

EDUCATION

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

RESEARCH INTERESTS

- Topological band theory, non-Hermitian and many-body systems.
- Quantum photonics, quantum-enhanced sensing, disordered quantum systems.

PUBLICATIONS

Research

- C. Fortin, K. Wang and T. Pereg-Barnea, *Topological amplification of the bosonic Kitaev chain with nonuniform loss*, [arXiv](#) preprint (2024).
- K.E.M. Church and C. Fortin, *Computer-assisted methods for analyzing periodic orbits in vibrating gravitational billiards*, Int. J. Bifurcation Chaos (2021).

Thesis

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

PRESENTATIONS AND POSTER SESSIONS

- APS Global Physics Summit 2025 in Anaheim, United States: <i>Non-Hermitian topological phase transition of the bosonic Kitaev chain.</i>	Mar. 2025
- CONFETI 2025, INTRIQ in Bromont, Canada: <i>Non-Hermitian topology in bosonic systems.</i>	Jan. 2025
- ICTP Conference on Advances in Topological Condensed Matter in Trieste, Italy: <i>Non-Hermitian topological phase transition of the bosonic Kitaev chain.</i>	Nov. 2024
- Institute of Photonic Sciences (ICFO) in the Quantum Optics Theory group in Barcelona, Spain: <i>Topological amplification in the bosonic Kitaev chain.</i>	Oct. 2024
- Fall 2024 INTRIQ meeting in Bromont, Canada: <i>Non-Hermitian topological phase transition of the bosonic Kitaev chain.</i>	Oct. 2024
- MaQTech Annual Retreat in Ottawa, Canada: <i>Non-Hermitian topology of the bosonic Kitaev chain.</i>	Jul. 2024
- PQS2D Annual Retreat in Ottawa, Canada: <i>Non-Hermitian topology of the bosonic Kitaev chain.</i>	Jul. 2024

AWARDS

Department of Physics, McGill University	
- Chalk-Rowles fellowship (\$11,120)	Sep. 2025 – Aug. 2026
- Emily Ross Crawford scholarship (\$1,000)	Sep. 2020 – May 2021

SCIENTIFIC ARTICLE REVIEWING

Journals: Physical Review Letters, Physical Review A.

UNDERGRADUATE RESEARCH EXPERIENCE

- McGill University**, Montréal, Canada *May 2021 – Aug. 2021*
Supervisor: Prof. Vojkan Jakšić
- Quantum information theory, 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.

RELEVANT EXPERIENCE

- Teaching Assistantships (McGill University)**
Preparation of tutorial sessions. Substituting lectures. Holding office hours. Marking of assignments and examinations.
List of courses:
- 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*
- SciLearn Peer Collaboration Teaching Assistant (McGill University)** *Jan. 2023 – May 2023*
- Providing guidance to undergraduate students in mathematics.

PROGRAMMING

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

LANGUAGES

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