

He Yin

Department of Forest and Wildlife Ecology
University of Wisconsin – Madison
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EDUCATION

Humboldt University of Berlin

Doctor of Philosophy, Geography

Honors: *magna cum laude*

Dissertation: Understanding land use and land cover change in Inner Mongolia using remote sensing time series.

Advisor: Dr. Patrick Hostert

Berlin, Germany

Dec 2014

Peking University

Master of Science, Physical Geography

Dissertation: Desertification assessment in Inner Mongolia based on vegetation dynamics.

Advisor: Dr. Yanglin Wang

Beijing, China

Jul 2009

Northeast Forestry University

Bachelor of Management, Tourism Management

Dissertation: Environmental protection and ecological design for Jingpo Lake National Park.

Advisor: Dr. Hongxian Yu

Harbin, China

Jul 2006

PROFESSIONAL EMPLOYMENT

- | | |
|--------------|---|
| 2015-Current | Postdoctoral Researcher
Department of Forest and Wildlife Ecology, University of Wisconsin-Madison
Advisor: Dr. Volker Radeloff |
| 2014–2015 | Postdoctoral Researcher
Center for Development Research (ZEF), University of Bonn, Germany
Advisor: Dr. Asia Khamzina |
| 2009-2010 | Research Assistant
College of Urban and Environmental Sciences, Peking University, China
Advisor: Dr. Yanglin Wang |

PUBLICATIONS (PEER REVIEWED)

Qi, Y. Fang, S.B. **Yin, H.** Zhou, W.Z. Hao, C. Wang, R.Y. and Yang, Z.Q. (in press): Measuring the soil water retention capacity with an integrated vegetation and drought index in southwest China. *Journal of Applied Remote Sensing*.

- Yin, H.** Prishchepov, A. Kuemmerle, T. Bleyhl, B. Buchner, J. and Radeloff, V. (2018): Mapping agricultural land abandonment from spatial and temporal segmentation of Landsat time series. *Remote Sensing of Environment*. 210: 12-24
- Yin, H.** Pflugmacher, D. Li, A. Li, Z.G. and Hostert, P. (2018): Land use and land cover change in Inner Mongolia – understanding the effects of China’s re-vegetation programs. *Remote Sensing of Environment*. 204: 918-930
- Cai J.L. , **Yin, H.** and Varis, O. (2018): Impacts of urbanization on water use and energy-related CO₂ emissions of residential consumption in China: A spatio-temporal analysis during 2003–2012. *Journal of Cleaner Production*. 194: 23-33
- Yin, H.** Khamzina, A. Pflugmacher, D. and Martius, C. (2017): Forest cover mapping in post-Soviet Central Asia using multi-resolution remote sensing imagery. *Scientific Reports*. 7:1375
- Cai J.L. , Varis, O. and **Yin, H.** (2017): China's water resources vulnerability: A spatio-temporal analysis during 2003-2013. *Journal of Cleaner Production*. 142: 2901-2910
- Cai J.L. , **Yin, H.** and Varis, O. (2016): Impacts of industrial transition on water use intensity and energy-related carbon intensity in China: A spatio-temporal analysis during 2003-2012. *Applied Energy*. 183:1112-1122
- Wang, R. Zhang, Y.Z. Wünnemann, B. **Yin, H.** Xia, F. Zhou, L.F. and Diekmann, B. (2015): Linkages between Quaternary climate change and sedimentary processes in Hala Lake, northern Tibetan Plateau, China. *Journal of Asian Earth Sciences*. 107: 140-150
- Yin, H.** Pflugmacher, D. Kennedy, R.E. Sulla-Menashe, D. and Hostert, P. (2014): Mapping annual land cover changes using MODIS time series. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*. 7(8): 3421-3427
- Li, Z.G. Yang, P. Tang, H.J. Wu, W.B. **Yin, H.** Liu, Z.H. and Zhang, L. (2014): Response of maize phenology to climate warming in Northeast China between 1990 and 2012. *Regional Environmental Change*. 14, 39-48.
- Liu, X.Q. Wang, Y.L. Peng, J. Ademola, K.B. and **Yin, H.** (2013): Assessing vulnerability to drought based on exposure, sensitivity and adaptive capacity: A case study in middle Inner Mongolia of China. *Chinese Geographical Science*, 1, 13-25
- Yin, H.** Udelhoven, T. Fensholt, R. Pflugmacher, D. and Hostert, P. (2012): How Normalized Difference Vegetation Index (NDVI) trends from Advanced Very High Resolution Radiometer (AVHRR) and Système Probatoire d’Observation de la Terre VEGETATION (SPOT VGT) time series differ in agricultural areas: An Inner Mongolian case study. *Remote Sensing*, 4, 3364-3389
- Huang, Y. Cai, J.L. **Yin, H.** and Cai, M.T. (2009): Correlation of precipitation to temperature variation in the Huanghe River (Yellow River) basin during 1957-2006. *Journal of Hydrology*, 372, 1-8
- Peng, J. Wu, J.S. **Yin, H.** Li, Z.G. Chang, Q. and Mu, T.L. (2008): Rural land use change during 1986-2002 and its ecological effects in Lijiang, China, based on remote sensing and GIS. *Sensors*, 8, 8201-8223
- Selected publications in Chinese with English abstract
- Yin, H.** Li, Z.G. Wang, Y.L. and Cai, F. (2011): Assessment of desertification using time series analysis of hyper-temporal vegetation indicator in Inner Mongolia. *Acta Geographica Sinica*, 66, 653-661

