Luke Peilen

PERSONAL AND CONTACT INFORMATION	DOB: 05.04.1996 1805 N. Broad St. # 544 Philadelphia, PA 19122 USA	US Citizen Phone Number: (612) 412-8560 Email: luke.peilen@temple.edu

RESEARCH INTERESTS

Probability and Analysis, emphasis on problems from Statistical Physics

EMPLOYMENT

Temple University, Department of Mathematics　　　　2023-
　　Research Assistant Professor

EDUCATION

New York University, Courant Institute　　　　2018-2023
　　Ph.D. in Mathematics, awarded May 2023
　　Thesis: *Statistical Mechanics of Log and Riesz Interactions*
　　Advisor: Prof. Sylvia Serfaty

Yale University　　　　2014-2018
　　M.S., B.S. Mathematics, cum laude
　　Thesis: *Spherical Harmonics and Minimizers of Riesz-type*
　　　　　　Energies on S^2
　　Advisor: Prof. Stefan Steinerberger

University of Minnesota - Twin Cities　　　　2012-2014
　　PSEO Student, College of Continuing Education

HONORS AND AWARDS

2022-2023	Glenn Y. Louie Endowed Fellowship *awarded to a Ph.D. student for significant contributions* *to the mathematical sciences*
2021-2022	Henning Biernmann Prize *awarded to a Ph.D. student who has made outstanding* *contributions to education or service to the department.*
2021-2022	Peter Lax Fellowship *awarded to an outstanding Ph.D. student*
2019-2022	NSF Graduate Research Fellowship
2018	Deforest Senior Mathematical Prize *for proficiency in pure and applied mathematics.*
2017	Anthony D. Stanley Memorial Prize *awarded to a member of the junior class of Yale College for* *excellence in mathematics.*

PUBLICATIONS

L. Peilen. Local laws and a mesoscopic CLT for β-ensembles. *Comm. Pure Appl. Math.*. https://doi.org/10.1002/cpa.22175.

A. Cerbu, E, Gunther, M. Magee, L. Peilen. The cycle structure of a Markoff automorphism over finite fields. *Journal of Number Theory*, vol. 211, 2020, pp. 1-27.

A.Cerbu, S. Marcus, L. Peilen, D. Ranganathan, A. Salmon. Topology of tropical moduli of weighted stable curves. *Advances in Geometry*, vol. 20, no. 4, 2020, pp. 445-462.

N. Kaplan, S. Kimport, R. Lawrence, L. Peilen, M. Weinreich. Counting arcs in projective planes via Glynn's algorithm. *Journal of Geometry*, vol. 108, no. 3, 2017, pp. 1013-1029.

INVITED TALKS	*Local Laws and Fluctuations for Log Gases*, 2023 Canadian Mathematical Society Winter Meeting, Montréal, Québec, CA. (December 2023)
	Statistical Mechanics of Log and Riesz Interactions, Penn-Temple Probability Seminar. (September 2023)
CONTRIBUTED TALKS	*Local Laws and a Mesoscopic CLT for β-ensembles*, 22nd Northeast Probability Seminar, Courant Institute of Mathematical Sciences. (November 2023)
	Local Laws and a Mesoscopic CLT for beta-ensembles, AMS Eastern Sectional Meeting Fall 2023, University at Buffalo. (September 2023)
	Topology of Moduli Spaces of Tropical Curves, Young Mathematicians Conference 2017, Ohio State University. (August 2017; paper accepted, presented by coauthors)
	Pseudorandomness of a Markoff Automorphism over F_p, Young Mathematicians Conference 2016, Ohio State University. (August 2016)
	Counting 10-Arcs in the Projective Plane over Finite Fields, Young Mathematicians Conference 2015, Ohio State University. (August 2015)

COURSE INSTRUCTOR EXPERIENCE		
Spring	2024	Temple MATH 3031: Probability Theory I
Fall	2023	Temple MATH 1041: Calculus I
Summer	2022	NYU MATH-UA.132: Mathematics for Economics II
Summer	2021	Thinking and Problem Solving: Math in the Real World
Summer	2020	Thinking and Problem Solving: Math in the Real World
Summer	2019	Thinking and Problem Solving: Math in the Real World
		Designed and taught a three week summer course for high school students in probability, graph theory, and game theory as part of the Columbia University Summer Program for High School students

GRADUATE TEACHING ASSISTANT EXPERIENCE		
Fall	2022	Graduate Teaching Assistant, NYU MATH-UA.0325 Analysis
Spring	2022	Graduate Teaching Assistant, NYU MATH-UA.0325: Analysis
Fall	2021	Graduate Teaching Assistant, NYU MATH-UA.0262: Ordinary Differential Equations
Spring	2021	Graduate Teaching Assistant, NYU MATH-UA.0121: Calculus I
Fall	2020	Graduate Teaching Assistant, NYU MATH-UA.0325: Analysis
Fall	2019	Teaching Assistant, NYU Putnam Exam seminar

PROFESSIONAL ACTIVITIES	Organizer, Courant Graduate Student and Postdoc Seminar, AY 2022-2023
	Courant DEI Reading Group Member, AY 2021-2022 and 2022-2023
	Courant Student Organization President, AY 2020-2021
	Courant Student Organization Vice President, AY 2019-2020
RELEVANT SKILLS	Languages: Reading knowledge of French, Ancient Greek and Latin