

Evan D. Randles, Ph.D.

Assistant Professor of Mathematics

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Employment

Colby College, Assistant Professor of Mathematics, 2017-present

University of California, Los Angeles, Assistant Adjunct Professor of Mathematics, 2016-2017

Education

Ph.D. Applied Mathematics, Cornell University, 2016

Advisor: Professor Laurent Saloff-Coste

Thesis: *Convolution powers of complex-valued functions and related topics in partial differential equations*

M.S. Applied Mathematics, Cornell University, 2014

M.S. Mathematics, California State University, Northridge 2011

Masters with Distinction

Advisor: Professor David Klein

Thesis: *Spacelike foliations of Robertson-Walker spacetimes by Fermi space slices*

B.S. Physics, California State University, Northridge 2010

Summa Cum Laude

B.A. Mathematics, California State University, Northridge 2010

Summa Cum Laude

A.S. Welding Technology, College of the Canyons, 2005

With High Honors

Teaching Experience

Colby College, Spring 2021

Instructor for MA 311 (Ordinary Differential Equations) and MA411 (Partial Differential Equations)

Colby College, Fall 2020

Instructor for Math 122 (Series and Multivariable Calculus) and Math 311 (Ordinary Differential Equations)

Colby College, Spring 2020

Instructor for Math 253 (Linear Algebra) and Math 311 (Ordinary Differential Equations)

Colby College, Fall 2019

Instructor for Math 311 (Ordinary Differential Equations) and Math 352 (Complex Analysis)

Colby College, Summer 2019

Co-instructor (with Professor Nora Youngs) for CAPS Module: Fractals, Chaos and the Maine Coastline

Colby College, Spring 2019

Instructor for Math 311 (Ordinary Differential Equations) and Math 411 (Topics in Differential Equations: Partial Differential Equations)

Colby College, Fall 2018

Instructor for Math 122 (Series and Multivariable Calculus), Math 311 (Ordinary Differential Equations) and Math 439 (Topics in Real Analysis: Measure Theory)

Colby College, Summer 2018

Co-instructor (with Professor Nora Youngs) for CAPS Module: Fractals, Chaos and the Maine Coastline

Colby College, Spring 2018

Instructor for Math 122 (Series and Multivariable Calculus) and Math 398 (Fourier Analysis)

Colby College, Fall 2017

Instructor for Math 121 (Calculus I) and Math 311 (Ordinary Differential Equations)

University of California, Los Angeles, Spring 2017

Instructor for Math 170 A (Probability I) and Math 170 B (Probability II)

University of California, Los Angeles, Winter 2017

Instructor for Math 131 A (Analysis I)

University of California, Los Angeles, Fall 2016

Instructor for Math 131 B (Analysis II) and Math 32A (Calculus of Several Variables)

Ithaca High School-Cornell University, Spring 2015

Instructor for Senior Seminar (Fourier Analysis)

Cornell University, Department of Mathematics, Spring 2015

Instructor for Math 1110 (Calculus 1)

Cornell University, Department of Mathematics, Fall 2014

Teaching Assistant for Math 2220 (Vector Calculus)

California State University, Northridge, Department of Mathematics, Summer 2010

Guest Lecturer/Teaching Assistant, Math 350 (Advanced Calculus), Math 320 (Intro to Proofs)

California State University, Northridge, PUMP Program, Summer 2010

Summer Institute Instructor for PUMP (Preparing Undergraduates through mentoring toward PhDs)

College of the Canyons, TLC Tutoring Lab, 2006-2008

Lead Tutor specializing in mathematics, physics and engineering

Fellowships/Scholarships

2012-2015 NSF Graduate Research Fellowship Program

2011-2012 Research Training Group Graduate Assistantship in Probability (Funding NSF)

2010-2011 Bridge to the Doctorate Fellow, Louis Stokes Alliances for Minority Participation (LSAMP) Program (Funding NSF-CSU)

2007-2008 PUMP Scholarship, Preparing Undergraduates through Mentoring toward PhDs (PUMP) Program (Funding NSF-DMS-0502258)

Awards

Distinguished Teaching Award, Department of Mathematics, University of California, Los Angeles, Recipient 2017

Award for Outstanding Graduate Achievement, Department of Mathematics, California State University, Northridge, Recipient 2011

Heald Outstanding Graduating Senior Award, College of Science and Mathematics, California State University, Northridge, Recipient 2010

John W. Nagle Outstanding Senior Award, Department of Physics and Astronomy, California State University, Northridge, Recipient 2010

Research Interests

Fourier Analysis, Probability, Partial Differential Equations, Mathematical Physics

