Contact Information	rv2549@columbia.edu Department of Mathematics Columbia University			
CITIZENSHIP	USA			
Education	Massachusetts Institute of Technology			
	Ph.D. in Mathematics, advised by Alexei Borodin 2018-2023			
	Princeton University			
	 A.B. in Mathematics, summa cum laude with highest honors in mathematics Certificate (minor) in Applied and Computational Mathematics GPA: 4.0 (departmental), 3.90 (overall) 			
Positions	Columbia University			
	Ritt Assistant Professor (non tenure track) 2024-			
	Royal Institute of Technology (KTH)			
	Postdoctoral researcher, mentored by Maurice Duits 2023-2024			
Papers and preprints (chronological by arxiv submission)	 Vineet Gupta, Uma Roy, and Roger Van Peski. A generalization of Tokuyama's formula to the Hall-Littlewood polynomials. The Electronic Journal of Combinatorics, 22(2):P2-11, 2015. 			
	[2] Steven J Miller, Carsten Peterson, Carsten Sprunger, and Roger Van Peski. The bidirectional ballot polytope. <i>Integers</i> , 18, 2018.			
	[3] Paula Burkhardt, Peter Cohen, Jonathan DeWitt, Max Hlavacek, Steven J Miller, Carsten Sprunger, Yen Nhi Truong Vu, Roger Van Peski, and Kevin Yang. Random matrix ensembles with split limiting behavior. <i>Random Matrices: Theory and Applications</i> , 7(03):1850006, 2018.			
	[4] Oscar E González, Chung Hang Kwan, Steven J Miller, Roger Van Peski, and Tian An Wong. On smoothing singularities of elliptic orbital integrals on $GL(n)$ and Beyond Endoscopy. Journal of Number Theory, 183:407–427, 2018.			
	[5] Samuel DeHority, Xavier Gonzalez, Neekon Vafa, and Roger Van Peski. Moonshine for all finite groups. Research in the Mathematical Sciences, 5(1):1–34, 2018.			
	[6] Roger Van Peski. Spectral distributions of periodic random matrix ensembles. Random Matrices: Theory and Applications, 10(01):2150011, 2021.			
	[7] Roger Van Peski. Limits and fluctuations of <i>p</i>-adic random matrix products. Selecta Mathematica, 27(5):1–71, 2021.			
	[8] Andrew Ahn, Marianna Russkikh, and Roger Van Peski. Lozenge tilings and the Gaussian free field on a cylinder. Communications in Mathematical Physics, 396(3):1221–1275, 2022.			
	[9] Andrew Ahn and Roger Van Peski. Lyapunov exponents for truncated unitary and Ginibre matrices. Ann. Inst. Henri Poincaré Probab. Stat., 59(2):1029–1039, 2023.			
	[10] Roger Van Peski. Hall-Littlewood polynomials, boundaries, and p-adic random matrices. International Mathematics Research Notices, 2023(13):11217–11275, 2022.			
	[11] Roger Van Peski. q-TASEP with position-dependent slowing. Electronic Journal of Probability, 27:1–35, 2022.			

- [12] Peter Cohen, Justine Dell, Oscar E González, Geoffrey Iyer, Simran Khunger, Chung-Hang Kwan, Steven J Miller, Alexander Shashkov, Alicia Smith Reina, Carsten Sprunger, Nicholas Triantafillou, Nhi Truong, Roger Van Peski, Stephen Willis, and Yingzi Yang. Extending support for the centered moments of the low lying zeroes of cuspidal newforms. arXiv preprint arXiv:2208.02625, 2022.
- [13] Hoi H Nguyen and Roger Van Peski. Universality for cokernels of random matrix products. Advances in Mathematics, 438:109451, 2024.
- [14] Roger Van Peski. What is a p-adic Dyson Brownian motion? To appear in Ann. Inst. Henri Poincaré Probab. Stat. arXiv preprint arXiv:2309.02865, 2023.
- [15] Roger Van Peski. Local limits in p-adic random matrix theory. To appear in Proceedings of the London Mathematical Society. arXiv preprint arXiv:2310.12275, 2023.
- [16] Roger Van Peski. Reflecting Poisson walks and dynamical universality in p-adic random matrix theory. arXiv preprint arXiv:2312.11702, 2023.
- [17] Roger Van Peski. Symmetric functions and the explicit moment problem for abelian groups. arXiv preprint arXiv:2402.16625, 2024.
- [18] Roger Van Peski. The rank of a random triangular matrix over \mathbb{F}_q . arXiv preprint arXiv:2407.19578, 2024.
- [19] Hoi H Nguyen and Roger Van Peski. Rank fluctuations of matrix products and a moment method for growing groups. arXiv preprint arXiv:2409.03099, 2024.

