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Curriculum Vitae

I. Personal Information

I.A. Name and Contact Information

Chengquan Huang

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I.B. Academic Appointments at UMD

07/2014 – present, Research Professor, University of Maryland, College Park, MD

07/2009 – 06/2014, Research Associate Professor, University of Maryland, College Park, MD 12/2004 – 06/2009, Research Assistant Professor, University of Maryland, College Park, MD

I.C. Other Employment

11/2003 – 11/2004, Principal Physics Engineer, Raytheon, Upper Marlboro, MD 02/2000 – 10/2003, Senior Scientist, USGS EROS Data Center (EDC), Sioux Falls, SD

I.D. Educational Background

1999 Ph.D. Geography, University of Maryland, College Park, MD
1992 M.S. Environmental Sciences, Peking University, Beijing, China

1989 B.S. Geology, Peking University, Beijing, China

II. Research, Scholarly, and Professional Activities

II.A. Refereed Book Chapters

- 1. **Huang, C.** (in press). Forest Disturbance Mapping. In: *T. Lobota (Ed.), Mapping land surface types and changes, Vol. 6, Comprehensive Remote Sensing Series (S. Liang, Series Editor), London: Elsevier.*
- 2. **Huang,** C. & Song, K. (2012). Forest Cover Change Detection Using Support Vector Machines. In: *C.P. Giri (Ed.), Remote Sensing of Land Use and Land Cover: Principles and Applications* (pp. 191-206), London: Taylor & Francis.
- 3. **Huang, C.**, Schleeweis, K., Thomas, N. & Goward, S.N. (2011). Forest dynamics within and around the Olympic National Park assessed using time series Landsat observations. In: *Y. Wang (Ed.), Remote Sensing of Protected Lands*, (pp. 75-93), London: Taylor & Francis.
- 4. **Huang, C**. (2011). Forest change analysis using time series Landsat observations. In: *Q. Weng (Ed.), Advances in Environmental Remote Sensing: Sensors, Algorithms, and Applications* (pp. 339-365), New York: CRC Press.
- 5. **Huang, C.**, Homer, C. & Yang, L. (2003). Regional forest land cover characterization using medium spatial resolution satellite data. In: *M. Wulder & S. Franklin (Eds.), Methods and Applications for Remote Sensing of Forests: Concepts and Case Studies* (pp. 389-410), Boston: Kluwer Academic Publishers.

<u>II.B.</u> <u>Selected Refereed Journal Articles</u>¹

¹ See http://scholar.google.com/citations?user=Z0zCc7wAAAA[&hl=en&oi=ao for a more complete list, current update, and citations.

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1. Tao, X., Huang, C., Zhao, F., Schleeweis, K., Masek, J., & Liang, S. (2019). Mapping forest disturbance intensity in North and South Carolina using annual Landsat observations and field inventory data. *Remote Sensing of Environment*, 221, 351-362.

