

## EDUCATION

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

## RESEARCH INTERESTS

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

## PUBLICATIONS

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### 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

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- 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

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| <b>Department of Physics, McGill University</b> | Sep. 2022 – May 2025 |
| - Graduate Excellence Awards                    |                      |
| - Emily Ross Crawford Scholarship               | Sep. 2020 – May 2021 |

## SCIENTIFIC ARTICLE REVIEWING

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**Journals:** Physical Review Letters, Physical Review A.

## UNDERGRADUATE RESEARCH EXPERIENCE

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- 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

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### 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)

- Providing guidance to undergraduate students in mathematics. *Jan. 2023 – May 2023*

## PROGRAMMING

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

## LANGUAGES

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**Fluent:** French, English.

**Intermediate:** Spanish, German.

**Beginner:** Serbo-Croatian.