

Jason (Jiansheng) Yang

Professor, Department of Geography
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EDUCATION

- PhD Environmental Sciences
Department of Natural Resources Science, University of Rhode Island, Kingston,
Rhode Island
August 1999 – June 2003
- MSc Natural Resources: Land, Air & Water
Department of Natural Resources Management and Engineering, University of Connecticut,
Storrs, Connecticut
August 1997 - July 1999
- BSc Physics, Department of Physics
Shanxi University, Taiyuan, Shanxi Province, P. R. China
September 1985 - July 1989

TEACHING

Undergraduate Courses Taught

- Geog 265: Introduction to Geographic Information Systems (GIS)
Geog 342/542: Introductory Remote Sensing
Geog 343/543: Advanced Remote Sensing

Graduate Courses Taught

- Geog 615: Research Methods in Geography
Geog 618: Quantitative Methods in Geography
Geog 635: Special Topics in Remote Sensing

WORK EXPERIENCES

- 2017.8-present Professor, Department of Geography, Ball State University, Muncie, Indiana
- 2009.8-2017.7 Associate Professor, Department of Geography, Ball State University, Muncie,
Indiana
- 2005.8-2009.7 Assistant Professor, Department of Geography, Ball State University, Muncie,
Indiana
- 2004.9-2005.7 Postdoctoral Associate, Lab for Terrestrial Remote Sensing, University of Rhode
Island, Kingston, Rhode Island
- 2003.9-2004.8 Postdoctoral Associate, Meadowlands Environmental Research Institute (MERI),
Rutgers University, Newark, New Jersey
- 1999.9-2003.8 Graduate Teaching/Research Assistant, Department of Natural Resources Science,
University of Rhode Island, Kingston, Rhode Island
- 1997.9-1999.8 Graduate Research Assistant, Department of Natural Resources Management and
Engineering, University of Connecticut, Storrs, Connecticut
- 1989.9-1997.8 Professional staff, Shanxi University, Taiyuan, Shanxi Province, P. R. China

PRINCIPAL AREAS OF RESEARCH INTEREST

- Terrestrial Remote Sensing (Thermal Infrared, Multispectral, Hyperspectral, etc.)
- Geographic Information Systems (GIS)
- Geospatial Analysis on natural resources management and environmental monitoring

REFEREED PUBLICATIONS*Journal Articles*

- Yang, J.** and F. Wang. 2016. Land features extraction from Landsat TM image using decision tree method. *International Journal of Remote Sensing Application (IJRSA)*, Volume 6. doi: 10.14355/ijrsa.2016.06.011
- Yang, J.** and Li, W. 2013. Feature selection methods in extracting impervious surface from Landsat TM image, *Annals of GIS*, 19:4, 253-261, DOI: 10.1080/19475683.2013.843591.
- Li, S., Zhang, J., and **Yang, J.** 2012. Acquisitions of vegetation coverage and cultivated land occupation ratio of Taiyuan Valley Plain using CBERS-02B CCD image. *Advanced Materials Research*, vols. 518-523, pp 5663-5667.
- Wang, Y., Zhang, J., Wang, Z., and **Yang, J.** 2012. Monitoring water resource in Taiyuan, China using HJ-1B imagery. *Advanced Materials Research*, vols. 356-360 (2012) pp 2892-2896.
- Yang, J.** 2008. Detecting landscape changes pre- and post- surface coal mining in Indiana, USA. *Geographic Information Sciences*, 14 (1):36-43.
- Yang, J.** and F.J. Artigas. 2008. Estimating impervious surfaces of urban watershed using ASTER data. *Journal of Environmental Informatics*, 12(1):1-8.
- Yang, J.**, Y. Wang, and D.R. Miller. 2007. Estimating air temperature profiles in forest canopies using empirical models and Landsat data. *Forest Science*, 53(1): 93-99.
- Artigas F. J. and **J. Yang**. 2006. Spectral discrimination of marsh vegetation types in the New Jersey Meadowlands, USA. *Wetlands*, 26(1): 271-277.
- Artigas F. J. and **J. Yang**. 2005. Hyperspectral remote sensing of marsh surface types and plant vigor gradients in New Jersey Meadowlands. *International Journal of Remote Sensing*, 26: 5209 - 5220.
- Yang, J.**, Y. Wang, and P.V. August. 2004. Measuring land surface temperature using spatial interpolation and satellite-derived surface emissivity. *Journal of Environmental Informatics*, 4(1):40-47.
- Artigas F. J. and **J. Yang**. 2004. Hyperspectral remote sensing of habitat heterogeneity between tide-restricted and tide-open areas in New Jersey Meadowlands. *Urban Habitat*, 2(1):1-18.
- Yang, J.** and D.R. Miller. 2002. Trends and variability of ground-level ozone in Connecticut over the period 1981-1997. *Journal of Air & Waste Management Association*, 52:1354-1361.
- Yang, J.** and Y. Wang. 2002. Using an emissivity calibration model and Landsat-7 ETM+ data to estimate land surface temperature. *Journal of Remote Sensing, Suppl.*, 6:104-110.

