

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 systems, disordered quantum systems.
- Quantum photonics, quantum-enhanced sensing.

PUBLICATIONS

Research

- C. Fortin, K. Wang and T. Pereg-Barnea, *Non-Hermitian topological phase transition of the bosonic Kitaev chain*, [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: *Non-Hermitian topological phase transition of the bosonic Kitaev chain* Mar. 2025
- CONFETI 2025, INTRIQ: *Non-Hermitian topology in bosonic systems*. Jan. 2025
- ICTP Conference on Advances in Topological Condensed Matter: *Non-Hermitian topological phase transition of the bosonic Kitaev chain*. Nov. 2024
- Fall 2024 INTRIQ meeting: *Non-Hermitian topological phase transition of the bosonic Kitaev chain*. Oct. 2024
- MaQTech Annual Retreat: *Non-Hermitian topology of the bosonic Kitaev chain*. Jul. 2024
- PQS2D Annual Retreat: *Non-Hermitian topology of the bosonic Kitaev chain*. Jul. 2024

AWARDS

- | | |
|---|----------------------|
| Department of Physics, McGill University | Sep. 2022 – May 2025 |
| - Graduate Excellence Awards | |
| - Emily Ross Crawford Scholarship | 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

Lecturer (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, Bash, LaTeX.

LANGUAGES

Fluent: French, English.

Intermediate: Spanish, German.

Beginner: Serbo-Croatian.