Selected Fellowships and Awards	NSF Graduate Research Fellowship	2018-2023
	MIT Presidential Fellowship An Institute-wide merit award	2018-2019
	Phi Beta Kappa Andrew H. Brown Prize for Outstanding Juniors in Mathematics Awarded by the Princeton mathematics department to three juniors (out of	May 2018 May 2017 a class of 34)
	Top 200, William Lowell Putnam Mathematical Competition	December 2015
	1 st Place in Algebra category, JMM Undergraduate Poster Session Intel International Science and Engineering Fair 4 th in Category Awa Outstanding Presentation Award, JMM Undergraduate Poster Session Siemens Competition Semifinalist in Mathematics Category	January 2015 ard May 2014 on January 2014 November 2013
Talks	 ARNO conference (KU Leuven) [contributed talk] Leipzig integrable probability seminar UC Irvine number theory seminar IHES Probability and analysis informal seminar North British Probability Seminar (Edinburgh) KTH Probability and Mathematical Physics Seminar Paris-Saclay Signal Seminar Columbia Probability Workshop Ohio State University Combinatorics and Probability Seminar MIT Integrable Probability Working Group Northeast Probability Seminar Cornell Probability Seminar Probability and Mathematical Physics 2022 (Helsinki) [contributed poster] Probability and the City Seminar UChicago Probability and Statistical Physics Seminar 	April 2024 April 2024 April 2024 January 2024 October 2023 October 2023 September 2023 March 2023 December 2022 November 2022 November 2022 June 2022 April 2022 March 2022

	 St. Petersburg Youth Conference in Probability and Mathematical Physics Northeast Probability Seminar Junior Integrable Probability Seminar UW-Madison Joint Probability and Number Theory Seminar Columbia Integrable Probability Seminar Ohio State University Virtual Combinatorics & Probability seminar UniMelb-Bielefield RMT seminar Joint Mathematics Meetings [contributed talk] International Conference of the Indian Mathematics Consortium in cooperation December 2016 Quebec-Maine Number Theory Conference 	December 2021 November 2021 March 2021 February 2021 January 2021 November 2020 January 2018 on with the AMS October 2016
TEACHING	 Instructor of record - Columbia Fall 2024: Math UN2500 (Analysis and Optimization) Spring 2025: MATH UN1101 (Calculus I) [2 sections] 	
	 Graduate teaching assistant - MIT Fall 2020: 18.600 (Probability Theory) Spring 2021: 18.03 (Differential Equations) 	
	 Undergraduate course assistant - Princeton University Fall 2015: MAT 216 (Accelerated Honors Analysis I) Spring 2016: MAT 218 (Accelerated Honors Analysis II) Fall 2016: MAT 340 (Applied Algebra I) Spring 2017: MAT 355 (Introduction to Differential Geometry) Fall 2017: MAT 320 (Introduction to Real Analysis) Spring 2018: MAT 330 (Complex Analysis with Applications) 	
Mentoring	 Co-adviser to Columbia PhD student Jiahe Shen, joint with Ivan Corv Mentor, MIT Grad-Undergrad Math Mentor Initiative (GUMMI) Mentor, MIT directed reading program (DRP) Mentors for this program guide MIT undergraduates reading an advanced text month-long independent activities period (IAP) in January. I advised the follow Sean Li (Lie algebras), Joshua Kuffour and Katie Miner (statistical physics) Korina Digalaki and Dhruv Rohatgi (random matrices) Korina Digalaki (integrable probability) Joshua Amaniampong and Yogeshwar Velingker (Lie groups and quantum me 2019 	win 2024-present 2021-2023 book during the ring groups: January 2022 January 2021 January 2020 chanics) January
	 Mentor, MIT SPUR and UROP Summer 2 Supervised undergraduate Korina Digalaki in a research project on the 6-vertex three times weekly during summer and weekly/biweekly during academic year. Program in Mathematics for Young Scientists (PROMYS) Counselor (July 2015 – August 2015) Gave three high school students of their work in the first-year number theory program, mentored a student re- combinatorics, and graded for the class Complex Analysis in Number Theory Head counselor (July 2018 – August 2018) Along with two other oversaw a team 25 counselors in running most aspects of the ~70-student prog to regular counselor duties as above). Mentored students Aman Aggarwal, C Nathan Sun in a research project which became https://arxiv.org/abs/1 Research lab coordinator (July 2019 – August 2019) Helped orga independent research projects of ~20 returning students. Volunteer application grader (Spring 2023) 	2020-Spring 2021 a model, meeting daily feedback on search project in y. head counselors, gram (in addition aroline Choi and 809.07398. nize and oversee

Princeton Splash

2014 - 2018

• Splash is an educational event in which roughly 300 high school students come to Princeton's campus for a day to take short hour classes in a wide array of topics from Princeton students.

- Teacher coordinator (2014-2015) Helped recruit undergraduates to teach classes.
- Co-director (2015-2016, 2016-2017) Directed a team of about 10 Princeton undergraduates to organize all aspects of the event and coordinate with Princeton administration and national nonprofit Learning Unlimited.
- Advisor (2017-2018) Advised and assisted the new directors in running the event.

Princeton University Math Club

• Advising co-chair (2017-2018) Ran a 'big-small' program 'Mentoring Möbius', which brings together graduate students and undergraduates to talk about math in an informal setting.

SERVICE Co-organizer, Northeast Probability Seminar Fall 2024 Co-organizer, Columbia Probability Seminar Fall 2024-present Co-organizer, KTH Probability and Mathematical Physics Seminar Spring 2024 **Co-organizer**, MIT Integrable Probability Working Group Fall 2021 – Spring 2023 Co-organizer, MIT Seminar from a Safe Distance Spring 2020 – Fall 2021 2019 - 2020Co-organizer, MIT pure math graduate student seminar (PuMaGraSS) **Referee activities** include reports for Advances in Mathematics, Algebra and Number Theory, Annales de l'Institut Henri Poincaré, Contemporary Mathematics, Discrete Mathematics, Journal of Algebra, Nonlinearity, Probability Theory and Related Fields, Selecta Mathematica, SIGMA.