

# QINGLING ZHANG

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## **PROFESSIONAL EXPERIENCE**

- 2011.09 — Yale University  
Research Scientist  
Yale School of Forestry and Environmental Studies
- 2008.11 - 2011.09 Yale University  
Research Associate II & Lab Manager  
Yale School of Forestry and Environmental Studies

## **EDUCATION**

- 2008 Ph.D., Geography (**Remote Sensing**)  
Boston University  
*Dissertation: A Global Spatially and Temporally Complete Anisotropy Knowledge Database to Improve Albedo Quantities for Climate Modeling, Carbon Modeling, and Cloud/Aerosol Property Retrieval*
- Faculty advisors: Crystal Schaaf and Alan Strahler
- 2004 M.A., Geography (**GIS**)  
Central Michigan University  
*Thesis: A general clustering algorithm for point pattern analysis based on spatial buffering*
- Faculty advisor: Bin Li
- 2002 M.S., Environmental Sciences (**Remote Sensing**)  
Chinese Academy of Sciences, China  
*Thesis: Temporal and spatial distribution pattern of Chlorophyll in South China Sea from Multi-year Remote Sensed Ocean Color data*
- Faculty advisors: Chuqun Chen and Ping Shi
- 1997 B.A., Geography (**Geography Education**)  
Hunan Normal University, China

## **TEACHING EXPERIENCE**

- Fall 2009  
**Lab instructor**, Yale University, New Haven, CT  
*F&ES 725a: Remote Sensing of Land Cover and Land Use Change*,  
Instructor: Karen Seto

Fall 2006

**Grader**, Boston University, Boston, MA  
*GG516: Multivariate Statistics*  
 Instructor: Mark Friedl

**Designing a lab**, Boston University, Boston, MA  
*GG645: Physical Models in Remote Sensing*  
 Instructor: Ranga B. Myneni

Fall 2002 – Spring 2004

**Teaching Assistant**, Central Michigan University, Mount Pleasant, MI  
 1. *Computer Cartography and GIS*, Spring 2004, Lab instructor  
 2. *Remote sensing of the Environment*, Fall 2003, Lab instructor  
 3. *Computer Cartography and GIS*, Spring 2003, Lab instructor  
 4. *Remote sensing of the Environment*, Fall 2002, Lab instructor

Fall 1997 – Spring 1999

**Lecturer**, Changsha Social work College, Changsha, China  
 1. *World Geography*, Spring 1999  
 2. *Landscape Surveying and Topographic Map Editing*, Fall 1998  
 3. *Cartography and mapping*, Fall 1997  
 4. *Landscape Surveying and Topographic Map Editing*, Fall 1997

### **PEER-REVIEWED JOURNAL ARTICLES**

10. Zhang, Q., Christensen, P., Seto, K. C. "Toward characterizing urban emergence and lock-in", *Remote Sensing of Environment*. (In review).
9. Pandey, B., Zhang, Q., Seto, K. C. "An automated algorithm to detect timing of urban conversion of agricultural land with high temporal frequency MODIS NDVI data", *Remote Sensing of Environment*. (in revision and will be resubmitted).
8. Proud, S.R., Zhang, Q., Schaaf, C., Fensholt, R., Rasmussen, M.O., Shisanya, C., Mutero, W., Mbow, C., Anyamba, A., Pak, E., Sandholt, I., "The Normalization of Surface Anisotropy Effects Present in SEVIRI Reflectances by Using the MODIS BRDF Method," *Geoscience and Remote Sensing, IEEE Transactions on*, vol. PP, no. 99 (2014): 1-14.
7. Zhang, Qingling, Crystal Schaaf, and Karen C. Seto. "The Vegetation Adjusted NTL Urban Index: A new approach to reduce saturation and increase variation in nighttime luminosity." *Remote Sensing of Environment*. 129 (2013): 32-41.
6. Zhang, Qingling, and Karen C. Seto. "Mapping urbanization dynamics at regional and global scales using multi-temporal DMSP/OLS nighttime light data." *Remote Sensing of Environment*. 115, no. 9 (2011): 2320-2329.
5. Zhao, Feng, Xiaoyuan Yang, Mitchell A. Schull, Miguel O. Román-Colón, Tian Yao, Zhuosen Wang, Qingling Zhang et al. "Measuring effective leaf area index, foliage profile, and stand height in New England forest stands using a full-waveform ground-based lidar." *Remote Sensing of Environment*. 115, no. 11 (2011): 2954-2964.
4. Yao, Tian, Xiaoyuan Yang, Feng Zhao, Zhuosen Wang, Qingling Zhang, David Jupp, Jenny Lovell et al. "Measuring forest structure and biomass in New England forest stands

