

Yin-Phan Tsang
College of Tropical Agriculture and Human Resources
Dept. of Natural Resources and Environmental Management
 FTE Distribution: 55% I;45% R;0% E

Education

<u>Degree</u>	<u>University</u>	<u>Major</u>
B.S.	National Taiwan University, Taipei, Taiwan	Agricultural Engineering
M.S.	National Taiwan University, Taipei, Taiwan	Bioenvironmental System Engineering
Ph.D.	University of Maryland, College Park, MD, USA	Biological Resources Engineering

Professional Appointments

<u>Title</u>	<u>Employer</u>	<u>Dates Employed</u>
Associate Professor	Dept. of Natural Resources and Environmental Management, University of Hawaii at Manoa, Honolulu, HI	2020-Present
Cooperating Graduate Faculty	Earth and Planetary Sciences, University of Hawaii, Manoa, HI	2018-Present
Affiliate Faculty	Water Resources Research Center, University of Hawaii, Manoa, HI	2018-Present
Graduate Faculty	Dept. of Natural Resources and Environmental Management, University of Hawaii at Manoa, Honolulu, HI	2015-Present
Assistant Professor	Dept. of Natural Resources and Environmental Management, University of Hawaii at Manoa, Honolulu, HI	2015-2020
Research Associate	Dept. of Fisheries and Wildlife, Michigan State University, MI	2010-2015
Postdoctoral Research Fellow	Stroud Water Research Center, Avondale, PA	2008-2010
Graduate Assistant	Dept. of Biological Resources Engineering/ Environmental Science & Technology Dept., University of Maryland, College Park, MD	2005-2008
Graduate Teaching Assistant	Dept. of Agricultural Engineering, National Taiwan University, Taipei, Taiwan	2001-2003
Internship	Dept. of Agricultural Engineering, National Taiwan University, Taipei, Taiwan	1999-2000

Courses Taught

- Course Number and Title (credits)
 NREM 301 Natural Resources Management (3)
 NREM 301L Natural Resources Management Lab (1)
 NREM 601 System Analysis of NREM (4)
 NREM 662 Watershed Hydrology (3)
 NREM 664 Small Watershed Modeling (3)
 NREM 699 Directed Research (V)
 NREM 700 Thesis Research (V)

Publications (reverse chronological order)

Books

Book Chapters

Conference Proceedings

Refereed Journal Publications

In the hydrological and ecological literature, the sequence of names in the byline is assumed to represent the relative contribution of each person. Throughout the Bibliography, names of my undergraduate, graduate, and Post-Doctoral advisees are underlined and superscripts are used to show degree type (UG, MS, PhD, or PD).

In Review/Revision

1. Sears M^{MS}, Nugent A, **Tsang Y**. Weather system contributions to high streamflow in Halelea, Kaua'i. *Journal of Hydrometeorology*. In Review.
2. Miller J, Ching C^{MS}, **Tsang Y**, Kinzie R, Akau J, Fraiola K, Strauch A, MacKenzie R, Stream and ocean hydrodynamics mediate partial migration strategies in an amphidromous Hawaiian goby: Comment. *Ecology*. In Revision.
3. Huang Y-F^{PhD}, **Tsang Y**, Nugent A. Deriving gridded hourly rainfall on O'ahu by combining gauge network and radar rainfall. *Journal of Hydrometeorology*, In Revision.
4. Strauch A, Huang Y-F^{PhD}, **Tsang Y**. Characterizing streamflow regimes using a distributed model to develop environmental flow standards for sustainable resource management in the humid tropics. *Journal of Hydrology*. In Review.

Published

5. Huang Y-F^{PhD}, **Tsang Y**, Nugent A. Deriving gridded hourly rainfall on O'ahu by combining gauge network and radar rainfall. *Journal of Hydrometeorology*, In Press. <https://doi.org/10.1175/JHM-D-22-0196.1>.
6. Ching C^{MS}, Miller J, **Tsang Y**, Fraiola K, Clilverd H, Honarvar S. Uncovering Migratory Patterns of the Native Hawaiian Goby, 'O'opu Nākea (*Awaous stamineus*). *Journal of Fish Biology*. In Press. <https://doi.org/10.1111/jfb.15511>.
7. Thornbrugh D, Infante D, **Tsang Y**. 2023. Regional Trends of Biodiversity Indices in the Temperate Mesic United States: Testing for Influences of Anthropogenic Land Use on Stream Fish while Controlling for Natural Landscape Variables. *Water* 2023, 15(8), 1591; <https://doi.org/10.3390/w15081591>.
8. Huang Y-F^{PhD}, Gayte M^{MS}, **Tsang Y**, Longman R, Nugent A, Kodama K., Lucas M, Giambelluca T. 2022. Publisher Correction: Hourly rainfall data from rain gauge networks and weather radar up to 2020 across the Hawaiian Islands. *Scientific Data* 9, 505. <https://doi.org/10.1038/s41597-022-01617-7>.
9. Wilmot E^{MS}, Wong J, **Tsang Y**, Lynch A, Infante D, Oleson K, Strauch A, Clilverd H^{PD}. 2022. Characterizing mauka-to-makai connections for aquatic ecosystem conservation on Maui, Hawai'i. *Ecological Informatics* 70, 101704. <https://doi.org/10.1016/j.ecoinf.2022.101704>.
10. Huang Y-F^{PhD}, Gayte M^{MS}, **Tsang Y**, Longman R, Nugent A, Kodama K., Lucas M, Giambelluca T. 2022. Hourly rainfall data from rain gauge networks and weather radar up to 2020 across the Hawaiian Islands. *Scientific Data* 9, 334. <https://doi.org/10.1038/s41597-022-01430-2>.
11. Widanage R, Chan C, **Tsang Y-P**, Sipes B, Melakeberhan H, Sanchez A, Mejia A. Enhancing Technical Efficiency and Economic Welfare: A Case Study of Smallholder Potato Farming in the Western Highlands of Guatemala. *Economia agro-alimentare / Food Economy*. Accept Submission.
12. Chandrasekaran S, Danos N, George U, Han J-P, Quon G, Müller R, **Tsang Y-P**, Wolgemuth C. 2021. The Axes of Life: A roadmap for understanding dynamic multiscale systems. *Integrative and Comparative Biology*, 2021;, icab114, <https://doi.org/10.1093/icb/icab114>
13. Huang Y-F^{PhD}, **Tsang Y-P**, Strauch A, Clilverd H^{PD}. 2021. Shifting magnitude and timing of streamflow extremes and the relationship with rainfall across the Hawaiian Islands. *Journal of Hydrology*. <https://doi.org/10.1016/j.jhydrol.2021.126424>.
14. **Tsang Y-P**, Infante DM, Wang L, Krueger D, Wieferich D. 2021. Conserving stream fishes with changing climate: Assessing fish responses to changes in habitat over a large region. *Science of the Total Environment*. 755(2): 142503. <https://doi.org/10.1016/j.scitotenv.2020.142503>.
15. Benoit L, Lucas M, Tseng H, Huang Y-F^{PhD}, **Tsang Y-P**, Nugent A., Giambelluca T, Mariethoz G. 2021. High resolution observation of extreme orographic rain gradients in a Pacific island catchment. *Frontiers in Earth Sciences – Hydrosphere*. doi: 10.3389/feart.2020.546246.

