

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
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: Benoît 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)	
PUBLICATIONS AND PREPRINTS	<ol style="list-style-type: none">1. Local well-posedness of the Vlasov-Poisson-Landau System and the massless electron system. <i>arXiv preprint</i> arXiv:2310.00777 (2023). link2. The massless electron limit for the Vlasov-Poisson-Landau system (with Yan Guo). <i>Communications in Mathematical Physics</i> 405.2 (2024): 27. (2024). link3. Scattering map for the Vlasov-Poisson system (with Zhimeng Ouyang, Benoît Pausader, and Klaus Widmayer). <i>Peking Mathematical Journal</i> (2021): 1-28. link4. The vanishing surface tension limit of the Muskat problem (with Huy Q. Nguyen). <i>Communications in Mathematical Physics</i> 382.2 (2021): 1205-1241. link5. 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	UC Davis PDE and Applied Math Seminar (October 2024) 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	Spring	2024	Instructor, Math 136, Partial Differential Equations, UCLA
	Winter	2024	Instructor, Math 135, Ordinary Differential Equations, UCLA
	Fall	2023	Instructor, Math 31B, Integration and Infinite Series, UCLA
	Fall	2023	Instructor, Math 135, Ordinary Differential Equations, UCLA
	Fall	2022	Instructor, Single Variable Calculus, Part II, Brown University
	Spring	2020	Teaching Assistant, Applied Partial Differential Equations, Brown University
	Fall	2019	Teaching Assistant, Applied Partial Differential Equations, Brown University
HONORS AND AWARDS	2020–2023		National Science Foundation Graduate Research Fellowship
	2018–2020		Presidential Fellowship, Brown University
GRADUATE COURSEWORK	<ul style="list-style-type: none"> • Real Analysis • Partial Differential Equations • Dynamical Systems • Probability Theory 		
OUTREACH	2020	Mentor for applied math directed reading program on stochastic control	
	2019	Led student workshop on the Rayleigh-Taylor instability at applied math graduate student retreat	
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	