

# MINKI HONG

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## EDUCATION

2017 – PRESENT

**DOCTORAL STUDENT**, TEXAS A&M UNIVERSITY

Graduate Research Assistant  
Biological and Agricultural Engineering Department

2014 – 2016

**MASTER OF SCIENCE**, SEOUL NATIONAL UNIVERSITY

Department of Landscape Architecture and Rural System Engineering  
(Rural System Engineering Major)

2008 – 2014

**BACHELOR OF SCIENCE**, SEOUL NATIONAL UNIVERSITY

Department of Landscape Architecture and Rural System Engineering  
(Rural System Engineering Major)

## RESEARCH INTERESTS

- Numerical module development and modeling
- Earth system modeling
- Coupled processes between surface-subsurface
- Data assimilation

## PROJECTS

2017 – PRESENT

**SUSTAINABLE WATER RESOURCES FOR IRRIGATED AGRICULTURE IN A DESERT BASIN  
FACING CLIMATE CHANGE AND COMPETING DEMANDS**

United States Department of Agriculture (USDA) – National Institute of Food and Agriculture  
(NIFA)

2017 – PRESENT

**TEXAS WATER OBSERVATORY (TWO)**

Texas A&M University & Texas A&M Agrilife Research

2014 – 2016

**DEVELOPMENT OF WATER USE INFORMATION FORECASTING SYSTEM FOR  
AGRICULTURAL ECO-SYSTEM MANAGEMENT**

Seoul National University & National Center for Agro-Meteorology (NCAM)

2013 – 2014

## DEVELOPMENT OF INTELLIGENT SYSTEM FOR MANAGEMENT OF IRRIGATION AND DRAINAGE

Seoul National University & Korea Institute of Planning and Evaluation for Technology in Food, Agriculture and Fisheries (IPET)

## PUBLICATIONS

- [4] Hong, M., B. Mohanty, Z. Sheng, 2020. **An explicit scheme to represent the bidirectional exchanges among vadose zone, phreatic aquifer, and river**, *Advances in Water Resources*, [In preparation].
- [3] Hong, M., S. H. Lee, S. J. Lee, J. Y. Choi, 2019. **Application of high-resolution meteorological data from NCAM-WRF to analyze soil moisture deficit and drought severity in small-scale farmlands**, *Agricultural Water Management*, [In review].
- [2] Hong, M., R. Karki, J. M. Krienert, S. S. Memari, 2018. **Evaluating Alternative Groundwater Discharge Estimations for Improved National Water Model Forecasting**, *National Water Center Innovators Program Summer Institute Report 2018 (CUAHSI & NOAA)*.
- [1] Hong, M., S. H. Lee, J. Y. Choi, S. H. Lee, S. J. Lee, 2015. **Estimation of Soil Moisture and Irrigation Requirement of Upland using Soil Moisture Model applied WRF meteorological data**, *The Korean Society of Agricultural Engineering*.

## HONORS AND AWARDS

- [8] **USGS TWRI Grad Student Scholarship** (2020 – 21).  
*United States Geological Survey (USGS) & Texas Water Resources Institute (TWRI)*
- [7] **Soil Science Society of America Oral Presentation Award** (2019).  
*Soil Science Society of America (SSSA)*
- [6] **BAEN Graduate Student Competitive Scholarship** (2019)  
*Texas A&M University*
- [5] **Aggies Commit Fellowship** (2019)  
*Texas A&M University*
- [4] **National Water Center Summer Institute Program** (2018)  
*National Oceanic and Atmospheric Administration (NOAA)*
- [3] **BAEN Graduate Student Competitive Scholarship** (2018)  
*Texas A&M University*
- [2] **Outstanding Paper Presentation Award** (2015)  
*Korean Water Resources Association*
- [1] **Best Oral Presentation Award** (2014)  
*International Society of Paddy and Water Environment Engineering (PAWEES)*

## RELEVANT SKILLS

- Programming (Python, C, R, Mathematica)
- Linux-based high-performance computing
- Integrated modeling. Skillful at *WRF-hydro*, *Noah-MP*, *VIC (open source) Hydrus*, *MODFLOW (commercial) models*.
- Data visualization