

Evrydiki Xenia Nestoridi

CONTACT INFORMATION	Department of Mathematics Fine Hall, Washington Road Princeton NJ 08544-1000 USA Email Address: exn@princeton.edu
RESEARCH INTERESTS	Random Walks on Groups, Combinatorics, Representation Theory, Probability
CURRENT AND PAST EMPLOYMENT	Stony Brook University, Department of Mathematics , Stony Brook NY, USA Associate Professor of Mathematics since September 2022 Princeton University, Department of Mathematics , Princeton, NJ, USA Assistant Professor of Mathematics since September 2019 Cambridge University, Department of Mathematics , Cambridge, UK Research Associate October 2018-September 2019 Princeton University, Department of Mathematics , Princeton, NJ, USA Instructor of Mathematics September 2016-June 2018
EDUCATION	Stanford University , Stanford, CA, USA Ph.D., Mathematics, <i>Completed</i> : June 2016 Advisor: Persi Diaconis <i>Thesis Title</i> : Rates of convergence of Markov chains to stationarity: strong stationary times, coupling, Gelfand pairs and comparison theory National and Kapodistrian University of Athens , Athens, Greece B.S., Mathematics, average 9.83/10, June 2011
AWARDS	Research Member, fall 2021 MSRI NSF research grant DMS-2052659, 2021-2024 \$224,195 Princeton Departmental Teaching Award 2018 Princeton University Centennial Teaching Award 2014-2015 Stanford University The Colleen and Robert D. Haas Graduate Fellowship Stanford University
ACCEPTED ARTICLES	Bounded cutoff window for the non-backtracking random walk on Ramanujan Graphs in collaboration with Peter Sarnak, under revision at <i>Combinatorica</i> (arxiv:2103.15176) Mixing times for the one-sided k-transposition shuffles (arxiv:2112.05085) in collaboration with Kenny Peng, under revision at <i>Annals of Applied Probability</i> The random walk on upper triangular matrices over $\mathbb{Z}/m\mathbb{Z}$ in collaboration with Allan Sly, under revision at <i>Probability Theory and Related Fields</i> (arxiv:2012.08731) Mixing times for the simple exclusion process with open boundaries. in collaboration with Nina Gantert and Dominik Schmid, under revision at <i>Annals of Applied Probability</i> (arXiv:2003.03781) Limit Profiles for Reversible Markov Chains in collaboration with Sam Olesker-Taylor, <i>Probability Theory and Related Fields</i> , accepted (arXiv:2005.13437)

**Generalized Harmonic Functions on Trees:
Universality and Frequent Universality**

in collaboration with N. Biehler and V. Nestoridis,
Journal of Mathematical Analysis and Applications, accepted (arXiv:2010.02149)

On the spectrum of random walks on complete finite d -ary trees.

in collaboration with Oanh Nguyen, Electronic Journal of Probability
(arXiv:1912.06771)

Cutoff for the Bernoulli-Laplace urn model with $o(n)$ swaps.

in collaboration with Alexandros Eskenazis, Ann. de l'Institut Henri Poincaré (2020)

**On the mixing time of the Diaconis-Gangolli random walk on contingency
tables over $\mathbb{Z}/q\mathbb{Z}$.**(arxiv:1808.06157)

in collaboration with Oanh Nguyen, Annales de l'Institut Henri Poincaré (2019)

Cutoff for cyclic adjacent transpositions.(arXiv:1805.10508)

in collaboration with Danny Nam, Annals of Applied Probability (2019)

Cutoff for random to random card shuffle.(arXiv:1703.06210)

in collaboration with M. Bernstein, Annals of Probability (Dec 2018).

**Super-character theory and comparison arguments for a random walk on
the upper triangular matrices.** (arXiv:1609.01238)

Journal of Algebra (November 2018).

**Optimal strong stationary times for random walks on the chambers of a
hyperplane arrangement.**

(arXiv:1706.00310)
Probability Theory and Related Fields (September 2018).

Shuffling big decks of cards and the Bernoulli-Laplace Urn model.

(arXiv:1606.01437)
in collaboration with G. White,
Journal of Theoretical Probability (February 2018).

A non local Markov Chain on the hypercube. (arxiv:1507.05690)

Advances in Applied Probability (December 2017).

PREPRINTS

The Limit profile of star transpositions (arXiv:2111.03622)

Cutoff on trees is rare

in collaboration with Nina Gantert and Dominik Schmid, (arXiv:2012.11484)

GRADUATE
ADVISING

Dominik Schmid

Technical University of Munich, graduated June 2021.

SangHak Jeon

Princeton University, G3

UNDERGRADUATE
ADVISING

Caoimhe Boyle

senior thesis advising Princeton University, currently a senior.

