





# 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<sup>A</sup>T<sub>E</sub>X, Microsoft Office, Inkscape
- **Languages** English (professional), Mandarin (native)

## RESEARCH EXPERIENCE

- Graduate Research Assistant** September 2022 - present  
• *University of Guelph*
  - **Model development:** Coupling Building Energy Model (BEM) and rooftop photovoltaic model 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/CO<sub>2</sub> 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.
- 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.
- 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.**, 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 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**
  - 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
  - Enriched Educational Opportunities Bursaries 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** Montreal, Canada  
Helped graduate students in need of mental health support. September 2019 - August 2021
- **Note Taker for Office for Students with Disabilities** Montreal, Canada  
Took clear and accurate notes as a supplementary record to lectures. September 2019 - December 2019