

Dr. Yongqin Zhang

Curiculum Vitae

EDUCATION

- 2002-2007** **Ph.D.**, Geography, University of Toronto, Canada
Foci: Environment Remote Sensing, GIS, Quantitative Retrieval of Land Surface Biophysical and Biogeochemical Parameters, Forest Mapping and Health Modeling through Remote Sensing Products and Multi-scale Physically-based Models
Dissertation: “Hyperspectral Remote Sensing Algorithms for Retrieving Forest Chlorophyll Content”
- 1999-2001** **A.B.D.**, Geography, Nanjing University, China
Foci: Land and Water Resources
- 1996-1999** **M.Sc.**, Applied Meteorology, Nanjing University of Information Science and Technology (Former Nanjing Institute of Meteorology), China
Foci: Ground Water Resources, Climate Change, Remote Sensing, GIS
Thesis: “Integrated Evaluation on Impacts of Climate Change on Regional Water Resources and Economy”
- 1990-1994** **B.Sc.**, Climatology, Nanjing University of Information Science and Technology (Former Nanjing Institute of Meteorology), China
Foci: Climatology, Environmental Science
Undergraduate Research Project:
“Parameterization and Test of an Atmospheric Radiative Transfer Model”

WORK EXPERIENCE

- 2017-present Associate Professor (tenured), Director of the graduate program Master of Applied Science in Geospatial Information Technologies, Delta State University
- 2011-2017 Assistant Professor, Director of the graduate program Master of Applied Science in Geospatial Information Technologies, Delta State University
- 2009-2011 Researcher at Agriculture and Agri-Food Canada
- 2007-2009 Full Time Postdoctoral Researcher at York University, Canada
- 2002-2007 Research and Teaching Assistant (Ph.D. level) at University of Toronto
- 1999-2001 Research Associate at the Institute of Land and Water Resources, Nanjing University, China.
- 1996-1999 Research Assistant (Master level) at Nanjing Institute of Meteorology, China.
- 1994-1996 Associate Engineer at Climate Research Center, Weather Bureau of Ningxia, China.

AWARDS AND HONORS

- 2014 **Connected Educator Award**, Delta State University
- 2011 **Highest Course Evaluation Award**, Institutional Research and Planning, Delta State University
- 2007 **National Best Ph. D. Thesis Award**, Canadian Remote Sensing Society (In Canada, only one thesis is given this award every year)
- 2009-2011 **Natural Sciences and Engineering Research Council of Canada**, Visiting Fellowship
- 2007-2009 **Natural Sciences and Engineering Research Council of Canada**, Postdoctoral Fellowship
- 2007 **Graduate Student Research Award**, Center for Global Change Sciences, University of Toronto
- 2006-2007 **Doctoral Dissertation Completion Grant**, University of Toronto

- 2005 **Graduate Research Award**, Ontario Association of Remote Sensing
 2005 **Travel Grant**, University of Toronto
 2002, 2004 **Additional University Graduate Scholarship**, University of Toronto
 2002-2006 **University Graduate Scholarship**, University of Toronto
 2000 **The 11th Guanghua Award**, Taiwan Guanghua foundation for the most outstanding student in the first year of graduate studies
 2000 **Outstanding Graduate Student Award**, Nanjing University
 1999 **2nd Place Scientific Progress Prize**, National Environmental Protection Agency of China
 1998 **Research Paper Award**, Nanjing Institute of Meteorology
 1992, 1993 **Outstanding Student Award**, Nanjing Institute of Meteorology

TEACHING EXPERIENCE

Graduate and Undergraduate Courses at Delta State University, 2011-present

- GIS681, Community Growth (Developed and taught the online course)
 GIS631, Photogrammetry (Developed and taught the online course)
 REM611, Digital Image Processing (Developed and taught the online course)
 REM616, Remote Sensing (Developed and taught the online course)
 REM641, Advanced Sensor Systems and Data Collection (Developed and taught the online course)
 REM631, Information Extraction from Multi-, hyper-spectral and Lidar Remote Sensing (Developed and taught the online course)
 GIS690, GIS Capstone Project (Developed and taught the online course)
 GIS580, GIS for the internet and spatial database (Developed and taught the online course)
 GIS570, GIS Programming (Developed and taught the online course)
 REM316, Remote Sensing (Taught the campus course)

