

Patrick Flynn

CONTACT INFORMATION	University of California, Los Angeles Math Sciences Building 520 Portola Plaza Box 951555 Los Angeles, CA 90095	+1 (310) 825-4980 pflynn@math.ucla.edu
CITIZENSHIP	United States of America	
RESEARCH INTERESTS	Partial differential equations, kinetic theory, fluid equations	
EDUCATION	Brown University Ph.D. in Applied Mathematics (2018-2023) M.S. in Applied Mathematics (2020) Advisor: Benoit Pausader	
	Oregon State University B.S. in Mathematics and Physics (2014-2018) Summa Cum Laude	
EMPLOYMENT	University of California, Los Angeles Hedrick Assistant Adjunct Professor (2023-Present, currently on leave)	
	Simons Laufer Mathematical Sciences Institute (formerly MSRI) “Kinetic Theory: Novel Statistical, Stochastic and Analytical Methods,” Postdoc Huneke (Fall 2025)	
PUBLICATIONS AND PREPRINTS	<ol style="list-style-type: none">1. Linear decay of the beta-plane equation near Couette flow on the plane (with Jacob Bedrossian and Sameer Iyer). <i>arXiv preprint arXiv:2511.00667</i> (2025). link2. Negative regularity mixing for random volume preserving diffeomorphisms (with Jacob Bedrossian and Sam Punshon-Smith). <i>arXiv preprint arXiv:2410.19251</i> (2024). link. Recommended for publication pending revisions in <i>Annals of Probability</i>.3. Local well-posedness of the Vlasov-Poisson-Landau System and related models. <i>Kinetic and Related Models</i> 18.4 (2025): 583-608. link4. The massless electron limit for the Vlasov-Poisson-Landau system (with Yan Guo). <i>Communications in Mathematical Physics</i> 405.2 (2024): 27. (2024). link5. Scattering map for the Vlasov–Poisson system (with Zhimeng Ouyang, Benoit Pausader, and Klaus Widmayer). <i>Peking Mathematical Journal</i> (2021): 1-28. link6. The vanishing surface tension limit of the Muskat problem (with Huy Q. Nguyen). <i>Communications in Mathematical Physics</i> 382.2 (2021): 1205-1241. link7. Self-organized clusters in diffusive run-and-tumble processes (with Quinton Neville, and Arnd Scheel). <i>Discrete and Continuous Dynamical Systems-Series S</i> 13.4 (2019): 1187-1208. link	

INVITED TALKS	Brin Mathematics Research Center, University of Maryland, workshop on Random Dynamical Systems, PDEs, and Stochastic Analysis (July 2025)
	University of Wisconsin Madison, Workshop on Kinetic Theory and Fluids (March 28)
	University of Southern California, Analysis and PDE Seminar (April 2025)
	Brown University PDE Seminar (February 2025)
	UC Davis PDE and Applied Math Seminar (October 2023)
	New England Dynamics Seminar, UMass Amherst (April 2023)
	Princeton University Fluids Seminar (February 2023)
	Boston University Dynamics Seminar (September 2022)
	Brown University PDE Seminar (September 2022)
	University of Barcelona, Mathematical Analysis Seminar (June 2022)
	University of Michigan, Differential Equations Seminar (March 2022)
	Online North East PDE and Analysis Seminar (February 2021)
TEACHING EXPERIENCE	<p>Spring 2025 Instructor, Math 135, Partial Differential Equations, UCLA</p> <p>Winter 2025 Instructor, Math 132H, Honors Complex Analysis, UCLA</p> <p>Fall 2024 Instructor, Math 135, Ordinary Differential Equations, UCLA</p> <p>Spring 2024 Instructor, Math 136, Partial Differential Equations, UCLA</p> <p>Winter 2024 Instructor, Math 135, Ordinary Differential Equations, UCLA</p> <p>Fall 2023 Instructor, Math 31B, Integration and Infinite Series, UCLA</p> <p>Fall 2023 Instructor, Math 135, Ordinary Differential Equations, UCLA</p> <p>Fall 2022 Instructor, Single Variable Calculus, Part II, Brown University</p> <p>Spring 2020 Teaching Assistant, Applied Partial Differential Equations, Brown University</p> <p>Fall 2019 Teaching Assistant, Applied Partial Differential Equations, Brown University</p>
HONORS AND AWARDS	<p>2020–2023 National Science Foundation Graduate Research Fellowship</p> <p>2018–2020 Presidential Fellowship, Brown University</p>
OUTREACH AND SERVICE	<p>2025 Organizer for professional development series at SLMath</p> <p>2024 Mentor for reading project for an undergraduate student</p> <p>2020 Mentor for applied math directed reading program on stochastic control</p> <p>2019 Led student workshop on the Rayleigh-Taylor instability at applied math graduate student retreat</p> <p>2021–current Referee for the following journals: Quarterly of Applied Math, Nonlinearity, Studies in Applied Mathematics, Archive of Rational Mechanics and Analysis, Memoirs of the AMS, Annals of PDE, SIAM Journal of Mathematical Analysis.</p>

UNDERGRADUATE RESEARCH EXPERIENCE	2018	Computational Physics Student Summer Workshop Advisors: Juan Saenz, Jesse Canfield Los Alamos National Laboratory
	2017	Complex Systems REU Advisor: Arnd Scheel, Department of Mathematics University of Minnesota, Twin Cities