- 2. Bian, J., Li, A., Huang, C., Zhang, R., & Zhan, X. (2018). A self-adaptive approach for producing clear-sky composites from VIIRS surface reflectance datasets. *ISPRS Journal of Photogrammetry and Remote Sensing*, 144, 189-201.
- 3. Huang, W., DeVries, B., Huang, C., Lang, M., Jones, J., Creed, I., & Carroll, M. (2018). Automated Extraction of Surface Water Extent from Sentinel-1 Data. *Remote Sensing*, *10*, 797.
- 4. Li, Z., Huang, C., Zhu, Z., Gao, F., Tang, H., Xin, X., Ding, L., Shen, B., Liu, J., Chen, B., Wang, X., & Yan, R. (2018). Mapping daily leaf area index at 30 m resolution over a meadow steppe area by fusing Landsat, Sentinel-2A and MODIS data. *International Journal of Remote Sensing*, 1-29.
- 5. Yeo, I.-Y., Lang, M.W., Lee, S., McCarty, G.W., Sadeghi, A.M., Yetemen, O., & Huang, C. (2018). Mapping landscape-level hydrological connectivity of headwater wetlands to downstream waters: A geospatial modeling approach Part 1. *Science of the Total Environment*.
- Healey, S.P., Cohen, W.B., Yang, Z., Kenneth Brewer, C., Brooks, E.B., Gorelick, N., Hernandez, A.J., Huang, C., Joseph Hughes, M., Kennedy, R.E., Loveland, T.R., Moisen, G.G., Schroeder, T.A., Stehman, S.V., Vogelmann, J.E., Woodcock, C.E., Yang, L., & Zhu, Z. (2018). Mapping forest change using stacked generalization: An ensemble approach. *Remote Sensing of Environment*, 204, 717-728.
- 7. Shen, W., Li, M., Huang, C., Tao, X., & Wei, A. (2018). Annual forest aboveground biomass changes mapped using ICESat/GLAS measurements, historical inventory data, and time-series optical and radar imagery for Guangdong province, China. *Agricultural and Forest Meteorology*, 259, 23-38.
- 8. Qi, J., Zhang, X., McCarty, G.W., Sadeghi, A.M., Cosh, M.H., Zeng, X., Gao, F., Daughtry, C.S.T., Huang, C., Lang, M.W., & Arnold, J.G. (2018). Assessing the performance of a physically-based soil moisture module integrated within the Soil and Water Assessment Tool. *Environmental Modelling & Software*, 109, 329-341.
- 9. Tao, X., Liang, S., Wang, D., He, T., & Huang, C. (2018). Improving Satellite Estimates of the Fraction of Absorbed Photosynthetically Active Radiation Through Data Integration: Methodology and Validation. *IEEE Transactions on Geoscience and Remote Sensing*, 56, 2107-2118.
- 10. Zhao, F., Healey, S.P., Huang, C., McCarter, J.B., Garrard, C., Goeking, S.A., & Zhu, Z. (2018). Assessing the Effects of Fire Disturbances and Timber Management on Carbon Storage in the Greater Yellowstone Ecosystem. *Environmental Management*, 1-11.
- 11. Zhao, F., **Huang, C.**, Goward, S.N., Schleeweis, K., Rishmawi, K., Lindsey, M.A., Denning, E., Keddell, L., Cohen, W.B., Yang, Z., Dungan, J.L., & Michaelis, A. (2018). Development of Landsat-based Annual US Forest Disturbance History Maps (1986-2010) in Support of the North American Carbon Program (NACP). *Remote Sensing of Environment*, 209, 312-326.
- 12. Bian, J., Li, A., Zhang, Z., Zhao, W., Lei, G., Yin, G., Jin, H., Tan, J., & **Huang, C**. (2017). Monitoring fractional green vegetation cover dynamics over a seasonally inundated alpine wetland using dense time series HJ-1A/B constellation images and an adaptive endmember selection LSMM model. *Remote Sensing of Environment*, 197, 98-114.
- 13. Chen, Y., Sun, K., Li, D., Bai, T., & **Huang, C**. (2017). Radiometric Cross-Calibration of GF-4 PMS Sensor Based on Assimilation of Landsat-8 OLI Images. *Remote Sensing*, *9*, 811.
- 14. Cohen, W., Healey, S., Yang, Z., Stehman, S., Brewer, C., Brooks, E., Gorelick, N., **Huang, C.**, Hughes, M., Kennedy, R., Loveland, T., Moisen, G., Schroeder, T., Vogelmann, J., Woodcock, C., Yang, L., & Zhu, Z. (2017). How Similar Are Forest Disturbance Maps Derived from Different Landsat Time Series Algorithms? *Forests*, *8*, 98.
- 15. DeVries, B., **Huang, C.**, Lang, M., Jones, J., Huang, W., Creed, I., & Carroll, M. (2017). Automated Quantification of Surface Water Inundation in Wetlands Using Optical Satellite Imagery. *Remote Sensing*, *9*, 807.

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16. Dolan, K.A., Hurtt, G.C., Flanagan, S.A., Fisk, J.P., Sahajpal, R., Huang, C., Le Page, Y., Dubayah, R., & Masek, J.G. (2017). Disturbance Distance: quantifying forests' vulnerability to disturbance under current and future conditions. *Environmental Research Letters*, *12*, 114015.

- 17. Jin, H., **Huang, C.**, Lang, M.W., Yeo, I.-Y., & Stehman, S.V. (2017). Monitoring of wetland inundation dynamics in the Delmarva Peninsula using Landsat time-series imagery from 1985 to 2011. *Remote Sensing of Environment, 190*, 26-41.
- 18. Noojipady, P., Morton, C.D., Macedo, N.M., Victoria, C.D., **Huang, C.**, Gibbs, K.H., & Bolfe, L.E. (2017). Forest carbon emissions from cropland expansion in the Brazilian Cerrado biome. *Environmental Research Letters, 12*, 025004.
- 19. Song, X.-P., **Huang, C.**, & Townshend, J.R. (2017). Improving global land cover characterization through data fusion. *Geo-spatial Information Science*, 1-10.
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- 30. Liu, F.-J., **Huang**, C., Pang, Y., Li, M., Song, D.-X., Song, X.-P., Channan, S., Sexton, J.O., Jiang, D., & Zhang, P. (2016). Assessment of the three factors affecting Myanmar's forest cover change using Landsat and MODIS vegetation continuous fields data. *International Journal of Digital Earth*, *9*, 562-585.
- 31. Neigh, C.S., Masek, J.G., Bourget, P., Rishmawi, K., Zhao, F., **Huang, C.**, Cook, B.D., & Nelson, R.F. (2016). Regional rates of young US forest growth estimated from annual Landsat disturbance history and IKONOS stereo imagery. *Remote Sensing of Environment*, *173*, 282-293.

