

## Elias Hess-Childs

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<u>Information</u>	Pittsburgh, PA 15213-3890	Website: <a href="https://math.cmu.edu/~ehesschi/">https://math.cmu.edu/~ehesschi/</a>
<u>Academic</u>	<b>Carnegie Mellon University</b> , Dept. of Mathematical Sciences	2024-present
<u>Positions</u>	Postdoctoral Associate	
<u>Education</u>	<b>New York University</b> , Courant Institute	2019-2024
	Ph.D. in Mathematics, awarded September 2024	
	Supervisor: Sylvia Serfaty	
	<b>McGill University</b>	
	B.S. in Honours Mathematics, awarded May 2019	2015-2019
	First Class Honours	
<u>Publications</u>	E. Hess-Childs, R. Raquépas, K. Rowan. <b>Divergence-free drifts decrease</b>	
<u>and Preprints</u>	<b>concentration</b> . Submitted. (2025 <a href="#">arxiv</a> )	
	E. Hess-Childs, K. Rowan. <b>A universal total anomalous dissipator</b> . Submitted. (2025 <a href="#">arxiv</a> )	
	E. Hess-Childs. <b>Large deviation principles for singular Riesz-type diffusive flows</b> . Submitted. (2024 <a href="#">arxiv</a> )	
	E. Hess-Childs, K. Rowan. <b>Higher-order propagation of chaos in <math>L^2</math> for interacting diffusions</b> . Probability and Mathematical Physics. (2025 <a href="#">article</a> )	
	A. Burchard, R. Choksi, E. Hess-Childs. <b>On the strong attraction limit for a class of nonlocal interaction energies</b> . Nonlinear Analysis, 198, 111844, 12 (2020 <a href="#">article</a> )	
<u>Honours and</u>	2024	Kurt O. Friedrichs Prize
<u>Awards</u>	2022-2023	Isaac Barkey and Ernesto Yhap Fellowship
	2021-2024	Alexander Graham Bell CGS-D (Declined)
	2021-2024	Postgraduate Scholarships-Doctoral
	2019-2025	Eckhardt Fellowship (Declined)
	2019	Anna and Robert Skomoroski Prize
	2016-2019	Dean’s Honour List
	2018-2019	Herbert J. Brennen Scholarship
	2018-2019	Faculty of Science Scholarship
	2018	Undergraduate Student Research Award
	2017-2018	Edward Beatty Scholarship in Math
	2017-2018	Robert Bruce Scholarship
	2017	Undergraduate Student Research Award
	2016-2017	Garnet A. Woonton Prize in Physics
	2016-2017	Faculty of Science Scholarship
	2015-2016	J W McConnell Scholarship
		New York University
		New York University
		NSERC
		NSERC
		University of Chicago
		McGill University
		McGill University
		McGill University
		McGill University
		NSERC
		McGill University
		McGill University
		NSERC
		McGill University
		McGill University
		McGill University

## Talks

*A total anomalous dissipator.* Probability Seminar, University of Pennsylvania and Temple University. (March 2024)

*Large deviation principles for singular Riesz-type diffusive flows.* Probability Seminar, University of Toronto. (November 2024)

*Universal Asymptotic Total Dissipation.* Graduate Student and Postdoc Seminar, Carnegie Mellon University. (November 2024)

*Higher-order Corrections to Propagation of Chaos for Mean-field Interacting Diffusions.* Analysis Research Interaction Team Seminar, Beijing International Center for Mathematical Research. (May 2024)

*Higher-order corrections to propagation of chaos for mean-field interacting diffusions.* Center for Nonlinear Analysis Seminar, Carnegie Mellon University. (March 2024)

*Propagation of chaos from the perspective of perturbation theory.* 2023 Winter Meeting of the Canadian Mathematical Society. (December 2023)

*Large deviation principles for interacting diffusions.* Student Probability Seminar, Courant Institute. (September 2023)

*Large deviation principles and Hamilton-Jacobi equations.* Student Probability Seminar, Courant Institute. (March 2022)

*An introduction to Coulomb Gases.* Student Probability Seminar, Courant Institute (October 2020)

*Nearest neighbour percolation and extensions.* Student Probability Seminar, Courant Institute. (February 2020)

*Introduction to Spin Glass.* Seminars in Undergraduate Mathematics in Montreal. (January 2018)

## Teaching

Instructor for Continuous Time Finance, CMU. (Spring 2025)

Instructor for Differential and Integral Calculus, CMU. (Fall 2024)

Teaching Assistant for Honours Analysis I, NYU. (Spring 2024)

Teaching Assistant for Analysis I, NYU. (Spring 2023)

Teaching Assistant for Probability and Statistics, NYU. (Fall 2022)

Teaching Assistant for Analysis I, NYU. (Spring 2022)

Teaching Assistant for the PIMS-CRM Summer School in Probability. (Summer 2021)

Professional  
Activities

Co-organizer, Center for Nonlinear Analysis Seminar. (2024-present)

Co-organizer, Courant Student Probability Seminar. (Spring 2020-Spring 2024)

Co-organizer, Graduate Student/Postdoc Seminar. (2021-2022)

President, Courant Student Organization. (2021-2022)

Vice-President, Courant Student Organization. (2020-2021)

Referee

Communications on Pure and Applied Mathematics (CPAM), Probability and Mathematical Physics (PMP), SIAM Journal on Mathematical Analysis (SIMA), Potential Analysis