- Li, Z.G. Tang, H.J. Yang, P. Zhou, QB. Wang, Y.L. Wu, W.B. **Yin, H.** and Zhang, L. (2011): Identification and application of seasonality parameters of crop growing season in Northeast China based on NDVI time series data. *Acta Scientiarum Naturalium Universitatis Pekinensis*, 47, 882-892
- Yin, H.** Li, Z.G. and Wang, Y.L. (2011): A review on the research progress of desertification assessment. *Chinese Journal of Plant Ecology*, 35, 345–352
- Cai, J.L. **Yin, H.** and Huang, Y. (2010): Ecological function regionalization: a review. *Acta Ecologica Sinica*, 30, 3018-3027
- Yin, H.** Wang, Y.L. Cai, J.L. Lv, X.F. and Liu, X.Q. (2009): Regional ecological risk assessment: Its research progress and prospect. *Chinese Journal of Ecology*, 28, 969-975
- Yin, H.** Wang, Y.L. and Peng, J. (2009): Variation analysis on precipitation and temperature in middle and upper reach of Yellow River Basin during 1956 to 2006. *Research of Soil and Water Conservation*, 16, 35-39

BOOK CHAPTER

- Liu, X.Q. **Yin, H.** and Braimoh, A.K. (2014): Vulnerability assessment diagram: A case study on drought in Middle Inner Mongolia, China. In Braimoh, A. and Huang, H.Q. (eds). *Vulnerability of Land Systems in Asia*. Wiley-Blackwell Press. Pp: 63-74

GRANTS

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| 2017 | Radeloff, V. Hostert, P. Griffiths, P. and Yin, H. Monitoring the dynamics of abandoned agriculture, fallow fields and grasslands, with harmonized Landsat and Sentinel-2 data. NASA Land-Cover and Land-Use Change Program (LCLUC) Multi-Source Land Imaging Science, 2018-2020, \$647,487 |
| 2017 | Radeloff, V. Butsic, V. Nita, M. Yin, H. Ghambashidze, G. Hayadyan, H. Elizbarashvili, N. Mammadov, R. and Kuemmerle, T. Long-term land degradation in the Caucasus. NASA Land-Cover and Land-Use Change Program (LCLUC), 2018-2020, \$874,000 |
| 2016 | Zuckerberg, B. Radeloff, V. Pidgeon, A. Bonter, D. McCabe, J. and Yin, H. Re-wilding urban environments: Integrating remote sensing and citizen science to study the environmental context and ecological consequences of returning avian predators. NASA Citizen Science for Earth Systems Program, 2016-2017, \$172,270 |

SCHOLARSHIP

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| 2015 | Postdoctoral grant; Robert Bosch Foundation (€ 13,800 EURO) |
| 2014 | Postdoctoral Fellowship; Center for International Forestry Research (€ 26,400 EURO) |
| 2014 | Research grant; Humboldt Innovation (€ 3,900 EURO) |
| 2013 | Travel grant; International Office, Humboldt University of Berlin (€ 2,500 EURO) |
| 2011 | Travel grant; Humboldt University of Berlin (€ 3,000 EURO) |
| 2008 | Kwang-Hua Scholarship; Peking University (¥ 3,000 YUAN) |

2005	First Prize Scholarship; Northeast Forestry University (¥ 3,000 YUAN)
2004	Second Prize Scholarship; Northeast Forestry University (¥ 2,000 YUAN)
2003	First Prize Scholarship; Northeast Forestry University (¥ 3,000 YUAN)

TEACHING EXPERIENCE

2016	Invited lecture: Land-use and land-cover change in the Caucasus and the Chechen Wars (Center for Russia, East Europe, and Central Asia at the University of Wisconsin–Madison 2016 Fall Lecture Series)
2012	Invited lecture: Time series analysis of remote sensing imagery, Land System Science (Humboldt University of Berlin)
2008	Teaching assistant: Landscape Ecological Planning and Design (Peking University)
2008	Teaching assistant: Rural Geography (Peking University)

