

Nikki Plackowski

University of Arizona
Applied Math

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Education

University of Arizona

Ph.D., Applied Math, 2015-present.

Fields: Finite Element Methods, Numerical Analysis, General Relativity,
Black Hole Perturbation Theory

University of Washington

M.S., Applied Math, 2015.

Stetson University

B.S., Math, 2014.

B.S., Economics, 2014.

Minor, German, 2014.

Research

Finite Element Approximation of Scalar Fields for Near-Extremal Black Holes

University of Arizona, 2016-present

Dissertation Topic

Advisor: Andrew Gillette

“Black Hole Perturbation Theory: The Discovery of Gravitational Waves”

University of Arizona, 2016-2017

Research Tutorial Paper

“Laminar to Turbulent Flow Transition: An Analysis of Cone vs. Plate Boundary Layers”

University of Arizona, 2015

Term Paper

“Soliton solutions to the Einstein Field Equations”

University of Washington, 2014

Coherent Structures, Pattern Formation, and Solitons Term Presentation

“A Theoretical Warp Drive: The Mathematics of Faster Than Light Travel”

Stetson University, 2013-2014

Senior Thesis

“The Hautbois Modeled: An Analysis of the Double Reed”

Stetson University, 2012-2013

Independent Research

Work Experience

Sandia National Labs Intern

Summer 2018-present

Teaching

Math, University of Arizona

TA/Instructor, Calculus Preparation, 2016-2017

TA/Instructor, College Algebra Concepts and Applications, Fall 2015

Math, University of Washington

TA, Beginning Scientific Computing, 2014-2015

Math, Stetson University

TA, Calculus I, 2011-2013

Awards and Fellowships

University of Arizona

Supported as a graduate assistant by NSF Award DMS-1522289

(PI: Gillette), 2017-2018

Awarded Interdisciplinary Link Student Team Award, 2018

Supported as a graduate research assistnat (PI: Tumin), 2016

Stetson University

Summa Cum Laude

Member of Phi Beta Kappa

Member of Delta Phi Alpha

Member of Omicron Delta Epsilon

Ashcraft Award Winner, given to the most outstanding junior in Mathematics

Maris Prize Winner: awarded for outstanding new research at the

Stetson Undergraduate Research and Creative Arts Symposium (SURCAS)

Conferences

AMS-MAA Joint Mathematics Meetings, Denver

Attended, 2020

Finite Element Circus, University of Delaware

Attended, 2018

AMS-MAA Joint Mathematics Meetings, San Diego

Organized a special session on the Mathematics of Gravitational Wave Science
organizer, 2018

Pacific-Coast Variational Conference, University of Washington

A Survey of Nonconservative Mechanics

presented, 2015

Stetson Undergrad Research and Creative Arts Symposium (SURCAS), Stetson University

A Theoretical Warp Drive: The Mathematics of Faster Than Light Travel

presented, 2014

Nebraska Conference for Undergraduate Women in Mathematics University of Nebraska-Lincoln

A Theoretical Warp Drive: The Mathematics of Faster Than Light Travel

presented, 2013

Embry-Riddle Undergraduate Mathematics Conference

Embry-Riddle Aeronautical University

The Hautbois Modeled: An Analysis of the Double Reed

presented, 2012

MAA-FTYCMA Joint Conference, University of North Florida

The Hautbois Modeled: An Analysis of the Double Reed

presented, 2012

Computer Languages

Matlab (Proficient), Mathematica (Proficient), Microsoft Office (Proficient),
Latex (Proficient), R (Intermediate), C++ (Intermediate), Python (Intermediate),
Fortran (Basic), Java (Basic)

and Tools

Git (Proficient) SVN (Intermediate)