16. Cohen S, Raney A, Munasinghe D, Loftis D, Molthan A, Bell J, Rogers L, Galantowicz J, Brakenridge GR, Kettner AJ, Huang Y-F^{PhD}, **Tsang Y-P**. 2019 The Floodwater Depth Estimation Tool (FwDET v2.0) for improved remote sensing analysis of coastal flooding. *Natural Hazards and Earth System Science* 19(9): 2053-2065. <https://doi.org/10.5194/nhess-19-2053-2019>.
17. **Tsang Y-P**, Tingley RW III, Hsiao J, Infante DM. 2019. Identifying high value areas for conservation: Accounting for connections among terrestrial, freshwater, and marine habitats in a tropical island system. *Journal for Nature Conservation* 50:125711. DOI: 10.1016/j.jnc.2019.125711.
18. Cooper AR, **Tsang Y-P**, Infante DM, Daniel WM, McKerrow AJ, Wieferich D. 2019. Protected areas lacking for many common fluvial fishes of the conterminous USA. *Diversity and Distributions* 25:1289-1303. DOI: 10.1111/ddi.12937.
19. Martin B^{MS}, **Tsang Y-P**, Tingley RW III, Clilverd H, Infante DM. 2019. Characterizing Natural Barriers to Non-native Stream Fauna in Hawaii. Pages 83-104 in R. M. Hughes, D. M. Infante, L. Wang, K. Chen, and B. de Freitas Terra, editors. *Advances in Understanding Landscape Influences on Freshwater Habitats and Biological Assemblages. American Fisheries Society, Symposium 90*. Bethesda, Maryland.
20. Clilverd H^{PD}, **Tsang Y-P**, Lynch AJ, Infante DM. 2019. Long-term streamflow trends in Hawaii and implications for native stream fauna. *Hydrological Processes* 33(5):699-719. <https://doi.org/10.1002/hyp.13356>.
21. Tingley RW III, Infante DM, MacKenzie RA, Cooper AR, **Tsang Y-P**. 2019. Identifying natural catchment landscape influences on tropical stream organisms: classifying stream reaches of the Hawaiian Islands. *Hydrobiologia* 826(1):67-83. DOI: 10.1007/s10750-018-3726-5.
22. Munasinghe D, Cohen S, Huang Y-F^{PhD}, **Tsang Y-P**, Zhang J, Fang Z. 2018. Intercomparison of satellite remote sensing-based flood inundation mapping techniques. *JAWRA Journal of the American Water Resources Association* 54(4):834-846. DOI: 10.1111/1752-1688.12626.
23. Zhang J, Huang Y-F^{PhD}, Munasinghe D, Fang Z, **Tsang Y-P**, Cohen S. 2018. Comparative analysis of inundation mapping approaches for the 2016 flood in the Brazos River, Texas. *JAWRA Journal of the American Water Resources Association* 54(4):820-833. DOI: 10.1111/1752-1688.12623.
24. Yang D, Cai J, Hull V, Wang K, **Tsang Y-P**, Liu J. 2016. New road for telecoupling global prosperity and ecological sustainability. *Ecosystem Health and Sustainability* 2(10):e01242. DOI: 10.1002/ehs2.1242.
25. **Tsang Y-P**, Infante DM, Stewart J, Wang L, Tingley RW, Thornbrugh D, Cooper AR, Daniel WM. 2016. StreamThermal: A software package for calculating thermal metrics from stream temperature data. *Fisheries* 41(9):548-554. DOI: 10.1080/03632415.2016.1210517.
26. Sievert NA, Paukert CP, **Tsang Y-P**, Infante D. 2016. Development and assessment of indices to determine stream fish vulnerability to climate change and habitat alteration. *Ecological Indicators* 67:403-416. DOI: 10.1016/j.ecolind.2016.03.013.
27. Daniel WM, Infante DM, Hughes RM, **Tsang Y-P**, Esselman PC, Wieferich D, Herreman K, Cooper AR, Wang L, Taylor WW. 2015. Characterizing coal and mineral mines as a regional source of stress to stream fish assemblages. *Ecological Indicators* 50:50-61. DOI: 10.1016/J.ECOLIND.2014.10.018.
28. **Tsang Y-P**, Wieferich D, Fung K, Infante DM, Cooper AR. 2014. An approach for aggregating upstream catchment information to support research and management of fluvial systems across large landscapes. *SpringerPlus* 3(1):589. DOI: 10.1186/2193-1801-3-589.
29. Deweber JT, **Tsang Y-P**, Krueger DM, Whittier JB, Wagner T, Infante DM, Whelan G. 2014. Importance of understanding landscape biases in USGS gage locations: Implications and solutions for managers. *Fisheries* 39(4):155-163. DOI: 10.1080/03632415.2014.891503.
30. **Tsang Y-P**, Hornberger G, Kaplan LA, Newbold JD, Aufdenkampe AK. 2014. A variable source area for groundwater evapotranspiration: impacts on modeling stream flow. *Hydrological Processes* 28:2439-2450. DOI: 10.1002/hyp.9811.
31. Esselman P, Infante D, Wang L, Cooper AR, Wieferixh D, **Tsang Y-P**, Thornbrugh DJ, Taylor WW. 2013. Regional fish community indicators of landscape disturbance to catchments of the conterminous United States. *Ecological Indicators* 26:163-173.

32. **Tsang Y-P**, Felton GK, Moglen GE, Paul M. 2011. Region of influence method improves macroinvertebrate predictive models in Maryland. *Ecological Modelling* 222(19):3473-3485. DOI: 10.1016/J.ECOLMODEL.2011.08.006.
33. Wu F-C, **Tsang Y-P**. 2004. Second-order Monte Carlo uncertainty/variability analysis using correlated model parameters: application to salmonid embryo survival risk assessment. *Ecological Modelling* 177 (3-4): 393-414. DOI: 10.1016/j.ecolmodel.2004.02.016.
Adopted in *Environmental Risk Assessment of Genetically Modified Organisms, Volume 3: Methodologies for Transgenic Fish* (CABI Publishers, 2007); selected as one of the representative papers in modelling theory category in “Ecological Modelling: editorial overview 2000–2005”, *Ecological Modelling*. 2005. 188:137-144.
34. Wu F-C, Ma DY, **Tsang Y-P**. 2001. Sensitivity analysis of embryo survival model for salmonid spawning gravels. *Journal of Chinese Agricultural Engineering*, 47(4):39-47.
35. Ma DY, Wu F-C, **Tsang Y-P**. 2001. Comparison of fuzzy α -cuts method and Monte Carlo method in uncertainty analysis of salmonid embryo survival. *Journal of Chinese Agricultural Engineering* 47(4):48-55.

Journal Articles in Preparation

1. Gayte M^{MS}, **Tsang Y**, Huang Y-F^{PhD}. Changes in hourly rainfall extremes across the five main Hawaiian Islands. Expected submission February 2024.
2. Miller JA, Ching C^{MS}, **Tsang Y**, Kinzie RA, Akua J, Fraiola K, Mackenzie RA. Disentangling diadromy: a multifaceted approach to characterizing migratory variation. *Ecological Application*. Expected submission February 2024.
3. Gonzalez A^{MS}, **Tsang Y-P**, Renshaw M, Higachi G, Hazama N, Baker M, Nelson C. *Environmental DNA*. Expected submission June 2024.
4. Lariosa K-R^{MS}, **Tsang Y-P**, Strauch A, Clilverd H. Stream Restoration: Removal of *Hibiscus tiliaceus* in Kahana Valley, O‘ahu. Expected submission June 2024.
5. Martin B^{MS}, **Tsang Y-P**, Higashi G, Tingley RW III, Clilverd H, Herreman K, Infante DM. Characterizing the habitat use and distribution of introduced freshwater species in Hawaii. Expected submission June 2024.
6. **Tsang Y-P**, Infante DM, Wang L, Krueger D, Wieferich D. Developing linkages between fish metrics and fluvial variation to explore sensitive stream fish communities across the conterminous United States. Expected submission June 2024.

Extension Publications

Creative Works (i.e., Extension Videos, Websites, Blogs, Creative Designs and Exhibitions, etc.)

Workshop Reports

- **Cordell, S., A. Frazier, C. Trauernicht, Y. Tsang. 2019. Drought in the U.S.-Affiliated Pacific Islands: Impacts to Ecosystems. Workshop Report. 2pp.**

The Climate Adaptation Science Center (CASC) Network selected the emerging climate science field of Ecological Drought as a research focus area. The U.S.-Affiliated Pacific Islands (USAPI) falls within the domain of the Pacific Islands CASC. This workshop was an add-on to the eight Ecological Drought Workshops (each hosted by a different CASC), so that additional attention could be directed towards the topic of drought in island environments and the unique challenges that drought poses to island communities. Here is the USAPI workshop Synthesis Newsletter, 2019.
<https://www.sciencebase.gov/catalog/item/5cf81c76e4b07f02a70465be>

Software Packages, Geographic Information System Extensions and Layers

- **The Floodwater Depth Estimation Tool (FwDET v2.0) for Improved Remote Sensing Analysis of Coastal Flooding**

Cohen S, Raney A, Munasinghe D, Loftis D, Molthan A, Bell J, Rogers L, Galantowicz J, Brakenridge GR, Kettner AJ, [Huang Y-F](#)^{PhD}, **Tsang, Y-P**. The Floodwater Depth Estimation Tool (FwDET v2.0) for improved remote sensing analysis of coastal flooding. *Natural Hazards and Earth System Science* 19(9): 2053-2065. <https://doi.org/10.5194/nhess-19-2053-2019>.

The article “The Floodwater Depth Estimation Tool (FwDET v2.0) for Improved Remote Sensing Analysis of Coastal Flooding” submitted to Confex has been deposited as a poster to the Earth and Space Science Open Archive (ESSOAr) at Sagy Cohen’s request, making your research available sooner and to a wide audience of your fellow researchers

- **Hawaii Waterfall Layer**

The locations of waterfalls were assembled from three sources: National Hydrography Dataset; Hawaii Statewide GIS Program; and the World Waterfall Database. Additional locations were added by visually inspecting the stream network within the 129 watersheds for waterfalls using Google Earth Pro. Published in U.S. Geological Survey, Science Base.

<https://doi.org/10.5066/P9EA3GCD>

Waiting to be deposited and shared as part of an updated version of the national dataset, “Waterfalls linked to the National Hydrography Datasets”.

<https://www.sciencebase.gov/catalog/item/54944c2ce4b093dbe3016977>

- **StreamThermal**: A software package for calculating thermal metrics from stream temperature data (Tsang et al. 2016; DOI: 10.1080/03632415.2016.1210517).

<https://github.com/tsangyp/StreamThermal>

(September 2016, R package)

This R package contains a series of functions that calculate thermal metrics in five categories of stream thermal regimes based on continuous temperature records.

- **A tool for aggregating upstream information of fluvial systems across large landscapes**

(October 2014, .rb file)

A Ruby code that programs the upstream aggregation process for fluvial systems.

<http://www.springerplus.com/content/3/1/589/additional>

A Python 3.6 code (provided in both .py and .ipynb) that is a slightly modified translation of the ruby code published in the manuscript, “An approach for aggregating upstream catchment information to support research and management of fluvial systems across large landscapes” (Tsang et al. 2014; DOI: 10.1186/2193-1801-3-589). The code accepts csv input of stream network information (segment ID, upstream segment ID, local catchment area) and outputs an hdf file that includes the following information about each stream segment: segment ID; local catchment area; network catchment area; and a list of upstream segment IDs.

<https://my.usgs.gov/bitbucket/projects/BIOLAB/repos/upstreamnetworkaggregation/browse?at=refs%2Fheads%2FAggUpCSV>

- **Stream biodiversity extension software for GISHydro+2000**

http://www.gishydro.umd.edu/documents/yin-phan/Region_Style_BioModels.zip

(April 2008, Zip format ~5.0MB)

This zip file contains the documentation, installation instructions, and an ArcView extension that interacts with GISHydro to estimate biodiversity in Maryland streams.

Stream Mentoring Stations

- **Real-time stream monitoring station at Kaluanui stream** at Ewa Forest Reserve
Measuring stream water level (since September, 2020).
- **Real-time stream monitoring station at Poamoho stream** at Ewa Forest Reserve
Measuring stream water level (since March, 2018).