- using Echidna ground-based lidar." *Remote sensing of Environment*. 115, no. 11 (2011): 2965-2974.
3. Liu, Jicheng, Crystal Schaaf, Alan Strahler, Ziti Jiao, Yanmin Shuai, Qingling Zhang, Miguel Roman, John A. Augustine, and Ellsworth G. Dutton. "Validation of Moderate Resolution Imaging Spectroradiometer (MODIS) albedo retrieval algorithm: Dependence of albedo on solar zenith angle." *Journal of Geophysical Research: Atmospheres*, 114, no. D1 (2009): 1984–2012.
  2. Zhang, Qingling, Chu-Qun Chen, and Ping Shi. "Characteristics of Kd (490) around Nansha Islands in South China Sea." *Journal of Tropical Oceanography*, 22, no. 1 (2003): 9-16.
  1. Dai, Zhijun, Li, Chunchu, & Zhang, Qingling. "Fractal analysis of shoreline patterns for crenulate-bay beaches, Southern China." *Estuarine, Coastal and Shelf Science*, 61 (2004): 65-71.

## BOOKS

Zhang, Qingling. (2012). A Gap-filled MODIS BRDF Database to Improve Surface Characterization, Lap Lambert Academic Publishing, ISBN: 9783659167980.

## BOOK CHAPTERS

Zhang, Qingling, Noam Levin, Christos Chalkias, & Husi Letu. *Nighttime lights remote sensing -- Monitoring human societies from outer space. Volume III: Water Resources, Disasters, and Urban: Monitoring, Modeling, and Mapping*, Remote Sensing Handbook. Edited by Prasad S. Thenkabail (In review).

## INVITED SPEAKER AT WORKSHOPS

- 2013 Google at Yale: A Meeting of the Minds on Geotechnology, Yale University, New Haven, CT. *Global Landsat-7 cloud-free NDVI mosaic for urbanization study at 30m scale*.
- 2013 Yale GeoSIG: Google Earth Engine Workshop, Yale University, New Haven, CT. *Monitoring Urbanization and Agriculture Land Loss with Landsat on GEE*.

## INVITED GUEST LECTURES

- 2012 Yale University, F&ES 703: Climate and Life.  
Lecture title: *Mapping Urbanization Dynamics at Regional and Global Scales Using Multi-temporal DMSP/OLS Nighttime Light Data*.
- 2011 Yale University, F&ES 77015a: Remote Sensing of Land-Use and Land-Cover Change.  
Lecture title: *Vegetation Phenology and Timesat*.
- 2009 Yale University, F&ES 77015a: Remote Sensing of Land-Use and Land-Cover Change.  
Lecture title: *Gap-filling MODIS Albedo Products based on Vegetation Phenology*.
- 2009 Yale University, F&ES 77015a: Remote Sensing of Land-Use and Land-Cover Change.  
Lecture title: *Vegetation Phenology*.