Book/Book Chapters

- Yang, J.** and Artigas F.J. 2010. Mapping salt marsh vegetation by integrating hyperspectral and Lidar remote sensing. In *Remote Sensing of Coastal Environment*. Ed. Y. Q. Wang. CRC press, Taylor & Francis Group, pp 173-187.
- Yang, J.** 2009. *Estimating Land Surface Temperature from Space: A Remote Sensing Perspective*. VDM Verlag Dr. Muller.
- Yang, J.**, Artigas F. J., and Wang, Y. 2008. Mapping salt marsh vegetation using hyperspectral imagery. In *Wetland and Water resource Modeling and Assessment: A Watershed Perspective*. Ed. Wei Ji. CRC press, Taylor & Francis Group, LLC, pp 21-27.

Encyclopedia Entry

- Yang, J.** 2014. Atmospheric Ozone and Ozone Depletion, in *Encyclopedia of Natural Resources: Air*. Taylor and Francis: New York, Published online: 21 Oct 2014; 1050-1054.
<http://dx.doi.org/10.1081/E-ENRA-120047614>

Conference Proceedings

- Wang, H., **J. Yang**, Z. Wang, and Q. Wang. 2015. A Binary Granular Algorithm for Spatiotemporal Meteorological Data Mining. 2nd IEEE International Conference on Spatial Data Mining and Geographical Knowledge Services (ICS DM 2015), July 7-13, Fuzhou, China.
- Zhou, R., J. Zhang, Z. Wang, and **J. Yang**. 2011. The fusion methods and evaluation on HR and CCD remote sensing image of CBERS. 4th IEEE International Congress on Image and Signal Processing. October 15-17, Shanghai, China.

GRANTS

External

- *Acquisition of a Cloud Computing Infrastructure for Inter-/multi-disciplinary Research and Education at a Primarily Undergraduate Institution.* Co-PI, U.S. NSF via Ball State University (PI: Dr. Shaoen Wu), Jan. 1, 2018 - Dec. 31, 2010. Funded \$260,000.
- *Joint Development of High Performance Real Time Spectrum Remote Detection System with Photoelastic Modulation Fourier Transform Method* (In Chinese). Co-PI, International S&T Cooperation via North University of China (PI: Dr. Zhaoba Wang), Jan. 1, 2012- Dec. 31, 2014. CNY 3,750,000 (\$55,0000).
- *Wetland monitoring and assessment using hyperspectral remote sensing.* Co-PI, U.S. EPA via the New Jersey Meadowlands Environmental Research Institute (MERI) (PI: Dr. Francisco Artigas). Nov. 15, 2006-Nov. 14, 2008. Funded \$77, 500.
- *Characterization of Wetlands Habitats of New Jersey Meadowlands using Hyperspectral AISA Images.* PI, Rutgers University. October 1, 2004 – June 30, 2005. Funded \$30,000.