Pedagogical training

The Learning Environment and Pedagogics (LEaP) workshop. Organizer: University of Wisconsin-Madison Teaching Academy, 23-24 August 2017 (<https://teachingacademy.wisc.edu/i-leap-and-ta-leap/>)

MENTORING EXPERIENCE

since 2016	Johanna Buchner, PhD thesis “Effects of Socio-economic shocks/armed conflicts on land use change in the Caucasus” (University of Wisconsin–Madison)
2014-2015	Tigist A Gessesse, PhD thesis “Above- and below-ground carbon stocks in semi-arid land-use systems under integrated watershed management in Gergera watershed, Ethiopia” (University of Bonn, Germany)

CONFERENCE CONTRIBUTIONS

Organization of sessions

The Global Land Project third Open Science Meeting (GLP 3rd OSM 2016), “Young scientist forum on mapping land use and land cover change using remote sensing techniques”, Beijing, China.

Selected conference presentations

Yin, H. Tan, B. Frantz, D. and Radeloff, V. 2018. Evaluation of topographic correction on forest mapping using Landsat imagery (American Geophysical Union Fall Meeting, Washington, DC).

Radeloff, V. **Yin, H.** Tan, B. Frantz, D. and Buchner, J. 2018. Topographic correction of Landsat imagery in the Caucasus Mountains (USGS Landsat Science Team meeting, Boulder).

Yin, H. Butsic, V. Buchner, J. Baumann, M. Kuemmerle, T. Prishchepov, A. Buchner, J. Bragina, E. and Radeloff, V. 2018. Chechen Wars triggered land use change in the North Caucasus (Association of American Geographers Annual Meeting, New Orleans).

- McCabe, J. **Yin, H.** Cruz, J. Radeloff, V. Pidgeon, A. Bonter, D. and Zuckerberg, B. 2017. Integrating remote sensing and citizen science to study the environmental context and ecological consequences of returning avian predators (American Geophysical Union Fall Meeting, New Orleans).
- Cai, J.L. **Yin, H.** and Varis, O. 2017 Impact of urbanization on water use and energy-related CO₂ emission of residential consumption in China: A spatio-temporal analysis during 2003-2012 (American Geophysical Union Fall Meeting, New Orleans).
- Zuckerberg, B. McCabe, J. **Yin, H.** Cruz, J. Pidgeon, A. Bonter, D. and Radeloff, V. 2017. Re-wilding urban environments: The environmental context and ecological consequences of returning avian predators (NASA Biodiversity and Ecological Forecasting Team Meeting, Washington, DC).
- Radeloff, V. **Yin, H.** Buchner, J. Baumann, M. Bleyhl, B. Bragina, E. Kuemmerle, T. Sayadyan, H. and Tan, B. 2017. Land use change in the Caucasus Mountains due to ethnic differences, national policies, and armed conflicts (NASA Land-Cover and Land-Use Change Program Science Team Meeting, Rockville).
- Cai, J.L. **Yin, H.** and Varis, O. 2016. Impacts of industrial transition on water use intensity and energy-related carbon intensity in China: A spatio-temporal analysis during 2003-2012 (American Geophysical Union Fall Meeting, San Francisco).
- Yin, H.** Bleyhl, B. Buchner, J. Kuemmerle, T. Tan, B. and Radeloff, V. 2016. Land use and land cover change in the Caucasus Mountains after the collapse of the Soviet Union (Global Land Project 3rd Open Science Meeting, Beijing China).
- Yin, H.** Buchner, J. Bleyhl, B. Bragina, E. Kuemmerle, T. Tan, B. and Radeloff, V. 2016. Long-term forest change in the Caucasus using remote sensing time series (North America Congress for Conservation Biology, Madison).
- Yin, H.** Bleyhl, B. Buchner, J. Kuemmerle, T. Tan, B. and Radeloff, V. 2016. Land use change in the Caucasus and the Chechen Wars (NASA Land-Cover and Land-Use Change Program Science Team Meeting, North Bethesda).
- Gessesse, T.A. Khamzina, A. **Yin, H.** and Amelung, W. 2015. Changes in land cover and ecosystem carbon stocks under integrated watershed management in Tigray, Ethiopia (International Association for Landscape Ecology- German Chapter Annual Conference, Bonn, Germany).
- Cai, J. Varis, O. and **Yin, H.** 2015. China's water resources vulnerability: A spatio-temporal analysis during 2003-2013 (American Geophysical Union Fall Meeting, San Francisco).
- Kumar, N. Voigt, H. **Yin, H.** and Yamac, S. 2015. Nexus of multi-disciplines for sustainable water resource management: concepts, interlinkages and models ("Sustainable Development Goals: A water perspective" organized by the German Federal Ministry of Education and Research, Bonn, Germany).
- Yin, H.** Haas, S. Martius, C. and Khamzina, A. 2015. Forest cover change between 2000 and 2014 in Central Asia (The 8th International Workshop on the Analysis of Multi-Temporal Remote Sensing Images, Annecy, France).
- Yin, H.** Jacob, A. Martius, C. and Khamzina, A. 2015. Forest cover mapping in Central Asia using multiple-resolution imagery (The 36th International Symposium on Remote Sensing of Environment, Berlin, Germany).