MIT Colloquium	October 2021
Stony Brook University: Colloquium	October 2021
University of Pennsylvania: Colloquium	October 2021
University of Michigan Ann-Arbor: Colloquium	September 2021
MSRI Connections Workshop: Universality and Integrability in Random Matrix Theory and Interacting Particle Systems	September 2021
UC Davis: Mathematical Physics and Probability Seminar Bounded cutoff window for the non-backtracking random walk on Ramanujan Graphs May 2021	
Conference on New Developments in Probability Bounded cutoff window for the non-backtracking random walk on Ramanujan Graphs May 2021	
WIM: UCD Limit Profiles for Reversible Markov chains	May 2021
Princeton University: Probability Seminar Mixing time of the upper triangular matrix walk over $\mathbb{Z}/m\mathbb{Z}$.	November 2020.
UBC: Probability Seminar Mixing time of the upper triangular matrix walk over $\mathbb{Z}/m\mathbb{Z}$.	September 2020.
BIRS, Banff: Permutations and Probability The interchange and exclusion process with open boundaries	September 2020.
Stanford University: Talking Across Fields A Conference in Honor of Persi Diaconis Mixing time of the upper triangular matrix walk over $\mathbb{Z}/m\mathbb{Z}$.	January 2020.
Technical University of Munich Mixing time of the upper triangular matrix walk over $\mathbb{Z}/m\mathbb{Z}$.	June 2019.
Paul Sebatie University Mixing time of the upper triangular matrix walk over $\mathbb{Z}/m\mathbb{Z}$.	June 2019.
York: Pine Meeting" Mixing time of the upper triangular matrix walk over $\mathbb{Z}/m\mathbb{Z}$.	May 2019.
York: LMS "Applied Algebra and Geometry" On the mixing time of the Diaconis-Gangolli random walk on contingency tables over $\mathbb{Z}/q\mathbb{Z}$.	January 2019.
Duke University: Math Colloquium Mixing times and the cutoff phenomenon.	January 2019.
Drexel University: Math Colloquium Mixing times and the cutoff phenomenon.	January 2019.

Stanford University: Probability Seminar	Mixing time of the upper triangular matrix walk over $\mathbb{Z}/m\mathbb{Z}$.	January 2019.
Stanford University: Math Colloquium	Mixing times and the cutoff phenomenon.	January 2019.
Purdue University: Math Colloquium	Mixing times and the cutoff phenomenon.	December 2018.
Greece: FCGM-2018	On the mixing time of the Diaconis-Gangolli random walk on contingency tables over $\mathbb{Z}/q\mathbb{Z}$.	June 2018
Algorithms and Randomness Workshop, Georgia Tech	Hyperplane arrangements and Stopping times.	May 2018
Stony Brook University: Analysis seminar	Studying cutoff for card shuffling.	April 2018
Athens probability day	Studying cutoff for card shuffling.	March 2018
NYU: Probability Seminar	Cutoff for the random to random shuffle.	February 2018
Columbia University: Statistics seminar	Studying cutoff for card shuffling.	February 2018
USC: Colloquium Seminar	Studying cutoff for card shuffling.	January 2018
Rutgers University: Probability Seminar	Cutoff for the random to random shuffle.	November 2017
Columbia University: Probability Seminar	Cutoff for the random to random shuffle.	October 2017
UPenn: Probability Seminar	Cutoff for the random to random shuffle.	September 2017
LMS-EPSC Durham Symposium	Hyperplane arrangements and Stopping times.	July 2017
Princeton University: IDeas	A random walk on the upper triangular matrices.	April 2017
Brown University	Hyperplane arrangements and Stopping times.	April 2017
Rutgers University: Experimental Mathematics Seminar	Shuffling large decks of cards and the Bernoulli-Laplace Urn model.	April 2017
Yale University: Analysis Seminar		

	Hyperplane arrangements and Stopping times.	February 2017
	University of Florida: Discrete Math Seminar Hyperplane arrangements and Stopping times.	January 2017
	Princeton University: Special Lecture A random walk on the upper triangular matrices.	December 2016
	Cornell University: Probability Seminar Hyperplane arrangements and Stopping times.	November 2016
	Princeton University: Ergodic Theory and Statistical Mechanics Shuffling large decks of cards and the Bernoulli-Laplace Urn model.	October 2016
	University of Tennessee, Knoxville: Colloquium seminar Hyperplane arrangements and Stopping times.	April 2016
	UC Berkeley: Combinatorics seminar Hyperplane arrangements and Stopping times.	January 2016
	Stanford University: Probability seminar Hyperplane arrangements and Stopping times.	November 2015
	Princeton University: Probability seminar Hyperplane arrangements and Stopping times.	November 2015
	Cambridge University: Probability seminar Hyperplane arrangements and Stopping times.	October 2015
	National and Kapodistrian University of Athens , Athens, Greece Shuffling big decks of cards and the Bernoulli-Laplace Urn model.	September 2014
	Institute for Advanced Study Shuffling big decks of cards and the Bernoulli-Laplace Urn model.	May 2014
OFFERED SUMMER SCHOOL COURSES	Open Online Probability School Mixing time bounds, cutoff and limit profiles for Markov chains	August 2021
	Calouste Gulbenkian Foundation, Lisbon Introducing Probability to undergraduate students	September 2019
SENIOR THESIS ADVISING	Jackson Blitz Princeton University	2020-2021
	Riley Chabot Princeton University	2019-2020
MENTORING	Mentor	Fall 2015

EDGE Doctoral Fellowship Program
Stanford University

Research Mentor Summer 2014
Stanford Undergraduate Research Institute in Mathematics
Department of Mathematics, Stanford University

Organizer of the Teaching Mentoring Program 2014- 2015
Department of Mathematics, Stanford University

Teaching Mentor Spring 2014
Department of Mathematics, Stanford University

TEACHING
EXPERIENCE

Head Instructor Fall 2020
Math 103 - Calculus I
Department of Mathematics, Princeton University

Supervisions Fall 2018
Markov Chains
Department of Mathematics, Cambridge University

Head Instructor Spring 2018
Math 215 - Real Analysis
Department of Mathematics, Princeton University

Instructor Fall 2017
Math 202 - Linear Algebra
Department of Mathematics, Princeton University

Instructor Spring 2017
Math 104 - Calculus II
Department of Mathematics, Princeton University

Instructor Fall 2016
Math 103 - Calculus I
Department of Mathematics, Princeton University

Math 19 - Calculus Summer 2014
Department of Mathematics, Stanford University

LANGUAGES

Greek (maternal), English (fluent), French (very good)