Tom Potter

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Nationality

Canadian

Education

2015–2025	**Ph.D.** Mathematics, Dalhousie University
	Thesis: Subspaces of $L^2(\mathbb{R}^n)$ Invariant Under Crystallographic Shifts
	Supervisor: Dr. Keith Taylor
2010–2014	**M.Sc.** Mathematics, Dalhousie University
	Thesis: The Bochner Integral and an Application to Singular Integrals.
	Supervisor: Dr. Keith Taylor
2004–2009	**B.Sc. Honours** Mathematics, Dalhousie University
	Thesis: Schwartz Functions, Tempered Distributions, and the Hilbert Transform.
	Supervisor: Dr. Andrea Fraser

Awards and Recognitions

NSERC CGS-M	2010	Alexander Graham Bell Canada Graduate Scholarship
Ralph & Frances Lewis Jeffery Scholarship	2009	This scholarship was awarded upon completion of my B.Sc. in Mathematics at Dalhousie. This scholarship is awarded annually to a student who has completed the final year of an honours degree in Mathematics, and who has maintained at least a second-class standing during the first three years of the class.
NSERC USRA	2009	Undergraduate Student Research Award, under the supervision of Dr. Andrea Fraser at Dalhousie University. Continued my studies in functional analysis, with some self-directed study in differential geometry of curves and surfaces.
NSERC USRA	2008	Undergraduate Student Research Award, under the supervision of Dr. Andrea Fraser at Dalhousie University. This work set the stage for my honours thesis, providing me the foundations from measure theory, Fourier analysis, point set topology, and distribution theory.

Teaching Experience

Courses Taught

Winter 2026		
Assistant Professor, Cape Breton University	Math 1109	Introductory Statistics I
	Math 1105	Calculus I
	Math 1109L	Introductory Statistics I Lab
	Math 2106L	Elementary Mathematical Statistics I Lab
Fall 2025		
Assistant Professor, Cape Breton University	Math 1109	Introductory Statistics I
	Math 2409	Introductory Statistics II
	Math 1101	Calculus with Precalculus I
Summer 2025		
Lecturer, Cape Breton University	Math 2409	Introductory Statistics II
Winter 2025		
Lecturer, Cape Breton University	Math 1109	Introductory Statistics I (two sections)
	Math 1203	Calculus with Precalculus II
Fall 2024		
Lecturer, Cape Breton University	Math 1211	Introductory Statistics II
	Math 1101	Calculus with Precalculus I
	Math 1105	Calculus I
Summer 2024		
Instructor, Dalhousie University	Math 2002	Intermediate Calculus II
Summer 2023		
Instructor, Dalhousie University	Math 2002	Intermediate Calculus II
Summer 2022		
Instructor, Dalhousie University	Math 2002	Intermediate Calculus II
Summer 2021		
Instructor, Dalhousie University	Math 2002	Intermediate Calculus II
Summer 2020		
Instructor, Dalhousie University	Math 2002	Intermediate Calculus II
Summer 2019		
Instructor, Dalhousie University	Math 1115	Mathematics for Commerce
Summer 2018		
Instructor, Dalhousie University	Math 2002	Intermediate Calculus II

TA and Other Teaching Experience

- More than a decade of teaching assistant experience: leading tutorials at Dalhousie University, TA at Help Desk, Grading exams, projects, tests, quizzes.

- More than a decade of experience private tutoring: tutored courses in Calculus, Linear Algebra, Math for Commerce, Math for Engineering, Math for Life Sciences, High School Math, Differential Equations, Functional Analysis.
- See Outreach section for additional Teaching Experience in the local school community.

Publications

- With Keith Taylor: *Subspaces of $L^2(\mathbb{R}^n)$ Invariant Under Shifts by a Crystal Group* (Submitted)

Outreach and Service

Open House at CBU	October 2025	Prepared and ran activities for the open house booth for the department of Math, Physics, and Geology.
Science Atlantic Conference	October 2025	Assisted with invigilation, chaired a session, made arrangements with IT support, graded, and helped tally grades for problems. Also helped direct participants between locations, and was available as needed for 2 days.
Math Outreach to Local Schools in Cape Breton	Winter and Spring 2025	February 4: Visited Sydney Academy for math outreach activities with about 12 small groups of students. April 9: Visited Memorial High School for math outreach activities with about 8 small groups of students. April 14: Visited SAERC High School for math outreach activities with about 8 small groups of students. April 29, May 1, May 2: Planned and co-facilitated Math and Probability activities for 3 groups of local students each morning. These students visited CBU as part of a recruitment/outreach endeavor. May 7: Visited Allison Bernard School for math outreach activities with several groups of students.
Presenter and Assistant at Dalhousie Indigenous Math Camp	June 2024	Worked closely with a group of Indigenous students (Grades 6 to 9) for four days. This included creating and giving an interactive math presentation on probability, and helping facilitate other presentations given faculty members. The camp was hosted by our department in coordination with educators and an elder from the Indigenous community.
Coordinator of Indigenous Afterschool Program	May 2023-May 2024	Along with Mandy-Lynne Markie, a Mi'kmaw/Indigenous Social support worker, and Dr. Dorette Pronk (Dalhousie), I helped start a pilot program for Indigenous students at Ridgecliff Junior High and Bayview High. This was done with the approval of the principal and the parents. Our goal was to create a Two-Eyed Seeing approach to help support local Indigenous students in math. We met regularly with students at their school and provided tutoring for math, while learning about their goals and interests.