Internal

- 2017 *Interdisciplinary, systems approach & big digital data enhanced obesity research.* Co-PI for a Digital Scholarship Lab (DSL) Fellowship (PI: Dr. Hong Xue). May 15, 2017 – May 4, 2018. Funded 9,240.
- 2017 Co-PI for ASPiRE ADVANCE Proposal Development Award (PI: Dr. Hong Xue). Funded 5,000.
- 2017 ASPiRE International Travel Fund. Sponsored Projects Administration, \$400.
- 2017 College of Science and Humanities Travel Fund. \$400.
- 2016 Building Better Neighborhoods Fund. Ball Brothers Foundation, \$5,175.
- 2016 Provost Travel Fund. \$2,765.
- 2016 ASPiRE International Travel Fund. Sponsored Projects Administration, \$400.
- 2015 President Travel Fund. \$1800.
- 2015 ASPiRE International Travel Fund. Sponsored Projects Administration, \$400.
- 2014 College of Science and Humanities Travel Fund. \$400.
- 2014 ASPiRE International Travel Fund. Sponsored Projects Administration, \$400.
- 2013 President Travel Fund. \$731.
- 2013 ASPiRE International Travel Fund. Sponsored Projects Administration, \$400.
- 2012 College of Science and Humanities Travel Fund. \$400.
- 2012 ASPiRE International Travel Fund. Sponsored Projects Administration, \$400.
- 2011 ASPiRE International Travel Fund. Sponsored Projects Administration, \$400.
- 2010 ASPiRE International Travel Fund. Sponsored Projects Administration, \$400.
- 2007 *Remote Sensing Mapping Wetland Habitats in Northern Indiana.* Lilly V. July 1, 2007 – June 30, 2008. \$4,100.
- 2006 *Southwestern Indiana.* Lilly V. July 1, 2006 - June 30, 2007. \$19,628.
- 2005 *Long-term Monitoring of Coastal Wetlands Using Hyperspectral and LIDAR Remotely Sensed Data.* Lilly V. August 20, 2005 –August 19, 2006. \$11,500.

PRESENTATIONS AT PROFESSIONAL CONFERENCES

- 2017: *Assessing heat leaks in 8twelve target area of Muncie, IN using FLIR One.* AAG Annual Conference, Boston, MA, April 5-9.
- 2016: *Retrieval of land surface temperature using uncalibrated airborne hyperspectral thermal imagery.* 4th International workshop on Earth Observation and Remote Sensing Application, Guangzhou, China, July 4-6.
- 2016: *An enhanced water index in extracting water bodies from TM image.* AAG Annual Conference, San Francisco, CA, March 29-April 2.
- 2015: *A binary granular algorithm for spatiotemporal meteorological data mining.* In the 2nd IEEE International Conference on Spatial Data Mining and Geographical Knowledge Services (ICSMD), Fuzhou, China, July 7-13.

- 2015: *Urban land feature extraction from TM image using decision tree method*. In AAG Annual Conference, Chicago, Illinois, April 21-25.
- 2014: *Information extraction of Taiyuan from Landsat TM image using decision tree classifier*. In AAG Annual Conference, Tampa, Florida, April 8-12.
- 2013: *Characterization of cultivated land changes in urban growth in Shanxi Province, China using remote sensing*. In AAG Annual Conference, Los Angeles, California, April 9-13.
- 2012: *Construction of Basic Geographic Framework System of Taiyuan, China Based on 3S Technology*. In AAG Annual Conference, New York, New York, February 24-28.
- 2011: *Urban Growth Detection in Taiyuan, China Using Satellite Remote Sensing*. In AAG Annual Conference, Seattle, Washington, April 12-16.
- 2010: *Detect salt marsh vegetation changes using hyperspectral remote sensing*. In AAG Annual Conference, Washington, D.C., April 14-18.
- 2009: *Salt marsh vegetation mapping using hyperspectral and LiDAR remote sensing*. In AAG Annual Conference, Las Vegas, NV, March 22-27
- 2008: *Integration of LiDAR and hyperspectral remote sensing on salt marsh vegetation*. In International Society for Photogrammetry and Remote Sensing (ISPRS), Beijing, China, July 3-11.
- 2008: *Detecting salt marsh vegetation changes by hyperspectral remote sensing*. In AAG Annual Conference, Boston, MA, April 15- 19.
- 2007: *Remote sensing of landscape change on surface coal mines in Indiana, USA*. EcoSummit 2007, Beijing, China, May 22-27.
- 2007: *Vegetation change detection of surface coal mines in Indiana, USA*. In AAG Annual Conference, San Francisco, CA, April 17- 21.
- 2006: *Estimation of Methane (CH₄) Flux in the San-Jiang Plain in Northeast China Using MODIS Data*. In AAG Annual Conference, Chicago, IL, March 7-11.
- 2005: *Salt marsh vegetation and invasive species mapping in New Jersey Meadowlands using Hyperspectral AISA imagery*. In the International Conference on Poyang Lake Complex Environment System. Nanchang, Jiangxi, China, June 27-29.
- 2005: *Mapping impervious surface for New Jersey Watershed Management Area 5 using ASTER imagery*. In ASPRS Annual Conference, Baltimore, Maryland, March 7-11.
- 2004: *Effects of surface variables on deriving land surface temperature from Landsat TIR data*. In ASPRS Annual Conference, Denver, Colorado, May 23-28.
- 2004: *Detecting plant vigor gradient in New Jersey Meadowlands using hyperspectral remote sensing imagery*. In AAG Annual Conference, Philadelphia, Pennsylvania, March 14-19.
- 2003: *Modeling of forest under-canopy temperature using field observation and Landsat ETM+ data*. In ASPRS Annual Conference, Anchorage, Alaska, May 5-9.
- 2003: *Land-use and Land-cover types and ground-level ozone in the northeastern United State*. In AAG Annual Conference, New Orleans, Louisiana, March 5-8.
- 2002: *Effecting factors on ground-level ozone in the Northeastern United States*. In the 22nd FIG ACSM-ASPRS Annual Conference, Washington, DC, April 19-26.
- 2001: *Variability of ground-level ozone and land cover change in the southern New England region*. In ASPRS Annual Conference, St. Louis, Missouri, April 23-27.