- Yin, H.** Jacob, A. Martius, C. and Khamzina, A. 2014 Forest cover and land degradation mapping in Central Asia – Implications for carbon sequestration (Climate Engineering Conference 2014, Berlin, Germany).
- Yin, H.** Pflugmacher, D. Li, Z.G. and Hostert, P. 2014. Land use and land cover change in Inner Mongolia – understanding the effects of China’s re-vegetation programs (The 2nd Global Land Project Open Science Meeting, Berlin, Germany).
- Li, Z.G. **Yin, H.** Yang, P. Tang, H.J. Wu, W.B. Chen, Z.X. Liu, Z.H. Tan, J.Y. and Zhang, L. 2014. Response of maize cropping system to climate warming in Northeast China in the past 30 years (The 2nd Global Land Project Open Science Meeting, Berlin, Germany).
- Yin, H.** Pflugmacher, D. and Hostert, P. 2014. Mapping annual land cover changes using MODIS time series (Joint workshop of the EARSeL 5th Land Use & Land Cover Workshop and NASA LCLUC Science Team, Berlin, Germany).
- Yin, H.** Pflugmacher, D. Li, Z.G. and Hostert, P. 2014. Assessing land degradation in Inner Mongolia using MODIS time series (The 7th International Workshop on the Analysis of Multi-temporal Remote Sensing Images, Banff, Canada).
- Yin, H.** Wang, Y.L. and Chang Q. 2007. A study on multi-scale effect of urban landscape pattern based on the wavelet transform in Shenzhen (The Xth China Landscape Ecology Congress, Beijing, China).

PROFESSIONAL DEVELOPMENT

2018	Neural Network and Deep Learning, Andrew Ng, Coursera course
2017	Hierarchical Modeling and Analysis of Spatial-Temporal Data Workshop, Andrew Finley & Ben Zuckerberg, UW-Madison
2013	The European Space Agency (ESA) 4th Advanced Training Course in Land Remote Sensing. The European Space Agency, Athens, Greece
2010	ENVI/IDL Workshop, Mort Canty & Geomatics Lab, Humboldt University of Berlin, Germany

AWARDS

2016	Best Oral Presentation at the Global Land Project 3rd Open Science Meeting
2008	Advanced individual of student volunteers at social practices of Peking University
2006	Graduated with honors across Heilongjiang Province of China (Rank: 1/32)
2004	First place in TK Competition Cup of the Northeast Forestry University
2004	Second place in the 9th National Scientific Competition Cup

PROFESSIONAL SERVICE

Manuscript reviewer for 18 journals:

Applied Geography, Canadian Journal of Remote Sensing, IEEE Journal of Selected Topics in Earth Observation and Remote Sensing, International Journal of Digital Earth, International Journal of Remote Sensing, Journal of Arid Environments, Journal of Environmental Management, Journal of Integrative Agriculture, Journal of Land Use Science, Land Use Policy, Landscape Ecology, Photogrammetric Engineering & Remote Sensing, Remote Sensing, Remote Sensing Letters, Remote Sensing of Environment, Science of the Total Environment, Scientific Reports, Sustainability

COMMUNITY SERVICE

2012-2013	Volunteer at the Long Night of the Sciences (in German: Lange Nacht der Wissenschaften)
2008	Volunteer at the Beijing 2008 Olympic & Paralympic Games. Awarded as "Excellent Volunteer" by the Beijing Olympics Organizing Committee
2008	Volunteer at the Good Luck Beijing - the Olympic test tournament
2007-2008	Vice president of the Yoga Student Association at Peking University
2005	Volunteer at annual Bird Week organized by the World Wildlife Fund (WWF) and Northeast Forestry University

MEMBERSHIPS

American Geophysical Union, Association of American Geographers, Canadian Remote Sensing Society, China Wildlife Conservation Association, IEEE Geoscience and Remote Sensing Society, Society for Conservation Biology

References

Dr. Van Butsic

Department of Environmental Science, Policy and Management, University of California Berkeley, USA
Email: vanbutsic@berkeley.edu

Dr. Asia Khamzina

Div. Environmental Science and Ecological Engineering, Korea University, Korea
Email: asia_khamzina@korea.ac.kr

Dr. Patrick Hostert

Geography Department, Humboldt University of Berlin, Germany
Email: patrick.hostert@geo.hu-berlin.de

Dr. Volker Radeloff

Department of Forest and Wildlife Ecology, University of Wisconsin-Madison, USA
Email: radeloff@wisc.edu