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Ph.D.

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EDUCATION

Ph.D. (2013) Geography, Texas A&M University, College Station, TX, USA.
Graduated with Distinguished Graduate Student Award for Excellence in Research
Dissertation: Investigation of variations and impacts of tropical cyclone precipitation in Texas (1950-2009).
Advisor: Dr. Steven M. Quiring.

M.S. (2008) Geography, Beijing Normal University, Beijing, China.
Thesis: Observation and analysis of Sea-Land Breeze in the western coast of Bohai Sea in China.
Advisor: Dr. Wei Gu.

International Exchange Student (2006) California State University, Long Beach, CA, USA

B.S. (2004) Environmental Science, Nanjing Forestry University, Nanjing, China
Thesis: El Niño/Southern Oscillation (ENSO) and regional disaster responses
Advisor: Dr. Chuan Li.

PROFESSIONAL APPOINTMENTS

Assistant Professor (2015-Present), Western Michigan University, Department of Geography, College of Art and Science.

Postdoctoral Research Fellow (2013-2015), Johns Hopkins University, Department of Geography and Environmental Engineering.

Graduate Research Assistant (2010-2012), Texas A&M University, Department of Geography.

Field Research Assistant (2004-2008), Beijing Normal University, College of Resources & Technology.

TEACHING EXPERIENCE

Instructor (2012 summer), Texas A&M University, Department of Geography

Teach both lectures and labs for GEOG 390 'Principles of GIS'.

Graduate Teaching Assistant (2009-2013), Texas A&M University, Department of Geography.

Lab Instructor: GEOG 475 'Advanced GIS' (Spring 2013).

Lab Instructor: GEOG 434 'Hydrology and Environment' (Fall 2012 & Spring 2010).

Lab Instructor: GEOG 339 'Principles of GIS' (Spring 2012).

Lab Instructor: GEOG 332 'Thematic Cartography' (Fall 2010).

CERTIFICATES

Fellows Certificate (2012), Graduate Teaching Academy, Texas A&M University, College Station, TX, USA.

PEER-REVIEWED PUBLICATIONS

In Preparation

Zhu, L., S. Quiring. Developing a new extraction method for long term tropical cyclone precipitation climatology from daily rain gauges. *Journal of Hydrometeorology*.

C. Stewart., **Zhu, L.** Temporal Variability and Trends within the Tributaries of the Huron River: Effects on the Frequency of Flooding. *Applied Geography*.

Zhu, L., S. Guikema, B. Liu. Predicting cassava yield in southern China from statistical models and CMIP5 model outputs. *Climatic Change*.

Accepted

A. Reilly., S. Guikema, **Zhu, L.**, T. Igusa. An agent-based model for households' mitigation strategies and their hurricane wind risk. *PLOS One*.

R. Wang., **Zhu, L.**, Yu. H., S. Cui., J. Wang. Automatic Type Recognition and Mapping of Global Tropical Cyclone Disaster Chains (TDC). *Sustainability*.

Published

Zhu, L., S. Quiring, I. Gunalp, W. Peacock. Variations in tropical cyclone-related discharge in four watersheds near Houston, Texas (2015). *Climate Risk Management*, doi:10.1016/j.crm.2015.01.002

Zhu, L., S. Quiring, K. Emanuel. Estimating tropical cyclone precipitation risk in Texas (2013). *Geophysical Research Letters*, doi: 10.1002/2013GL058284.

Zhu, L., O. Frauenfeld, and S. Quiring. (2013) Seasonal Tropical Cyclone Precipitation (TCP) in Texas: A Statistical Modeling Approach based on a 60-year Climatology. *Journal of Geophysical Research-Atmospheres*

, doi: 10.1002/jgrd.50663.

Zhu, L., and S. Quiring. (2013) Variations in Tropical Cyclone Precipitation in Texas (1950 to 2009). *Journal of Geophysical Research–Atmospheres*, doi: 10.1029/2012JD018554.

Quiring, S. M., Schumacher, A. B., Labosier, C., and **Zhu, L.** (2011) Variations in mean annual tropical cyclone size in the Atlantic. *Journal of Geophysical Research–Atmospheres*, 116, D09114, doi: 10.1029/2010JD015011.

Quiring, S. M., **Zhu, L.**, and Guikema, S. (2011) Importance of soil and elevation characteristics for modeling power system outages due to hurricanes. *Natural Hazards*, 58: 365-390, doi: 10.1007/s11069-010-9672-9.

