

Panshi Wang | Curriculum Vitae

7065 Oak Grove Way – Elkridge Maryland 21075 – USA

☎ +1 (301) 538 8078 • ✉ panshi_wang@ieee.org • 🌐 pswang.net
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Education

University of Maryland <i>Ph.D. Geographical Sciences, Advisor: Dr. Chengquan Huang</i> Dissertation: Towards Fine Scale Characterization of Global Urban Extent, Change and Structure	College Park, MD 2011–2017
Institute of Electronics, Chinese Academy of Sciences <i>M.E. Signal and Information Processing</i>	Beijing, China 2008–2011
University of Science and Technology of China <i>B.E. Electronic Engineering, Special Class for the Gifted Young</i>	Hefei, China 2003–2008

Experience

Research.....

Global Land Analysis and Discovery (GLAD) lab, University of Maryland
Postdoctoral Associate 2018–

University of Maryland **College Park**
Graduate Research Assistant 2012–2017

Supported various remote sensing projects, including:

- o Global Land Survey Impervious Mapping Project (<https://urban.gsfc.nasa.gov>):
 - Designed a global urban extent mapping algorithm using Landsat data;
 - Produced a 30m global Human Built-up and Settlement Extent (HBASE) product;
 - Developed computer programs for global-scale Landsat imagery processing;
 - Led validation efforts for global HBASE product and impervious surface change.
- o VIIRS Surface Type Project (<http://vct.geog.umd.edu/st>):
 - Developed and implemented an algorithm for automatic training data generation from high resolution imagery to map continuous fields land cover;
 - Supported VIIRS surface type product development and validation;
 - Prototyped VIIRS daily burnt area mapping;
 - Prototyped VIIRS daily inundation validation method using Sentinel-1 SAR data.

Institute of Electronics **Beijing**
Graduate Research Assistant 2009–2011

Developed and implemented a relative calibration platform and data processing systems.

Teaching.....
University of Maryland **College Park**
Teaching Assistant *2011–2012*
 Lab instructor for two remote sensing courses.

Skills

Programming Languages: C/C++ (10+ yr), Python (8+ yr), IDL (8+ yr), Java (basic)
Datasets: Landsat (8+ yr), MODIS (8+ yr), VIIRS (5+ yr), Sentinel-1/2 (1+ yr)
Geospatial Tools: ENVI (8+ yr), ArcGIS (6+ yr), QGIS (5+ yr), GDAL (5+ yr)
Others: Linux (8+ yr), GIT (2+ yr)

Awards

Jacob K. Goldhaber Travel Grant: University of Maryland *2015. 12*
Jingli Yang Graduate Research Fellowship: University of Maryland *2016. 04*
Open Access Publishing Fund: University of Maryland *2017. 09*
Jacob K. Goldhaber Travel: University of Maryland *2017. 10*

Services

- o Reviewer for (a list of 16 verified peer reviews available on publons):
 - IEEE Transactions on Geoscience and Remote Sensing
 - IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing
 - Remote Sensing
 - International Journal of Remote Sensing
 - Sustainability
 - Urban Science
 - Symmetry
 - Remote Sensing Applications: Society and Environment
- o Co-chair for 2017 IGARSS session TU1.L12: Radar and Thermal Data for Urban Monitoring
- o Career and Research Advice Mentorship (CRAM) program of 2017 AGU Fall Meeting
- o Undergraduate student mentor for college of Behavioral and Social Sciences (Fall 2013)

Publications

- Journal Papers.....
- o P. Wang, C. Huang, J. C. Tilton. Mapping Three-dimensional Urban Structure by Fusing Landsat and Global Elevation Data. *Submitted to PLOS One*.
 - o P. Wang, C. Huang, J. C. Tilton, B. Tan, and E. C Brown de Colstoun. Continental scale mapping of human built-up and settlement extent (HBASE) using landsat-based hierarchical

- segmentation and texture information. *Remote Sensing of Environment (In Revision)*.
- P. Wang, C. Huang, and E. C. Brown de Colstoun. Mapping 2000–2010 impervious surface change in india using global land survey landsat data. *Remote Sensing*, 9(4):366, 2017.
 - K. Sun, X. Geng, P. Wang, and Y. Zhao. A fast endmember extraction algorithm based on gram determinant. *IEEE Geoscience and Remote Sensing Letters*, 11(6):1124–1128, 2014.
 - P. Wang, and Y. Zhao. Evaluation of Relative Radiometric Correction Methods Using Simulated Images. *Science Technology and Engineering*, 11(19):4501–4505, 2011. (In Chinese).

Scientific Data Products.....

- P. Wang, C. Huang, P. Wang, J. C. Tilton. 30m Building Height/Volume of England by Fusing Landsat and Global Elevation Data. *doi://10.7910/DVN/NNUDZG*.
- E. C. Brown de Colstoun, C. Huang, P. Wang, J. C. Tilton, B. Tan, J. Phillips, S. Niemczura, P. Y. Ling, and R. E. Wolfe. Global man-made impervious surface (GMIS) dataset from landsat. *doi://10.7927/H4P55KKF*.
- P. Wang, C. Huang, E. C. Brown de Colstoun, J. C. Tilton, and B. Tan. Global human built-up and settlement extent (HBASE) dataset from landsat. *doi://10.7927/H4DN434S*.

Conferences.....

- P. Wang, C. Huang, J. C. Tilton. Characterizing Large Scale 3D Urban Structure by Fusing Landsat and Global Elevation Data. Poster presentation at 2018 NASA LCLUC Spring Science Team Meeting.
- P. Wang, C. Huang. Towards large-scale mapping of urban three-dimensional structure using Landsat imagery and global elevation datasets. Poster presentation at 2017 AGU Fall Meeting.
- P. Wang, C. Huang, J. C. Tilton, B. Tan, and E. C. Brown de Colstoun. HOTex: An Approach for Global Mapping of Human Built-up and Settlement Extent. Oral paper presentation at 2017 IEEE International Geoscience and Remote Sensing Symposium (IGARSS).
- X. Zhan, R. Zhang, P. Wang, C. Huang, I. Csiszar, L. Zhou, and F. Weng. Monitoring Surface Type Changes with S-NPP/JPSS VIIRS Observations. Oral paper presentation at 2017 IEEE International Geoscience and Remote Sensing Symposium (IGARSS).
- P. Wang, C. Huang, J. C. Tilton, B. Tan, and E. C. Brown de Colstoun. A new map of circa 2010 global urban extent from Landsat data. Poster presentation at 2015 AGU Fall Meeting.
- P. Wang, C. Huang, J. C. Tilton, B. Tan, and E. C. Brown de Colstoun. Global Urban Extent from Landsat using Multi-level Object-based Texture Features. Poster presentation at 2015 NASA Carbon Cycle & Ecosystems Joint Science Workshop.
- P. Wang, C. Huang, J. C. Tilton, B. Tan, and E. C. Brown de Colstoun, R. E. Wolfe, J. Philips, and P.-Y. Ling. Urban Extent Mapping Using Object-Based Texture Classification and Landsat Data. Poster presentation at 2014 AGU Fall Meeting.