

# Curriculum Vitae

## Yaqian He

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### ACADEMIC APPOINTMENTS

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08/2020- **Assistant Professor** in the Department of Geography, University of Central Arkansas, Conway, AR  
09/2018- 07/2020 **Postdoc Research Fellow** in the Department of Geography, Dartmouth College, Hanover, NH

### EDUCATION

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2013-2018 **Ph.D.** in Geography in the Department of Geology and Geography, West Virginia University, Morgantown, WV.  
2010-2013 **M.S.** in Cartography and GIS in the Department of Geography, Beijing Normal University, China.  
2006-2010 **B.E.** in Surveying Engineering in the Dept. of Environment Science and Spatial Informatics, China Univ. of Mining and Tech., China.

### RESEARCH INTERESTS

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Remote Sensing; GIS; Geostatistics; Land Use and Land Cover Change; Climate Modeling; Climate Change; Land-Atmosphere Interaction

### REFEREED PUBLICATIONS

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#### Published

#### 2020

19. He, Y., Lee, E. and Mankin, J. S., 2020. Seasonal tropospheric cooling in Northeast China associated with cropland expansion. *Environmental Research Letters*, 15, 034032.

#### 2019

18. Ji, X., Li, X., He, Y\* and Liu, X., 2019. A simple method to improve estimate of county-level economic in China by using nighttime light data and GDP growth rate. *ISPRS International Journal of Geo-Information*, 8(9), pp. 419. (\*corresponding author)
17. Song, C+, He, Y+, Bo, Y., Wang, J., Ren, Z., Guo, J. and Yang, H., 2019. Disease relative risk downscaling model to localize various epidemiologic indicators for mapping hand, foot, and mouth disease over China. *Stochastic Environmental Research and Risk Assessment*, pp. 1-19. (+contribute equally)
16. Gaertner, B.A., Zegre, N., Warner, T., Fernandez, R., He, Y. and Merriam, E.R., 2019. Climate, forest growing season, and evapotranspiration changes in the central Appalachian Mountains, USA. *Science of The Total Environment*, 650, pp.1371-1381.

#### 2018

15. He, Y., Warner, T., McNeil, B. and Lee, E., 2018. Reducing uncertainties in applying remotely sensed land use and land cover maps in land-atmosphere interaction: identifying change in space and time. *Remote Sensing*, 10(4), pp.506.
14. Lee, E. and He, Y., 2018. Could the enhanced forests reduce summer warming in the southern China?. *Journal of Climate Research*, 13(4), pp.345-359.

13. Lee, E., **He, Y.** and Park, Y-L., 2018. Effects of climate change on the phenology of *Osmia cornifrons*: implications for population management. *Climatic Change*, 150(3-4), pp.305-317.
12. Song, C., **He, Y.**, Bo, Y., Wang, J., Ren, Z. and Yang, H., 2018. Risk assessment and mapping of hand, foot, and mouth disease at the county level in mainland China using spatiotemporal zero-inflated Bayesian hierarchical models. *International Journal of Environmental Research and Public Health*, 15(7), pp.1476.

## 2017

11. **He, Y.**, Lee, E. and Warner, T.A., 2017. A time series of annual land use and land cover maps of China from 1982 to 2013 generated using AVHRR GIMMS NDVI3g data. *Remote Sensing of Environment*, 199, pp.201-217.
10. Lee, E., **He, Y.** and Shanmugasundaram, J., 2017. Geography of Monsoons. In Oxford Bibliographies in Geography. Ed. Barney Warf. New York: Oxford University Press.

## 2016

9. **He, Y.** and Lee, E., 2016. Empirical relationships of sea surface temperature and vegetation activity with summer rainfall variability over the Sahel. *Earth Interactions*, 20(6), pp.1-18.
8. **He, Y.**, Bo, Y., Chai, L., Liu, X. and Li, A., 2016. Linking in situ LAI and fine resolution remote sensing data to map reference LAI over cropland and grassland using geostatistical regression method. *International Journal of Applied Earth Observation and Geoinformation*, 50, pp.26-38.
7. Ahn, J.J., Son, Y., **He, Y.**, Lee, E. and Park, Y.L., 2016. Effects of temperature on development and voltinism of *Chaetodactylus krombeini* (Acari: Chaetodactylidae): implications for climate change impacts. *PloS One*, 11(8), pp.e0161319.

