

Joël De Leon Mayeu

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ABOUT ME

I am a passionate, hard-working and very involved physics student. I'm currently in the 1st year of my MSc degree under the supervision of Pr. Tami-Pereg Barnea at McGill university. My research thesis will be on the subject of fermi arcs and effective surface models in Weyl semi-metals.

HONORS & AWARDS

Physics Department Engagement Scholarship - University of Montreal 2023

Laurier de Bronze - Collège de l'Assomption 2020

HOBBIES & INTERESTS

-Improvisation
-Cooking
-Cycling
-Magic the Gathering and other board games

EDUCATION

Cégep Marie-Victorin - DEC in natural sciences

2022-2023

University of Montreal - B.Sc. in physics

2020-December 2023

GPA: 4.195 out of 4.3

RESEARCH EXPERIENCE

Laboratory of Pr. Philippe St-Jean - Research Intern

Summer 2022

- Simulation of topological materials using optical fiber loops
 - Study of the SSH model
 - Handling of tools such as oscilloscopes, waveform generators and high-precision lasers

Research team of Pr. Richard MacKenzie - Research Intern

2023

- Qubit probe for edge states in an SSH chain
- Effects of soliton inclusion on transmission
 - Study of the SSH model
 - Usage of numerical methods to find solutions
 - Usage of Green's functions to find analytical solutions
 - Study of transmission in an SSH chain with a soliton

WORK EXPERIENCE

University of Montreal - Teaching assistant

2022-2023

- Relativity 1 (Autumne 2022 and 2023)
- Classical mechanics 1 (Winter 2023)

FAECUM (Fédération des Associations Étudiantes du Campus de l'Université de Montréal) - Member of the PHARE (Programme contre le Harcèlement et pour des Actions Responsables et Éclairées)

2022-2023

- Prevention of sexual harassment in a student environment
- Security assistance in the context of festive events

Commission scolaire de Montréal - High school teacher

2024

- Math teacher for two "Classes d'accueil"
- Science teacher for a sec. 4 class

McGill University - Teaching assistant

2024

- Teaching assistant for PHYS 131 in fall 2024

VOLUNTEERING

Physum - Student Life Coordinator

2021-2022

- Weekly organization of activities
- Budget and inventory management
- Communication with members

Café La Planck - Coordinator of volunteers

2022-2023

- Communication with volunteers
- Schedule creation
- Budget management, money entry

Café La Planck - Treasurer

2023-2024

- Budget management, money entry
- Payment of bills
- Communication with suppliers

CCUWiP 2024 - Webmaster

2023-2024

- Fundraising for CCUWiP
- Maintenance of the conference's website