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- 34. Shen, W., Li, M., **Huang**, C., & Wei, A. (2016). Quantifying Live Aboveground Biomass and Forest Disturbance of Mountainous Natural and Plantation Forests in Northern Guangdong, China, Based on Multi-Temporal Landsat, PALSAR and Field Plot Data. *Remote Sensing*, *8*, 595.
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- 44. Sexton, J.O., Noojipady, P., Anand, A., Song, X.-P., McMahon, S., **Huang, C.**, Feng, M., Channan, S., & Townshend, J.R. (2015). A model for the propagation of uncertainty from continuous estimates of tree cover to categorical forest cover and change. *Remote Sensing of Environment,* 156, 418-425.
- 45. Song, D.-X., **Huang, C.**, Sexton, J.O., Channan, S., Feng, M., & Townshend, J.R. (2015). Use of Landsat and Corona data for mapping forest cover change from the mid-1960s to 2000s: Case studies from the Eastern United States and Central Brazil. *ISPRS Journal of Photogrammetry and Remote Sensing*, 103, 81-92.
- 46. Song, X.-P., **Huang, C.**, Saatchi, S.S., Hansen, M.C., & Townshend, J.R. (2015). Annual Carbon Emissions from Deforestation in the Amazon Basin between 2000 and 2010. *PLoS ONE, 10*, e0126754.
- 47. Zhang, R., Qu, J.J., Liu, Y., Hao, X., **Huang, C.**, & Zhan, X. (2015). Detection of burned areas from mega-fires using daily and historical MODIS surface reflectance. *International Journal of Remote Sensing*, *36*, 1167-1187.

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48. Zhao, F., **Huang, C.**, & Zhu, Z. (2015). Use of Vegetation Change Tracker and Support Vector Machine to Map Disturbance Types in Greater Yellowstone Ecosystems in a 1984 - 2010 Landsat Time Series. *Geoscience and Remote Sensing Letters, IEEE*, 1-5.

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- 51. Kim, D.-H., Sexton, J.O., Noojipady, P., **Huang**, C., Anand, A., Channan, S., Feng, M., & Townshend, J.R. (2014). Global, Landsat-based forest-cover change from 1990 to 2000. *Remote Sensing of Environment*, 155, 178-193.
- 52. Neigh, C., Masek, J., Bourget, P., Cook, B., **Huang, C.**, Rishmawi, K. & Zhao, F. (2014). Deciphering the Precision of Stereo IKONOS Canopy Height Models for US Forests with G-LiHT Airborne LiDAR. *Remote Sensing*, *6*, 1762-1782.
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- 89. Rittenhouse, C.D., Pidgeon, A.M., Albright, T.P., Culbert, P.D., Clayton, M.K., Flather, C.H., **Huang, C.**, Masek, J.G., Stewart, S.I. & Radeloff, V.C. (2010). Conservation of forest birds: evidence of a shifting baseline in community structure. *PLoS ONE*, *5*, e11938.
- 90. Chander, G., **Huang, C.**, Yang, L., Homer, C. & Larson, C. (2009). Developing consistent Landsat data sets for large area applications: The MRLC 2001 protocol. *IEEE Geoscience and Remote Sensing Letters*, 6, 777-781.
- 91. Dolan, K., Masek, J.G., **Huang, C**. & Sun, G. (2009). Regional forest growth rates measured by combining ICESAT GLAS and Landsat data. *Journal of Geophysical Research: Biogeosciences, 114,* G00E05, doi:10.1029/2008JG000893.
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- 93. **Huang, C.**, Goward, S.N., Schleeweis, K., Thomas, N., Masek, J.G. & Zhu, Z. (2009). Dynamics of national forests assessed using the Landsat record: case studies in eastern U.S. *Remote Sensing of Environment*, *113*, 1430-1442.
- 94. **Huang, C.**, Kim, S., Altstatt, A., Song, K., Townshend, J.R.G., Davis, P., Rodas, O., Yanosky, A., Clay, R., Tucker, C.J. & Musinsky, J. (2009). Assessment of Paraguay's forest cover change using Landsat observations. *Global and Planetary Change*, *67*, 1-12.
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- fragmentation in Alabama, USA, using the vegetation change tracker model. *Forest Ecology & Management*, 257, 1480-1488.
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- 100. **Huang, C.**, Kim, S., Altstatt, A., Townshend, J.R.G., Davis, P., Song, K., Tucker, C.J., Rodas, O., Yanosky, A., Clay, R. & Musinsky, J. (2007). Rapid loss of Paraguay's Atlantic forest and the status of protected areas a Landsat assessment. *Remote Sensing of Environment*, *106*, 460-466.
- 101. Homer, C., **Huang, C.**, Yang, L., Wylie, B. & Coan, M. (2004). Development of a 2001 national land cover database for the United States. *Photogrammetric Engineering & Remote Sensing*, *70*, 829-840.
- 102. **Huang, C**. & Townshend, J.R.G. (2003). A stepwise regression tree for nonlinear approximation: applications to estimating subpixel land cover. *International Journal of Remote Sensing*, *24*, 75-90.
- 103. Yang, L., **Huang, C.**, Homer, C.G., Wylie, B.K. & Coan, M.J. (2003). An approach for mapping large-area impervious surfaces: Synergistic use of Landsat 7 ETM+ and high spatial resolution imagery. *Canadian Journal of Remote Sensing*, *29*, 230-240.
- 104. **Huang, C.**, Davis, L.S. & Townshend, J.R.G. (2002). An assessment of support vector machines for land cover classification. *International Journal of Remote Sensing*, *23*, 725-749.
- 105. **Huang, C.**, Townshend, J.R.G., Liang, S., Kalluri, S.N.V. & DeFries, R.S. (2002). Impact of sensor's point spread function on land cover characterization: assessment and deconvolution. *Remote Sensing of Environment*, *80*, 203-212.
- 106. **Huang, C.**, Wylie, B., Homer, C., Yang, L. & Zylstra, G. (2002). Derivation of a tasseled cap transformation based on Landsat 7 at-satellite reflectance. *International Journal of Remote Sensing*, 23, 1741-1748.
- 107. Chan, J.C.-W., **Huang, C**. & DeFries, R.S. (2001). Enhanced algorithm performance for land cover classification using bagging and boosting. *IEEE Transactions on Geoscience and Remote Sensing*, 39, 693-695.
- 108. Townshend, J.R.G., **Huang, C.**, Kalluri, S.N.V., DeFries, R.S., Liang, S. & Yang, K. (2000). Beware of per-pixel characterization of land cover. *International Journal of Remote Sensing*, *21*, 839-843.
- 109. Zhan, X., DeFries, R., Townshend, J.R.G., Dimiceli, C., Hansen, M., **Huang, C**. & Sohlberg, R. (2000). The 250m global land cover change product from the Moderate Resolution Imaging Spectroradiometer of NASA's Earth Observing System. *International Journal of Remote Sensing*, 21, 1433-1460.

