Curriculum Vitae   **Rachel Levanger**

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Professional Preparation

University of North Florida	Mathematics & Art History	B.A. 2012
Rutgers State University of New Jersey	Mathematics	Ph.D. (2017)

Appointments and Employment

EAPSI Fellow*, Host: Takashi Ishihara, Nagoya University, Japan*	Summer 2016
Graduate Assistant, Rutgers University*, Advisor: Konstantin Mischaikow*	Fall 2015 – Spring 2016
RYSP, Rutgers University, *Instructor for Graph Algorithms*	Summer 2015
DIMACS REU, *Graduate Student Mentor*	Summer 2015
Rutgers University, *TA for Calculus II for Math/Science Majors*	Fall 2014
DIMACS REU, *Graduate Student Coordinator*	Summer 2014
Fidelity National Financial, *Statistical Data Analyst Intern*	Summer 2012
University of North Florida, *Grader for Calculus II and Probability*	Spring 2012
University of North Florida, *Grader for Advanced Calculus*	Fall 2011
Fidelity National Financial, *Business Systems Analyst*	2005 - 2011
Wells Fargo Services Company, *Business Systems Analyst*	2001 - 2005

Publications

S. Harker, M. Kramar, R. Levanger, K. Mischaikow, *"A Comparison Framework for Interleaved Persistence Modules,"* in preparation.

M. Kramar, R. Levanger, J. Tithof, B. Suri, M. Xu, M. Paul, M.Schatz, K. Mischaikow, *"Analysis of Kolmogorov Flow and Rayleigh-Bénard Convection using Persistent Homology,"* accepted, Physica D: Nonlinear Phenomena, 2016.

R. Dumitru, R. Levanger, and B. Visinescu, "*On singular value inequalities for matrix means," Linear Algebra and its Applications*, 439(8), Oct 15, 2405-2410 (2013).

Awards & Fellowships

Recipient of the Janice Pattwell Annual Mathematics Fellowship *Rutgers University, Department of Mathematics*	2013 - 2014
University Diversity Fellowship *Rutgers University Graduate School of Arts and Sciences*	2013 - 2015
Outstanding Undergraduate Student in Mathematics *University of North Florida Mathematics & Statistics Department*	Apr 2012
Student Speaker Award *Pi Mu Epsilon National Meeting at MathFest 2011, Lexington, KY.*	Aug 2011
Undergraduate Scholarships for Analysis & Probability *University of North Florida Mathematics & Statistics Department*	May 2011

UNF College of Arts & Sciences, Willard O. Ash Award   Nov 2010
*Award recognizing a senior who embodies Dean Ash's philosophy of a
broad-based education in the liberal arts and sciences.*

Selected Talks

(TBA) *Dynamical Systems Conference, Sapporo, Japan*   Aug. 1-5, 2016

Recent Developments in Topological Data Analysis, *High-Dimensional Data*   May 25-27, 2016
Analysis (HDDA VI), Fields Institute, Toronto

A Comparison Framework for Interleaved Persistence Modules.   Apr. 11, 2016
Applied topology seminar, University of Pennsylvania.

Auslander-Reiten Quivers of finite-dimensional algebras.   Mar. 23, 2016
Algebra seminar, Rutgers University.

Generalizations of the induced matching and algebraic stability theorems.   Mar. 10, 2016
MacPherson nighttime seminar, Institute for Advanced Study.

Dynamics of 2D fluid simulations through persistent homology.   Oct. 23, 2015
Applied topology seminar, Columbia Medical.

Using Persistent Homology to study dynamics in the space of persistence   Aug. 17-28, 2015
diagrams, Parts I & II. *Algebraic Topology & High-Dimensional Data Analysis
(HDDA V), University of Victoria, Victoria, BC*

Computing Hausdorff Dimension via Persistent Homology   Mar. 29, 2013
Graduate Student Pizza Seminar, Rutgers University

Bent out of Shape: Taking a look at Perturbed Eigenvalues   Feb. 18, 2012
Florida MAA Conference Student Speaker, University of North Florida

Imagining the Banach-Tarski Paradox   Aug. 4, 2011
Student Speaker, Pi Mu Epsilon National Meeting at MathFest 2011

Service

Co-organizer for New York Applied Topology seminar,   Fall 2015 – Spring 2016
Columbia University Medical Center

Co-organizer for AMS Special Session on Topological Data Analysis: Nov. 2015
Computations, Statistics and Applications, *Rutgers University*

Directed Reading Program, *Rutgers University*   Fall 2014 – Spring 2016

Pi Mu Epsilon Florida Eta Chapter, *President*   2011 - 2012

Pi Mu Epsilon Florida Eta Chapter, *Vice President*   2011

Computer Experience

Experience with MATLAB, Mathematica, Maple, Microsoft Office Suite (Excel, Word, Access, Visio),
Microsoft SQL Server, Microsoft Visual Studio, Processing, and Eclipse IDE for Java Developers.

Programming experience in Python, shell scripting, R, LaTeX, SQL, C#, C++, VB, and JAVA. Data
modeling experience with relational databases, domain models (UML), and XML.