




Hang Yin

Ph.D. Student

 <https://hyin09.github.io/hangyin-main/about.html>

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EDUCATION

- University of Guelph** Guelph, ON, Canada
• *Doctor of Philosophy, Environmental Sciences* September 2022 - **present**
- McGill University** Montréal, QC, Canada
• *Doctor of Philosophy, Civil Engineering* September 2021 - August 2022
- McGill University** Montréal, QC, Canada
• *Master of Science, Atmospheric and Oceanic Sciences* September 2019 - August 2021
- McGill University** Montréal, QC, Canada
• *Bachelor of Science, Environment - Atmospheric Environment & Air Quality* September 2015 - May 2019

SKILLS SUMMARY

- **Programming** Fortran, Bash
- **Analysis** Python (NumPy, xarray, Cartopy, Matplotlib), Matlab, CDO
- **Platforms** Linux, MacOS, Windows
- **Tools** L^AT_EX, Microsoft Office, Inkscape, HTML
- **Languages** English (professional), Mandarin (native)

RESEARCH EXPERIENCE

- Graduate Research Assistant** September 2022 - **present**
• *University of Guelph*
 - **Model development:** Coupling a Building Energy Model (BEM) and a rooftop photovoltaic model (UCRC-Solar) to the Canadian Global Environmental Multiscale (GEM) model.
 - **Model application:** Investigation of building energy use/savings under different climatic conditions with the newly coupled GEM model for major Canadian cities.
- Graduate Research Assistant** September 2021 - August 2022
• *McGill University*
 - **Model application:** Regional climate modeling of the urbanization impacts on local seasonal and extreme precipitation patterns for Montréal with the GEM model.
- Graduate Research Assistant** September 2019 - August 2021
• *McGill University*
 - **Model development:** Thermodynamic modeling of carbonate/bicarbonate/CO₂ system and the interaction with water and organic compounds for the AIOMFAC model (<http://www.aiomfac.caltech.edu/>).
 - **Code optimization:** Implementation of advanced numerical solvers for systems of coupled non-linear functions with extreme values.
- Undergraduate Research Trainee** May 2019 - August 2019
• *McGill University*
 - **Model development:** Thermodynamic modeling of aqueous iodate and sulfate/bisulfate systems and their interactions with organic compounds.
 - **Lab experiments:** Water activity measurements of aqueous iodide, iodate, and bisulfate systems.
- Undergraduate Research Assistant** September 2018 - April 2019
• *McGill University*
 - **Literature review:** Research of literature data on aerosol thermodynamic measurements.
 - **Model development:** Thermodynamic modeling of aqueous iodide systems and their interactions with organic compounds.

PUBLICATION

- **Yin, H.**, Dou, J., Klein, L., Krieger, U. K., Bain, A., Wallace, B. J., Preston, T. C., and Zuend, A.: Extension of the AIOMFAC model by iodine and carbonate species: applications for aerosol acidity and cloud droplet activation, *Atmos. Chem. Phys.*, 22, 973–1013, <https://doi.org/10.5194/acp-22-973-2022>, 2022.
- **Yin, H.**: Modeling aerosol acidity and cloud droplet activation in marine and dust aerosols: extension of the AIOMFAC model by iodine and carbonate species, MSc thesis, McGill University, Montreal, Canada, <https://escholarship.mcgill.ca/concern/theses/0z7092734>, 2021.

CONFERENCE

- **Yin, H.**, Krayenhoff, E. S., Aliabadi, A. A., Heusinger, J., Leroyer, S., Voogt, J., and Masson, V.: Building energy use prediction and mitigation from rooftop photovoltaic panels at a city scale: A case study in London, Ontario, Canada, CAGONT 2023, Department of Geography and Environmental Studies, Toronto Metropolitan University, 27-28 October 2023, 2023.
- **Yin, H.**, Krayenhoff, E. S., Aliabadi, A. A., Heusinger, J., Leroyer, S., and Masson, V.: Building energy use prediction and mitigation from rooftop photovoltaic panels at a city scale: A case study in London, Ontario, Canada, 11th International Conference on Urban Climate, Sydney, Australia, 28 August-1 September 2023, 2023.
- **Yin, H.**, Sushama, L., and Teufel, B.: Impacts of urbanization on summer precipitation and management of engineering infrastructure systems for Montreal, EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-5182, <https://doi.org/10.5194/egusphere-egu22-5182>, 2022.

TEACHING EXPERIENCE

- **Teaching Assistant**
University of Guelph - ENVS 2030 - Meteorology and Climatology *September 2023 - December 2023*
- **Teaching Assistant**
University of Guelph - ENVS 2270 -Impacts of Climate Change *January 2023 - April 2023*
- **Guest lecturer**
University of Guelph - ENVS 2030 - Meteorology and Climatology *26 October 2022*
- **Teaching Assistant**
McGill University - ATOC 184 - Science of Storms *January 2021 - April 2021*
- **Teaching Assistant**
McGill University - ATOC 185 - Natural Disasters *September 2020 - December 2020*

AWARDS

- **Graduate level**
 - Arthur D. Latornell Graduate Scholarship *September 2023 - December 2023*
 - Taffy Davison Memorial Research Travel Grant *August 2023*
 - Robinson Research Travel Grant *August 2023*
 - International Doctoral Tuition Scholarship *September 2022 - April 2026*
 - The Mary Edmunds Williams Scholarship *September 2022 - December 2023*
 - McGill Engineering Doctoral Awards *September 2021 - April 2022*
 - John Bonall Porter Fellowship *September 2021 - April 2022*
 - Graduate Excellence Award *September 2019 - August 2021*
 - Meteorology Research Graduate Award *September 2019 - August 2021*
- **Undergraduate level**
 - Science Undergraduate Research Awards *May 2019 - August 2019*
 - Science Lab without Borders *May 2018 - August 2018*
 - Mobility Undergraduate Award *May 2018 - August 2018*

MEMBERSHIP

- International Association for Urban Climate (IAUC) *2023 - present*
- Canadian Meteorological and Oceanographic Society (CMOS) *2022 - present*

SERVICE

- Member at McGill Peer Support Centre**
Helped graduate students in need of mental health support.

Montreal, Canada
September 2019 - August 2021
- Note Taker for Office for Students with Disabilities**
Took clear and accurate notes as a supplementary record to lectures.

Montreal, Canada
September 2019 - December 2019