<https://tsangstreamlab.github.io/#stream-poamoho-stream>

- **Real-time stream monitoring station in upper Manoa watershed**
Upstream of Ahuilama stream at Lyon Forest Reserve, measuring stream water level (since April 2018).
<https://tsangstreamlab.github.io/#stream-lyon-aihualama-stream-above-diversion>
- **Real-time stream monitoring station at Lyon Arboretum**
Measuring stream water level and water quality—conductivity, turbidity, dissolved oxygen, pH, oxygen reduction potential, water temperature, total dissolved solids, salinity (since September 2016).
<https://tsangstreamlab.github.io/#stream-lyon-aihualama-stream-below-diversion>
<https://www.intelesense.net/data/intelecell/0000001100060005/t:water>

Weather Station

- **Real-time weather station at Lyon Arboretum**
Measuring rainfall, temperature, humidity, wind speed and direction, soil moisture, and solar radiation (since February 2018).
<https://explore.synopticdata.com/011HI/current>

Web Portal

- **NorEaST: A Stream Temperature Inventory Network and Decision Support Metadata Mapper**
The NorEaST web portal was developed to serve as a coordinated, multi-agency regional framework to map and store continuous stream temperature locations and data for New England, Mid-Atlantic, and the Great Lakes States. Stream temperature monitoring locations and metadata can be viewed for nearly 7900 monitoring locations across 22 states, contributed by 41 different organizations (October 2015).
<https://ccviewer.wim.usgs.gov/noreast/>

Leadership Roles (Committees, Boards, Advisory, etc.)

Professional Memberships

American Geophysical Union, since 2011

American Fisheries Society, since 2010

Society for Freshwater Science (North American Benthological Society), since 2008

American Ecological Engineering Society, since 2006

Reviewer of Professional Journals and Publications

- Nature Communication
- Nature Sustainability
- Science of the Total Environment
- Conservation Biology
- Biological Conservation
- Hydrobiologia
- Water
- Fisheries
- Geoinformatics and Geostatistics
- Land Water Policy
- Journal of Hydrology
- Journal of Water Resources Planning and Management
- Landscape Ecology

- Ecohydrology and Hydrobiology
- Ecological Engineering
- Journal of Nature Conservation

Reviewers of Proposals

- National Science Foundation—EPSCoR, Track IV
- National Institute of Food and Agriculture, Hatch and Hatch Supplement
- National Science Foundation—Hydrology Program
- South Carolina, Sea Grant Consortium

Department Services

2021–2022, 2023 – Present NREM Graduate Committee

2019–2021 NREM Curriculum Committee Chair

2019 Search Committee for Agricultural Economist

2017 Search Committee for Administrative, Professional and Technical staff

2015-2019 NREM Curriculum Committee

College and University Services

2017–Present Representative for Consortium for the Advancement of Hydrologic Science Inc. (CUAHSI)

2019–2021 CTAHR senate

2019–2021 UHM Meeting Pattern Advisory Committee

2017 Judge for the 29th Annual CTAHR Student Research Symposium

2016 Judge for the 28th Annual CTAHR Student Research Symposium

Professional Community Services

2022–Present Standing Committee on Instrumentation for Consortium for the Advancement of Hydrologic Science Inc. (CUAHSI)

2020–2021 Early-Career Advisory Panel for Consortium for the Advancement of Hydrologic Science Inc. (CUAHSI)

2020 Reviewer of Consortium for the Advancement of Hydrologic Science Inc. (CUAHSI) Voices of the Future Award

2019–2020 Society of Freshwater Science (SFS), Hynes award selection committee

2017–Present UHM Representative for Consortium for the Advancement of Hydrologic Science Inc. (CUAHSI)

2017–2019 American Ecological Engineering Society (AEES) Treasurer

2018 Review Editor for *Frontiers in Forests and Global Change*, special section: Forest Hydrology.

2016 Mentor for Career and Research Advice Mentorship (CRAM) program in the American Geophysical Union 2016 Fall meeting.

2014, 2015 Co-instructor in seminar “Strategies to Become a Productive Writer”, Spring 2015, Dept. of Fisheries and Wildlife, Michigan State University, MI

2013-2014 Committee for Early Career in Fisheries Science, American Fisheries Society

2013 Book review: *Mentoring for Diversity for More Effective Fisheries Management and Conservation*

Local Community Services

2020 Interview for Honors Chemistry class at Lakeside School in Seattle, WA.

2019 Final STEM project judge of STEMulate Summer Symposium at Windward Community College, July 12, 2019

2019 Presenter at Wahine Processing Power Workshop, July 11, 2019, “The Importance of Stream Temperature to the Ecosystem, and Some of My STEM Journeys”

2019 Co-leader of a group section for Imi Wai Ola Student Science Conference May 17, 2019, hosted by Pacific American Foundation

2018 Guest presenter on “Hydrology for Manoa Watershed” at the Oceanography Summer Bridge Program

2018 Invited talk on Ala Wai Watershed stream research, SMART Ala Wai Workshop III, September 29, 2018

2018 Invited talk on past and present of monitoring of Manoa watershed, SMART Ala Wai Workshop II, June 18, 2018

2017 Hosted the Hawaii Stream Conservation Meeting, August 1, 2017

2016 Hosted a “Meeting with Assistant Director of Fish and Wildlife Service” to help graduate students in exploring career paths and opportunities in state and federal agencies, February 21, 2016

Graduate Students

<u>Category</u>	<u>Current Number of Students</u>	<u>Number Graduated (Career)</u>
<i>Chair</i> of Master’s Committees	6	12
<i>Chair</i> of PhD Committees	2	0
Member of Master’s Committees	3	6
Member of PhD Committees	5	2

Grant Support

Title of Grant: RAPID: Post-Wildfire Runoff from Burned Urban Coastal Landscape (Award# OIA-2346745)

Source of Grant: National Science Foundation

Total Dollar Value (Your share of the grant value): \$200,000

Dates of Grant: *11/15/2023–10/31/2024

Role (PI, CoPI): PI

Title of Grant: Supporting Equitable Nature-Based Solutions for Flood Mitigation

Source of Grant: National Oceanic and Atmospheric Administration: the Cooperative Institute for Research to Operations in Hydrology (CIROH); University of Alabama

Total Dollar Value (Your share of the grant value): \$487,127

Dates of Grant: *06/01/2023–05/31/2026

Role (PI, CoPI): CoPI

Title of Grant: MRI: Acquisition of a Hawaii Statewide Mesonet - supplement

Source of Grant: NSF-MRI, AGS Div Atmospheric & Geospace Science; GEO Directorate for Geosciences

Total Dollar Value (Your share of the grant value): \$100,000

Dates of Grant: *09/01/2021–08/31/2024

Role (PI, CoPI): CoPI

Title of Grant: Fill the Knowledge Gaps: Extreme Weather Driven Changes in Flow Regime and their Impacts on Amphidromous Species in Hawaii Streams, G22AC00563

Source of Grant: USGS-National Climate Adaptation Science Center

Total Dollar Value (Your share of the grant value): \$338,089

Dates of Grant: *09/01/2022–08/31/2024

Role (PI, CoPI): PI

Title of Grant: ‘Iolani Pa‘ēpa‘ē o Wai ‘Ekolu: Place-based Watershed Education and Caring for Stream Ecosystems

Source of Grant: NOAA, BWET

Total Dollar Value (Your share of the grant value): \$75,000

Dates of Grant: *08/01/2022–07/31/2023

Role (PI, CoPI): PI

Title of Grant: Laying the Groundwork for Water Security Preparedness and Resilience in Hawaii and the USAPI Through

Strong Partnerships, Robust Scientific Information, and Increased Analytical Capacity

Source of Grant: Defense, Department Navy OFC of Naval Reserach

Total Dollar Value (Your share of the grant value): \$2,500,000

Dates of Grant: *08/01/2023–07/31/2025

Role (PI, CoPI): CoPI

Title of Grant: The Cooperative Institute for Research to Operations in Hydrology (CIROH.) subaward: An evaluation of the NextGen National Water Model in tropical conditions with the aim of improving hyperlocal flood forecasting

Source of Grant: National Oceanic and Atmospheric Administration: the Cooperative Institute for Research to Operations in Hydrology (CIROH); University of Alabama

Total Dollar Value (Your share of the grant value): \$875,486

Dates of Grant: *08/01/2022–07/31/2024

Role (PI, CoPI): CoPI

Title of Grant: Preliminary Scope of Work and Budget for Water Resources Research Center Coordination of UH Activities for Red Hill Response (scope change): Enhancing Capacity to Detect and Quantify Contaminants in Drinking Water and Environmental Waters Associated with the Red Hill Underground Fuel Storage Facility

Source of Grant: Office of Naval Research (ONR), United States Department of the Navy

Total Dollar Value (Your share of the grant value): \$311,229

Dates of Grant: *02/17/2022–08/31/2023

Role (PI, CoPI): CoPI

Title of Grant: Biodiversity Monitoring of Freshwater and Estuarine Communities in Halawa Stream, Oahu, Hawai'i

Source of Grant: Department of Navy, Naval Facilities Engineering Systems Command, Pacific

Total Dollar Value (Your share of the grant value): \$435,000

Dates of Grant: *01/21/2022–01/20/2024

Role (PI, CoPI): PI

Title of Grant: Characterizing network-wide, spatially explicit current and future stream temperature distribution

Source of Grant: WRRIP

Total Dollar Value (Your share of the grant value): \$40,000

Dates of Grant: *08/01/2022–07/24/2024

Role (PI, CoPI): CoPI

Title of Grant: Characterizing network-wide, spatially explicit current and future stream temperature distribution