<u>II.C.</u> Conferences, Workshops, and Talks

II.C.1. Invited Talks and Seminars

1. **Huang, C**. (2017). Challenges and Opportunities for Advancing Land Change Studies in a Big Data Era. *Invited Seminar*. USGS Earth Resources Observation and Science (EROS) Center, March 23, 2017, Sioux Falls, SD.

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2. **Huang, C.**, et al. (2017). North American Forest Disturbances Assessed from Landsat. *Invited Plenary Presentation at the Joint NACP and AmeriFlux Principal Investigators Meeting*. March 27-29, 2017, North Bethesda, MD.

- 3. **Huang, C**. (2016). Land Change Monitoring Using Time Series Satellite Observations: Recent Advances and Future Opportunities, *Invited presentation at the International Symposium on National Geographic State Monitoring*, December 17-18, 2016, Wuhan, China.
- 4. **Huang, C**. (2015). Dynamics of Industrial Forests in Southeast United States Assessed using Satellite and Field Inventory Data, *Invited presentation at the AGU Conference*, December 14-18, 2015, San Francisco, CA.
- 5. **Huang, C**. (2014). Remote Sensing Monitoring of Forest Disturbance, Regrowth, and Timber Production. *Invited presentation for the Planning for Growth and Open Space Conservation Webinar Series*. March 12, 2014, USDA Forest Service.
- 6. **Huang, C**. (2012). Automated Forest Change Monitoring Using Landsat Observations. *Invited Seminar*. Department of Geography, Humboldt University in Berlin, October 7, 2012, Berlin, Germany.
- 7. **Huang, C.** (2012). Improving Biomass Monitoring by Incorporating Forest Disturbance History: Contributions of the Landsat Program. *Invited presentation at the European Space Agency GlobalBiomass User Consultation Workshop*, 9-11 October 2012, Jena, Germany.
- **8. Huang, C**. (2012). Mapping US Forest Disturbance Using Landsat Time Series Observations. *Invited presentation at the ForestSAT*. September 11-14, 2012, Corvallis, OR, USA.
- 9. **Huang, C**. (2010). Forest change analysis using Landsat time series stacks. Department of Earth System Science, University of California-Irvine, October 20, 2010, Irvine, CA.
- 10. **Huang, C**. (2010). Automated forest cover change analysis using Landsat images. *Invited Seminar*. Department of Forest and Wildlife Ecology, University of Wisconsin-Madison, April 29, 2010, Madison, WI.
- **11. Huang, C**. (2009). Automated forest cover change analysis using Landsat observations. *International Society for Photogrammetry and Remote Sensing Workshop on Virtual Changing Globe for Visualization and Analysis*. October 27-28, 2009, Wuhan, China.
- 12. **Huang, C**. (2009). Monitoring forest dynamics using Landsat time series stacks (LTSS) and a vegetation change tracker (VCT). *Invited Presentation at the U.S. Forest Service Monitoring Trends in Land Cover Change Workshop*, September 1-3, 2009, Salt Lake City, Utah, USA.
- 13. **Huang, C**. (2009). Approaches for automated forest cover change analysis using satellite observations. *Invited Seminar*. Biospheric Sciences Branch, NASA Goddard Space Flight Center, August 26, 2009, Greenbelt, MD.

