

# Patrick K. Torres

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Department of Mathematics  
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## Citizenship

United States (U.S.)

## Fields of Interest

**General Interests:** Matrix Theory, Partial Differential Equations, Complex Analysis, Numerical Analysis, Dynamical Systems

**Current Emphasis:** Theory and Application of P-Matrices, Stability Theory, Interval Matrices

## Education

Ph.D. Mathematics, May 2018  
Washington State University, Pullman, WA, USA

- Advisor: Dr. Michael J. Tsatsomeros
- Dissertation: *Stability Analysis, Convex Hulls of Matrix Powers and their Relations to P-matrices*

M.S. Applied Mathematics, December 2009  
University of Washington, Seattle, WA, USA

B.S. Mathematics, June 2007  
University of Washington, Seattle, WA, USA

A.S. (Transfer Degree), June 2004  
South Seattle College, Seattle, WA, USA

## Employment

Washington State University

- Mathematics Instructor/Graduate TA  
August 2013 - May 2018
- Math 171 (Calculus I) TA Mentor  
August 2014 - May 2015

South Seattle College

- Adjunct Instructor of Mathematics  
January 2010 - June 2013

- RST "Ready, Set, Transfer" Coordinator for International Students  
February 2013 - August 2013
- Mathematics Tutor  
AANAPISI Center  
November 2012 - August 2013
- Mathematics Tutor  
Math and Science Tutoring Center  
September 2007 - August 2011
- Math Lab Tutor  
January 2004 - December 2007

#### Green River College

- Adjunct Instructor of Mathematics  
June 2010 - March 2012

## Teaching

#### *Washington State University, 2013 - present*

- MATH 103: Algebra Methods (*Spring, 2016*)
- MATH 105: Exploring Mathematics (*Fall, 2013*)
- MATH 108: Trigonometry (*Spring, 2017, Summer, 2017*)
- MATH 171: Calculus I (Lab) (*Spring, 2014, Fall, 2014, Spring, 2015*)
- MATH 171: Calculus I (Lecture) (*Summer, 2015*)
- MATH 220: Introductory Linear Algebra (*Fall, 2016, Spring, 2018*)
- MATH 315: Differential Equations (*Fall, 2015, Summer, 2016, Fall, 2017*)

#### *South Seattle College, 2010 - 2013*

- MATH 081: Basic Math Skills (*Summer, 2012, Fall, 2012, Winter, 2013*)
- MATH 083: Arithmetic (*Winter, 2012*)
- MATH 102: College Algebra (*Winter, 2010, Spring, 2010, Fall, 2010*)
- MATH 141: Precalculus I (*Winter, 2012*)
- MATH 142: Precalculus II (*Spring, 2012*)
- MATH 224: Vector Calculus (*Spring, 2011, Spring, 2012, Spring, 2013*)

#### *Green River College, 2010 - 2012*

- MATH 072: Elementary Algebra (*Fall, 2011*)
- MATH 097: Intermediate Algebra (*Fall, 2011*)
- MATH 141: Precalculus I (*Fall, 2010*)
- MATH 142: Precalculus II (*Winter, 2011*)
- MATH 147: Finite Mathematics (*Spring, 2011*)
- MATH 148: Business Calculus (*Fall, 2010*)
- MATH 151: Differential Calculus (*Summer, 2010, Winter, 2012*)
- MATH 152: Integral Calculus (*Winter, 2011*)

## Publications

P. K. Torres, M. J. Tsatsomeros, *Stability and Convex Hulls of Matrix Powers*, Linear and Multilinear Algebra, 66(4):769-775, 2018.

## Awards

### Scholarships/Fellowships

- Three-time recipient of the Nancy J. Robertson Endowed Graduate Fellowship in Mathematics
  - \* Awarded for 2014-2015, 2015-2016, and 2016-2017

### Other Financial Support

- MSRI, Travel and Lodging for *Summer Graduate Workshop on Dispersive Partial Differential Equations*, June 2014
- WSU Math Dept., support to work on *Student-Centered Stem Calculus Project*, May 2014 - Aug. 2014

## Conferences and Workshops

Western Canada Linear Algebra Meeting  
Washington State University  
Pullman, WA, May 26-27, 2018

AMS Spring Western Sectional Meeting 2017  
Washington State University  
Pullman, WA, April 22-23, 2017

Summer Graduate Workshop on Dispersive Partial Differential Equations  
Mathematical Sciences Research Institute  
Berkeley, CA, June 16-27, 2014

- Poster Presentation: *Low Regularity Global Well-posedness for the Zakharov System*

2013 Washington State Community College Math Conference  
Bellingham, WA, May 9-11, 2013

Sixth Annual Western Washington Community College Student Mathematics Conference  
Green River College  
Auburn, WA, February 25, 2012

2011 Regional Math Conference  
Washington Mathematical Association of Two-Year Colleges  
Stevenson, WA, April 28-30, 2011

## Talks

*Spectra of Matrices and Convex Hulls of Matrix Powers*, Western Canada Linear Algebra Meeting, Washington State University, Pullman, WA, May 26, 2018

*Stability and Convex Hulls of Matrix Powers*, AMS Spring Western Sectional Meeting 2017, Washington State University, Pullman, WA, April 23, 2017

*Stability and Convex Hulls of Matrix Powers*, CLaN Seminar, Department of Mathematics and Statistics, Washington State University, Pullman, WA, October 17, 2016

*Convex Hulls of Matrices and Stability*, CLaN Seminar, Department of Mathematics and Statistics, Washington State University, Pullman, WA, November 16, 2015

*Convex Sets of Nonsingular and P-Matrices*, CLaN Seminar, Department of Mathematics and Statistics, Washington State University, Pullman, WA, April 6, 2015

*Math Success Strategies*, Collaborative Learning & Instruction Center, South Seattle College, Seattle, WA, February 9, 2012

*A Computational Method in Ship Routing*, Applied Mathematics Masters Symposium, Department of Applied Mathematics, University of Washington, Seattle, WA, March 5, 2009

## Technology

Platforms: Mac OS X, Windows

Languages: Java

Mathematical Software: MAPLE, MATLAB, Python

Statistical Software: R

Typesetting:  $\LaTeX$ , Word

Miscellaneous: Excel, PowerPoint

## Affiliations

American Mathematical Society (AMS)

Society for Industrial and Applied Mathematics (SIAM)

International Linear Algebra Society (ILAS)

## Languages

English, Chamorro, some Japanese

## Academic References

**Mark Kot**, Associate Professor, University of Washington, Department of Applied Mathematics, Box 352420, Seattle, WA 98195-2420  
kot@amath.washington.edu

**Nathan Kutz**, Professor, University of Washington, Department of Applied Mathematics, Box 352420, Seattle, WA 98195-2420  
kutz@amath.washington.edu

**Heidi Lyman**, Instructor and Math Department Coordinator, South Seattle College, Department of Mathematics, Mailstop: 4UNI101, Seattle, WA 98106  
heidi.lyman@seattlecolleges.edu

**Judi McDonald**, Professor, Washington State University, Department of Mathematics and Statistics, Pullman, WA 99164-3113  
jmcdonald1@wsu.edu

**Lynn Schreyer**, Associate Professor, Washington State University, Department of Mathematics and Statistics, Pullman, WA 99164-3113  
lynn.schreyer@wsu.edu

**Michael Tsatsomeros**, Professor, Washington State University, Department of Mathematics and Statistics, Pullman, WA 99164-3113  
tsat@wsu.edu