## 2015

6. **He, Y.**, Bo, Y., de Jong, R., Li, A., Zhu, Y. and Cheng, J., 2015. Comparison of vegetation phenological metrics extracted from GIMMS NDVIg and MERIS MTCI data sets over China. *International Journal of Remote Sensing*, 36(1), pp.300-317.
5. Lee, E., **He, Y.**, Zhou, M. and Liang, J., 2015. Potential feedback of recent vegetation changes on summer rainfall in the Sahel. *Physical Geography*, 36(6), pp.449-470.
4. Zhu, Y., Kang, E.L., Bo, Y., Tang, Q., Cheng, J. and **He, Y.**, 2015. A robust fixed rank kriging method for improving the spatial completeness and accuracy of satellite SST products. *IEEE Transactions on Geoscience and Remote Sensing*, 53(9), pp.5021-5035.
3. Liu, X., Bo, Y., Zhang, J. and **He, Y.**, 2015. Classification of C3 and C4 vegetation types using MODIS and ETM+ blended high spatio-temporal resolution data. *Remote Sensing*, 7(11), pp.15244-15268.
2. Zheng, L., Bo, Y. and **He, Y.**, 2015. Comparison of natural vegetation phenology developed from MODIS and CYCLOPES and GLASS LAI data product based on dynamical threshold method: a case study in three provinces of Northeast China. *Remote Sensing Technology and Application*, 30 (6), 1103-1112. (Chinese with English abstract)

## 2013

1. Li, A., Bo, Y., Zhu, Y., Guo, P., Bi, J. and **He, Y.**, 2013. Blending multi-resolution satellite sea surface temperature (SST) products using Bayesian maximum entropy method. *Remote Sensing of Environment*, 135, pp.52-63.

## TEACHING EXPERIENCE

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2020	<b>Instructor</b> of GIS, Department of Geography, University of Central Arkansas.
2020	<b>Instructor</b> of <i>Geographic Field Technique</i> , Department of Geography, University of Central Arkansas.
2020	<b>Instructor</b> of <i>Cartography</i> , Department of Geography, University of Central Arkansas.
2020	<b>Guest Lecture</b> “Spatial statistics: from data to information”, Department of Geology, University of Dayton.

- 2019           **Guest Lecture** ‘The monsoon climate’ in *future faculty teaching series*, Dartmouth Center for the Advancement of Learning.
- 2018           **Guest Lecture** ‘A magic line- division of climate and land use/cover in China’ in *World Regional Geography course*, Department of Geology and Geography, West Virginia University.
- 2016           **Summer Instructor** of *World Regional Geography* at Department of Geology and Geography, West Virginia University. (3 hours/day, 12 undergraduate students)
- 2016           **Guest Lecture** ‘Remote sensing of vegetation: Normalized Difference Vegetation Index (NDVI)’ in *Climate and watersheds course*, *Division of Forest and Natural Resources*, West Virginia University.
- 2011           **Lab Instructor** of *Introduction to Remote Sensing* at Department of Geography, Beijing Normal University, China. Instructor: Dr. Yanchen Bo. (Spring Semester, 60 undergraduate students)