II.C.2. Invited Training Workshops/International Activities

- 1. **Huang, C.** (2017). Mapping Forest Disturbance and Recovery Using Time Series Satellite Observations, a workshop for the 2nd SilvaCarbon Regional Workshop on Forest Monitoring GEO-GFOI Methods for Biomass Estimation and Forest-cover Mapping in the Tropics, San Jose, Costa Rica, January 30 February 3, 2017.
- 2. **Huang, C.** (2017). Annual Forest Disturbance Mapping Using Time Series Landsat Observations, a two-hour hands-on training workshop for the *NASA LCLUC SARI International Regional Science Meeting in South/Southeast Asia*, Chiang Mai University, Thailand, July 22-24, 2017.
- 3. **Huang, C.** (2014). Landsat Data Processing and Time Series Forest Change Mapping, a two-hour hands-on training workshop for the *NASA International LCLUC Regional Science Meeting in Central Europe*, Sopron, Hungary, October 20-22, 2014.
- 4. **Huang, C.** (2011). Forest Monitoring and Global Environmental Change, a half-day hands-on training session for the *Training Workshop for Forest Mapping using Geospatial Technology in the Asia-Pacific Region*, Nanning, China, Jan 6-9, 2011.

II.C.3. Posters and Other Conference Presentations Not listed.

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<u>II.D.</u> <u>Completed Creative Works</u>

II.D.1. Datasets

1. Brown de Colstoun, E., **Huang, C.**, Wang, P., Tan, B., Tilton, J., and Wolfe, R. (2016). 2010 Global Man-made Impervious Surfaces (GMIS) and Human Built-up And Settlement Extent (HBASE). http://beta.www.ciesin.columbia.edu/mapping/impervious-surfaces/.

- 2. Goward, S.N., **Huang, C.**, Zhao, F., Schleeweis, K., Rishmawi, K., Lindsey, M., Dungan, J.L., & Michaelis, A. (2015). NACP NAFD Project: Forest Disturbance History from Landsat, 1986-2010. http://daac.ornl.gov/cgi-bin/dsviewer.pl?ds_id=1290.
- 3. Zhang, R., **Huang, C.**, Zhan, X., Dai, Q., & Song, K. (2015). JPSS S-NPP VIIRS Global Surface Type Classification Map, 2012. http://vct.geog.umd.edu/.
- Sexton, J.O., Noojipady, P., Anand, A., Song, X.-P., McMahon, S., Huang, C., Feng, M., Channan, S., & Townshend, J.R. (2014). Global Landsat Forest Cover Change, 2000-2005. http://landcover.org/data/landsatFCC/.
- 5. Sexton, J. O., Song, X.-P., Feng, M., Noojipady, P., Anand, A., **Huang**, C., Kim, D.-H., Collins, K.M., Channan, S., DiMiceli, C., and Townshend, J.R.G. (2013). Global Landsat Tree Cover Continuous Fields, 2000. http://landcover.org/data/landsatTreecover/.
- Goward, S.N., Huang, C., Masek, J.G., Cohen, W.B., and Moisen, G.G. (2012). NACP North American Forest Dynamics Project: Forest Disturbance and Regrowth Data. Available on-line [http://daac.ornl.gov] from ORNL DAAC, Oak Ridge, Tennessee, U.S.A., http://daac.ornl.gov/cgi-bin/dsviewer.pl?ds_id=1077.
- 7. DiMiceli, C.M., M.L. Carroll, R.A. Sohlberg, C. **Huang**, M.C. Hansen, and J.R.G. Townshend (2011). Annual global MODIS vegetation continuous fields (MOD44B) at 250 m spatial resolution, 2000–2010. http://landcover.org/data/vcf/.
- 8. **Huang, C.**, Kim, S., Altstatt, A., Song, K., Townshend, J.R.G., & Davis, P. (2006). Forest Cover Change in Paraguay, 1990-2000. http://landcover.org/data/paraguay/.
- 9. Homer, C., **Huang**, C., Yang, L., Wylie, B. & Coan, M. (2004). National Land Cover Database (NLCD), 2001. http://www.mrlc.gov/nlcd01_data.php.