INVITED PRESENTATIONS

- 2017: *Accessing heat leaks of residential areas using thermal remote sensing*. Invited by the College of Urban and Tourism, Taiyuan Normal University, Taiyuan, China. June 19.
- 2014: *Exploring software architectures for storing and analyzing global weather observations*. Invited by the College of Information, North University of China, presented together with Dr. Kevin Turcotte, Taiyuan, China. June 26.
- 2013: *Status and development of environmental remote sensing*. Invited by the Remote Sensing Center of Shanxi Province, Shanxi Geographic Information and Mapping Bureau, Taiyuan, China. May 29.
- 2012: *GIS and remote sensing application on public land management*. Invited by the Department of Natural Resources Environmental Management, Ball State University, Muncie, Indiana, March 16.

- 2011: *3S technology and digital city*. Invited by the Taiyuan Land and Resources Bureau, Taiyuan, Shanxi Province, China, July 8.
- 2011: *Introduction to 3S technology*. Invited by the Datong University, Datong, China. June 24.
- 2010: *Meteorological remote sensing in US and China*. Invited by the Shanxi Province Meteorological Bureau, Taiyuan, Shanxi Province, China, July 6.
- 2010: *Recent advances and applications of environmental remote sensing*. Invited by Engineering Technology Research Center of Shanxi Province for Opto Electronic Information and Instrument, NUC, Taiyuan, Shanxi Province, China, July 2.
- 2010: *Remote sensing applications on the environment*. Invited by the Department of Physics and Engineering, Taylor University, Upland, IN. April 8.
- 2009: *Remote sensing and landscape ecology*. Invited by the State Key Laboratory of Urban and Regional Ecology Research Center for Eco-Environmental Sciences, Chinese Academy of Science, Beijing, China. July 15.
- 2009: *Remote sensing of environment and its newest development*. Invited by the College of Environmental Resources & Tourism, Beijing Capital Normal University. China. July 13.
- 2008: *Characterization of salt marsh vegetation by integrating LiDAR and hyperspectral remote sensing*. On the workshop of Wetland Monitoring and Assessment Using Remote Sensing, New Jersey Meadowlands Environmental Research Institute. October 2.
- 2008: *Hyperspectral remote sensing on natural resources*. Invited by College of Environmental Resources & Tourism, Beijing Capital Normal University. July 5.
- 2007: *Vegetation change detection using airborne and satellite remote sensing*. On the workshop of Oversea Chinese Professionals in Earth Observation and Digital Earth, sponsored by Center for Earth Observation and Digital Earth (CEODE), Chinese Academy of Science. November 19-21.

