

YUECHUN WANG

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[94ycwang.github.io](https://github.com/94ycwang)

SUMMARY

Proficient with various programming languages. Strong analytical and troubleshooting skills. Profound knowledge of atmospheric dynamics and climate modeling with expertise in the Weather Research and Forecasting Model (WRF).

TECHNICAL SKILLS

Programming Languages MATLAB, NCL, Fortran, C, JavaScript, HTML, CSS, Python, R

Technologies / Environment WRF-ARW, Linux/Unix

PROJECTS AND RESEARCH EXPERIENCE

Storm-related Power Outage Modeling Project

Graduate Research Associate, The Ohio State University, Columbus, OH **09/2018 – present**

- Developed a web-based application to visualize projections from the Hurricane Power Outage Prediction Model (HPOM) using JavaScript, Html and CSS for Guangdong (China) Power Grid Company to help make hurricane preparedness and response decisions

Impacts of Soil Moisture Initializations on WRF-Simulated North American Monsoon System

Ph.D. Dissertation Project, The Ohio State University, Columbus, OH **05/2017 – present**

- Downloaded soil moisture data and atmospheric reanalysis data from the web using Linux shell commands
- Wrote soil moisture data to WPS intermediate files from NetCDF using FORTRAN
- Initialized WRF model with soil moisture fields from different data sources
- Visualized and analyzed WRF model output data using NCL and MATLAB
- Recommended a proper soil moisture data set for WRF simulations and improved current state of knowledge of WRF model deficiencies

NASA Soil Moisture-Active Passive (SMAP) Project

Graduate Research Associate, The Ohio State University, Columbus, OH **09/2016 – present**

- Utilized statistical methods to study the response of convection initiation to soil moisture content in the central US
- Illustrated the uncertainties related to data and methods in observation-based studies on soil moisture-precipitation interactions

A Study of the Influence of Oceanic Heat Transport on Westerly Jet

Undergraduate Research Associate, Nanjing University, Nanjing, China **10/2015 – 05/2016**

- Analyzed and interpreted output variables from WRF-ROMS (Regional Ocean Modeling System) coupled model
- Identified the causal links between meridional heat transport in the North Pacific Ocean and lower tropospheric westerly wind

PROFESSIONAL EXPERIENCE

Meteorology Intern 02/2015

Nanjing Municipal Meteorological Bureau, Nanjing, Jiangsu Province, China

- Interpreted information from numerical model forecast data, observed surface and upper-air data, satellite and radar data to produce short-term weather forecasts

US Forest Service Soil Moisture Workshop 05/2018

Monitoring Forest Soil Moisture for a Changing World, Michigan Tech Research Institute, Ann Arbor, MI

- Discussed a new strategic approach of research and monitoring on soil moisture issues for forest areas of the US

CONFERENCE PRESENTATIONS

Y. Wang, S. Yuan, S. M. Quiring, T. W. Ford, A. Houston and L. Goldstein, 2017: Investigating Soil Moisture–Convective Precipitation Feedbacks Using In-Situ Soil Moisture in the Central United States. Oral presentation at *2017 Annual American Geophysical Union Fall Meeting*, New Orleans, Louisiana. **12/14/2017**

Y. Wang, S. M. Quiring, 2018: Impacts of Soil Moisture Initializations on WRF-Simulated North American Monsoon System. Poster presentation at *2018 Annual American Geophysical Union Fall Meeting*, Washington, DC. **12/10/2018**

EDUCATION

Ph.D. Atmospheric Science, The Ohio State University, Columbus, OH GPA: 3.99/4.00 **08/2016 – present**

B.S. Atmospheric Science, Nanjing University, Nanjing, China GPA: 4.29/5.00 **09/2012 – 06/2016**