II.E. Sponsored Research and Programs – Administered by ORA

II.E.1. Grants (Co-Investigator when unspecified)

- 1. **Huang, C.** (PI), 2016-2018: *NPP/VIIRS Land Product Validation Research and Algorithm Refinement:* Science and Management Support for NPP VIIRS Surface Type EDR, Funding agency: NOAA. Award amount for UMD: \$650K.
- 2. **Huang, C.** (PI), 2016-2018: Characterization and Assessment of Wetland Ecosystem Services, Funding agency: USDA Agricultural Research Service, Award amount for UMD: \$58,988.
- 3. **Huang, C.** (PI), 2014-2018: Forest Carbon Assessment using Time Series Satellite Observations and Field Inventory Data, Funding agency: NASA, Award amount: \$287,823.
- 4. **Huang, C.** (PI), Lang, M. (Co-I), 2015-2018: Towards Near Daily Monitoring of Inundated Areas over North America through Multi-Source Fusion of Optical and Radar Data, Funding agency: NASA, Award amount: \$705,790.
- 5. **Huang, C.** (PI), 2014-2018: Role of Forest Disturbance and Regrowth in the US Carbon Budget, Funding agency: NASA, Award amount: \$1.1M.
- 6. **Huang, C.** (PI), 2014-2018: Assessment of Industrial Forests over North America: Disturbances, Biomass Extraction, and Growth Vigor, Funding agency: NASA, Award amount: \$823,136.
- 7. **Huang, C.** (PI), 2014-2018: Carbon Consequences of Land Management: A Multi-Region Assessment, Funding agency: USGS. Award amount for UMD: \$476,809.
- 8. **Huang, C.** (PI), 2015-2017: Towards Annual Monitoring of FIA Plots by Integrating Forest Vegetation Simulator and Remote Sensing, Funding agency: USDA Forest Service, Award amount for UMD: \$184,939.

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9. **Huang, C.** (PI), 2014-2017: A Historically Consistent and Broadly Applicable MRV System Based on Lidar Sampling and Landsat Time-series, Funding agency: USDA Forest Service, Award amount for UMD: \$75,000.

- 10. **Huang, C.** (PI), 2013-2015: Assessment of the Carbon Consequences of Land Management in the Greater Yellowstone Region, Funding agency: USGS, Award amount: \$148,125.
- 11. **Huang, C.** (PI), 2012-2014: Remote Sensing Land Change Monitoring, Funding agency: USDA Forest Service, Award amount: \$40,000.
- 12. **Huang, C.** (PI), 2013-2014: *NPP/VIIRS Land Product Validation Research and Algorithm Refinement:* Science and Management Support for NPP VIIRS Surface Type EDR, Funding agency: NOAA, Award amount: \$165,000.
- 13. **Huang, C.** (PI), 2011-2014: Using Landsat Global Land Survey Data to Measure and Monitor Worldwide Urbanization, Funding agency: NASA, Award amount for UMD: \$385K.
- 14. **Huang, C**. (PI), Dubayah, R., Hurtt, G., Masek, J., and Goward, S., 2009-2014, Integration of long term Landsat observations with DESDynI measurements for monitoring terrestrial carbon flux within and beyond the DESDynI mission, Funding agency: NASA, Award amount for UMD: \$976K.
- 15. **Huang, C.** (PI), 2011-2012: Ecosystem Disturbance and Fire: Patterns, Trends, and Greenhouse Gas Consequences, Funding agency: USGS, Award amount: \$100K.
- 16. Dubayah, R., **Huang**, C., and Hurtt, G., 2010-2013, A Framework for High-Resolution Estimation of Terrestrial Carbon Stocks and Dynamics, Funding agency: NASA, Award amount: \$534K.
- 17. **Huang, C.** (PI), Sexton, J., Feng, M., Channan, S., and Townshend, J., 2010-2011, Validation and Enhancement of North American Forest Change Products, Funding agency: NASA, Award amount: \$120K.
- 18. **Huang, C**. (PI), Goward, S., Townshend, J., and Zhu, Z., 2008-2011, Vegetation Change Detection and Tracking: Algorithm Development and Prototype Application in the Southeastern United States, Funding agency: USGS, Award amount: \$359K.
- 19. **Huang, C**. (PI), Feng, M., and Goward, S., 2009-2010, Development of a Data Management System to Support the USGS Carbon Sequestration Study, Funding agency: USGS, Award amount: \$50K.
- 20. Dubayah, R. (PI), Hurtt, G., **Huang, C**., Swatantran, A., and Pinto, N., 2012-2014, High Resolution Carbon Monitoring and Modeling: A CMS Phase 2 Study, Funding agency: NASA, Award amount: \$1,212,346.
- 21. Goward, S. (PI), Masek, J., Cohen, W., Moisen, G., **Huang, C.**, Healey, S., Kennedy, R., and Powell, S., 2011-2014, US Forest Disturbance History from Landsat, Funding agency: NASA, Award amount for UMD: \$795K (Total project award: \$2.7M).
- 22. Kasischke, E. (PI), **Huang, C.**, Masek, J., 2012-2014, The Forest Disturbance Carbon Tracking System ACMS Pilot Project, Funding agency: NASA, Award amount: \$155,149.
- 23. Townshend, J. (PI), **Huang, C.**, Masek, J., Hansen, M., and Goward, S., 2008-2013, Earth Science Data Records of Global Forest Cover Change, Funding agency: NASA, Award amount for UMD: \$3.4M (Total project award: \$4.6M).
- 24. Yeo, I. (PI), **Huang, C.**, Long, M., and Jantz, C., 2012-2015, Mapping and Monitoring of Wetland Dynamics for Improved Resilience and Delivery of Ecosystem Services in the Mid-Atlantic Region, Funding agency: NASA, Award amount: \$749,850.
- 25. Townshend, J. (PI), **Huang, C.**, and Masek, J., 2009-2011: Three Decades of Forest Cover Change in the Americas Evaluated Using the GeoCover and MDGLS Data Sets, Funding agency: NASA, Award amount: \$295K.
- 26. Townshend, J. (PI), **Huang, C.**, Sexton, J., Channan, S., and Feng, M., 2010-2011, Assessment of the Global Land Survey Data Sets, Funding agency: NASA, Award amount: \$74,368.
- 27. Goward, S. (PI), Masek, J., Cohen, W., Moisen, G., **Huang, C.**, Healey, S., Kennedy, R., and Powell, S., 2008-2011, Role of North America Forest Disturbance and Regrowth In NACP: Integrated Analyzes of Landsat and U.S. Forest Service FIA Data Phase 2, Funding agency: NASA, Award amount for UMD: \$775K (Total project award: \$2.5M).

