CURRICULUM VITAE

Di (Dee) Shi

Dept. of Geography and Atmospheric Science
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EDUCATION

- **Ph. D.,** Geography (2016), Florida State University, USA
  Dissertation: *Integrating Remote Sensing with Geospatial Analysis to Map and Interpret Vegetation Patterns in an Urban Environment*
- **M.S.,** Cartography and GIS (2008), Beijing Normal University, China
  Thesis: *A Physical Model for Topographic Correction of Remotely Sensed Radiance Measurement*
- **B.S.,** Geographic Information Systems (2005), Chengdu University of Technology, China

RESEARCH INTERESTS

My research interests include the development of theories and techniques in geographic information systems (GIS) and remote sensing with applications in urban and environmental domains. Specifically, I pursue several research themes:

- Cartography and geovisualization;
- Remote sensing and digital image processing;
- Geographic information systems and spatial analysis; and
- Land change science and urban ecology

SELECTED GRADUATE COURSE WORK

- **Topic Courses in Geography:** Thematic Cartography and Geographic Visualization, Land Use and Land Cover Change, Biogeography, Landscape Ecology, Urban Geography, Medical Geography, Introduction to Geographic Research, Geographic Thoughts
- **GIS and Spatial Analysis:** Principle of Geographic Information Systems, Applications of Geographic Information Systems, Quantitative Geography, Advanced Quantitative Geography, GIS for Environmental Analysis and Modeling, Environmental Change Modeling, Statistical Modeling with Application to Biology
- **Remote Sensing and Digital Image Processing:** Principle of Remote Sensing, Physics in Remote Sensing, Digital Processing of Remote Sensor Imagery, Advanced Remote Sensing, Urban Remote Sensing, Machine Learning, Pattern Classification

PROFESSIONAL EXPERIENCE

- **2016-Present: Lecturer in Cartography and Director of Cartographic Services**, Department of Geography and Atmospheric Science, University of Kansas
- **2010-2016: Graduate Teaching Assistant**, Department of Geography, Florida State University

  Independent Full Course Instructor: Human Geography (Fall 2012 and Fall 2013) and Remote Sensing (Online) (Spring 2014)
  Independent Laboratory Course Instructor: Introduction to GIS Lab, Introduction to Remote Sensing Lab
  Teaching Assistant (providing laboratory support): Advanced Remote Sensing, GIS Capstone, Urban Remote Sensing, GIS for Environmental Analysis and Modeling
- **2008-2009: Map Editor**, China Communication Press, Beijing, China

  Evaluated maps based on the cartographic principles
  Deputy Editor of China automobile touring atlas
- **2005-2008: Graduate Teaching and Research Assistant**, Beijing Normal University, China

SCHOLARLY PUBLICATIONS

Full Papers

- **Shi, D**. and Yang, X. 2016. An Assessment of Algorithmic Parameters Affecting Image Classification Accuracy by Random Forests. *Photogrammetric Engineering and Remote Sensing*, 82(6): 407-417
- **Shi, D**. and Yang, X. 2015. Support Vector Machines for Land Cover Mapping from Remote Sensor Imagery. In Li, J. and Yang, X. (eds) *Monitoring and Modelling Global Changes: A Geomatics Perspective*. Springer
- **Shi, D**. and Yang, X. A Relative Evaluation of Land Cover Classification in an Urban Area by Random Forests. (submitted to *Remote Sensing of Environment*)
- **Shi, D**. and Yang, X. Comparison of Hyperspectral and Multispectral Imagery for Land Cover Classification in an Urban Area (to be submitted to *Remote Sensing of Environment*)
- **Shi, D**. and Yang, X. Mapping Vegetation and Land Cover in an Urban Area through a Multiple Classifier Approach (to be submitted to *Remote Sensing of Environment*)
- **Shi, D**. and Yang, X. A Multiple Scale Assessment of Factors Affecting Vegetation Patterns in the Atlanta Metropolitan Area (first draft completed)
- **Shi, D**. and Yang, X. 2012. Support Vector Machines for Landscape Mapping from Remote Sensor Imagery. *Proceedings of the 2012 AutoCarto International Symposium on Automated Cartography*
- **Shi, D**., Yan, G. and Mu, X. 2009. A Physical Model for Topographic Correction of Remotely Sensed Radiance Measurement. *Journal of Remote Sensing*, 13(6): 1030-1038 (in Chinese)