Source of Grant: WRRIP

Total Dollar Value (Your share of the grant value): \$40,000

Dates of Grant: *08/01/2022–07/24/2024

Role (PI, CoPI): CoPI

Title of Grant: RII Track-1: Change Hawai'i; Harnessing the Data Revolution for Island Resilience

Source of Grant: NSF, Office of Integrative Activities, EPSCoR, Research Infrastructure Improvement Program Track-1 (RII Track-1)

Total Dollar Value (Your share of the grant value): \$20,000,000 (\$275,000)

Dates of Grant: *06/01/2022–05/31/2027

Role (PI, CoPI): Key Personnel, leading a sub-project

Title of Grant: Assessing the Influence of Forest on the Streamflow Regimes in the Hawaiian Watersheds

Source of Grant: NIFA, McIntire Stennis 1140M, managed by the College of Tropical Agriculture and Human Resources

Total Dollar Value (Your share of the grant value): \$125,000

Dates of Grant: *10/01/2021–09/30/2026

Role (PI, CoPI): PI

Title of Grant: SCC-CIVIC-FA Track B: Hoomalu Halelea - Community-led Innovation for Integrated Flood

Resilience (Award no. 2133398)

Source of Grant: NSF: Civic Innovation Challenge (NSF 20-562)

Total Dollar Value (Your share of the grant value): \$999,966

Dates of Grant: *10/01/2021–09/30/2022

Role (PI, CoPI): CoPI

Title of Grant: Resilient Ala Wai - Enhancing Flood Mitigation Through Invasive Species Control

Source of Grant: National Fish and Wildlife Foundation – National Coastal Resilience Fund 2021

Total Dollar Value (Your share of the grant value): \$1,640,830

Dates of Grant: *04/01/2022–12/31/2025

Role (PI, CoPI): CoPI

Title of Grant: MRI: Acquisition of a Hawaii Statewide Mesonet (Award no. 2117975)

Source of Grant: NSF-MRI, AGS Div Atmospheric & Geospace Science; GEO Directorate for Geosciences

Total Dollar Value (Your share of the grant value): \$1,334,481

Dates of Grant: *09/01/2021–08/31/2024

Role (PI, CoPI): CoPI

Title of Grant: HI RWO 20- Influence streamflow variability on fish populations as a proxy for understanding nutrient transport under climate change in Hawaiian and Alaskan streams

Source of Grant: Pacific Island – Alaska Climate Adaptation Science Center

Total Dollar Value (Your share of the grant value): \$53,684

Dates of Grant: *10/01/2021–09/30/2022

Role (PI, CoPI): CoPI

Title of Grant: SCC-CIVIC-PG Track B: Hoomalu Halelea - Community-led Innovation for Integrated Flood Resilience (Award no. 2043358)

Source of Grant: NSF: Civic Innovation Challenge (NSF 20-562)

Total Dollar Value (Your share of the grant value): \$49,997

Dates of Grant: *01/15/2021–09/30/2021

Role (PI, CoPI): CoI

Title of Grant: Impact of extreme events on native and nonnative fauna on Hawai'i stream ecosystem

Source of Grant: Pacific Island Climate Adaptation Science Center

Total Dollar Value (Your share of the grant value): \$214,471

Dates of Grant: *07/15/2021–07/14/2024

Role (PI, CoPI): PI

Title of Grant: Connecting ecosystems from mountain to the sea upon changing climate

Source of Grant: Department of Interior, United State Geological Survey

Total Dollar Value (Your share of the grant value): \$46,863

Dates of Grant: *06/15/2021–06/14/2023

Role (PI, CoPI): PI

Title of Grant: On-the-ground Invasive Species Removal Continues Improving Habitat Accessibility and Connectivity for Returning Native Stream Species in Makiki, Mānoa, and Pālolo Streams

Source of Grant: Hawaii Fish Habitat Partnership

Total Dollar Value (Your share of the grant value): \$58,457

Dates of Grant: *04/01/2020–09/30/2022

Role (PI, CoPI): PI

Title of Grant: Assessing Hawaiian Near- Coastal Marine Habitats- A Geospatial Framework for Linking Watershed Characteristics to Coastal Ecosystems

Source of Grant: U.S. Fish and Wildlife Services, the National Fish Habitat Partnership (NFHP)

Total Dollar Value (Your share of the grant value): \$20,000

Dates of Grant: *06/05/2019– 12/31/2020

Role (PI, CoPI): PI

Title of Grant: RII Track-4: Building the Next- Generation Hydrological Model for Hawaii—A Statewide Meteorology Model for Water Prediction and Management

Source of Grant: NSF, Office of Integrative Activities, EPSCoR Research Infrastructure Improvement Track 4: EPSCoR Research Fellows (RII Track-4)

Total Dollar Value (Your share of the grant value): \$197,157

Dates of Grant: 12/01/2019–11/30/2021

Role (PI, CoPI): PI

Title of Grant: Documenting and Monitoring the Stream and Riparian Resources of Two Ecologically Significant Streams on the Island of Oahu

Source of Grant: Hawaii Fish Habitat Partnership

Total Dollar Value (Your share of the grant value): \$53,128

Dates of Grant: *09/25/2019–09/30/2021

Role (PI, CoPI): CoPI

Title of Grant: Biodiversity of Freshwater and Estuarine Communities of Pearl Harbor

Source of Grant: Navy Joint Base Pearl Harbor- Hickam, Natural Resources Management

Total Dollar Value (Your share of the grant value): \$238,208

Dates of Grant: *07/01/2018–06/30/2021

Role (PI, CoPI): PI

Title of Grant: Experiential Learning 4 Resilient C: Culture, Community, Conservation, and Climate

Source of Grant: National Institute of Food and Agriculture (NIFA), Agriculture and Food Research Initiative, Educational Literacy Initiative’s Research and Extension Experiences for Undergraduates (REEU) grant program

Total Dollar Value (Your share of the grant value): \$278,688

Dates of Grant: 02/05/2018-02/04/2022

Role (PI, CoPI): CoPI

Title of Grant: Strategic Monitoring And Resilience Training in the Ala Wai Watershed— SMART Ala Wai

Source of Grant: University of Hawaii at Manoa, Strategic Investment Initiative

Total Dollar Value (Your share of the grant value): \$600,000

Dates of Grant: 01/01/2018-12/31/2019

Role (PI, CoPI): CoPI

Title of Grant: Characterizing the Water Availability and Nutrient Transport of Hawaii’s Watersheds and Its Implication to Downstream Agriculture and Coastal Environment

Source of Grant: Hatch 2018

Total Dollar Value (Your share of the grant value): \$125,000

Dates of Grant: 10/01/2017-09/30/2022

Role (PI, CoPI): PI

Title of Grant: Hawaiian Estuary Habitat Assessments— A Geospatial Foundation for Linking Watershed Hydrology to Semi-Enclosed Coastal Waterbodies

Source of Grant: U.S. Fish and Wildlife Services, the National Fish Habitat Partnership (“NFHP”)

Total Dollar Value (Your share of the grant value): \$11,528

Dates of Grant: 05/15/2017-12/31/2018

Role (PI, CoPI): PI

Title of Grant: Characterizing Natural Flow Regime of Hawaiian Forest Watersheds and its Implication on Downstream Water Availability

Source of Grant: NIFA, McIntire Stennis 1140M, managed by the College of Tropical Agriculture and Human Resources

Total Dollar Value (Your share of the grant value): \$131,000

Dates of Grant: 10/01/2016-09/30/2021

Role (PI, CoPI): PI

Title of Grant: Water Diversions: Economic Opportunities and Ecological Tradeoffs

Source of Grant: NIFA, McIntire Stennis 1140M, managed by the College of Tropical Agriculture and Human Resources

Total Dollar Value (Your share of the grant value): \$125,000

Dates of Grant: 10/01/2016-09/30/2021

Role (PI, CoPI): CoPI

Title of Grant: Assessing the Impact of Future Climate on Hawaii's Aquatic Ecosystems

Source of Grant: USGS-National Climate Change and Wildlife Center, G16AS00001

Total Dollar Value (Your share of the grant value): \$226,070

Dates of Grant: 05/18/2016-11/30/2019

Role (PI, CoPI): PI

Title of Grant: Understanding the Hydrology of a Rainforest Watershed in Hawaii

Source of Grant: U.S. Geological Survey State Water Resources Research Institutes Grant Program, Hawaii