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28. Townshend, J. (PI), Hansen, M., and **Huang, C**., 2008-2011, Enhanced Land Cover and Land Cover Change Products from MODIS, Funding agency: NASA, Award amount: \$750K.

- 29. Masek, J. (PI), **Huang, C.**, Gao, F., Vermote, E., Wolfe, R., Gubbels, T., and Townshend, J., 2008-2011, Recent North American Forest Dynamics via Integration of ASTER, MODIS, and Landsat Reflectance Data, Funding agency: NASA, Award amount for UMD: \$348K (Total project award: \$1.1M).
- 30. **Huang, C**. (PI), and Townshend, J., 2007-2008: Develop Algorithms for Updating LANDFIRE Vegetation Data Sets Using MODIS and Landsat Data, Funding agency: USGS, Award amount: \$60K.
- 31. **Huang, C**. (PI), and Goward, S., 2005-2008: Support of the NASA LEDAPS Project, Funding agency: NASA, Award amount: \$178K.
- 32. Loveland, T. (PI), and **Huang, C.**, 2003-2006: A Strategy to Evaluate and Enhancement of the NPOESS Surface Type Environmental Data Record, **Co-Investigator**, Funding agency: NASA, Award amount: \$185K.

II.F. Prizes and Awards

- 1. 2005, ESRI Award for Best Scientific Paper in Geographic Information Systems for the paper, "Homer, C., **Huang, C.**, Yang, L., Wylie, B. & Coan, M. (2004). Development of a 2001 national land cover database for the United States. *Photogrammetric Engineering & Remote Sensing*, 70, 829-840"
- 2. 2004, Raytheon NPOESS Group Achievement Award
- 3. 2002, Raytheon Special Recognition Award
- 4. 2001, Raytheon Special Recognition Award
- 5. 2000, Raytheon Special Recognition Award

III. Teaching and Advising

III.A. Courses Taught

- 1. Geog472: "Remote Sensing: Digital Image Processing & Analysis", a core course offered to senior undergraduates, graduate students, and Master of Professional Studies (MPS) students:
 - Fall 2007
 - Fall 2008
 - Fall 2009
 - Spring 2018
- 2. Geog606: "Quantitative Spatial Analysis", a core course for graduate students:
 - Spring 2012
 - Sprint 2013
 - Spring 2014
 - Spring 2015

III.B. Advising

III.B.1. Master's

- Aminul Islam (graduated in 2012)

III.B.2. Doctoral (Advisor)

- Jiaming Lu (since 2015)
- Weishu Gong (since 2014)
- Panshi Wang (graduated in 2017)
- Pui-Yu Ling (graduated in 2016)
- Danxia Song (graduated in 2016)
- Xiaopeng Song (graduated in 2015)
- Feng Robin Zhao (graduated in 2015)

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III.B.3. Doctoral (Dissertation Committee)

- Donal O'Leary (Since 2018)
- Sangchul Lee (graduated in 2016)
- Praveen Noojipady (graduated in 2016)
- Katelyn Dolan (graduated in 2015)
- Qiongyu Huang (graduated in 2015)
- DoHyung Kim (graduated in 2015)
- Enrique Montaño (graduated in 2015)
- Matthias Baumann (UW-Madison, graduated in 2013)
- Karen Schleeweis (graduated in 2012)
- Hua Wei (graduated in 2011)
- Kuan Song (graduated in 2010)
- Jyothy Nagol (graduated in 2010)

III.B.4. Post-doctoral (Full time employee unless specified otherwise)

