

VIVIANE AUBIN

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Languages:

French — native
English — proficient
Spanish — proficient
Norwegian — beginner

EDUCATION

PhD in Electric Power Engineering 2022 - 2026

Norwegian University of Science and Technology (NTNU)

- Thesis: Utilization of flexible hydropower in 100 % renewable power systems

Master of Science in Energy Engineering 2018 - 2020

Polytechnique Montréal

GPA: 4.00/4

- Thesis: Hydropower modelling for integration of variable renewable energy sources

Bachelor of Mechanical Engineering 2014 - 2018

Polytechnique Montréal

GPA: 3.95/4

- Student exchange at Universidad Politécnica de Madrid — winter 2017

WORK EXPERIENCE

Engineer — energy modelling, optimization, and analysis 2020 - 2022

Hydro-Québec, member of the *Ordre des ingénieurs du Québec* (Quebec Order of Engineers)

Research intern — energy modelling, optimization, and analysis 2019 - 2020

Hydro-Québec

Teaching Assistant — End of studies project with a focus on sustainable development 2018 - 2021

Polytechnique Montréal

EXTRACURRICULAR ACTIVITIES AND VOLUNTEERING

Member of the Youth Working Group for the Green Economy Plan 2019

Québec Ministry of Environment and Fight against Climate Change (MELCC) (Canada)

- Writing of a report with recommendations for the province of Québec's Green Economy Plan 2020-2030

Member of Project Esteban, Solar Car 2014 - 2019

Polytechnique Montréal

- **Business, Comms and Operations Director** 2017-2018, **Treasurer** 2015-2016
- Member of the **Mechanical Team** 2014-2018
- Design, manufacturing, promotion of a solar car, international competitions (2015, 2016, 2018)
- Conferences in schools and summer camps (~40 between 2015 and 2019)

Member of the Operations Team of Poly-Monde 2018, industrial mission to India 2017 - 2018

Polytechnique Montréal

- Industrial visits in Canada, and in India (May 2018), writing of a comparative report

Finalist at the Student Science Popularization Competition of the AQPER (Québec, QC, Canada) 2020/02, 2019/02

Québec Association of Renewable Energy Production (AQPER)

Participant in Québec Engineering Competition (3rd place 2018) (QC, Canada)

2019, 2018, 2016

- Mechanical and industrial design, scientific popularization

Volunteer at Scientifines (Montréal, QC, Canada)

2016 - 2019

- Promotion of science, technology, engineering and mathematics to young girls from underprivileged urban areas

MAIN ACADEMIC HONOURS AND AWARDS SINCE 2018

Order of the White Rose Scholarship

2018

Polytechnique Montréal, CA\$30,000

Trottier Scholarship

2018 - 2020

Institut de l'Énergie Trottier, CA\$25,000

Master's research scholarship

2019 - 2020

Fonds de Recherche du Québec, Nature et technologies, CA\$17,500

Canada Graduate Scholarships — Master's program

2018 - 2019

Natural Sciences and Engineering Research Council of Canada (NSERC), CA\$17,500

Gold Medal from Canadian Society for Mechanical Engineering (CSME)

2018

Polytechnique Montréal

PUBLICATIONS

Aubin, V., Blais, M. and Anjos, M. F. (2021) **How Québec can support the energy transition of northeastern North America**, The Electricity Journal 34(6), 106972, <https://doi.org/10.1016/j.tej.2021.106972>.

- Presented at the **INFORMS Annual Meeting**, October 25, 2021

Esfahlani, M., Roy, M.-M., Aubin, V. and Soleimanpour, N. (2020) **Energy Modelling Initiative National Forum 2019 — Synthesis Report**. Institut de l'énergie Trottier, Polytechnique Montréal. 1-21. *(without peer review)*

Beaumier, L., Aubin, V. and Kuznetsova, E. (2019) **Workshop on the Development of an Open Modelling Platform for Electrification and Deep Decarbonization Studies — Synthesis Report**. Institut de l'énergie Trottier, Polytechnique Montréal, prepared for CanmetENERGY, Varennes Research Centre. 1-12. *(without peer review)*

SKILLS

Computer skills (Julia, Matlab, C++, AMPL, OPL, Microsoft Office)

Communication (written, spoken)

Mathematical skills (modelling, optimization, simulation)

Problem analysis (investigation, solutions)

INTERESTS

Outdoor sports (cross-country skiing, kayaking, windsurfing, hiking) **Music** (piano, trumpet, guitar) and **reading**