

CLÉMENT FORTIN

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🌐 <https://clementfortin.github.io/>

📍 Montréal, Canada

EDUCATION

PhD Physics at McGill University in Montréal, Canada Supervisors: Prof. Tami Pereg-Barnea, Prof. Kai Wang	<i>Sep. 2023 –</i>
MSc Maths at McGill University in Montréal, Canada Supervisor: Prof. Vojkan Jakšić	<i>May 2022 – May 2023</i>
Visiting MSc Student at CY Institute for Advanced Studies in Cergy-Pontoise, France Supervisor: Prof. Armen Shirikyan	<i>May 2022 – Jul. 2022</i>
BSc Physics and Maths Joint Honours at McGill University in Montréal, Canada	<i>Sep. 2019 – May 2022</i>

RESEARCH INTERESTS

- Non-Hermitian systems, quantum condensed matter, quantum photonics.

PUBLICATIONS

Research

1. C. Fortin, K. Wang and T. Pereg-Barnea, *Unifying Anderson transitions and topological amplification in non-Hermitian chains*, Phys. Rev. B **112**, 174208 (2025). arXiv:2509.05842
2. C. Fortin, K. Wang and T. Pereg-Barnea, *Topological amplification of the bosonic Kitaev chain with nonuniform loss*, Phys. Rev. B **112**, 064208 (2025). arXiv:2412.09744
3. K.E.M. Church and C. Fortin, *Computer-assisted methods for analyzing periodic orbits in vibrating gravitational billiards*, Int. J. Bifurcation Chaos (2021). (Selected as a **Feature Article**)

Thesis

C. Fortin, *Central Limit Theorem and Large Deviations of the Maximum Likelihood Estimator*. Master's thesis. McGill University (2023).

PRESENTATIONS

- APS Global Physics Summit 2025 in Anaheim, United States	<i>Mar. 2025</i>
- CONFETI 2025, INTRIQ in Bromont, Canada	<i>Jan. 2025</i>
- Institute of Photonic Sciences (ICFO) in the Quantum Optics Theory group in Barcelona, Spain	<i>Oct. 2024</i>

POSTER SESSIONS

- Beyond Linearity: Frontiers in Non-Hermitian Many-Body Physics 2025 in Erice, Italy	<i>Dec. 2025</i>
- MaQTech Winter School 2025 in Orford, Canada	<i>Nov. 2025</i>
- Fall 2025 INTRIQ meeting in Bromont, Canada	<i>Nov. 2025</i>
- Emerging Quantum Phenomena (RQMP) at the Institut Quantique in Sherbrooke, Canada	<i>Oct. 2025</i>
- Grande Conférence de l'Institut Courtois in Montréal, Canada	<i>Oct. 2025</i>
- International Workshop on Topological Photonics and Beyond 2025 in Tianjin, China	<i>Sep. 2025</i>
- ICTP Conference on Advances in Topological Condensed Matter in Trieste, Italy	<i>Nov. 2024</i>
- Fall 2024 INTRIQ meeting in Bromont, Canada	<i>Oct. 2024</i>
- MaQTech Annual Retreat in Ottawa, Canada	<i>Jul. 2024</i>
- PQS2D Annual Retreat in Ottawa, Canada	<i>Jul. 2024</i>

SCIENTIFIC ARTICLE REVIEWING

Journals: Physical Review Letters, Physical Review Research, Physical Review A, Physical Review B.

AWARDS

- **Best Poster Award** at Topological Photonics and Beyond 2025, Nankai University: ¥1,000 CNY *Sep. 2025*
Awarded by Nature Reviews Electrical Engineering
- **Chalk Rowles fellowship**: \$11,120 CAD *Sep. 2025*
McGill Faculty of Science fellowship awarded to two graduate students in physics.
- **Emily Ross Crawford scholarship**: \$1,000 CAD *Sep. 2020*
McGill Faculty of Science scholarship awarded to undergraduate candidates of high academic merit.

RELEVANT EXPERIENCE

Teaching Assistantships (McGill University)

Preparation of tutorial sessions. Substituting lectures. Holding office hours. Marking of assignments and examinations.

List of courses:

- PHYS 230 – Dynamics of Simple Systems *Sep. 2025 – Dec. 2025*
- PHYS 457 – Honours Quantum Mechanics II *Jan. 2025 – May 2025*
- PHYS 551 – Quantum Theory *Sep. 2024 – Dec. 2024*
- PHYS 457 – Honours Quantum Mechanics II *Jan. 2024 – May 2024*
- PHYS 352 – Honours Electromagnetic Waves *Sep. 2023 – Dec. 2023*
- MATH 141 – Calculus 2 *Jan. 2023 – May 2023*
- MATH 455 – Honours Analysis 4 *Jan. 2023 – May 2023*
- MATH 454 – Honours Analysis 3 *Sep. 2022 – Dec. 2022*

Teaching Assistantships (CY Institute for Advanced Studies)

Preparation of weekly lectures. Marking assignments. List of courses:

- Information-theoretic notions of entropy *May 2022 – Jul. 2022*
- Complex Analysis *May 2022 – Jul. 2022*
- Finite State Markov Chains *May 2022 – Jul. 2022*

CPM student committee (McGill University)

Sep. 2025 –

- Event planner for the CPM (Centre for the Physics of Materials)

Volunteer for the Physics & TSI Outreach group (McGill University)

Sep. 2023 –

- Helping run outreach activities for the general public and prospective graduate students.

SciLearn Peer Collaboration Teaching Assistant (McGill University)

Jan. 2023 – May 2023

- Providing guidance to undergraduate students in mathematics.

UNDERGRADUATE RESEARCH EXPERIENCE

McGill University, Montréal, Canada

May 2021 – Aug. 2021

Supervisor: Prof. Vojkan Jakšić

- Quantum information theory and parameter estimation of classical Markov chains.

McGill University, Montréal, Canada

Sep. 2020 – Dec. 2020

Supervisor: Prof. Daryl Haggard

- Data analysis of the supermassive black hole Sgr. A* using the Bayesian Blocks algorithm.

McGill University, Montréal, Canada

May 2020 – Aug. 2020

Supervisor: Prof. Jean-Philippe Lessard

- Computer-assisted methods for dynamical systems.

PROGRAMMING

Languages: Mathematica, Python, MATLAB, Bash, LaTeX.

LANGUAGES

Fluent: French, English. **Intermediate:** Spanish, German. **Beginner:** Serbo-Croatian.