108 students, Spring 2018.
    (MTH 112) Trigonometry, 105 students, Spring 2018.

Presentations	**Cleveland State University Annual P.M.E. and S.P.S. Meeting**
	Fixed Point Iteration, Fractals, and the Marina-Silver Algorithm.
	December 1, 2016.
	    An hour long presentation on fixed point iteration with an application to computing fractals. A back tracking method and Marina-Silver Algorithm were also demonstrated. Roughly 100 people in attendance.
	
	Cleveland State University Math Club
	A Mollification Application: Power Grid Risk Modeling
	March 15, 2016.
	    Overview of mollification, its properties, and an application to estimating derivatives of rough data to identify risk in power grid operation. 13 people in attendance.

Conference Participation	**Oregon Number Theory Days**, Portland State University,
	    April, 2018.
	Differential Equations and Dynamical Systems, Miami University,
	    November, 2016.
	Annual Meeting of the Ohio MAA, Sinclair Community College,
	    April, 2017.
	MathFest, Youngstown State University, February, 2017.
	Centennial Meeting of the Ohio MAA, Ohio Northern University,
	    April, 2016.

Employment History	**Graduate Teaching Assistant**
	Oregon State University/Mathematics Department, September 2017 - Present.
	    Duties: Tutoring, Grading, Office Hours, Teaching.
	
	Private Tutor
	August 2014 - Present.
	    Subject Areas: Mathematics, Physics, Chemistry.
	
	Tutor
	Minneapolis Community and Technical College, August 2014 - 2015.
	    Subject Areas: Mathematics, Chemistry, Biology, Music Theory.

Computer Languages	Python, C++, Matlab, Visual Basic, HTML, LaTeX.