Guest Lecturer at the University of Lethbridge

- GEOG 4725, *Advanced Remote Sensing*, Fall 2009 (undergraduate and graduate course)

Guest Lecturer at York University

- ESS 5420: *Advanced Geospatial Information Technology*, Fall 2008 (graduate course)

Sessional Instructor at the University of Toronto

- GGR206: *Introduction to Hydrology*, Summer 2007 (2nd year undergraduate course)

Teaching Training and Practice at the University of Toronto

- THE500: *Teaching in Higher Education*, Fall 2006 (Senior graduate course)

Guest Lecturer at the University of Toronto

- GGR206: *Introduction to Hydrology*, Fall 2005, Fall 2008 (2nd year undergraduate course)
 GGR203: *Introduction to Climatology*, Fall 2002 (2nd year undergraduate course)

Teaching Assistant at the University of Toronto

- GGR206: *Introduction to Hydrology*, 2002, 2003, 2004, 2005 (four terms)
 GGR203: *Introduction to Climatology*, Summer 2002

RESEARCH GRANTS

- 2017 NSF Grant, The declining significance of race or increasing significance of class: Investigating black-white earnings inequality along class lines 1968-2015, Co-PI.
 2017 NIH Grant, An NLP and GIS approach to understand tweets related to Zika disease, Co-PI.
 2017 U.S. Department of Education, capacity-building grant for the project DSU Goes Global (submitted), Co-PI.
 2016 Challenge Grant, Ellucian Service and Technology for Higher Education. Project “Evaluating growth and health conditions of crops using ground and aerial remote sensing measurements”, PI.
 2016-17 Research and Development Fund, for the project Developing Digital Database for Land Surface Mapping and Monitoring, Delta State University, PI.

- 2016-17 Griffith President's Endowment Fund, research grant for the project Mapping and Monitoring Ground Surface Changes in Mississippi Delta, Delta State University, PI.
- 2014-15 Ellucian Service and Technology for Higher Education Challenge Grant, for the project "Use of Unmanned Aerial Vehicles to Enhance Learning and Research", PI.
- 2014-15 Dulce Fund, Delta State University.
- 2014 Kent and Janice Wyatt Fund for project "Online teaching strategy of Geospatial Information Technologies", Delta State University, PI.
- 2013-14 Ellucian Service and Technology for Higher Education Challenge Grant, for the project "Land Surface Feature Extraction from Field Spectral Data and Remote Sensing Images", PI.
- 2013-14 Dulce Fund, Delta State University
- 2012-13 SunGard Higher Education Solutions, Challenge Grant for the project "Developing Digital Spectral Library for Land Cover Types and Vegetation Species in Mississippi Delta to Enhance Teaching of MAS-GIT Program", PI.
- 2012-13 Bryce Fund, Delta State University.
- 2012 Research Award, Tri-State Foundation Funds, "Implementation of Geospatial Technologies in Nelson Mandela Metropolitan University, South Africa", Delta State University
- 2012 University Library Award, Delta State University
- 2011-12 Research Grant, Investigating defoliation in Delta National Forest from remote sensing images, Bryce Griffith President's Endowment Fund, Delta State University, PI.
- 2011 Faculty Library Resources Award, Delta State University
- 2009-11 Government Related Initiative Programs, Canadian Space Agency
- 2007-09 Postdoctoral Research Award, Natural Sciences and Engineering Research Council of Canada, PI.
- 2006 Graduate Research Award, Center for Global Change Sciences, University of Toronto
- 2005 Graduate Research Award, Ontario Association of Remote Sensing