Total Dollar Value (Your share of the grant value): \$39,932

Dates of Grant: 03/01/2016-09/30/2018

Role (PI, CoPI): PI

Presentations at Conferences

Invited Seminars, Symposium, and Workshop Presentations

1. **Tsang Y.** 2023. Changes in Rain, Streams, and Aquatic Ecosystems in Hawaiian Islands. National Institute of Water and Atmospheric Research. June 16, 2023, Christchurch, New Zealand.
2. **Tsang Y.** 2023. Changes in Rain, Streams, and Aquatic Ecosystems in Hawai'i. Civil & Natural Resources Engineering, University of Canterbury. June 15, 2023, Christchurch, New Zealand.
3. Vaughan M, **Tsang Y**, and Sears M. 2022. Ho'omalua Halele'a Community Led Innovation for Integrated Flood Resilience. NSF CIVIC - Closing Event Presentation. Washington DC.
4. **Huang Y-F**^{PhD}, **Tsang Y**, **Wilmot E**^{MS}, **Gayte M**^{MS}, **Clilverd H**^{PD}. 2022. Connecting ecosystems from the mountains to the sea during a changing climate. Pacific-Islands and Alaska Collaboration Meeting, Juneau, Alaska, July 25-27, 2022.
5. **Gayte M**^{MS}, **Tsang Y**, **Huang Y-F**^{PhD}. 2022. Estimating the timing of high streamflow discharge in Hawai'i using hourly rainfall and antecedent soil moisture conditions. 2022 Conference on Island Sustainability: Harness Wind in Our Sails to Sustainable 2030. April 5-9, 2022. Guam & Online.
6. **Tsang Y**, **Ching C**^{MS}, Miller J, Honarvar S, 2022. Uncovering Migratory Patterns of the Native Hawaiian Goby, O'opu Nākea (Awaous stamineus). 2022 Animal Behavior and Ecology Conference, January 18-19, 2022.
7. **Tsang Y**, Grabowski T, Yap C, Falke J, Bellmore R, Fellman J. 2022. Influence streamflow variability on fish populations as a proxy for understanding nutrient transport under climate change in Hawaiian in OC19 Icefield2Ocean and Ridge2Reef: A Collaborative Cross-Regional Approach to Actionable Climate Adaptation Science in Alaska and Pacific Islands Watershed Ecosystems. Ocean Science Meeting, February 24 – March 4, 2022
8. **Wilmot E**^{MS}, Wong J, **Tsang Y-P**, Lynch A, Infante D, **Clilverd H**^{PD}. 2021. Characterizing mauka to makai connections for aquatic conservation on Maui. 1st Annual E Pili ana I Ka Moana: Capacity Building Collaboration Symposium. Task Force Oceania. April 27-29, 2021. Online Virtual.
9. **Tsang Y-P**. 2021. Connecting ecosystems from mountain to the sea upon changing climate. PI-AK CSC Principal Investigator Meeting. April 15, 2021. Online Virtual.
10. **Tsang Y-P**. 2020. Threats and Opportunities of Freshwater Ecosystem under Climate Change. 2020 Pacific Islands Climate Adaption Science Summit. November 17-18, 2020, Online Virtual.
11. **Tsang Y-P**. 2020. Current effort in monitoring and understanding freshwater dependent ecosystems in Tsang Stream Lab: connection among stream and estuaries. Ike Wai – Water Resources Research Center Stakeholder Workshop, February 20, Hawaii Imin International Conference Center East-West Center.

12. **Tsang Y-P.** 2019. Characterizing Hawaiian Streams and Its Association with Ecosystem in Hawaii. Water Resources Research Center seminar, April 16, HIG 210, University of Hawaii Manoa.
13. **Tsang Y-P, Martin B^{MS}, Clilverd H^{PD},** Tingley RW III, Infante D, Herreman K, Higashi G. 2018. Characterizing the Habitat Use and Distribution of Introduced Stream Species Across Spatial Scales in Hawaii. National Climate Adaptation Science Center webinar, November 29.
14. **Tsang Y-P.** 2018. Streams Connect Fish, Watershed, and You. Natural Resources and Environmental Management Department Seminar, October 3, Honolulu, Hawaii.
15. **Tsang Y-P.** 2018. Understanding the Hydrology of Ala Wai Watershed. Smart Ala Wai Workshop III, September 29, Honolulu, Hawaii
16. **Tsang Y-P.** 2018. Stream Research Update and Overview. Ecohydrology Lab Meeting, September 28, Honolulu, Hawaii.
17. **Tsang Y-P.** 2018. Understanding the Hydrology of a Rainforest Watershed. Lyon Centennial Symposium, September 13–14, Honolulu, Hawaii.
18. **Tsang Y-P.** 2018. Impacts to Managed Natural Resources (USAPI)—Aquatic Species. Drought in the USAPI—Impacts, Resilience, and Management, August 14–15, Honolulu, Hawaii.
19. **Tsang Y-P.** 2018. Understanding the Hydrology of a Rainforest Watershed. Smart Ala Wai Workshop II, June 18, Honolulu, Hawaii
20. **Tsang Y-P.** 2018. Monitoring Streams to Understand Our Watersheds. HI Tech—Water Edition, May 23, Honolulu, Hawaii
21. Hsiao J, Infante DM, **Tsang Y-P,** Lynch A. 2018. Characterizing Spatial Linkages between Inland and Coastal habitats for Improved Conservation of Maui, Hawaii. NOAA Brown Bag Seminar, April 5, Silver Spring, Maryland.
22. **Clilverd H^{PD} Tsang Y-P,** Lynch A, Infante DM. 2018. Long-term Streamflow Trends in Hawaii and Implications for Native Stream Fauna. Water Resources Research Center seminar, February 20, HIG 210, University of Hawaii Manoa.
23. **Tsang Y-P.** 2017 Ecohydrology—the Linkage between Climate and Stream Ecosystem. Atmospheric Science seminar, September 20, Honolulu, Hawaii.
24. **Tsang Y-P.** 2017. Ecosystem and Natural Disasters in Hawaii. Center for Weather Climate and Disaster Research, National Taiwan University, June 4, Taipei, Taiwan.
25. **Tsang Y-P.** 2017. Ecohydrology Across Scales: Field, Model, and Data Science. National Taiwan Normal University, June 2, Taipei, Taiwan.
26. **Tsang Y-P.** 2017. Ecohydrology Across Scales: Field, Model, and Data Science. Bioenvironmental System Engineering Department, National Taiwan University, June 1, Taipei, Taiwan.
27. **Tsang Y-P.** 2017. Climate Change and Ecosystem. Association of Chinese Scholars in Hawaii Annual Meeting, March 4, Honolulu, Hawaii.
28. **Tsang Y-P.** 2016. Prioritizing Conservation Effort: An Application on Identifying Conservation Land for Stream Habitat Throughout the Main Hawaiian Islands. Natural Resource Management Seminar Series, May 19, Maui, Hawaii.
29. **Tsang, Y-P.** 2015. Ecohydrology and Its Application to Aquatic Ecosystems at the Landscape Scale. Department of Geography seminar, November 5, Honolulu, Hawaii.

Conference Presentations

1. **Tsang Y,** Strauch AM, Kimmel-Brownc J, Hau S, **Ching C^{MS}.** 2023.Characterizing Hydrological Habitats Used by Stream Fauna in East Maui, Hawai‘i. Freshwater Science. June 3rd- 7th, Brisbane, Australia.
2. **Ching C^{MS}, Tsang Y,** Miller J, Fraiola K, Clilverd H, Honarvar S. 2022. Uncovering Migratory Patterns of the Native Hawaiian Goby, ‘O‘opu Nākea (*Awaous stamineus*), Hawai‘i Conservation Conference, July 18 – 22, 2022.
3. Strauch A, **Tsang Y,** 2022. Evaluating How Recent Drought Exacerbates Limited Water Availability For A Tropical Island. Frontiers in Hydrology June 19-24, 2022. San Juan, Puerto Rico.
4. **Huang Y-F^{PhD}, Tsang Y,** 2022. How did geometrical characteristics of rainfall patterns change on O‘ahu Hawai‘i, between 2016 and 2020? Frontiers in Hydrology June 19-24, 2022. San Juan, Puerto Rico.
5. **Ching C^{MS}, Tsang Y,** Miller J, Fraiola K, Clilverd H, Honarvar S. 2022. Uncovering Migratory Patterns of the Native Hawaiian Goby, ‘O‘opu Nākea (*Awaous stamineus*), Science of the Service Event by US Fish & Wildlife. May 4, 2022.
6. Bullington J, Golder A, Beebe CA, McClintock R, Chen S, Lio S, Ornelas B, Wriston S, Quach H, Alegado R, **Tsang Y,** Glazer B, Nelson C. 2022. Using statistical and machine learning techniques to predict inland and

