



Yu-Fen Huang

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EDUCATION

University of Hawaii at Manoa, HI, USA, M.S. Atmospheric Science 2016

Thesis: "A Study of Summer Leaside Rainfall over the Islands of Hawai'i and Oahu"

National Central University, Taoyuan, Taiwan, B.S. Atmospheric Science 2011

RESERACH EXPEIRENCES

Graduate Assistant in Hydrology Lab., Department of Natural Resources and Environmental Management, University of Hawaii at Manoa, HI, USA: 2016–present

Advisor: Dr. Tsang, Yin-Phan

- Field experiences: Install and maintain stream gages (staff plates, pressure transducers); measure streamflow and build rating curves.
- Data visualization: Visualize the data above, and maintain a near real-time webpage for public by using Github static website: [TsangStreamLab](https://tsangstreamlab.github.io/)
- Simulation: Hydrological Modeling for watersheds in Hawaii by using SWAT and WRF-Hydro.
- Data analysis: Long-term trend analysis for the peakflow/flood and its association with rainfall.
- Workshop: Assist the 2017 Stream Meeting, Honolulu, Hawaii, U.S.A.
- Administrative: Maintain lab website and design lab logo/stickers.

Graduate Assistant in the Department of Meteorology, School of Ocean and Earth Science and Technology, University of Hawaii at Manoa, HI, USA: 2013–2016

Advisor: Dr. Chen, Yi-Leng

- Analyze the island effect on the rainfall and airflow over Hawaiian Islands by using the Fifth-Generation Penn State/NCAR Mesoscale Model (MM5) data, and describe the main mechanism for the rainfall in Kona by seasonal analysis.
- Analyze the seasonal rainfall over Hawaii by CMORPH and MM5 output data from 2003 to 2010 by using GrADS.

Research Assistant in Precipitation Modeling Lab., Department of Atmospheric Sciences, National Central University, Taoyuan, Taiwan: 2011–2013

Advisor: Dr. Yang, Ming-Jen

- Assist with analyzing typhoon, Fanapi, to see how it rebuilt in the west after deconstructed due to the high mountain by using the Weather Research and Forecast (WRF) model.
- Administer the lab cluster/computers.

Part-time Research Intern (40 hours/month) in the Atmospheric Chemistry Modeling Lab., Department of Atmospheric Sciences, National Central University, Taoyuan, Taiwan: 2009–2010

Advisor: Dr. Kuo-Ying Wang

- Analyze the relationship between El Nino and lightening by using Fortran.
- Assist with the study in relationship between the summer surface circulation and convection in Taiwan by using the Lagrangian particle dispersion model - Windmodel to simulate each day in July and August during 2005 to 2009.

PUBLICATIONS

Huang, Y-F. and Y-L. Chen, o: Numerical Simulations of Seasonal Variations of Rainfall over the Island of Hawaii. J. Appl. Meteor. Climatol., o, <https://doi.org/10.1175/JAMC-D-18-0078.1> (in press)

Munasinghe, D., Cohen, S., **Huang, Y-F.**, Tsang, Y., Zhang, J. and Fang, Z. (2018). “Inter-comparison of Satellite Remote Sensing Techniques of Flood Inundation Mapping”. *Journal of the American Water Resources Association (JAWRA)* 54(4): 834-846. <https://doi.org/10.1111/1752-1688.12626>

Zhang, J., Munasinghe, D., **Huang, Y-F.**, Fang, Z., Cohen, S., and Tsang, Y.P (2018). “Comparative Analysis of Inundation Mapping Approaches for the 2016 Flood in the Brazos River, Texas”, *Journal of the American Water Resources Association (JAWRA)* 54(4): 820-833. <https://doi.org/10.1111/1752-1688.12623>

Cohen, S., Brakenridge, G. R., Kettner, A., Bates, B., Nelson, J., McDonald, R., **Huang, Y-F.**, Munasinghe, D., and Zhang, J., (2017). Estimating Floodwater Depths from Flood Inundation Maps and Topography. *Journal of the American Water Resources Association (JAWRA)* 54(4): 847-858. <https://doi.org/10.1111/1752-1688.12609>

Zhang, J., Munasinghe, D., & **Huang, Y-F.** (2016). Comparison of Flood Inundation Mapping Techniques between Different Modeling Approaches and Satellite Imagery. *NATIONAL WATER CENTER INNOVATORS PROGRAM SUMMER INSTITUTE REPORT 2016*, 4, 46.