Gu, W., **Zhu, L.**, Cui, W., Li, N., Cong, J., Xu, Y., Huang, S., Yu, H. and L. Li. (2011) The research of sea-land breeze (SLB) on the west coast of Bohai Bay based on field observation. *Sciences in Cold and Arid Regions*, 3(3): 264-273, doi: 10.3724/SP.J.1226.2011.00264.

Zhu, L., Xu, Y., Cui, W., Gu, W., and S. Huang. (2009) The observation research of temperature impacted by the sea land breeze in the coastal area of Western Bohai bay. *Scientia Meteorologica Sinica*, 29: 694-699. (In Chinese).

Wang, J., Shi, P., Yi, X., Jia, H., and **Zhu, L.** (2007) The regionalization of urban natural disasters in China. *Natural Hazards*, 44: 169-179, doi: 10.1007/s11069-006-9102-1.

AWARDS AND HONORS

Distinguished Graduate Student Award for Excellence in Research, Association of Former Students, Texas A&M University, 2014.

John Russell Mather Paper of the Year Award, Climate Specialty Group of the Association of American Geographers, 2014.

First Class Scholarship for academic excellence, College of Resources Science and Technology, Beijing Normal University, 2005, 2006.

Outstanding student of Beijing Normal University for Academic excellence, Beijing Normal University, 2005.

ACADEMIC SERVICES

Paper reviewer for:

Journal of Geophysical Research-Atmospheres (3)

Journal of Hydrometeorology (3)

Journal of Applied Meteorology and Climatology (2)
International Journal of Climatology (5)
Risk Analysis (7)
Global Environmental Change (1)
Stochastic Environmental Research and Risk Assessment (2)
Physical Geography (1)
Atmospheres (3)
Acta Meteorologica Sinica (1)

CONFERENCE PRECEEDINGS

Zhu, L., Lv H., Zhang J., et al. (2005) Analysis of traffic vulnerability based on college campus security, Proceedings of Asia Pacific Safety Symposium 2005, Part B: 1567-1572.

Zhu, L. (2005) Regional Disasters Responses of El Niño, Proceedings of the 5th IIASA- DPRI Forum.

NEWSPAPERS & OTHERS

Labosier, C., **Zhu, L.**, Quiring, S. (2012) Engaging the public through writing an op-ed. *Transactions of the AGU*, 93 (40): 389. doi:10.1029/2012EO400008.

Labosier, C., **Zhu, L.**, Quiring, S. (2012) Tight budgets posing threat to Texas hurricane research. *Houston Chronicle*, June 1, 2012, B9.

THESES & DISSERTATION

Zhu, L. (2013) Tropical Cyclone (TC) precipitation and floods in Texas: observation and modeling. Doctoral Dissertation, Department of Geography, Texas A&M University, College Station.

Zhu, L. (2008) Regional climate of west coast of Bo-hai Bay in China: observation and analysis. Master Thesis, College of Resources Science and Technology, Beijing Normal University, Beijing, China.

Zhu, L. (2004) Regional Disaster Responses to El Niño/Southern Oscillation (ENSO) cycle. Bachelor Degree Thesis, College of Forestry Resources and Environment, Nanjing Forestry University, Nanjing, Jiangsu Province, China.

CONFERENCE PRESENTATIONS

Zhu, L. (2015) Reconstruction of Tropical Cyclone for North American in 93 years. Poster presentation given at American Geophysical Union Fall Meeting, San Francisco, CA, Dec 2015.

Zhu, L. (2015) Extracting Daily Tropical Cyclone Precipitation Climatology from the Daily Rain Gauges for North America (2014) Annual Meeting of the Association of American Geographers, Chicago, IL, April 2015.

Zhu, L., S. M. Quiring, S. Guikema (2014) A New Method to estimate Daily Tropical Cyclone Precipitation from the GHCND Rain Gauges. Poster presentation given at American Geophysical Union Fall Meeting, San Francisco, CA, Dec 2014.

Zhu, L., S. Guikema, T. Igusa (2014) People's decisions and hurricane wind damages: an Agent-Based Model (ABM) approach. Paper presentation given at Society for Risk Analysis Annual Meeting, Denver, CO, Dec 2014.

Zhu, L., S. M. Quiring, S. Guikema (2014) A New Method to estimate Daily Tropical Cyclone Precipitation from the GHCND Rain Gauges. Poster presentation given at American Geophysical Union Fall Meeting, San Francisco, CA, Dec 2014.

Zhu, L. (2014) A Statistical Modeling Approach Based on a 60 Year Climatology (2014) John Russell Mather Paper Presentation (invited) at Annual Meeting of the Association of American Geographers, Tampa, Florida, April 8–12.