## PRESENTATIONS

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### Oral

1. He, Q., Meng, Q., Flatley, W., Buenemann, M., **He, Y. 2020.** Agricultural Aid and Deforestation in sub-Saharan Africa: A Sub-national Causal Analysis Based on Remotely Sensed Data of Sierra Leone, *American Association of Geographers*, Virtual Meeting, Nov 17-19.
2. **He, Y. 2020.** Land use and land cover change impacts on regional climate. *Department of Geology, University of Dayton*, Feb 4. (Invited)
3. He, Q. and **He, Y., 2019.** Water conflict: an empirical test for neo-malthusian view with remote sensing data. *American Political Science Association*, Washington DC, Aug. 29-Sep. 01.
4. **He, Y.,** Mankin, J. S. and Lee, E., **2019.** Agricultural expansion in Northeast China and its impacts on regional climate. *American Association of Geographers*, Washington DC, Apr. 3-7.
5. Lee, E., **He, Y.** and Park, Y-L., **2019.** Could the future climate change pose a risk or benefit to bee development. *American Association of Geographers*, Washington DC, Apr. 3-7.
6. Yadav, S., Lee, E. and **He, Y., 2019.** Spatio-temporal evaluations of reanalysis surface temperatures in the Tibetan Plateau. *American Association of Geographers*, Washington DC, Apr. 3-7.
7. Shull, N., Lee, E. and **He, Y., 2019.** April vegetation greenness and its impact on near-surface climate conditions in South-Central Appalachia. *American Association of Geographers*, Washington DC, Apr. 3-7.
8. **He, Y.,** McNeil, B., Warner, T.A. and Lee, E., **2018.** Reducing uncertainties in applying remotely sensed land use and land cover maps in land-atmosphere interaction: identifying change in space and time. *American Association of Geographers*, New Orleans, LA, Apr. 10- Apr. 14.
9. Yadav, S., Lee, E. and **He, Y., 2018.** The impact of temperature change in Tibetan Plateau on summer rainfall on western Nepal. *American Association of Geographers*, New Orleans, LA, Apr. 10- Apr. 14.
10. He, Q., Pang, X. and **He, Y., 2018.** Link Remote Sensing and Political Science: An Application of Foreign Development Aid. *Asian Political Methodology Meetings*, Seoul, Korea, Jan. 11-12.
11. He, Q. and **He, Y., 2017.** Evaluating Agriculture Aid- A New Approach based on Remotely Sensed Data. *American Political Science Association*, San Francisco, CA, Aug. 31-Sep. 03.
12. Gaertner, B., Nicolas, Z., Fernandez, R. and **He, Y., 2016.** Climate warming impacts on phenological patterns and hydrology in Central Appalachia, United States. *American Geophysical Union Fall Meeting*, San Francisco, California, Dec. 12- 16.
13. **He, Y.,** Lee, E., and Warner, T. A., **2016.** Continuous annual land use and land cover mapping using AVHRR GIMMS NDVI3g and MODIS MCD12Q1 in China from 1982 to 2012. *IEEE International Geoscience and Remote Sensing Symposium*, Beijing, China, July10-15.
14. **He, Y.,** Lee, E. and Warner, T. A., **2016.** Detect geographic and temporal patterns of land use and land cover change in China. *West Virginia GIS Conference*, Morgantown, WV, May 3- 6.

15. **He, Y.** and Lee, E., **2015**. Empirical relationships of oceanic heat sources and vegetation activity with summer rainfall over the Sahel. *American Association of Geographers*, Chicago, Illinois, April 21-25.
16. Bo, Y., and **He, Y.**, **2014**. Linking in situ LAI and fine resolution remote sensing data to estimate the reference LAI for the coarse resolution satellite LAI products validation based on the geostatistical regression. *SPIE: Remote sensing for Agriculture, Ecosystem, and Hydrology*, Amsterdam, Netherlands, Sep. 22-25.
17. **He, Y.** and Bo, Y., **2011**. A consistency analysis of MODIS MCD12Q1 and MERIS Globcover land cover datasets over China. *19<sup>th</sup> International Conference on Geoinformatics*, Shanghai, China, June 24-26.

