

# Panshi Wang | Curriculum Vitae

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## Highlights

- o Advanced skills in programming, machine learning, and geospatial tools for large-scale applications.
- o Strong knowledge of remote sensing datasets and algorithms.
- o Practical experience working with multi-disciplinary teams and handling diverse tasks.

## Education

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

## Experience

Research.....

<b>University of Maryland</b> <i>Graduate Research Assistant</i> Supported various remote sensing projects, including: <ul style="list-style-type: none"><li>o Global Land Survey Impervious Mapping Project (<a href="https://urban.gsfc.nasa.gov">https://urban.gsfc.nasa.gov</a>):<ul style="list-style-type: none"><li>- Designed a global urban extent mapping algorithm using Landsat data;</li><li>- Produced a 30m global Human Built-up and Settlement Extent (HBASE) product;</li><li>- Developed computer programs for global-scale Landsat imagery processing;</li><li>- Led validation efforts for global HBASE product and impervious surface change.</li></ul></li><li>o VIIRS Surface Type Project (<a href="http://vct.geog.umd.edu/st">http://vct.geog.umd.edu/st</a>):<ul style="list-style-type: none"><li>- Developed and implemented an algorithm for automatic training data generation from high resolution imagery to map continuous fields land cover;</li><li>- Supported VIIRS surface type product development and validation;</li><li>- Prototyped VIIRS daily burnt area mapping;</li><li>- Prototyped VIIRS daily inundation validation method using Sentinel-1 SAR data.</li></ul></li></ul>	<b>College Park</b> 2012–2017
<b>Institute of Electronics</b> <i>Graduate Research Assistant</i> Developed and implemented a relative calibration platform and data processing systems.	<b>Beijing</b> 2009–2011

Teaching.....

<b>University of Maryland</b> <i>Teaching Assistant</i> Lab instructor for two remote sensing courses.	<b>College Park</b> 2011–2012
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## Skills

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**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

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**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

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- o Reviewer for scientific journals including IEEE Transactions on Geoscience and Remote Sensing, International Journal of Remote Sensing, Urban Science, and 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 *(Contact information available upon request)*

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**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

## Publications

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Journal Papers.....

- o 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.
- o 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.

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 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).

- o X. Zhan, R. Zhang, P. Wang, C. Huang, I. Csizar, 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).
- o 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.
- o 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.
- o 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.