Abstracts

- Yang, X., **Shi, D**. and Liu, T. 2016. Mapping and Interpreting Vegetation Patterns in Urban Areas: Research Status and Challenges. *Abstracts of the 33rd International Geographical Congress*
- **Shi, D**. and Yang, X. 2016. Geospatial Analysis of Factors Affecting Vegetation Patterns in the Atlanta Metropolitan Area. *Abstracts of the 2016 Annual Meeting of Association of American Geographers (AAG)*
- **Shi, D**. and Yang, X. 2015. Use of Random Forests for Land Cover Mapping in an Urban Area. *Abstracts of the 2015 Annual Meeting of SouthEastern Division of the Association of American Geographers (SEDAAG)*
- **Shi, D**. and Yang, X. 2015. An Assessment of Algorithmic Parameters Affecting Image Classification Accuracy by Random Forests. *Abstracts of the 2015 Annual Meeting of Association of American Geographers (AAG)*
- **Shi, D**. and Yang, X. 2014. Mapping Land Cover in an Urban Area Using Hyperspectral Imagery and Support Vector Machines. *Abstracts of the 2014 Annual Meeting of Association of American Geographers (AAG)*
- **Shi, D**. and Yang, X. 2012. Improving Urban Land Mapping Using Hyperspectral Imagery and Support Vector Machines. *Abstracts of the 7th International Conference on Geographic Information Science (GIScience 2012)*
- **Shi, D**., Liu, T. and Yang, X. 2011. Mapping Urban Vegetation by Support Vector Machines. *Abstracts of the 8th World Congress of International Association of Landscape Ecology (IALE)*
- Liu, T., **Shi, D**. and Yang, X. 2011a. Mapping Urban Vegetation Using Hierarchical Classification and Multiple Endmember Spectral Mixture Analysis. *Abstracts of the 8th World Congress of International Association of Landscape Ecology (IALE)*
- Liu, T., **Shi, D**. and Yang, X. 2011b. A Knowledge-Based Approach to Urban Vegetation Mapping. *Abstracts of the 2011 Annual Meeting of AAG*
- **Shi, D**. 2010. A Review and Study on Household Energy Saving Decision Making Models. *Abstracts of 2010 Sustainable Energy and Climate Change Workshop* (organized by FSU Institute for Energy Systems, Economics, and Sustainability-IESES)

SCHOLARLY PRESENTATIONS

- Yang, X., **Shi, D**. and Liu, T. 2016. Mapping and Interpreting Vegetation Patterns in Urban Areas: Research Status and Challenges. *The 33rd International Geographical Congress,* August 21-25 2016, Beijing, China
- **Shi, D**. and Yang, X. 2016. Geospatial Analysis of Factors Affecting Vegetation Patterns in the Atlanta Metropolitan Area. *The 2016 Annual Meeting of Association of American Geographers (AAG)*, March 29- April 2, San Francisco, California, USA
- **Shi, D**. and Yang, X. 2015. Use of Random Forests for Land Cover Mapping in an Urban Area. *Presented at the 2015 Annual Meeting of SouthEastern Division of the Association of American Geographers (SEDAAG)*, November 23, Pensacola, Florida, USA
- **Shi, D**. and Yang, X. 2015. An Assessment of Algorithmic Parameters Affecting Image Classification Accuracy by Random Forests. *Presented at the 2015 Annual Meeting of AAG,* April 21, Chicago, Illinois, USA

- **Shi, D.** and Yang, X. 2014. Mapping Land Cover in an Urban Area Using Hyperspectral Imagery and Support Vector Machines. *Presented at the 2014 Annual Meeting of AAG,* April 12, Tampa, Florida, USA
- **Shi, D.** and Yang, X. 2012a. Improving Urban Land Mapping Using Hyperspectral Imagery and Support Vector Machines. *Presented at the 7th International Conference on Geographic Information Science (GIScience 2012),* September 12-21, Columbus, Ohio, USA
- **Shi, D.** and Yang, X. 2012b. Support Vector Machines for Landscape Mapping from Remote Sensor Imagery. *Presented at the 2012 AutoCarto International Symposium on Automated Cartography,* September 16-18, Columbus, Ohio, USA
- **Shi, D.,** Liu, T. and Yang, X. 2011. Mapping Urban Vegetation by Support Vector Machines. *Presented at the 8th World Congress of International Association of Landscape Ecology (IALE),* August 18-23, 2011, Beijing, China
- Liu, T., **Shi, D.** and Yang, X. 2011. Mapping Urban Vegetation Using Hierarchical Classification and Multiple Endmember Spectral Mixture Analysis. *Presented at the 8th World Congress of International Association of Landscape Ecology (IALE),* August 18-23, 2011, Beijing, China

PROFESSIONAL MEMBERSHIPS

- American Society for Photogrammetry and Remote Sensing (ASPRS) (since 2010)
- Association of American Geographers (AAG) (since 2012)
- Southeastern Division of Association of American Geographers (SEDAAG) (since 2014)

HONORS AND AWARDS

- AAG International Geographic Information Fund (IGIF) Student Travel Grant by the Association of American Geographers (2015)
- Honors Paper Competition Finalist, Remote Sensing Specialty Group, AAG 2015
- Best Poster Award (The Second Place of the Graduate Student Group), 2010 Sustainable Energy and Climate Change Workshop, organized by the Institute for Energy Systems, Economics, and Sustainability (IESES), Florida State University
- Conference Presentation Grants by the Congress of Graduate Students, Florida State University (2011, 2012, 2014, 2015, and 2016)

PROFESSIONAL SERVICES

Manuscript Reviewer

- International Journal of Remote Sensing
- Photogrammetric Engineering & Remote Sensing

AAG Session Organizer

- Special Paper Session *Advanced Techniques for Remote Sensor Data Analysis in Urban Areas* at *the 2015 Annual Meeting of the Association of American Geographers (AAG),* April 21-25, 2015, Chicago, Illinois, USA

- Special Paper Session *Advanced Techniques for Remote Sensor Data Analysis in Urban Areas* at *the 2016 Annual Meeting of the Association of American Geographers (AAG)*, March 29-April 2, San Francisco, California, USA

MISCELLANEOUS

- Computer Programming Languages: C, Matlab, R
- GIS Packages: ArcGIS, GEODA, Fragstats, Illustrator, CorelDraw
- Image Processing Packages: ERDAS IMAGINE, ENVI, IDRISI
- Statistics Packages: SPSS, Weka, SAS, STATA
- Language Skills: English and Mandarin (native language)