#### Poster

1. **He, Y.**, Chipman, J., and Mankin, J. S. 2020. Rapid Indo-Malaysian land cover and land use change over the last 35 years, *American Association of Geographers*, Virtual Meeting, Dec. 1-17 (**with 3-minute talk**).
2. **He, Y.** and Mankin, J. S., **2019**. Disentangling warming- from land use- induced precipitation changes over China. *American Geophysical Union*, San Francisco, Dec 09-13.
3. **He, Y.**, Lee, E. and Mankin, J. S., **2018**. The influence of Northeastern China cropland expansion on regional climate. *American Geophysical Union*, Washington DC, Dec 10-14.
4. **He, Y.**, Lee, E. and Warner, T. A., **2016**. Land use and land cover change detection based on AVHRR GIMMS NDVI3g and MODIS MCD12Q1 in Northeast China from 1982 to 2012. *American Association of Geographers*, San Francisco, CA, Mar. 29- Apr. 2.
5. Lee, E., **He, Y.**, Zhou, M. and Liang, J., **2016**. Potential feedback of recent vegetation changes on summer rainfall in the Sahel. *American Association of Geographers*, San Francisco, CA, Mar. 29- Apr. 2.
6. Lee, E., **He, Y.**, Ahn, J.J. and Park, Y-L. **2015**. Effects of future climate change on interactions between pollinator bees and bee parasites. *American Association of Geographers*, Chicago, Illinois, April 21-25.
7. Meng, L., Lee, E. and **He, Y.**, **2015**. Spatial and temporal variations of agriculture irrigated in China. *American Association of Geographers*, Chicago, Illinois, April 21-25.
8. **He, Y.** and Lee, E., **2014**. Comparisons of AVHRR GIMMS NDVI and MODIS NDVI datasets based on three temporal resampling methods over the Sahel in Africa. *American Association of Geographers*, Tampa, Florida, April 8-12.
9. **He, Y.**, Bo, Y., Zhu, Y. and Li, A., **2013**. Estimating spatial means of elementary sampling unit using MSN theory for field Leaf Area Index collection. *35<sup>th</sup> International Symposium on Remote Sensing of Environment*, Beijing, China, April 22-26.
10. **He, Y.**, Bo, Y. and Li, A., **2012**. Validation and inter-comparison of GLASS, MODIS and CYCLOPES global leaf area index products over the BigFoot and VALERI sites. *First International Symposium on Land Remote Sensing: Algorithms and Products*, Chengdu, China.
11. Ji, X., Bo, Y., Cheng, J., **He, Y.** and Liu, X., **2012**. The method of assessing shape similarity of object-based classification result of remote sensing imagery. *Second International Workshop on Earth Observation and Remote Sensing Applications*, Shanghai, China, June 8-11.

#### GRANT

##### Pending

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| 2020 | <b>Principle Investigator:</b> <i>Quantifying Agricultural Aid Impacts on Deforestation in Ethiopia Using Remote Sensing Data</i> , Early Career Grant, National Geographic Society (09/01/2021-08/32/2020), with Qingqian He (Co-PI), Beza Nisrane (Project member), and Rongting Xu (Project member) (\$10,000) (Pending). |
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##### Funded

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| 2020 | <b>Principle Investigator:</b> <i>Statewide land cover and land use change mapping to constrain uncertainty in the carbon budget in Arkansas</i> , University Research Council, University of Central Arkansas (05/2021-12/2022) (\$5,178). |
| 2020 | Faculty Development Grant, University of Central Arkansas (\$750).  |

2020	<b>Co-Investigator:</b> <i>Assessing Adaptation Feedbacks to Present and Future Climate Extremes</i> , Neukom Institute CompX, Dartmouth College (01/2020- 01/2021); with Justin S. Mankin (PI) and Ethan Coffel (Co-PI) (\$39,800).
2019	Postdoctoral Scholar Professional Development Award, Dartmouth College (\$750).
2018	Open Access Author Fund, West Virginia University (\$1700.43).
2014-2018	Graduate Student Travel Funds, West Virginia University (\$3,200).
2016	Travel Funds to CESM Tutorial, Mesa Lab, National center for atmospheric research (NCAR), Boulder, CO (~\$1,200).
2016	IGARSS Student Travel Funds, IEEE Geoscience and Remote Sensing Society, Beijing, China (\$300).
2015	Travel Funds to NCL Workshop, Corporate Technical Training Center (CTTC), NCAR, Boulder, CO (\$1,200).
2014	Graduate Student Travel Funds, William E. Vehse Endowment, West Virginia University (\$200).

#### Not-Funded

2020	<b>Co-Investigator:</b> <i>Quantifying land-cover and land-use change hotspots using high resolution mapping for detecting and attributing climate extremes</i> , NASA Land Cover and Land Use Change Program (01/2021-01/2024), with Justin S. Mankin (PI) and Benjamin Cook (Co-PI).
2018	<b>Principal Investigator:</b> <i>Mapping global land cover and land use change to constrain uncertainty in the carbon budget</i> , The Arthur L. Irving Institute for Energy and Society, Dartmouth College (01/2019-01/2020); with Justin S. Mankin (Co-PI).
2018	<b>Co-Investigator:</b> <i>Identifying impacts of dryland irrigation and the consequent climate variability on smallholder farmers in Rajasthan, India</i> , NASA Land Cover and Land Use Change Program (2020-2022); with Eungul Lee (PI) and Martina Angela Caretta (Co-PI).
2016	<b>Co-Investigator:</b> <i>Effects of deforestation and afforestation on regional summer rainfall in China</i> , NSF Doctoral Dissertation Research Improvement (DDRI) Awards (07/01/2016-05/31/2018); with Eungul Lee (PI).
2016	<b>Co-Investigator:</b> <i>Land use and land cover change influences on summer rainfall in Mainland China</i> , NASA Earth and Science Fellowship (NESSF) program (07/01/2016-06/30/2017); with Eungul Lee (PI).