CONFERENCES AND POSTERS

Poster, “Temporal Shifts in the Magnitude of Peak Streamflow and its Associated Rainfall across the Hawaiian Islands” American Geophysical Union 2018 Fall Meeting, Washington, DC. USA, 2018

Oral presentation, “Temporal Shifts in Peak Flow Magnitudes Across the Island of Maui, Hawaii.” Asia Oceania Geoscience Society (AOGS) 15th Annual Meeting, Honolulu, HI, USA 2018

Poster, “Apply Spatially Distributed Rainfall Data to a Hydrological Model in a Tropical Watershed in Hawaii.” American Geophysical Union 2017 Fall Meeting, New Orleans, LA, USA 2017

Poster, “Summer Leeseide Rainfall Maxima over the Island of Hawaii.” American Geophysical Union 2016 Fall Meeting, San Francisco, CA, USA 2016

Oral presentation, “An evaluation of the stability indices for local convective systems in Taiwan.” East-West Center International Graduate Student Conference, Honolulu, HI, USA 2016

PROJECTS

- Estimated ungaged streamflow for five locations by the Soil & Water Assessment Tool (SWAT) to assist [Comission on Water Resources Management \(CWRM\)](#) to build the instream flow standard in Wailua, Kauai, HI, USA. 2019 May–June

AWARDS, FELLOWSHIP AND HONOR

2019 The University of Washington WaterHackWeek travel grant.

2018 The University of Hawaii at Manoa Graduate Student Organization (GSO) Grant and Award.

2017 The Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) Instrumentation Discovery Travel Grant.

2016 The Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) The National Water Center Innovators Program Summer Institute.

2011 Department Scholarship for Academic Excellence, National Central University, Taoyuan, Taiwan.

2010 University Scholarship for Athletic Excellence, National Central University, Taoyuan, Taiwan.

2009 Seventh Place, National Intercollegiate Athletic Games, 100 m freestyle, Taiwan.

2008 – 2012 Record holder of 50 m and 100 m backstroke, National Central University, Taoyuan, Taiwan.

2009 Book Aroma Award, National Central University, Taoyuan, Taiwan.

2007 Medalist, intramural swimming, National Central University, Taoyuan, Taiwan.

TEACHING EXPERIENCES

Lecturer:

- Give a 3-hr lecture about the introduction of hydrology in a 300-level class, Natural Resources Management, Department of Natural Resources and Environmental Management at the University of Hawaii at Manoa, Honolulu, HI, USA. 2019
- Give a 1-hr introduction of *circular statistics* in R in Hydrology Lab., Department of Natural Resources and Environmental Management, University of Hawaii at Manoa, HI, USA. 2018
- Give a 3-hr lecture about the introduction of hydrology in a graduate-level class, Watershed Hydrology, Department of Natural Resources and Environmental Management at the University of Hawaii at Manoa, Honolulu, HI, USA. 2018

- Give a 1.5-hr introduction of Rmarkdown in a graduate-level class, Geospatial Analysis, Department of Tropical Plant and Soil Science, University of Hawaii at Manoa, HI, USA. 2016
- Give a 3-hr introduction of R in Hydrology Lab., Department of Natural Resources and Environmental Management, University of Hawaii at Manoa, HI, USA. 2016
- Give an 1.5-hr lecture about the mesoscale meteorological simulation in a 400-level class, mesoscale modeling, Department of Atmospheric Science at the University of Hawaii at Manoa, Honolulu, HI, USA 2016
- Give an introduction of space science in a junior high's summer camp in Tung-De Junior High School, Taoyuan, Taiwan 2008

Tutorer:

- Tutor a junior high student in science. (2 hours/week) 2013
- Tutor a junior high student in geography and history. (4 hours/ week) 2005

Swimming Instructor:

- Teach in both one-on-one and a small group with 7- to 9-year-old kids. 2009–2010

LEADERSHIP, ADMINISTRATION AND SERVICE EXPERIENCES

Department represent in Graduate Student Organization. University of Hawaii at Manoa, Honolulu, HI, USA. 2017–2018

Group leader in information and sport sectors of Atmospheric Sciences Student Association, National Central University, Taoyuan, Taiwan. 2009–2010

- Plan and execute sports competition within different departments or different universities.
- Lead student in the department of Atmospheric Sciences in sports intramural competition.
- Design and host the website of Atmospheric Sciences Student Association.

Captain of Intramural woman basketball, National Central University, Taoyuan, Taiwan 2009–2010

- Lead and supervise the training.
- Recruited new members.

Work-Study Student (4 hours/week) in the Language Center, National Central University, Taoyuan, Taiwan: 2011

- Guide students to find English books at English Reading Corner.
- Assist with Language Center to hold English speeches.

Work-Study Student (12 hours/month). 2008–2009

- Plan and execute extra-curricular activities for students.

- Organize data by using Microsoft Word and Excel.
- Make the memorial film for events.

Administrator Assistant for a summer English camp in Taiwan (20 hours/week) 2004

Volunteer for teaching 12-K kids how to catch fish by traditional Hawaiian opae net with Cory Yap 2017–2018

Volunteer for reviewing abstract in the 24th Annual Hawaii Conservation Conference (HCC), Honolulu, HI, USA, July 18-20, 2017 2017

Volunteer (30 hours for 10 days) for the International Union for Conservation of Nature Conference, Honolulu, Hawaii, USA, Sept. 1 - 10, 2016: 2016

- Assist information desk.
- Assist e-poster session.
- Assist panels for their needs.
- Assist printing press session.

Volunteer for assisting lunch set-up in the East-West Center International Graduate Student Conference, Honolulu, HI, USA Feb. 11 - 13, 2016 2016