Publications

Convolution Powers of Complex Functions on \mathbb{Z}^d : a study of local limit theorems and sup-norm estimates (in preparation)

A generalized polar-coordinate integration formula with applications to the study of convolution powers of complex-valued functions on \mathbb{Z}^d . (with Huan Q. Bui) arXiv:2103.04161 (submitted)

Davies' method for heat-kernel estimates: An extension to the semi-elliptic setting (with Laurent Saloff-Coste), *Transactions of the American Mathematical Society*, **373**(4) 2525-2565 (2020)

Convolution Powers of Complex Functions on \mathbb{Z}^d (with Laurent Saloff-Coste), *Revista Matemática Iberoamericana*, **33**(3) 1045-1121 (2017)

Positive-homogeneous operators, heat kernel estimates and the Legendre-Fenchel transform (with Laurent Saloff-Coste), *Stochastic Analysis and Related Topics: A Festschrift in Honor of Rodrigo Bañuelos*. *Progress in Probability*, Vol. 72 (2017)

On the Convolution Powers of Complex Functions on \mathbb{Z} (with Laurent Saloff-Coste), *Journal of Fourier Analysis and Applications* **21**(4) 754-798 (2015)

Fermi coordinates, simultaneity, and expanding space in Robertson-Walker cosmologies (with David Klein), *Annales Henri Poincaré* **12** 303-328 (2011)

Conference and Seminar Talks

A generalized polar-coordinate integration formula with applications to local (central) limit theorems. Joint Mathematics Meetings, Virtual, January 2021.

Higher order partial differential operators and their heat kernels. Colby-Bowdoin-Bates Seminar, Bates College, April 2019.

Convolution powers of complex-valued functions. Department of Mathematics & Statistics, University of Maine. November 2017.

Convolution powers of complex-valued function on \mathbb{Z}^d . Department of Mathematics and Statistics, Bowdoin College, October 2017.

Convolution powers of complex-valued functions. Department of Mathematics and Statistics, Swarthmore College. February 2017.

Convolution powers of complex-valued functions. Department of Mathematics and Statistics, Colby College. February 2017.

Convolution powers of complex-valued functions on \mathbb{Z}^d . Probability Seminar, University of British Columbia. September 2016.

Convolution powers of complex-valued functions. Department of Mathematics, Colgate University. January, 2016.

Heat kernel estimates corresponding to uniformly positive-homogeneous operators. Analysis Seminar, Cornell University, Ithaca. October 2015

The Stability of Matter: an important chapter in mathematical physics (expository talk). *CAM Colloquially!*, the student speaker series. Cornell University, Ithaca. November 2015

Convolution powers of complex-valued functions on \mathbb{Z}^d . Analysis Seminar, Cornell University, Ithaca. February 2015

Heat kernel estimate corresponding to higher order partial differential operators. Mathematics colloquium, California State University, Northridge. January 2014

Convolution powers of finitely supported function on \mathbb{Z} . Northeast probability seminar, Columbia University, New York. November 2012

Fermi coordinates, simultaneity, and expanding space. Mathematics & Physics colloquium, California State University, Northridge. December 2010

Conferences, Summer Schools and Workshops Attended

Joint Mathematics Meetings, Virtual. January 2021.

Probability Summer School, Northwestern University. July 2016.

Finger Lakes Probability Seminar, Cornell University. May 2016.

AMS National Meeting, Seattle. January 2016.

Cornell Probability Summer School, Cornell University. July 2014.

Rough Path Theory Workshop, IPAM, UCLA. January 2014.

Cornell Probability Summer School, Cornell University. July 2013.

Northeast Probability Seminar, Columbia University. November 2012

Princeton Institute for the Science and Technology of Materials (REU), Princeton University. Summer 2009

Service

Service to College

Member of the Off-campus Advisory Committee, Colby College, 2019-Present

Member of Facilities Committee, Colby College, 2018-Present

Participation as summer instructor for CAPS Program, 2018-Present

Service to Department

Chair of committee to restructure MA 122, Department of Mathematics & Statistics, Colby College, 2020-Present

Summer calculus coordinator for incoming Colby students, Department of Mathematics & Statistics, Colby College, 2018-2020

Co-advisor for Math Contest in Modeling, Colby College, 2018-Present

Department colloquium organizer, Department of Mathematics & Statistics, Colby College, 2017-2018

Service to Discipline

Referee for *Revista Matemática Iberoamericana*

Referee for the *Journal of Potential Analysis*.

General Service

Organizer for *CAM Colloquially!*, the student speaker series. Center for Applied Mathematics, Cornell University, 2015

Volunteer/Mentor. Louis Stokes Alliances for Minority Participation (LSAMP), Bridge to the Doctorate Program, 2014