Zhu, L., S. M. Quiring, I. Guneralp, and W. G. Peacock (2013) Trends in Tropical Cyclone Precipitation and Discharge in Watersheds near Houston, Texas. Paper presentation given at American Geophysical Union Fall Meeting, San Francisco, CA, Dec 2013.

Zhu, L. (2013) Diagnosing and forecasting seasonal Tropical Cyclone Precipitation (TCP) in Texas. Paper presentation given at the Annual Meeting of the Association of American Geographers, Los Angeles, CA, April 2013.

Zhu, L. (2012) Tropical Cyclone Precipitation (TCP) in Texas. Paper presentation given at the Annual Meeting of the Association of American Geographers, New York City, NY, Feb 2012.

Zhu, L. (2011) Modeling Tropical Cyclone induced inland flooding for Houston. Presentation given at the Fall Meeting of the American Geophysical Union, San Francisco, CA, Dec 2011.

Zhu, L. (2011) Climate change and Tropical Cyclone precipitation of Texas in 1950-2010. Paper presentation given at the Annual Meeting of the Association of American Geographers, Seattle, WA, Apr 2011.

Zhu, L. (2010) An analysis for Tropical Cyclone precipitation in Texas from 1950 to 2010. Poster presentation given at the Fall Meeting of the American Geophysical Union, San Francisco, CA, Dec 2010.

Zhu, L. (2010) Spatial and temporal variations of Tropical Cyclone (TC) precipitation in Texas. Interactive short paper presentation given at the Annual Meeting of the Association of American Geographers, Washington, D.C., Apr 2010.

Zhu, L. (2009) An observational study of sea-land breeze (SLB) on the West Coast of Bohai Sea in China. Interactive short paper presented at the Annual Meeting of the American Association of Geographers, Las Vegas, NV, Mar 2009.

Zhu, L. (2008) The Observational Study of Air Temperature on the Southwestern Coast of Bohai Sea in China. Paper presentation given at the Annual Conference of the Southwest Division of the Association of American Geographers, San Marcos, TX, Oct 2008.

Zhu, L. (2005) Analysis of traffic vulnerability based on college campus security, Paper presentation given at the Asia Pacific Safety Symposium 2005, Shaoxing, Zhejiang Province, Oct 2005.

TRAVEL GRANTS

Association of Geography Graduate Students (AGGS) Type I Grant, Department of Geography, Texas A&M University, 2011.

Research and Presentation Grants, Office of Graduate Studies, 2010.

Association of Geography Graduate Students (AGGS) Type I Grant, Department of Geography, Texas A&M University, 2009.

INVITED PRESENTATIONS

Zhu, L. (2012) Tropical Cyclone Precipitation in Texas (1950-2009). GEOG 434 Hydrology & Environment Invited Talk, Texas A&M University.

Zhu, L. (2011) Tropical Cyclone precipitation in Texas and its hydrological modeling. Texas A&M Geography Society Lecture Series, Department of Geography, Texas A&M University.

Zhu, L. (2011) HEC-HMS modeling of flash floods event in Houston area in 2001. GEOG 434 Hydrology & Environment Invited Talk, Texas A&M University.

PROFESSIONAL SERVICE

Session Chair (Co-organizing with Christopher Labosier), Annual Conference of Annual Conference of American Association of Geographers (AAG), New York City, 2012. Hydroclimatology Sessions: 2159, 2259, and 2559.

Organizer (Co-organizing with Christopher Labosier and Steven Quiring), Annual Conference of Annual Conference of American Association of Geographers (AAG), Seattle, 2011. Hydroclimatology Sessions: 3129 and 3229.

Session Chair, Annual Conference of American Association of Geographers (AAG), Las Vegas, 2009. Session: 4517 Water and Hazards.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

American Geophysical Union (since 2010)
Association of American Geographers (since 2009)
Society for Risk Analysis (since 2014)

DEPARTMENTAL SERVICE

Vice President, Graduate Student Union, College of Resources Science & Technology, Beijing Normal University, 2005-2006.

SKILLS

Languages: English (fluent), Chinese (fluent), German (basic), Japanese (basic)
Operating Systems: Windows & Linux
Programming Languages: FORTRAN (very proficient), MATLAB (very proficient)
Software Packages: ArcGIS (very proficient), ENVI 4.x (proficient), Microsoft Office Series (proficient)
Statistic Packages: R (proficient) and SPSS
Models: WRF, HEC-HMS, Agent-Based Models