## **CONFERENCE PRESENTATIONS**

6. Zhang, Qingling, Seto, Karen. (2012), Mapping urbanization dynamics at regional and global scales using multi-temporal DMSP/OLS nighttime light data. *Association of American Geographers 2012 Annual Meeting*, New York, New York, U.S.A. (Oral presentation).
5. Zhang, Qingling, Seto K., Frakias M., Schneider A., Liu J., Joshi P., Deng X., Prakash V., Wallace J., Zhang Q., Kim D., Christensen P., Jiang L., Shughrue C. (2011), Multi-scale and multi-sensor analysis of urban cluster development and agricultural land loss in China and India. *2011 NASA Workshop on Land Cover Land Use Change, Southeast Asia*, Hanoi, Vietnam. (Oral presentation).
4. Schaaf C., Song, Q., Zhang, Qingling, Wang Z., Zhao F., Strahler A., King M., Platnick S., Moody E., Gao F. (2011), Snow-Free Gap-filled MODIS Reflectance Anisotropy, Nadir Reflectance and Albedos for Land Modelling Applications. *2011 NASA Carbon Cycle & Ecosystem Joint Science Workshop*, Alexandria, VA, U.S.A. (Poster).
3. Zhang, Qingling, Schaaf C., Strahler A., King M., Moody E. (2008). Global statistics retrieved from the MODIS BRDF products for each IGBP class. *2008 IEEE International Geoscience & Remote Sensing Symposium*, July 6-11, 2008 | Boston, Massachusetts, U.S.A. (Poster).
2. Zhang Qingling, Schaaf C., Strahler A., Liu J., Shuai Y., Jiao Z., Román-Colón M., Hodges J., Fensholt R., Sandholt I., Stisen S., Rasmussen M., and Roy D. (2006), Daily BRDF and albedo retrieval from MSG observations using the MODIS operational algorithm (A53E-0254), *AGU 2006 Fall Meeting*, San Francisco, USA. (Poster).
1. Zhang ingling, Schaaf C. B., Strahler A. H., Woodcock C., Baccini A., Ozdogan M., From Landscape Snapshots to Regional Portraits of Forest Change: Extending Traditional Remote Sensing Analyses, *IUFRO Canopy Processes Workshop*, 6-13 October, 2006. (Oral presentation).

## **GRANTS**

- \$1,290,116    “Multi-Scale and Multi-Sensor Analysis of Urban Cluster Development and Agricultural Land Loss in China and India,” NASA Land-Cover and Land-Use Change Program, NNX11AE88G, 2011-2013.  
 PI: Seto, K. C.  
 Co-Is: Fragkias, M., Schneider, A., Liu, J., Joshi, P. K., Deng, X.  
 Remote Sensing Analyst: Zhang, Qingling.

## **CURRENT RESEARCH**

- Global environmental monitoring and change with remote sensing
- Change detection algorithm development
- Global urbanization and sustainability
- Remote sensing of land-use and land-cover change
- Agriculture land loss under urbanization
- Geographic information science and spatial statistics
- Big data
- Remote Sensing data mining based on cloud computing

**JOURNAL REVIEWER**

*Remote Sensing of Environment*

*International Journal of Remote Sensing*

*IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*

*Remote Sensing Letters*

*International Journal of Digital Earth*

*Journal of Geophysical Research – Biogeosciences*

*Landscape and Urban Planning*

*ISPRS Journal of Photogrammetry and Remote Sensing*

*ASPRS Photogrammetric Engineering & Remote Sensing (PE&RS)*

*Remote Sensing*

*Annals of the Association of American Geographers*

**AWARDS**

2004.09 – 2005.05      Presidential University Graduate Fellowship, Boston University

**PROFESSIONAL AFFILIATIONS**

American Geophysical Union (AGU)

American Association of Geographers (AAG)

Institute of Electrical and Electronics Engineers (IEEE)

**COMPUTER SKILLS**

Operational Systems    Linux, UNIX, Windows

Computer Languages    C, Fortran99, Mixing C and Fortran99, HDF and HDFEOS libraries, Shell, Perl, ArcObject (VB), VBA (Excel), Java, Javascript, GEE API

Application Software    ArcGIS, ENVI, GeoDA, MatLab, R, Python, Gdal.

**LANGUAGE SKILLS**

English and Chinese