SCIENTIFIC COOPERATIONS

Submitted grant proposals (not funded)

- with Dr. Lin Li at IUPUI to NASA. Optical remote sensing for monitoring Indiana Harmful algal blooms (HABs). Co-PI, August 1, 2017 – July 31, 2019. \$417,716.
- with Dr. Kirk Barrett at Montclair State University to U.S. EPA. *Assessing water quality in small and medium bays of the Great Lakes via remote sensing, 1980s to 2011*. Co-PI, April 10, 2010 – March 31, 2012. \$248,138.
- with Dr. Lin Li at IUPUI to Indiana Space Grant Consortium (ISGC). *Mapping Invasive Plants in Goose Pond Complex in Indiana Using Hyperion and IKONOS Imagery*. PI. August 1, 2006 – March 15, 2007. \$62,507.
- with Dr. John Pichtel, NREM, Ball State University to U.S. Department of the Interior Office of Surface Mining (OSM). *Use of Remote Sensing for Vegetative and Soil Assessment Pre- and Post-Surface Mining*. PI. September 1, 2006 – August 30, 2007. \$135,859.

Established Cooperation

- Teaming agreement in 2010 between North University of China (NUC), through its Engineering Technology Research Center of Shanxi Province for Opto-Electronic Information and Instrument, a university located in Taiyuan, Shanxi, China, and Ball State University (BSU), a state assisted institution of higher education located in Muncie, Indiana, through its Department of Geography.

Hosted two visiting scholars

- 2013.8. – 2014.8. Hongxia Wang from Shanxi Conservancy Technical College, Taiyuan, China.
- 2014.9. – 2015.9. Shiwei Li from North University of China, Taiyuan, China.

Initiated mutual international visits

- A delegate of four professors and PhD students from North University of China visited the Department of Geography in May 2012.
- The Chair of Department of Geography, Dr. Kevin Turcotte, was invited to visit North University of China in June 2014, and presented his research to faculty and students at UNC.
- A delegate of four professors from North University of China visited Ball State University in Sept. 2014.

THESIS/DISSERTATION COMMITTEE*Master thesis committee chair for*

- Candace Boren, Geography, graduated, 2013-2014
- Qia Ma, Geography, graduated, 2012-2013
- Jessica Thompson, Geography, graduated, 2010-2011
- Jessica Wei Wang, Geography, graduated, 2007-2008

Ph.D. dissertation committee member for

- Jia He, Computer Science, 2017-present
- Yue Li, School of Music, 2015-present
- Shiwei Li, Information Technology, North University of China, 2012-2015
- Cen Wang, Teachers College, graduated, 2010-2013
- Neil Hu, Computer Science, graduated, 2008-2013
- Tim Nall, English/Linguistics, graduated, 2007-2009
- Shupin Nall, English/Linguistics, graduated, 2006-2008

Master thesis committee member for

- Dan Lange, Geography, graduated, 2016-2017
- Ni Bai, Landscape Architecture, graduated, 2015-2016
- Kelly D. Boyd, Geography, graduated, 2012-2013
- Qin Wang, Landscape Architecture, graduated, 2011-2012
- Rui Zhou, Information Technology, North University of China, graduated, 2011-2012
- Weina Li, Information Technology, North University of China, graduated, 2011-2013
- Raju Gopinath, Geography, graduated, 2010
- Young Zheng, Landscape Architecture, graduated, 2010-2011
- Xiuwen Ma, Landscape Architecture, graduated 2009-2010
- Laura Giboo, Geography, graduated, 2010-2011
- Andrea Schlump, Geography, graduated, 2009-2010
- Bernard Ntiamoah, Geography, graduated, 2008-2009
- John (Yunzhong) Zhao, Geography, graduated, 2008-2009
- Nathan C. Eckstein, Geography, graduated, 2006-2007
- Zhanay Sagintayew, NRME, graduated, 2005-2006
- Nathan Hitchens, Geography, graduated, 2005-2006

MANUSCRIPTS REVIEWER FOR

- *Journal of Sustainability Science*
- *Journal of Ecological Indicators*
- *Journal of Northeastern Geographer*
- *Journal of Pedosphere*
- *Journal of Air & Waste Management Association (A&WMA)*
- *Journal of Computers, Environment, and Urban Systems (CEUS)*
- *Journal of Theoretical and Applied Climatology (TAC)*
- *Journal of IEEE Transactions, Geoscience and Remote Sensing*
- *Journal of Photogrammetry Engineering & Remote Sensing (PE&RS)*
- *Journal of Wetlands*
- *International Journal of Agricultural and Biological Engineering (IJABE)*
- *Book of Remote Sensing of Protected Lands*
- *Book of Advance in Environmental Remote Sensing: Sensors, Algorithm, and Application*
- *Book of Remote Sensing of Coastal Environments*
- *Book of Remote Sensing of Impervious Surface*