ACADEMIC WORKS

Book Chapters

1. **Zhang, Y.**, Blackwell, E., Wilson, T. 2016. GIS in Biological Science Education and Research. In: "GIS and STEM in Higher Education" Edited by Dr. David J. Cowen, *ESRI Press*.
2. **Zhang, Y.** 2011. Forest leaf chlorophyll content study using hyperspectral remote sensing. In: "Hyperspectral Remote Sensing of Vegetation" Edited by Thenkabail, P.S., Lyon, J.G., Huete, A. CRC Press, Boca Raton, FL, USA.
3. Miao, Q., **Zhang, Y.**, Xiang, Y., and Gu, X. 2003. Influence of climate variation on water resources in the target. In: "Climate change and regional sustainable development-A case study in the Changjiang Delta region of China". Edited by Yin, Y., Miao, Q., and Tian, G. Sciences Press, New York Ltd., New York. pp. 47-69.
4. Miao, Q., Gu, X., and **Zhang, Y.** 2003. Potential effects on sea level rising on the coastal zone of the Yangtze River Delta. In: "Climate change and regional sustainable development-A case study in the Changjiang Delta region of China". Edited by Yin, Y., Miao, Q., and Tian, G. Sciences Press, New York Ltd., New York. pp. 110-122.
5. Zhou, S., Miao, Q., Yin Y., Tian, G., and **Zhang, Y.**, 2003. An integrated regional climate change impact assessment system for the Yangtze River Delta. In: "Climate change and regional sustainable development-A case study in the Changjiang Delta region of China". Edited by Yin, Y., Miao, Q., and Tian, G. Sciences Press, New York Ltd., New York. pp. 123-206.
6. Zhou, S., Miao, Q., Yin Y., Tian, G., and **Zhang, Y.**, 2003. Adaptation Countermeasure Test. In: "Climate change and regional sustainable development-A case study in the Changjiang Delta region of China". Edited by Yin, Y., Miao, Q., and Tian, G. Sciences Press, New York Ltd., New York. pp. 206-215.

Peer-Reviewed Journal Papers

1. Croft, H., Chen, J.M., Mo, G., Luo, S., Luo, X., Arabian, J., **Zhang, Y.**, Simic, A., Noland, T., He, Y., Homolova, L., Quixang, Y., Beringer, J., Amit, R., Hutley, L., Arellano, P., Stahl, C., Global distribution of leaf chlorophyll content, *Remote Sensing of Environment* (under review).
2. **Zhang, Y.**, Roth, A. A comparison of the effects of vertical and horizontal natural gas wells on vegetation change through remote sensing. *Journal of Geographical Sciences*.(under revision)
3. **Zhang, Y.**, Iman, Y., 2017. A multi-factor GIS method to identify optimal geographic locations for electric vehicle. International Cartographic Conference.
4. Smith, A.M., Hill, M.J., **Zhang, Y.**, 2015. Estimating ground cover in the mixed prairie grassland of Alberta using Landsat TM imagery. *Canadian Journal of Remote Sensing*. 41(1): 51-66.
5. He, L., Liu, J., Chen, J.M., Wang, R., Sprintsin, M., Croft, H., Zheng, T., Ryu, Y., Pisek, J., Gonsamo, A., Deng, F., **Zhang, Y.** 2015. Inter- and intra-annual variations of clumping index derived from the MODIS BRDF product. *International Journal of Applied Earth Observations and Geoinformation*. 44:53-60.
6. Croft, H., Chen, J.M., **Zhang, Y.**, Simic, A., Noland, T., Nesbitt, N., Arabian, J. 2015. Evaluating leaf chlorophyll content prediction from multispectral remote sensing data within a physically-based modeling framework. *ISPRS Journal of Photogrammetry and Remote Sensing*. 102: 85-95.
7. Croft, H., Chen, J., **Zhang, Y.**, 2014. Temporal disparity in leaf chlorophyll content and leaf area index across a growing season in a temperate deciduous forest. *International Journal of Applied Earth Observation and Geoinformation*. 33: 312-320
8. Croft, H., Chen, J., **Zhang, Y.**, 2014. The applicability of empirical vegetation indices for determining leaf chlorophyll content over different leaf and canopy structures. *Ecological Complexity*. 17: 119-130.
9. Croft, H., Chen, J., **Zhang, Y.**, Simic, A., 2013. Modelling leaf chlorophyll content in broadleaf and needle leaf canopies from ground, CASI, Landsat TM 5 and MERIS reflectance data. *Remote Sensing of Environment*, 133:128-140.
10. **Zhang, Y.**, Chen, J.M., Miller, J.R., and Noland, T.L. 2008. Leaf chlorophyll content retrieval from airborne hyperspectral remote sensing imagery. *Remote Sensing of Environment*. 112: 3234-3247.
11. **Zhang, Y.**, Chen, J.M., Miller, J.R., and Noland, T.L. 2008. Retrieving chlorophyll content in conifer needles from hyperspectral measurements. *Canadian Journal of Remote Sensing*. 34(3): 296-310.
12. **Zhang, Y.**, Chen, J.M., and Thomas, S.C. 2007. Retrieving seasonal variation in chlorophyll content of overstorey and understorey sugar maple leaves from leaf-level hyperspectral data. *Canadian Journal of Remote Sensing*. 5: 406-415.
13. Chen, J.M., Govind, A., Sonnentag, O., **Zhang, Y.**, Barr, A., and Amiro, B. 2006. Leaf area index measurements at Fluxnet Canada forest sites. *Agricultural and Forest Meteorology*. 140: 257-268.
14. **Zhang, Y.**, Chen, J. M., and Miller, J.R. 2005. Determining digital hemispherical photograph exposure for leaf area index estimation. *Agricultural and Forest Meteorology*. 133: 166-181.
15. **Zhang, Y.**, Miao, Q., and Peng, B. 2001. Calculation and analysis on change of agricultural water consumption in the Changjiang Delta. *Chinese Geographical Sciences*. 11(4): 321-325.
16. Xie, Z., **Zhang, Y.**, Xu, M., and Zhou, Y. 2003. Fractal traits and predictable time analysis for flood series in the Huaihe River basin. *Journal of Nanjing University (Natural Sciences edition)*. 39(1): 113-119. (in Chinese with English Abstract)
17. **Zhang, Y.**, Miao, Q., and Peng, B. 2002. Study on supply and demand balance model of regional water resources for Yangtze Delta. *Hydrology*. 22(2): 6-9. (in Chinese with English Abstract)
18. Xu, R., **Zhang, Y.**, Ding, J., and Peng, B. 2002. Research on model for regional total dynamic balance of cultivated land- A case study in Wenzhou City. *Economic Geography*. 22(4): 435-439. (in Chinese with English Abstract)