Coordinator of Local Canadian Math Kangaroo Contest	2023 and 2024	With the help of Dr. Dorette Pronk (Dalhousie), I coordinated the Math Kangaroo Contest for the Halifax site for two consecutive years. This included advertising, planning, two practice sessions, and the awards ceremonies. In 2024, the contest had 160 students.
Program Director at NS Math Circles	August 2020-July 2024	• Running all aspects of the Nova Scotia Math Circles program. • Trained and managed a team of 15 to 25 people. Managed the timesheets and pay issues for this team. • Relationship-building and collaborating with other outreach programs, such as Imhotep's Legacy Academy, WISEatlantic, University of Waterloo Math Circles, Julia Robinson Math Festival. • Diversity work: this included developing a pilot afterschool program for Indigenous students at two local schools. Also coordinated visits for students of African Ancestry at Dalhousie, with role model presenters. I also organized Math Circles presentations for local groups of Sparks and Embers, led by female presenters. • Kept detailed records for reports and promotional purposes. Composed annual reports for department and sponsors. • Coordinated and arranged visits for hundreds of classrooms per year, including schools in remote districts. Kept detailed records of all these presentations, including teacher feedback. During my last year as director, we visited 427 classrooms. • Coordinated special outreach presentations for homeschool groups, private schools, and Girl Guides. • Developed, prepared, and ran events for the Math Department at Dalhousie: Open House, Dal Discovery Days. • Planned and organized 8 to 10 evening events at Dalhousie each year, including vetting presentations, ordering food, room bookings. These events were aimed at Jr High and Highschool students from around the province or further abroad, who could attend in person or via zoom. The presentations were designed to be interactive, and were given by graduate students, advanced undergraduate students, postdoctoral researchers, faculty member at Dalhousie and neighbouring universities, former Math Circles directors, and teachers. • Prepared material for various events such as South Shore Science Fair, Family STEAM Day at MSVU, NMES STEM night, KCA STEAM Day. • Updated and maintained the NS Math Circles website (HTML, CSS); created all new, responsive webforms.

Presenter and Content Developer at NS Math Circles	September 2018-July 2020	• Visited Schools around Nova Scotia to give interactive and meaningful presentations involving Mathematics. This commitment involved 200-260 hours per academic year. • Created and designed content for these presentations. • Helped boost confidence and foster enthusiasm for math by giving fun, hands-on presentations that appealed to a variety of learning styles.

Talks Given

- *NS Math Circles: About Our Program*. Given at annual Mathematics Teachers Association Conference. October 2023.
- *Dots and Boxes*. Given at the September 2023 Math Circles Monthly Event.
- *Exploring Probability: Part 2 (with Cali Park)*. Given at the December 2022 Math Circles Monthly Event.
- *Exploring Probability: Part 1 (with Cali Park)*. Given at the November 2022 Math Circles Monthly Event.
- *NS Math Circles: About Our Program*. Presentation with Arvin Vaziry. Given at annual Mathematics Teachers Association Conference. October 2022.
- *NS Math Circles: About Our Program*. Guest lecture for Dr. Asmita Sodhi's EDUC 403 class at St.FX. July 2022.
- *Subspaces of $L^2(\mathbb{R}^n)$ Invariant Under Crystallographic Shifts*. Given online at the Canadian Abstract Harmonic Analysis Symposium, June 18, 2022.
- *Toads and Frogs*. Given at October 2021 Math Circles Monthly Event.
- *Tessellations and Symmetry*. Given at the November 2021 Math Circles Monthly Event.
- *Interactive Problem Solving*. Given at the November 2020 Math Circles Monthly Event.
- *Path-connectedness of Sublevel, Level, and Superlevel Sets of Eigengap Functions in the Space of Hermitian Matrices*. Given at the Honours Seminar for Dalhousie Department of Mathematics and Statistics, on March 21, 2013.
- *Tempered Distributions and the Hilbert Transform*. Given at Canadian Undergraduate Math Conference in 2009.

Other

Fall 2018 to Summer 2019

Dalhousie Math & Stats Graduate Student Society	Vice President Internal (Treasurer): Ensured our books passed audit and kept us ratified. Attended meetings and kept minutes, engaged in fundraising as well as planning and hosting events.

Fall 2017 to Summer 2018

Dalhousie Math & Stats Graduate Student Society	Math Ph.D. Representative: Represented the interests of the math graduate students in the department. Attended meetings, engaged in fundraising as well as planning and hosting events.

January 1 to Aug 31, 2013

Research Assistant at Dalhousie Physics Department	Worked on mathematical problems pertaining to Adiabatic Quantum Computing, under the supervision of Dr. Jordan Kyriakidis.

Last updated: January 16, 2026