#### AWARDS

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##### Scholarship Awards

2018	Chinese Government Award for Outstanding Self-financed Student Abroad (\$6,000).
2017	Outstanding Merit Fellowship, West Virginia University (\$17,000).
2010-2013	Tuition Waiver Scholarship, Beijing Normal University, China.
2009	Chinese National Scholarship (~\$1,200).
2007-2008	First Place Scholarship, China University of Mining and Technology, China (~\$700).

##### Competition Awards

2018	Finalist in Remote Sensing Specialty Group Student Honors Paper Competition, AAG, New Orleans.
2016	First Place in the Student Oral Competition, WV GIS Conference, Morgantown, West Virginia.

#### STUDENT MENTORING

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2018	Nathan Shull (West Virginia University) (undergraduate)
2010	Zheng Li (Beijing Normal University, China) (undergraduate)

## PROFESSIONAL ACTIVITIES

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### Service to Profession

- 2015-present     **Peer-Reviewer:** *Global Biology Change* (1), *Environmental Research Letters* (3), *Geophysical Research Letters* (2), *ISPRS Journal of Photogrammetry and Remote Sensing* (2); *Frontiers of Earth Science* (4), *Atmosphere* (1), *International Journal of Remote Sensing* (3), *Journal of Arid Environments* (2), *Remote Sensing Letters* (1), *Sensors* (4), *Applied Geography* (1), *Remote Sensing* (13), *Sustainability* (5), *Climate* (1), *Environmental Research Communications* (1), *Journal of Asia-Pacific Entomology* (1), *Journal of Mountain Science* (1)
- 2020-present     **Topic Board** of *Atmosphere*
- 2020-present     **Reviewer Board** of *Remote Sensing*
- 2020-present     **Reviewer Board** of *Sustainability*
- 2020-2021        **Guest editor** of jointed special issue: Land and Monsoon Interactions: Physical and Societal Aspects of Asian Monsoons in *Land and Climate*.
- 2020              **Judge** of Outstanding Student Presentation Awards, AGU.
- 2019              **Co-organizer:** Integrating remotely-sensed data into climate models, *American Association of Geographers*, Washington, DC.
- 2018              **Co-organizer:** Monsoon geography: physical and societal aspects of monsoon, *American Association of Geographers*, New Orleans, Louisiana.
- 2016              **Co-organizer and Chair:** Land cover dynamics session, *IEEE International Geoscience and Remote Sensing Symposium*, Beijing, China.
- 2014              **Volunteer**, American Association of Geographers, Tampa, Florida.

### Service to Department

- 2016-2017        Geography Graduate Colloquium Committee, Department of Geology and Geography, West Virginia University.

### Faculty Development

- 2019              Future Faculty Teaching Series, Dartmouth Center for the Advancement of Learning.
- 2019              Creating Inclusive Course Materials, Dartmouth Center for the Advancement of Learning.
- 2017              Grant Writers' Seminar & Workshop, West Virginia University.

## WORKSHOPS

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- 2016              Community Earth System Model (CESM) Tutorial, Mesa Lab, National center for atmospheric research (NCAR), Boulder, CO.
- 2015              NCAR common language (NCL) workshop, Corporate Technical Training Center (CTTC), NCAR, Boulder, CO.

## INTERN EXPERIENCE

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- 2014-2015        **Summer Intern** at WV GIS Technical Center, West Virginia.
- 2010-2011        **Assistant Officer** of Graduate Affairs, Beijing Normal University, China.
- 2010              **Summer Intern**, Xuzhou Institute of Survey and Mapping, Jiangsu province, China.

## PROFESSIONAL MEMBERSHIPS

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- 2018-present     American Geophysical Union
- 2013-present     American Association of Geographers

2016-present     IEEE Geoscience and Remote Sensing Society