19. **Zhang, Y.**, and Miao, Q. 2001. Research on input-output model of climate change on regional economy. *Acta Meteorologic Sinica*. 59(5): 633-640. (in Chinese with English Abstract)
20. **Zhang, Y.**, Miao, Q., Xiang, Y., and Peng, B. 2001. Calculation and prediction of regional water resources. *Scientia Geographica Sinica*. 21(5): 457-462. (in Chinese with English Abstract)
21. **Zhang, Y.**, and Miao, Q. 2001. Impact of climate change on regional economy and the adaptative countermeasures. *Journal of Natural Disasters*. 10(2): 121-126. (in Chinese with English Abstract)
22. **Zhang, Y.**, and Peng, B. 2001. Analysis on sustainable use of water resources in Huaihe River basin. *Bulletin of Water and Soil Conservation*. 21(2): 67-70. (in Chinese with English Abstract)
23. **Zhang, Y.**, Miao, Q., and Peng, B. Xiang, Y., 2001. Analyses of agricultural water consumption in Nanjing region. *Resources and Environment in the Yangtze Basin*. 10(5): 413-418. (in Chinese with English Abstract)
24. **Zhang, Y.**, Miao, Q., and Peng, B. 2001. Research of climate change on the economy of Jiangsu province. *Resources and Environment in the Yangtze Basin*. 10(1): 8-14. (in Chinese with English Abstract)
25. **Zhang, Y.**, and Miao, Q. 1999. Impact of climate change on regional economy. *High Efficient Use of Agricultural Resources and Sustainable Development*. China Agriculture Science and Technology Press. Beijing, China. 101-102.
26. **Zhang, Y.**, Miao, Q., and Xiang, Y. 1999. Impact of climate change on water resources in the Yangtze Delta. *Journal of Nanjing Institute of Meteorology*. 22: 513-517. (in Chinese with English Abstract)
27. Miao, Q., **Zhang, Y.**, and Xiang, Y. 1999. Impact of climate change on agriculture water consumption in the Yangtze Delta. *Journal of Nanjing Institute of Meteorology*. 22: 518-522. (in Chinese with English Abstract)
28. **Zhang, Y.**, Miao, Q., and Xiang, Y. 1999. An analysis on the impact of climate change on water balance of supply and demand in the Yangtze Delta. *Journal of Nanjing Institute of Meteorology*. 22: 529-535. (in Chinese with English Abstract)
29. Xiang, Y., **Zhang, Y.**, Miao, Q., and Liu, W. 1999. A statistical model for the impact of climate change on industry and population water in the Yangtze Delta. *Journal of Nanjing Institute of Meteorology*. 22: 523-528. (in Chinese with English Abstract)

