Elias Hess-Childs

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Carnegie M Postdoctor	negie Mellon University, Dept. of Mathematical Sciences2024-presentostdoctoral Associate2024-present		
<b>New York University</b> , Courant Institute Ph.D. in Mathematics, awarded September 2024 Supervisor: Sylvia Serfaty			2019-2024
<b>McGill University</b> B.S. in Honours Mathematics, awarded May 2019 First Class Honours			2015-2019
E. Hess-Child concentratio	ls, R. Raquépas, K. Ro <b>n</b> . Submitted. (2025 <u>ar</u>	owan <b>. Divergence-free drif</b> <u>xiv</u> )	its decrease
E. Hess-Child <u>arxiv</u> )	ls, K. Rowan. <b>A unive</b>	rsal total anomalous dissi	pator. Submitted. (2025
E. Hess-Childs. Large deviation principles for singular Riesz-type diffusive flows. Submitted. (2024 <u>arxiv</u> )			
E. Hess-Childs, K. Rowan. Higher-order propagation of chaos in $L^2$ for interacting diffusions. Probability and Mathematical Physics. (2025 <u>article</u> )			
A. Burchard, nonlocal inte	R. Choksi, E. Hess-Ch praction energies. Nor	uilds. <b>On the strong attrac</b> ulinear Analysis, 198, 11184	tion limit for a class of 44, 12 (2020 <u>article</u> )
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	US/Canadian 5000 Forbes A Pittsburgh, PA <b>Carnegie M</b> Postdoctor <b>New York U</b> Ph.D. in M Supervisor <b>McGill Unit</b> B.S. in Ho First Class E. Hess-Child <b>concentratio</b> E. Hess-Child Submitted. (2) E. Hess-Child Submitted. (2) E. Hess-Child <b>diffusions.</b> Pr A. Burchard, <b>nonlocal inte</b> 2024 2022-2023 2021-2024 2021-2024 2021-2024 2019-2025 2019 2016-2019 2018-2019 2018-2019 2018-2019 2018-2019 2016-2017 2016-2017 2016-2017 2016-2017	<ul> <li>US/Canadian Citizen</li> <li>5000 Forbes Ave, WEH 7124</li> <li>Pittsburgh, PA 15213-3890</li> <li><b>Carnegie Mellon University</b>, De Postdoctoral Associate</li> <li><b>New York University</b>, Courant I Ph.D. in Mathematics, awarded S Supervisor: Sylvia Serfaty</li> <li><b>McGill University</b> B.S. in Honours Mathematics, aw First Class Honours</li> <li>E. Hess-Childs, R. Raquépas, K. Ro concentration. Submitted. (2025 ar</li> <li>E. Hess-Childs, K. Rowan. A unive arxiv)</li> <li>E. Hess-Childs. Large deviation pr Submitted. (2024 arxiv)</li> <li>E. Hess-Childs, K. Rowan. Higher- diffusions. Probability and Mathem</li> <li>A. Burchard, R. Choksi, E. Hess-Childs I 2022-2023 Isaac Barkey and E 2021-2024 Alexander Graham 2021-2024 Postgraduate Schol- 2019 Dean's Honour List 2016-2019 Dean's Honour List 2018-2019 Herbert J. Brennen 2018-2019 Faculty of Science 5 2018 Undergraduate Stud 2017-2018 Edward Beatty Sch 2017-2018 Robert Bruce Schol 2017 Undergraduate Stud 2017-2018 Robert Bruce Schol 2017 Undergraduate Stud 2017-2018 Robert Bruce Schol 2017 Undergraduate Stud 2016-2017 Garnet A. Woonton 2016-2017 Garnet A. Woonton</li> </ul>	<ul> <li>US/Canadian Citizen Phone Number: (646)</li> <li>5000 Forbes Ave, WEH 7124 Email: <u>chesschi@and</u></li> <li>Pittsburgh, PA 15213-3890 Website: <u>https://math.</u></li> <li><b>Carnegie Mellon University</b>, Dept. of Mathematical Science Postdoctoral Associate</li> <li><b>New York University</b>, Courant Institute Ph.D. in Mathematics, awarded September 2024 Supervisor: Sylvia Serfaty</li> <li><b>McGill University</b> <ul> <li>B.S. in Honours Mathematics, awarded May 2019</li> <li>First Class Honours</li> </ul> </li> <li>E. Hess-Childs, R. Raquépas, K. Rowan. <b>Divergence-free drift concentration</b>. Submitted. (2025 <u>arxiv</u>)</li> <li>E. Hess-Childs, K. Rowan. <b>A universal total anomalous dissi arxiv</b>)</li> <li>E. Hess-Childs, K. Rowan. <b>A universal total anomalous dissi arxiv</b>)</li> <li>E. Hess-Childs, K. Rowan. <b>Higher-order propagation of chard diffusions</b>. Probability and Mathematical Physics. (2025 <u>articles</u> A. Burchard, R. Choksi, E. Hess-Childs. <b>On the strong attract nonlocal interaction energies</b>. Nonlinear Analysis, 198, 11184</li> <li>2024 Kurt O. Friedrichs Prize</li> <li>2022-2023 Isaac Barkey and Ernesto Yhap Fellowship 2021-2024 Alexander Graham Bell CGS-D (Declined) 2021-2024 Alexander Graham Bell CGS-D (Declined) 2021-2024 Postgraduate Scholarships-Doctoral 2019-2025 Eckhardt Fellowship (Declined) 2019 Dean's Honour List 2018-2019 Dean's Honour List 2018-2019 Herbert J. Brennen Scholarship 2018-2019 Faculty of Science Scholarship 2018-2019 Faculty of Science Scholarship 2018 Undergraduate Student Research Award 2017-2018 Robert Bruce Scholarship in Math 2017-2016 J W McConnell Scholarship</li> </ul>

TalksA total anomalous dissipator. Probability Seminar, University of Pennsylvania and<br/>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)

<u>Teaching</u> 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	Co-organizer, Center for Nonlinear Analysis Seminar. (2024-present)			
<u>Activities</u>	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)			
<u>Referee</u>	Communications on Pure and Applied Mathematics (CPAM), Probability and			

Mathematical Physics (PMP), SIAM Journal on Mathematical Analysis (SIMA), Potential Analysis