- Ben DeVries (January 2016 present)
- Feng Robin Zhao (January 2016 present)
- Rui Zhang (March 2014 present)
- Xin Tao (May 2015 August 2017)
- Feng Aron Zhao (May 2012 August 2017)
- Wenli Huang (January 2016 July 2017, 0.5 FTE)
- Min Feng (February 2009 June 2010, July 2015 June 2017, 0.25 FTE)
- Huiran Jin (October 2013 December 2016)
- Yi Peng (August 2012 August 2013)
- Maosheng Zhao (July 2012 December 2015, 0.5 FTE)
- Kuan Song (August 2010 March 2014)
- Ainong Li (March 2008 April 2010)
- Michael O'Connell (July 2009 January 2011)

III.B.5. Visiting Students and Scholars

- Zhenwang Li (December 2016 February 2018)
- Kaimin Sun (November 2016 October 2017)
- Jinhu Bian (September 2015 August 2016)
- Xi Li (October 2015 September 2016)
- Yingchun Liu (August 2014 July 2015)
- Wenjuan Shen (October 2014 September 2015)
- Fujiang Liu (September 2013 August 2014)
- Mingshi Li (February 2013 August 2013)
- Yong Pang (November 2011 May 2012)

III.B.6. Summer Interns for High School and College Students

- Raymond Guo (Summer 2015)
- James Zhan (Summer 2014)
- Sike Li (Summer 2013)

III.B.7. Guest Lectures

- Geog 498D: Topical Investigations: Land Use and Regional Studies (Spring 2006)
- Geog 778A: Selected Topics in Terrestrial Global Change (Fall 2006)
- Graduate Student Orientation Class (1 credit, Fall 2007, Fall 2008)

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- Geog 602: Introduction to Physical Geography (Spring 2008)
- Geog 788W: Selected Topics in Advanced Remote Sensing Theory and Methods (Fall 2008)
- Geog 615: Land Cover and Land Use Change (Fall 2009)
- Geog 798: Departmental Seminar (Fall 2009)

IV. Service and Outreach

IV.A.1. Reviewing Activities for Agencies and Foundations

- Scholarship for Chinese Students Studying Abroad, Embassy of China (2015)
- Natural Sciences and Engineering Research Council of Canada (2014)
- NASA OpenNEX InnoCentive Challenge (2014)
- NASA Review Panel: Science of Terra and Aqua (2013)
- Belgian Earth Observation Programme (2010)
- NASA Fellowship Review Panel (2010)
- University of Missouri Research Board Grant Application (2010)
- National Environmental Research Council, UK (2010)
- Scholarship for Chinese Students Studying Abroad, Embassy of China (2010)
- NASA Terrestrial Ecology Program (2009)
- NOAA Scientific Data Stewardship (SDS) Grants Program (2009)

IV.A.2. Reviewing Activities for Journals (~2 manuscripts / month)

- Applied Geography
- Canadian Journal of Remote Sensing
- Environmental Modelling & Software
- Environmental Research Letter
- International Journal of Digital Earth
- International Journal of Remote Sensing
- IEEE Geoscience & Remote Sensing
- ISPRS Journal of Photogrammetry and Remote Sensing
- Journal of Applied Remote Sensing
- Journal of Environmental Management
- Journal of Geophysical Research: Biogeoscience
- Journal of Selected Topics in Earth Observations and Remote Sensing
- Landscape and Urban Planning
- Photogrammetric Engineering & Remote Sensing
- Proceedings of the National Academy of Sciences
- Remote Sensing of Environment
- Remote Sensing

IV.B. Committees, Professional & Campus Service

IV.B.1. Campus Service – Department

- Chair of Research Faculty Committee (2011-2014)
- Research Committee (every semester)
- Undergraduate Committee (Fall 2009, Fall 2008)
- Teaching Committee (Fall 2007, Spring 2008)
- Committee for Allocation of Faculty Offices (Spring 2007)
- Graduate Committee (2006)
- Diversity Task Force (2005)

IV.C. Service Awards and Honors

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- 2018, Honoree, Annual University-Wide Celebration of Scholarship and Research

- 2018, Honoree, University of Maryland Annual Research Leader
- 2017, Honoree, Annual University-Wide Celebration of Scholarship and Research
- 2017, Honoree, University of Maryland Annual Research Leader
- 2016, Honoree, Annual University-Wide Celebration of Scholarship and Research
- 2016, Honoree, University of Maryland Annual Research Leader
- 2015, Honoree, Annual University-Wide Celebration of Scholarship and Research
- 2015, Honoree, University of Maryland Annual Research Leader
- 2014, Honoree, Annual University-Wide Celebration of Scholarship and Research
- 2014, Honoree, University of Maryland Annual Research Leader
- 2013, Honoree, University of Maryland Annual Research Leader
- 2012, Honoree, University of Maryland Annual Research Leader
- 2011, Honoree, University of Maryland Annual Research Leader