Journal Articles in Preparation

1. **Zhang, Y.**, Miller, J.R., Noland, T.L., Chen, J.M., and Treitz, P., 2016. Leaf nitrogen and chlorophyll content: seasonal patterns, relationships, and remote sensing applications. *Canadian Journal of Forest Research* (submitted).
2. Croft, H., Chen, J.M., **Zhang, Y.**, 2016. Modeling spatial and temporal dynamics in canopy chlorophyll content and leaf area index in an Acer Saccharum forest. *Landscape Ecology*.(under Review)
3. Hezewijk, B.H.V., Bouchier, R.S., **Zhang, Y.**, Smith, A.M. 2016. Estimating Rangeland Weed Density Using Digital Photography and Automated Image Analysis. *Rangeland Management*. (Under review)
4. **Zhang, Y.**, Smith, A.M., 2015. Estimating percent ground cover of grasslands from hyperspectral and multi-angle remote sensing imagery. *Canadian Journal of Remote Sensing*.(under review)
5. **Zhang, Y.**, Smith, A.M., Larson, G., Kloppenburg, C. 2015. Grassland composition and percent cover estimation using digital hemispherical photographs. *Rangeland Management*. (submitted).

Proceeding Papers and Conference Presentations

1. Kory Iman, **Zhang Y.**, 2017. A geospatial method to develop infrastructure of EV vehicles, *Esri User Conference*, July 10-14, San Diego, CA.

2. Croft, H., Chen, J.M., Luo, X., Bartlett, P., Staebler, R.M., He, L., Mo, G., Chen, B., Luo, S., Arabian, J., **Zhang, Y.**, Simic, A., Noland, T.L., He, Y., Homolová, L., Malenovský, Z., Yi, Q., Beringer, J., Amiri, R., Hutley, L., Arellano, P., Stahl, C., Bonal, D., 2017. The Global Distribution of Leaf Chlorophyll Content and Seasonal Controls on Carbon Uptake, 2017 *American Geophysical Union Fall Meeting*, Dec. 11-15. New Orleans, LA.
3. **Zhang, Y.**, Iman, K., 2017 A multi-factor GIS method to identify optimal geographic locations for electric vehicle charging stations. 28th *International Cartographic Conference*. July 2-7, Washington. D.C.
4. **Zhang, Y.**, Roth A., 2016. Investigating the Impacts of Hydraulic Fracturing on Natural Gas Production and Vegetation Change through Remote Sensing, *Mississippi Association for Spatial Technologies Conference*. Oct 20-21, Long Beach, MS.
5. Francois, A., **Zhang, Y.**, 2016. Determining Species of Greatest Conservation Need Occurrence in the Yazoo River Drainage, Mississippi. *Mississippi Association for Spatial Technologies Conference*. Oct 20-21, Long Beach, MS.
6. Phillips, C., **Zhang, Y.**, 2016. Study of the Zika Virus using Disease Mapping and Ecological Niche Models. *Mississippi Association for Spatial Technologies Conference*. Oct 20-21, Long Beach, MS.
7. Chen, J., Holly C., Arabian, J., Nesbitt, N., He, Y., Shang, J., **Zhang, Y.**, Simic, A., Noland, T., Hoffman, T., Liu, J. 2015. Validation of a two-Step model inversion approach for regional retrieval of leaf chlorophyll content using remote sensing Data. Oral presentation and publication in Proceedings of 36th *Canadian Remote Sensing Symposium*. June 8-11. St. John's, Newfoundland and Labrador, Canada.
8. Holly C., Chen, J., **Zhang, Y.**, Staebler, R.M., Froelich, N., Chen, B., 2015. Temporal disparity between leaf area index and leaf chlorophyll content in temperate deciduous forests: Implications for GPP modeling. Oral presentation and publication in Proceedings of 36th *Canadian Remote Sensing Symposium*. June 8-11. St. John's, Newfoundland and Labrador, Canada.
9. **Zhang, Y.**, 2014. Integrating technologies in online teaching to engage students. 1st Technology in Teaching Symposium, April 4. Delta State University. Cleveland, MS
10. **Zhang, Y.**, 2014. Online teaching of Geospatial Information Technologies. American Society for Photogrammetry and Remote Sensing Annual Conference. March 23-28, Louisville, KY, USA.
11. Chen, J.M., Croft, H., **Zhang, Y.**, Simic, A., and Noland, T., 2013. Modelling leaf chlorophyll content from ground, airborne and satellite reflectance data. 46th American Geophysical Union Annual Fall Meeting, December 9-13, San Francisco, California.
12. Chen, J.M., Croft, H., **Zhang, Y.**, Simic, A., Noland, T., Miller, J.R. 2013. Retrieval of leaf chlorophyll content from CASI, LANDSAT, CHRIS and MERIS data using a model inversion approach. *IEEE International Geoscience and Remote Sensing Symposium*. July 21-26, Melbourne, Australia.
13. **Zhang, Y.**, Smith, A.M., 2013. Developing remote sensing methods to estimate short vegetation biophysical variables. 77th *Mississippi Academy of Science Annual Meeting*. Feb 20-22. Hattiesburg, MS, USA.
14. Weick, J., Huang, Y., **Zhang, Y.** 2013. Assessment of in-season agricultural crop growth using field and airborne remote sensing measurements. 77th *Mississippi Academy of Science Annual Meeting*. Feb 20-22. Hattiesburg, MS, USA.
15. Smith, A.M., Hill, M., Kloppenburg, C., **Zhang, Y.** 2013. Developing remote sensing tools for mapping the status of native grasslands in Southern Alberta: A case study. Annual meeting of Association of American Geographers. April 9-13, Los Angeles, CA, USA.

