Panshi Wang | Curriculum Vitae
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Highlights

○ Advanced skills in programming, machine learning, and geosptial tools for large-scale applications.

○ Strong knowledge of remote sensing datasets and algorithms.

○ Practical experience working with multi-discplinary teams and handling diverse tasks.

Education

University of Maryland	**College Park, MD**
Ph.D. Geographical Sciences	*2011–2017*
Institute of Electronics, Chinese Academy of Sciences	**Beijing, China**
M.E. Sigal 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*

Ph.D. Dissertation

title: *Towards Fine Scale Characterization of Global Urban Extent, Change and Structure*

advisor: Dr. Chengquan Huang

description: Based on innovative data processing and information extraction techniques, this dissertation seeks to fill in several fundamental knowledge gaps in urban science by advancing the fine scale characterization of global urban extent, change, and structure using satellite datasets.

Experience

Research...

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 algorithms 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*
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 Summer 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 scientific journals including IEEE Transactions on Geoscience and Remote Sensing, International Journal of Remote Sensing, Urban Science, Remote Sensing Applications: Society and Environment

o Co-chair for 2017 IGARSS session TU1.L12: Radar and Thermal Data for Urban Monitoring

o Undergraduate student mentor for college of Behavioral and Social Sciences (Fall 2013)

References

Dr. Chengquan Huang: Research Professor   *University of Maryland*

Dr. Eric Brown de Colstoun: Physical Scientist   *NASA Goddard Space Flight Center*

Dr. Bin Tan: Research Scientist   *NASA / Science Systems and Applications, Inc.*

Dr. James Tilton: Computer Engineer   *NASA Goddard Space Flight Center*

Greg Yetman: Associate Director   *CIESIN, Columbia University*

Contact information available upon request.

Publications

Journal Papers...

o Panshi Wang, Chengquan Huang, and Eric C Brown de Colstoun. Mapping 2000–2010 impervious surface change in india using global land survey landsat data. *Remote Sensing*, 9(4):366, 2017.

o Kang Sun, Xiurui Geng, Panshi Wang, and Yongchao Zhao. A fast endmember extraction algorithm based on gram determinant. *IEEE Geoscience and Remote Sensing Letters*, 11(6):1124–1128, 2014.

Scientific Data Products

o 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. *https://doi.org/10.7927/H4P55KKF*.

o 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. *https://doi.org/10.7927/H4DN434S*.

Conferences

o Panshi Wang, Chengquan Huang, James C Tilton, Bin Tan, and Eric 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).

o Xiwu Zhan, Rui Zhang, Panshi Wang, Chengquan Huang, Ivan Csiszar, Lihang Zhou, and Fuzhong Weng. Monitoring Surface Type Changes with S-NPP/JPSS VIIRS Observations. Oral paper presentation at 2017 IEEE International Geoscience and Remote Sensing Symposium (IGARSS).

o Panshi Wang, Chengquan Huang, James C Tilton, Bin Tan, and Eric C Brown de Colstoun. A new map of circa 2010 global urban extent from Landsat data. Poster presentation at 2015 AGU Fall meeting.

o Panshi Wang, Chengquan Huang, James C Tilton, Bin Tan, and Eric 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.

o Panshi Wang, James C Tilton, Chengquan Huang, Bin Tan, Eric C Brown de Colstoun, Robert E Wolfe, J Philips, and Pui-Yu Ling. Urban Extent Mapping Using Object-Based Texture Classification and Landsat Data. Poster presentation at 2014 AGU Fall meeting.