Panshi Wang | Curriculum Vitae

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Education

University of Maryland **College Park, MD**
Ph.D. Geographical Sciences, Advisor: Dr. Chengquan Huang *2011–2017*
Dissertation: Towards Fine Scale Characterization of Global Urban Extent, Change and Structure

Institute of Electronics, Chinese Academy of Sciences **Beijing, China**
M.E. Signal and Information Processing *2008–2011*

University of Science and Technology of China **Hefei, China**
B.E. Electronic Engineering, Special Class for the Gifted Young *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:
- 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.
- 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*

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

- 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
- Co-chair for 2017 IGARSS session TU1.L12: Radar and Thermal Data for Urban Monitoring
- Career and Research Advice Mentorship (CRAM) program of 2017 AGU Fall Meeting
- Undergraduate student mentor for college of Behavioral and Social Sciences (Fall 2013)

Publications

Journal Papers

- P. Wang, C. Huang, J. C. Tilton. Mapping Three-dimensional Urban Structure by Fusing Landsat and Global Elevation Data. *Submitted to PLOS One*.
- 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.