AIDAN SIRBU

E-mail: aidan.sirbu@mila.quebec | **Phone:** +1 (519) 890-8269 | **Address:** 1-1925 rue Alexandre-DeSève, Montreal, QC, H2L 2W2 | **Website:** aidansirbu.com | **LinkedIn:** linkedin.com/in/aidansirbu | **GitHub:** github.com/asirbu77

EDUCATION

Western University — London, ON
B.Sc. Honours (Western Scholar), Physics & Astronomy — 2019-2023
Specialization: Medical Physics
Thesis: Quasi-Quantum Brain Energetics
Supervisor: Dr. Andrea Soddu
Graduated with Distinction

McGill University — Montreal, QC
M.Sc., Computer Science (In progress) — 2025-Present
Supervisor: Dr. Blake Richards

HONOURS & SCHOLARSHIPS

Master's Research Scholarship - Nature and Technologies ($20,000 per year)	2025-2026
Recruitment Award ($5,000), McGill IPN	2024
J.B Bancroft Science Prize and Medal ($250), Western University	2023
Western Gold Medal Honours Specialization in Medical Physics, Western University	2023
Gonfalon Bearer for the Faculty of Science's Graduating Class, Western University	2023
Undergraduate Student Research Award ($6,000), NSERC	2023
S.R. Valluri Scholarship in Mathematical or Theoretical Physics ($1000), Western Uni.	2022
Rise-Globalink Research Award ($6,000), Mitacs & DAAD	2022
Mary Ann Underwood Small Global Opportunities Award ($2000), Western University	2022
International Learning Award ($1,000), Western University	2022
In-Course Scholarship Years III & IV ($1,400), Western University	2021/2022
Undergraduate Student Research Award ($6,000), NSERC	2021
John Gordon McIntosh Scholarship for Second Year Physics ($500), Western University	2021
Dean's Honour List for four consecutive years, Western University	2019-2023
The Western Scholarship of Excellence ($2,000), Western University	2019

PUBLICATIONS

Zhang, C. Y.*, Yang, Y.*, **Sirbu, A.** *et al.* MIMIC-MJX: Neuromechanical emulation of animal behavior. *arXiv* 2511.20532 (2025). https://doi.org/10.48550/arXiv.2511.20532

Ellerman, F.*, **Sirbu, A.***, Brahms, A. *et al.* Spying on parahydrogen-induced polarization transfer using a half-tesla benchtop MRI and hyperpolarized imaging enabled by automation. *Nat Commun* **14**, 4774 (2023). https://doi.org/10.1038/s41467-023-40539-9

***Co-first contribution**

INVITED TALKS

Embodied Agents for NeuroAI: Building brain inspired foundation models for motor control.
ARNI Annual Retreat 2025, Columbia University, New York City, NY. Nov 2025

RESEARCH EXPERIENCE

Western University London, ON
Research Assistant, Physics & Astronomy May 2023 – Aug 2023
Principle Investigator: Dr. Andrea Soddu

- Formulated my own independent research project.
- Designed and implemented large, scalable spiking neural networks based on Izhikevich's spiking neuron model in Python.
- Developed a novel learning rule specifically designed to promote pattern encoding in spiking networks.
- Built a foundational understanding of artificial neural networks.

Universitätsklinikum Schleswig-Holstein & Kiel University Kiel, Germany
Research Assistant, Section Biomedical Imaging May 2022 – Aug 2022
Principle Investigator: Dr. Jan-Bernd Hövener

- Designed, built, and ran a portable, fully automated parahydrogen-induced polarizer.
- Leveraged skills in MATLAB to interface with and program pulse sequences in a 0.5T tabletop MRI machine.
- Developed data analysis tools for monitoring the evolution of spin order distribution in real-time.
- Co-authored a manuscript and familiarized myself with the process of peer-revision.

Western University London, ON
Research Assistant, Physics & Astronomy May 2021 – April 2022
Principle Investigator: Dr. Alexei Ouriadov

- Prototyped and ran a stopped-flow xenon polarizer.
- Measured Xe polarization using a low-field pre-clinical MRI.
- Performed IDL and MATLAB based k-space simulations.
- Audited over 60 hours of lectures on NMR technology.

LEADERSHIP & OUTREACH

Physics Undergraduate Conference Committee (PhUnC) 2022-2023
Presentation Coordinator, Western University

Physics Undergraduate Conference Committee (PhUnC) 2021-2022
Outreach, Western University