- coastal aquatic microbial community dynamics in Honolulu, Hawai‘i. Ocean Science Meeting, February 24 – March 4, 2022
7. Gayte M^{MS}, **Tsang Y-P**, Huang Y-F^{PhD}. 2021. Changes in hourly rainfall extremes across the five main Hawaiian Islands. American Geophysical Union Fall Meeting, December 13–17, New Orleans and Online Everywhere.
 8. Huang Y-F^{PhD}, **Tsang Y-P**, Gayte M^{MS}, Nugent A. 2021. Deriving gridded hourly rainfall on O‘ahu by combining gauge network and radar rainfall. American Geophysical Union Fall Meeting, December 13–17, New Orleans and Online Everywhere.
 9. Wilmot E^{MS}, Wong J, **Tsang Y-P**, Lynch A, Infante D, Clilverd H^{PD}. 2021. Characterizing Mauka to Makai Connections for Aquatic Conservation on Maui. Hawai‘i Conservation Conference. July 27-29, 2021.
 10. Maruno T^{MS}, Kim JR, Yeung N, **Tsang Y-P**, Hayes K. 2021. Mapping the Distribution of Invasive Rosy Wolfsnail, the *Euglandina rosea* Species Complex, in Hawai‘i. Hawai‘i Conservation Conference, July 27-29, 2021.
 11. Maruno T^{MS}, Kim JR, Yeung N, **Tsang Y-P**, Hayes K. 2021. Mapping *Euglandina rosea*: Evaluating the Distribution of the Rosy Wolfsnail in Hawai‘i. American Malacological Society 87th Annual Meeting, June 14-18, 2021. Online Virtual.
 12. Huang Y-F^{PhD}, **Tsang Y-P**, Gayte M^{MS}, Nugent A. 2021. Advance hourly gridded rainfall on O‘ahu by including radar information. International Tropical Islands Water Conference. April 12-15, 2021.
 13. Wilmot E^{MS}, Wong J, **Tsang Y-P**, Lynch A, Infante D, Clilverd H^{PD}. 2021. Characterizing mauka to makai connections for aquatic conservation on Maui. International Tropical Islands Water Conference. April 12-15, 2021.
 14. Gayte M^{MS}, **Tsang Y-P**, Huang Y-F^{PhD}. 2021. Estimating the timing of high discharge events in Hawai‘i using hourly rainfall and antecedent soil moisture conditions. International Tropical Islands Water Conference. April 12-15, 2021.
 15. Widanage R, Chan C, **Tsang Y-P**, Sipes B, Melakeherhan, H, Sanchez A, Mejia A. 2021. Discovering the Economic and Spatial Factors to Enhance Farm Technical Efficiency: A Case Study of Smallholder Potato Farming in the Western Highlands of Guatemala, 175th EAAE Seminar, May 23-15.
 16. Clilverd H^{PD}, **Tsang Y-P**, Lynch A, Infante DM, Frazier AG, Longman RJ, Huang Y-F^{PhD}, Gayte M^{MS}. 2020. Simulation of the hydrological impacts of climate change on Hawaiian streams. American Geophysical Union Fall Meeting, December 1–17, Virtual, Online Everywhere.
 17. Benoit L, Lucas M, Tseng H, Huang Y-F^{PhD}, **Tsang Y-P**, Nugent A., Giambelluca T, Mariethoz G. High-resolution rainfall mapping in tropical Island mountains. American Geophysical Union Fall Meeting, December 1–17, Virtual, Online Everywhere.
 18. **Tsang Y-P**, Martin B^{MS}, Tingley RW III, Clilverd H^{PD}, Infante D. 2020. Characterizing Natural Barriers to Non-native Stream Fauna in Hawaii. American Fisheries Society Annual Conference, September 14-25, Virtual, Columbus, Ohio
 19. Gonzalez A^{MS}, **Tsang Y-P**. 2020. Biodiversity of Estuarine Species in Pearl Harbor: A Methods Comparison Between Multi-depth eDNA Sampling and Four Traditional Sampling Gears. Hawaii Conservation Conference, September 1-3, Honolulu, Hawaii.
 20. Huang Y-F^{PhD}, **Tsang Y-P**. 2020. Comparisons of Rainfall Estimation from Different Sources in Hawai‘i. American Meteorological Society 34th Conference in Hydrology, 100th Annual Meeting, Boston, Massachusetts.
 21. Huang Y-F^{PhD}, **Tsang Y-P**, Strauch A, Clilverd H. 2020. Changes in Peak Streamflow and its Associated Rainfall across the Hawaiian Islands from 1970 to 2005. American Meteorological Society 34th Conference in Hydrology, 100th Annual Meeting, Boston, Massachusetts.
 22. **Tsang Y-P**, Strauch A, Huang Y-F^{PhD}. 2019. Predicting water availability for hydropower in a tropical watershed using the SWAT model. American Geophysical Union Fall Meeting, December 8–13, San Francisco, California.
 23. Cohen S, Raney A, Munasinghe D, Loftis D, Molthan A, Bell J, Rogers L, Galantowicz J, Brakenridge GR, Kettner AJ, Huang Y-F^{PhD}, Tsang Y-P. 2019 The Floodwater Depth Estimation Tool (FwDET v2.0) for Improved Remote Sensing Analysis of Coastal Flooding. American Geophysical Union Fall Meeting, December 8–13, San Francisco, California.
 24. Widanage R, Chan C, **Tsang Y-P**, Sipes B, Melakeherhan, H, Sanchez A, Mejia A. 2019. What are the Factors Contributing to Low Productivity? Economic and Spatial Analysis of Inefficiency: A Case Study of Potato Farming in Guatemala. 28th European Vegetation Survey, September 2–6, Madrid, Spain.

25. Tseng H, Yost R, **Tsang Y-P**, Ziegler AD. 2019. Exploring Topographic Effects and their Seasonal Variations on Fine Spatial Scale Rainfall Distribution Over Mountainous Terrain Using Statistical Methods: Mae Sa, Northern Thailand. Asia Oceania Geosciences Society 16th Annual Meeting, July 28–August 2, Singapore.
26. **Tsang Y-P**, Martin B^{MS}, Tingley RW III, Clilverd H^{PD}, Infante D. 2019. Characterizing Natural Barriers to Non-native Stream Fauna in Hawaii. American Ecological Engineering Society Annual Conference, June 4-6, Asheville, North Carolina.
27. **Tsang Y-P**, Martin B^{MS}, Tingley RW III, Clilverd H^{PD}, Infante D. 2019. Characterizing Natural Barriers to Non-native Stream Fauna in Hawaii. Society of Freshwater Science Annual Conference, May 19–23, Salt Lake City, Utah.
28. **Tsang Y-P**, Clilverd H^{PD}, Lynch A, Infante DM. 2018. Ecological Responses to Hydrological Characteristics in Hawaii Streams and their Implication with Changing Climate. American Geophysical Union Fall Meeting, December 12–14, Washington DC.
29. Huang Y-F^{PHD}, **Tsang Y-P**, Strauch A, Clilverd H. 2018. Temporal Shifts in the Magnitude of Peak Streamflow and its Associated Rainfall across the Hawaiian Islands. American Geophysical Union Fall Meeting, December 12–14, Washington DC.
30. Harmon K, **Tsang Y-P**, Strauch A, Chan C, Price M. 2018. Impacts of Surface Water Levels and Predation on Hawaiian Stilt Nesting Success Symposium on Science in Support of Archipelagic Management, November 19–20, Honolulu, Hawaii.
31. Martin B^{MS}, **Tsang Y-P**, Clilverd H^{PD}, Tingley RW, Infante DM, Herreman K, Higashi G. 2018. Characterizing the Habitat Use and Distribution of Introduced Freshwater Species in Hawaii. American Fisheries Society 148th Annual Meeting, August 19–23, Atlantic City, New Jersey.
32. Clilverd H^{PD}, **Tsang Y-P**, Lynch A, Infante DM. 2018. Assessing the Impact of Declining Streamflow on the Distribution of Native Fishes Across the Hawaiian Islands. American Fisheries Society 148th Annual Meeting, August 19–23, Atlantic City, New Jersey.
33. Daniel WM, Infante DM, Hughes RM, **Tsang Y-P**, Herreman K, Cooper AR. 2018. Characterizing Coal and Mineral Mines as a Regional Source of Stress to Stream Fish Assemblages. American Fisheries Society 148th Annual Meeting, August 19–23, Atlantic City, New Jersey.
34. **Tsang Y-P**, Clilverd H^{PD}, Lynch A, Infante DM. 2018. Streamflow Dynamics Explained by Rainfall in Hawaii. Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) 6th Biennial Colloquium, July 29–August 3, National Conservation Training Center, Shepherdstown, West Virginia.
35. Lariosa K-R^{MS}, **Tsang Y-P**. 2018. Stream Restoration in Kahana Valley, O’ahu: Removal of *Hibiscus tiliaceus*. American Ecological Engineering Society Annual meeting, June 11–14, Houston, Texas.
36. Clilverd H^{PD}, **Tsang Y-P**, Peyton K, Kinzie R III. 2018. Ridge to Reef Hydrological Connectivity for Fish Passage. 25th Annual Hawaii Conservation Conference, July 24–26, Honolulu, Hawaii.
37. Harmon K, **Tsang Y-P**, Strauch A, Chan C, Price M. 2018. Evaluating Impacts of Rainfall Intensity and Surface Water Levels on Hawaiian Stilt Nesting Success. 25th Annual Hawaii Conservation Conference, July 24–26, Honolulu, Hawaii.
38. Cooper A, Infante DM, Fuller P, Neilson M, Daniel W, McKerrow A, Wieferrich D, **Tsang Y-P**, Herreman K. 2018. Improving Conservation of Freshwater Organisms: Using Multiple Species Distribution Models to Enhance Decision-Making Through Large Regions. Society of Freshwater Science, May 20–24, Detroit, Michigan.
39. Huang Y-F^{PHD}, **Tsang Y-P**, Strauch A, Clilverd H. 2018 Temporal Shifts in the Magnitude of Peak Streamflow and its Associated Rainfall across the Hawaiian Islands. Asia Oceania Geosciences Society 15th Annual Meeting, June 03–08, Honolulu, Hawaii.
40. Huang Y-F^{PHD}, **Tsang Y-P**. 2017. Applying Spatially Distributed Rainfall Data to a Hydrological Model in a Tropical Watershed in Hawaii. American Geophysical Union Fall Meeting, December 11–15, New Orleans, Louisiana
41. Harmon K, LaPorte P, Chan C, Price M, **Tsang Y-P**, Strauch A. 2017. Water Diversion: Assessment of Current Water Supply by Maunawili Stream to Kawainui Marsh and the Waimanalo Agricultural Community. Hawaii Agriculture Conference (Hawaii AG2017), August 29–30, Honolulu, Hawaii.
42. Cooper AR, Infante DM, Fuller PM, Neilson M, **Tsang Y-P**, McKerrow A, Wieferrich D, Herreman K. 2017. Distribution of Fluvial Fishes across the Conterminous United States: Supporting Conservation Across Large Spatial Extents. American Fisheries Society 147th Annual Meeting, August 20–24, Tampa, Florida.
43. Clilverd H^{PD}, **Tsang Y-P**, Lynch A, Infante DM. 2017. Impact of Climate Change on the Natural Flow Regime of Hawaii’s streams. 24th Hawaii Conservation Conference, July 18–20, Honolulu, Hawaii.