16. Croft, H., Chen, J.M., **Zhang, Y.** and Simic, A. 2012. Modelling spatio-temporal variations in leaf chlorophyll content for broadleaf and needle forest canopies. *European Geosciences Union General Assembly 2012*. April 22-27. Vienna, Austria.
17. Smith, A.M., Hill, M.J. and **Zhang, Y.** 2011. Estimating natural grassland productivity using a simple light use efficiency model. In: *Proceedings of 32nd Canadian Remote Sensing Symposium*. June 13-16. Sherbrooke, Québec, Canada.
18. **Zhang, Y.**, Smith, A.M. and Hill, M.J. 2011. Estimating biomass of mixed prairie grasslands from satellite remote sensing imagery. In: *Proceedings of 32nd Canadian Remote Sensing Symposium*. June 13-16. Sherbrooke, Québec, Canada.
19. **Zhang, Y.**, Smith, A.M., Hill, M.J., Larson, G. and Kloppenburg, C. 2011. Combining ground and satellite remote sensing measurements for quantifying grassland cover components. In: *Proceedings of 32nd Canadian Remote Sensing Symposium*. June 13-16. Sherbrooke, Québec, Canada.
20. **Zhang, Y.**, Smith, A.M., Hill, M. 2011. Estimating fractional cover of grassland components from two satellite remote sensing sensors, In: *Proceedings of 34th International Symposium on Remote Sensing of Environment. 4 page paper*. April 10-15, Sydney, Australia.
21. **Zhang, Y.**, Smith, A.M., Hezewijk, B.V., Bouchier, R. 2010. Detecting and estimating leafy spurge from ground level and airborne remote sensing data. In: *Proceedings of Prairie Summit- 31st Canadian Remote Sensing Symposium*. June 1-5. Regina, Saskatchewan, Canada. 353-356. (I presented)
22. **Zhang, Y.**, Smith, A.M. 2010. Estimation of percent ground cover in grasslands from hyperspectral and multi-angle remote sensing imagery. In: *Proceedings of Prairie Summit- 31st Canadian Remote Sensing Symposium*. June 1-5. Regina, Saskatchewan, Canada. 345-348. (I presented)
23. **Zhang, Y.**, Miller, J.R., Chen, J.M. 2009. Remote sensing of vegetation nitrogen content for spatially explicit carbon and water cycle estimation. AGU 2009 Joint Assembly. May 24-27, Toronto, Canada. 2 page paper on CD-ROM. (I presented)
24. **Zhang, Y.**, Chen, J.M., Miller, J.R., and Noland, T.L. 2008. Leaf chlorophyll content retrieval from airborne hyperspectral remote sensing imagery. ASTRO 2008 Conference and Annual General Meeting. April 29 - May 1. Montréal, Quebec, Canada. 4 page paper on CD-ROM. (I presented)
25. **Zhang, Y.**, Chen, J.M., Miller, J.R., and Noland, T.L. 2007. Algorithm of Retrieving Needle Leaf Chlorophyll Content from Hyperspectral Remote Sensing. In: *Proceedings of the International Geoscience And Remote Sensing Symposium (IGARSS'07)*, July 23-28, Barcelona, Spain. 2284-2287. (I presented)
26. **Zhang, Y.**, Chen, J.M., Miller, J.R. 2007. Hyperspectral remote sensing algorithms for retrieving forest chlorophyll content-from leaf to canopy level. *The American Society for Photogrammetry and Remote Sensing and Canadian Remote Sensing Society (CRSS/ASPRS) Specialty Conference*. Oct. 28 - Nov.1, Ottawa, Canada. paper on CD-ROM. (I presented)
27. **Zhang, Y.** and Chen, J.M. 2007. Hyperspectral remote sensing applications for retrieving forest biochemical and biophysical parameters. *The 15th International Conference on Geoinformatics*. May 26-28, Nanjing, China. paper on CD-ROM. (I presented)
28. **Zhang, Y.**, Chen, J.M., Thomas, S.C., and Noland, T.L. 2005. Using hyperspectral data for forest biochemical parameters estimation. *The 13th International Conference on Geoinformatics*. Aug 17-19, Toronto, Ontario, Canada. 3 page paper on CD-ROM. (I presented)
29. **Zhang, Y.**, Chen, J.M., Noland, T.L., and Miller, J.R. 2005. Retrieving black spruce leaf chlorophyll content from hyperspectral remote sensing. *The 54th Canadian Association of Geographers Annual Meeting*. June 1- 3, London, Ontario, Canada. 3 page paper on CD-ROM. (I presented)
30. Chen, J.M., **Zhang, Y.**, Simic, A., Miller, J.R. and Noland, T.L. 2005. Hyperspectral algorithms for forestry applications. *Resource and Environmental Hyperspectral Monitoring Products Workshop*.

