

HAEWON CHI

Agroecosystem Sustainability Center (ASC)
Department of Nature Resources and Environmental Science
University of Illinois, Urbana-Champaign, IL, US

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RESEARCH INTERESTS

Crop Yield, Machine Learning and Deep Learning, Remote Sensing, Community Land Model (CLM), Data Assimilation

EDUCATION

University of Illinois, Urbana-Champaign (UIUC)

IL, US

Ph.D. student of Natural Resources and Environmental Science

May. 2023 – present

- Advisor: Prof. Kaiyu Guan

Yonsei University

Seoul, Korea

Master of Civil and Environmental Engineering

Mar. 2020 – Feb. 2022

- Thesis: "The Impact of GRACE Assimilation on Hydrologic Variation with CLM5-BGC"
- Advisor: Prof. Yeonjoo Kim, Selected for Dissertation Fellowship

Sungshin Women's University (SSWU)

Seoul, Korea

Bachelor of Interdisciplinary Eco-science

Mar. 2016 – Feb. 2020

- Thesis: "A Study on Drought across Korea and Risk Assessment Framework"
- Advisor: Professor Hyun Seon Hong

PUBLICATIONS

- [1] **Chi, H.**, Seo, H., & Kim, Y. (2024): "Hydrological trends captured by assimilating GRACE total water storage data into the CLM5-BGC model," *Journal of Hydrology*, 629
- [2] Seo, J., **Chi, H.**, Kim, H. J., & Kim, Y. (2022): "Hydrological Drought Risk Assessment for Climate Change adaptation in South Korea," *Journal of Korea Water Resources Association*, 55(6), 421-435
- [3] Kang, B., Kim, Y., **Chi, H.**, Seo, J., et al. (2021): "Sustainability of Drought Hazard Risk Management for Climate Change Adaptation," *International Hydrological Program (IHP)* 8th year, Ministry of Environment
- [4] Seo, J., **Chi, H.**, & Kim, Y. (2021): "Sustainability of Drought Hazard Risk Management for Climate Change Adaptation," *Magazine of Korea Water Resources Association*, 54(2) 68-73
- [5] Kang, B., Kim, Y., **Chi, H.**, Seo, J., et al. (2020): "Sustainability of Drought Hazard Risk Management for Climate Change Adaptation," *International Hydrological Program (IHP)* 7th year, Ministry of Environment

CONFERENCE

- [1] **Chi, H.**, Seo, H., & Kim, Y. "Impact of GRACE Assimilation on Hydrologic Variation with CLM5 BGC," Korea Water Resources Association
- [2] **Chi, H.**, Seo, H., & Kim, Y. "Impact of Assimilating the Terrestrial Water Storage on the Water and Carbon Cycles in CLM5.0-BGC," Korea Water Resources Association
- [3] Kang, B., Kim, Y., **Chi, H.**, Seo, J., Lee, J., & Seo, H. "Sustainability of Drought Hazard Risk Management for Climate Change Adaptation," Korea Water Resources Association
- [4] Cho, K., Choi, S., **Chi, H.**, & Kim, Y. "Machine Learning Method for Improving WRF-Hydro Streamflow Prediction," Korea Water Resources Association

PROJECTS

- [1] Development of DB and Model Technology for Adaptation of Water-Forest-Ecological Climate Change & Evaluation of Greenhouse Gas Reduction, Korea Environment Institute (KEI), Graduate Researcher, Feb. 2020
- [2] Improvement of Ecological Hydrological Drought Prediction and Development of Drought Impact Prediction Technology through Advanced Land Model in Korea and Asia based on Machine Learning, National Research Foundation of Korea (NRF), Graduate Researcher, Sept. 2020 – Feb. 2021
- [3] Development of Integrated Water Resource Vulnerability Evaluation System and Basin In-field Integrity Evaluation Technology, Korea Environmental Industry and Technology Institute (KEITI), Undergraduate Researcher, Sept. 2019 – Dec. 2019

TEACHING AND MENTORING EXPERIENCE

- Teaching Assistant*, Environmental Energy Engineering Practice, SSWU Fall 2022
- Provided guidance on luminol-chemiluminescence experiment for 10 undergraduate students.
- Teaching Assistant*, Fluid Mechanics, Yonsei University Spring 2020
- Tutored 22 undergraduate students on Bernoulli's equation by solving problems and delivering lectures.
- Senior Mentor*, Freshmen Mentoring Program, SSWU Mar. 2018 – Jul. 2018
- Assisted selected freshmen students to understand basic chemistry lectures.
 - Provided counseling on personal issues such as campus life, academics / grades, and friend
 - Selected as the Best Mentor of the Semester and received a scholarship
- Personal Tutor* Mar. 2016 – Dec. 2019
- Coached 5 high school students on English, math, and personal statement writing.

HONORS & AWARDS

- First Place*, Ethical Management Contest, Korea Electronic Power Corporation (KEPCO E&C) Jul. 2018
- Topic: Coexistence of Corporate Purpose and Ethical Management
- First Place*, Climate Change Presentation Competition, SSWU Apr. 2016
- Topic: About the Truth of Global Warming

SCHOLARSHIPS

Graduate – UIUC

- *Research Assistant (RA) Scholarship*, Fall 2023 / Spring-Fall 2024

Graduate – Yonsei University

- Full-tuition Fellowship, National Research Foundation of Korea, Spring 2020-Fall 2022
- *Dissertation Fellowship*, Fall 2021
- *Research Assistant (RA) Scholarship*, Fall 2021
- *Teaching Assistant (TA) Scholarship*, Spring 2020

Undergraduate – SSWU

- *Academic Excellence Scholarships*, Spring-Fall 2017 / Spring 2019
- *Mentoring Scholarship*, Fall 2018
- *President's Special Scholarship*, Fall 2016
- *English Fluency Scholarship*, Fall 2016

ADDITIONAL INFORMATION

Credit Exchange: Department of Civil and Environmental Engineering, Sejong University, Seoul, Korea

Languages: Korean (native), English (advanced), German (elementary), and French (elementary)