44. Clilver H ^{PD}, **Tsang Y-P**, Lynch A, Infante DM. 2017. Assessing the Impact of Future Climate on Hawaii's Aquatic Ecosystems. Hawaii Ecosystem Meeting, June 29–30, Hilo, Hawaii.
45. Tseng H, Giambelluca T, Ziegler AD, **Tsang Y-P**. 2017. Seasonality in Stream Hydrograph of a Montane Watershed in Northern Thailand: Is There a Threshold Condition that Predicts Mid-Wet-Season Shift in Rainfall-Runoff Relationship? JpGU, May 20–25, Makuhari Messe, Chiba, Japan
46. Harmon K, LaPorte P, Chan C, Price M, **Tsang Y-P**, Strauch A. 2017. Water Diversion: Assessment of Current Water Supply by Maunawili Stream to Kawainui Marsh and the Waimanalo Agricultural Community. University of Hawaii at Manoa's College of Tropical Agriculture and Human Resources (CTAHR) and College of Engineering (CoE) 2017 Student Research Symposium, April 7–8, Honolulu, Hawaii.
47. Clilver H ^{PD}, **Tsang Y-P**, Lynch A, Infante DM. 2017. Assessing Climate-Driven Changes in Streamflow in the Hawaii Islands. American Society of Limnology and Oceanography meeting, February 26–March 3, Honolulu, Hawaii.
48. **Tsang Y-P**, Strauch A. 2016. The Natural Flow Regime of Hawaii Streams. American Geophysical Union Meeting Fall Meeting, December 10–16, San Francisco, California.
49. Zhang J, Munasinghe D, Huang Y-F ^{PHD}, Fang N, Cohen S, **Tsang Y-P**. 2016. Comparison of Flood Inundation Mapping Techniques between Different Modeling Approaches and Satellite Imagery. American Geophysical Union Fall Meeting, December 10–16, San Francisco, California.
50. Wiefelich D, Infante DM, **Tsang Y-P**. 2016. National and Regional Data Assets and Needs to Help Assess Climate Impacts on Fish. American Fisheries Society 146th Annual Meeting, August 21–25, Kansas City, Missouri.
51. Hsiao J, Infante DM, **Tsang Y-P**, Lynch A. 2016. Understanding Spatial Linkages between Terrestrial and Coastal Systems: Improving Conservation of Coastal Habitats. American Fisheries Society 146th Annual Meeting, August 21–25, Kansas City, Missouri.
52. **Tsang Y-P**. 2016. This is What I am Doing About Learning the Hawaii Streams. Hawaii Ecosystem Meeting, July 6-7, Hilo, Hawaii.
53. Munasinghe D, Zhang J, Huang Y-F ^{PHD}, Cohen S, **Tsang Y-P**. 2016. Comparison of Flood Inundation Mapping Techniques between Different Modeling Approaches and Satellite Imagery. Alabama Water Resources Conference, September 7–9, Orange Beach, Alabama.
54. Infante DM, Sievert N, Daniel WM, Paukert C, Whittier J, **Tsang Y-P**, Stewart J. 2016. FISHTAIL: Conserving Stream Habitats and Fishes from Current and Future Threats Throughout Large Regions. 7th World Fisheries Congress, Challenge to Sustainable Fisheries and Safe Seafoods, May 23–27, Busan, Korea.
55. Sievert N, **Tsang Y-P**, Daniel WM, Paukert C, Infante DM, Whittier J, Herreman K, J. Stewart J, Wagner T. 2016. An Assessment of Potential Changes in Habitat Classes Due to Climate Change in the Northeast Climate Science Center Region. 76th Midwest Fish and Wildlife Conference, January 24–27, Grand Rapids, Michigan.
56. **Tsang Y-P**, Strauch A. 2015. Understanding the Watershed Hydrology of Tropical Islands. American Geophysical Union Fall Meeting, December 14–18, San Francisco, California.
57. **Tsang Y-P**, Strauch A. 2015. Modeling Stream Flow in a Leeward Watershed in Hawaii: Application to Water Resource Management under the Threat of Wildfire. Water Resources Sustainability Issues on Tropical Islands, December 1–3, Honolulu, Hawaii.
58. ***Tsang Y-P**, Infante DM, Wang L. 2015. Evaluating Changes in Habitat of Warm Water Fishes with Changes in Climate over Large Regions: Using an Ecological Classification to Identify Susceptible Habitats. American Fisheries Society 145th Annual Meeting, August 15–20, Portland, Oregon.
59. Infante DM, Daniel WM, **Tsang Y-P**, Wiefelich D. 2015. Improving Opportunities for Conserving Streams through National Data Layers and a Common Spatial Framework: Advances in Large-Scale Ecological Investigations of Aquatic Systems. American Fisheries Society 145th Annual Meeting, August 15–20, Portland, Oregon.
60. Infante DM, Taylor WW, Daniel WM, **Tsang Y-P**. 2015. Improving Opportunities for Conserving Streams through National Data Layers and a Common Spatial Framework: Advances in Large-Scale Ecological Investigations of Aquatic Systems. American Fisheries Society 145th Annual Meeting, August 15–20, Portland, Oregon.
61. Daniel WM, Infante DM, Herreman K, Cooper A, **Tsang Y-P**, Taylor WW. 2015. 2015 Assessment of the Nation's Fluvial Fish Habitats: Promoting Conservation of Fish Habitats throughout the Conterminous United States. American Fisheries Society 145th Annual Meeting, August 15–20, Portland, Oregon.
62. Stewart JS, Polebitski A, Draper B, Schoephoester K, Blodgett D, **Tsang Y-P**, McKenna JE Jr, Armstrong D, Infante DM. 2015. NorEaST Web Portal: Highlights from a Multi-Agency Approach to Manage and Share

- Continuous Stream Temperature Data. American Fisheries Society 145th Annual Meeting, August 15–20, Portland, Oregon.
63. Tingley RW, Infante DM, Daniel WM, **Tsang Y-P**, Herreman K. 2015. Assessing Hawaii's Stream Habitats: Incorporation of an Ecological Classification of Streams for Improved Conservation Opportunities. American Fisheries Society 145th Annual Meeting, August 15–20, Portland, Oregon.
 64. ***Tsang Y-P**, Infante DM, Tingley RW, Herreman K. 2015. Prioritizing Conservation Lands in the Hawaiian Islands: Implications for Management in Freshwater Ecosystems in the Face of Climate Change. Association for Tropical Biology and Conservation, July 12–16, Honolulu, Hawaii.
 65. Tingley RW, Infante DM, MacKenzie RA, **Tsang Y-P**. 2015. An Ecological Classification of Hawaiian Streams: Development and Implementation of a Tool for Conservation in a Changing Climate. Association for Tropical Biology and Conservation, July 12–16, Honolulu, Hawaii.
 66. Daniel WM, Sievert N, Infante DM, Paukert C, Stewart J, Whittier J, Wagner T, Herreman K, **Tsang Y-P**. 2015. FISHTAIL: A Decision Support Mapper for Conserving Stream Fish Habitats of the NE CSC Region. 75th Midwest Fish and Wildlife Conference, February 8–11, Indianapolis, Indiana.
 67. Stewart J, Polebitski A, Infante DM, **Tsang Y-P**, Schoephoester K, Draper B, Armstrong D, McKenna J. 2014. NorEaST: A Stream Temperature Web Portal for Evaluating Climate-Change Effects on Streams of the USGS Northeast Climate Science Center Region. The National Workshop on Large Landscape Conservation, October 23–24, Washington DC.
 68. Daniel WM, Infante DM, Paukert C, Stewart J, Whittier J, Wagner T, Herreman K, **Tsang Y-P**, Sievert N. 2014. A Decision Support Mapper for Conserving Stream Fish Habitats of the NE CSC Region: A Spatially-Explicit Web-Based Tool for Assessing Current Human Land Use, Fragmentation, Water Quality, and Future Climate Change. The National Workshop on Large Landscape Conservation, October 23–24, Washington DC.
 69. Daniel WM, Infante DM, Wang L, Herreman K, Cooper A, Wieferich D, Ross J, Tingley RW, **Tsang Y-P**. 2014. 2015 National Assessment of Fluvial Fish Habitats: Improving Opportunities for Conservation and Management. American Fisheries Society 144rd Annual Meeting, August 17–21, Quebec City, Canada.
 70. **Tsang Y-P**, Infante DM, Oram R, Acoba T. 2014. Examining the Physical and Spatial Linkage Among Terrestrial and Coastal Systems. Ocean Science Meeting, February 23–28, Honolulu, Hawaii.
 71. Stewart J, Polebitski A, Draper B, Armstrong D, **Tsang Y-P**, Infante DM, McKenna J Jr, Schoephoester K. 2013. NorEaST: A Stream Temperature Inventory Mapper and Web Portal for Evaluating Climate Change Effects On New England, Mid-Atlantic, and the Great Lakes States Streams. American Fisheries Society 143rd Annual Meeting, September 8–13, Little Rock, Arkansas.
 72. Tingley RW III, Infante DM, MacKenzie R, **Tsang Y-P**, Strauch AM. 2013. An Ecological Classification Approach for Hawaiian Stream Reaches: Improving Efforts to Assess Current and Future Conditions. American Fisheries Society 143rd Annual Meeting, September 8–13, Little Rock, Arkansas.
 73. Daniel WM, Infante DM, Esselman PC, Hughes R, **Tsang Y-P**, Wieferich D, Cooper AR, Herreman K, Wang L, Taylor WW. 2013. Fish Community Threshold Response Associated with Coal and Mineral Mines in Catchments. American Fisheries Society 143rd Annual Meeting, September 8–13, Little Rock, Arkansas.
 74. **Tsang Y-P**, Infante DM, Wang L, Krueger D, Wieferich D. 2013. Evaluating Climate Change Impact on Fluvial Fish Habitats through Understanding Hydrological and Thermal Response of Fish Species Across the conterminous United States. American Ecological Engineering 13th Annual Meeting, June 10–12, East Lansing, Michigan.
 75. **Tsang Y-P**, Infante DM, Wang L, Krueger D, Wieferich D. 2013. Projecting Fish Habitat Changes under Future Climate: Hydrologically and Thermally Based Ecological Classifications across the Conterminous U.S. Society of Freshwater Science Annual Meeting, May 19–23, Jacksonville, Florida.
 76. Daniel MW, Infante DM, Esselman P, **Tsang Y-P**, Cooper A, Wieferich D, Herreman K. 2013. Fish Habitat Conservation at a National Scale: Biases, Trends, and Future Directions. Society of Freshwater Science Annual Meeting, May 19–23, Jacksonville, Florida.
 77. **Tsang Y-P**, Stewart J, Infante DM. 2012. A Stream Temperature Inventory Network and Decision Support Metadata Mapper for North East U.S. 73rd Midwest Fish and Wildlife Conference, December 9–12, Wichita, Kansas.
 78. Krueger D, Infante DM, Wehrly K, **Tsang Y-P**, Daniel W, Breck J, Thornbrough D, Cooper A, Wieferich D, Ross J, Tingley RW, Herreman K, David A. 2012. Landscape Ecology Principles and Practice: An Overview of Research at Michigan State University and the Institute for Fisheries Research. Invited lectures, Shiga University, Otsu, Shiga Prefecture, Japan.

79. Krueger D, Infante DM, **Tsang Y-P**, Wieferich D, Cooper A, Wang L, Whelan G. 2012. Assessing the Effects of Climate and Land-Use Changes on Minnesota Stream Habitat. Minnesota Department of Natural Resources, Lanesboro, MN.
80. **Tsang Y-P**. 2012. Effects of Climate and Land Use Changes on Fish and Fish Habitat in Streams and Lakes: Special Emphasis on Strategies for Fisheries Management and Conservation. American Fisheries Society, 142nd Annual Meeting, August 19–23, Minneapolis-St. Paul, Minnesota.
81. **Tsang Y-P**, Infante DM, Wang L, Krueger D, Wieferich D. 2012. A Framework of Ecological Classification that Demonstrates the Hydrological and Thermal Variance of Current Fish Fluvial Habitats across the Conterminous United States. American Fisheries Society, 142nd Annual Meeting, August 19–23, Minneapolis-St. Paul, Minnesota.
82. Krueger D, Infante DM, Wang L, **Tsang Y-P**. 2012. Fish Habitat in Midwestern Streams: How Forecasting Tools Can Help Managers Prepare for a Changing Climate. American Fisheries Society, 142nd Annual Meeting, August 19–23, Minneapolis-St. Paul, Minnesota.
83. Infante DM, Esselman P, Wang L, Taylor WW, **Tsang Y-P**, Cooper A, Wieferich D. 2012. Impacts of Current Anthropogenic Land Uses on River Fish across the Conterminous United States: Implications for Conservation and Management. 6th World Fisheries Congress, Sustainable Fisheries in a Changing World, May 7–11, Edinburgh, Scotland.
84. **Tsang Y-P**, Infante DM, Wang L, Krueger D, Wieferich D. 2011. Developing Linkages between Fish Metrics and Fluvial Variation to Explore Responses of Stream Fish Communities to Climate Change across the Conterminous United States. American Geophysical Union Fall Meeting, December 5–9, San Francisco, California.
85. Krueger D, Wang L, Infante DM, **Tsang Y-P**, Whelan G, Wieferich D, Cooper A. 2011. Assessing the Impact of Climate and Land Use Change on River Habitat in the Midwestern United States. International Congress for Conservation Biology, 25th Annual Meeting, December 5–9, Auckland, New Zealand.
86. **Tsang Y-P**, Infante DM, Wang L, Krueger D, Wieferich D. 2011. Vulnerability of River Systems to Climate Changes across the Conterminous United States. American Fisheries Society, 141st Annual Meeting, September 4–8, Seattle, Washington.
87. Krueger D, Wang L, Infante DM, **Tsang Y-P**, Wieferich D, Cooper A. 2011. Assessing the Impact of Climate and Land-Use Change on Midwest River Systems. American Fisheries Society, 141st Annual Meeting, September 4–8, Seattle, Washington.
88. **Tsang Y-P**, Infante DM, Wang L, Krueger D, Wieferich D. 2011. An Approach for Assessing Vulnerability of Rivers in the United States to Projected Climate Changes: Relevance to Michigan. Michigan Chapter of the American Fisheries Society Meeting, April 6–7, Petoskey, Michigan.
89. Krueger D, Wang L, Infante DM, Whelan G, **Tsang Y-P**, Wieferich D, Cooper A. 2011. Stream Temperature and Flow Modeling in Midwest River Systems: An Approach to Assess Vulnerability of Fish Habitat to Climate and Land Use Changes. Michigan Chapter of the American Fisheries Society Meeting, April 6–7, Petoskey, Michigan.
90. **Tsang Y-P**, Kaplan LA, Newbold JD. 2010. Flow Paths for Water and Carbon During Storms Revealed by Monitoring Groundwater Elevations in a Third Order Pennsylvania Piedmont Watershed. Poster presentation Joint Meeting with American Society of Limnology and Oceanography (ASLO) & North American Benthological Society (NABS), June 6–11, Santa Fe, New Mexico.
91. Mei Y, Hornberger GM, Kaplan LA, Newbold JD, Aufdenkampe A, **Tsang Y-P**. 2009. Transient Dissolved Organic Carbon Transport through Soils. Poster presentation American Geophysical Union (AGU) Fall Meeting, December 14–18, San Francisco, California.
92. **Tsang Y-P**, Kaplan LA, Newbold JD, Aufdenkampe A, Hornberger G. 2009. Simulation of Discharge in a 3rd-Order Stream in the Pennsylvania Piedmont with a Modified TOPMODEL. Poster presentation Gordon Conference: Catchment Science: Interactions of Hydrology, Biology & Geochemistry, July 12–17, Andover, New Hampshire
93. **Tsang Y-P**, Moglen G, Felton GK. 2008. Improving the Macroinvertebrate Predictive Model in Maryland and Incorporating It into A GIS Environment. Oral presentation Beyond Wetland: Engineering the Landscape— American Ecological Engineering Society 8th Annual Conference, June 9–14, Blacksburg, Virginia.
94. **Tsang Y-P**, Paul MJ, Felton GK. 2008. The Development of Region-Style Macroinvertebrate Predictive Models in Maryland. Oral presentation North American Benthological Society 56th Annual Conference, May 25–30, Salt Lake City, Utah.
95. **Tsang Y-P**, Felton GK. 2007 Build and Evaluate Macroinvertebrate Predictive Models for Maryland Streams. Poster presentation American Ecological Engineering 7th Annual Conference, May 23–25, Manhattan, Kansas.

96. **Tsang Y-P**, Paul MJ, Felton GK. 2006. Using ANNA Method to Build Macroinvertebrate Predictive Model for Maryland Stream. Platform presentation Maryland Water Monitoring Council 12th Annual Conference, November 16, North Linthicum, Maryland.
97. **Tsang Y-P**, Ayers E, Carleton J. 2005. An Investigation of Coupled Earthworm and Soil Organic Matter. Poster AEES 5th Annual Meeting, Ohio State University, Columbus, Ohio, May 18–20, poster no. 20.
98. Hebou L, **Tsang Y-P**, Iheanyi-Igwe I, Montas HJ. 2004. A DSS For Resident Canada Geese Management in Maryland. ASAE/CSAE Annual International Meeting, Ottawa, Ontario, Canada, August 1–4, paper no. 043017.

Lifetime and Fellow Achievement Awards (peer nominated and endorsed National and International-important for those without accreditation that is peer nominated and endorsed, recognized)

- Visiting Erskine Fellowship in the Department of Civil and Natural Resources Engineering, College of Engineering at the University of Canterbury from 10 January, 2023 to 10 July, 2023.
- Nominated for UHM Excellence in Teaching Award, AY 2020-2021.
- Nominated for UHM Excellence in Teaching Award, AY 2018-2019.
- Faculty Travel Fund by Office of the Vice Chancellor for Research (OVCR), UHM, Fall 2018.
- Nominated for UHM Excellent Teaching Award, AY 2017-2018.
- Faculty Travel Fund by Office of the Vice Chancellor for Research (OVCR), UHM, Fall 2016.
- Selected to participate in the National Science Foundation sponsored writing productivity workshop for biology at Mountain Lake Biological Station in Pembroke, Virginia, August 5–9, 2013.
- Selected to participate in the National Science Foundation ADVANCE program funded “Women Evolving the Biological Sciences” (WEBS) symposium in November 2011.
- Early Career Travel Award provided by American Society of Limnology and Oceanography (ASLO), 2010.
- Gordon Conference Funding provided by Gordon Research Conference (GRC), National Science Foundation (NSF), and the Northeastern Ecosystem Research Cooperative (NERC), 2009.
- First place at the American Ecological Engineering Society 3rd Annual Student Design Competition in 2008.
 - Developed a working model of a stream restoration project that included a plan, profile, and longitudinal morphology that: Minimized bank and bed erosion; Processed sediment load and flow through reach; Processed attributes advantageous to nutrient cycling; and Incorporated a variety of habitats for native plants and animals.
- American Ecological Engineering Society Conference student travel award, 2008.
- The Graduate School Jacob K. Goldhaber Travel Awards, 2008.
- American Ecological Engineering Society Conference student travel grant, 2007.
- Graduate School Fellowship of University of Maryland, College Park, 2003–2004.
- Student representative in Presidential Award of College of Agriculture, 2001.
- First in class upon graduating with a Bachelor of Science, June 2001.
- Outstanding College Youth in 2000. Only eight students are selected from the university.
- Seven-time recipient of Presidential Award during 1997–2001 undergraduate study in National Taiwan University. The award goes to the top three students in the class each semester.
- Professor Yu-Piao Hsu Scholarship, 2001.
- Professor Charles C.C. Shih Scholarship, 2000.
- Alumni Heng-Shan Bao Scholarship, 1999.
- Taipei Chi-Seng Water Management Research and Development Foundation Scholarship, 1998.