January 24-26, Natural Resources Canada, Victoria, BC, Canada. CD-ROM.

Conference Posters (abstracts were referred prior to acceptance)

1. Iman, K., **Zhang, Y.** 2016. A geospatial method to develop infrastructure of Electric Vehicle (EV) charging stations. *Mississippi Association for Spatial Technologies Conference*. Oct 20-21, Long Beach, MS.
2. Weick, J., Huang, Y., **Zhang, Y.** 2013. Assessment of in-season agricultural crop growth using field and airborne remote sensing measurements. *77th Mississippi Academy of Science Annual Meeting*. Feb 20-22. Hattiesburg, MS, USA.
3. **Zhang, Y.**, Smith, A.M., Larson, G., Kloppenburg, C. 2010. Grassland composition and percent cover estimation using digital hemispherical photographs. *Prairie Summit- 31st Canadian Remote Sensing Symposium*. June 1-5. Regina, Saskatchewan, Canada.
4. **Zhang, Y.**, Chen, J.M., Miller, J.R., Noland, T.L. 2008. Hyperspectral remote sensing algorithms for retrieving forest biophysical parameters and biochemical contents. *Canadian Carbon Program General Meeting*. March 14-16. Calgary, Alberta, Canada.
5. **Zhang, Y.**, Chen, J.M., Miller, J.R., and Noland, T.L. 2006. Retrieving forest biochemical parameters from hyperspectral remote sensing data. *The 40th Annual congress of the Canadian Meteorological and Oceanographic Society*. May 29-June 1. Toronto, Ontario, Canada.
6. **Zhang, Y.**, Chen, J.M., Miller, J.R., and Noland, T.L. 2005. Forest chlorophyll content retrieval from hyperspectral remote sensing. *The 7th GEOIDE Annual Scientific Conference*. May 29-31. Quebec City, Quebec, Canada.
7. Li, Y., Chen, J.M., and **Zhang, Y.** 2002. Method for retrieving leaf biochemical parameters from hyperspectral remote sensing data. *American Geophysical Union Spring Meeting*. May 28-31. Washington, DC, USA.

Project Reports to the Governments

1. **Zhang, Y.**, Smith, A. M., Hill, M. 2010. Estimating the spatial extent and fragmentation of grasslands as a result of agricultural activities, urban expansion and oil and gas exploration. Agriculture and Agri-Food Canada. Report to Canadian Space Agency, 29 pages.
2. **Zhang, Y.**, Smith, A. M., 2010. Estimating annual productivity of grasslands. Agriculture and Agri-Food Canada. Report to Canadian Space Agency, 31 pages.
3. Smith, A. M., **Zhang, Y.**, Buckley, J., Bouchier, R. 2010. The detection and assessment of spread and impact of a model invasive plant species, leafy spurge, on grasslands. Agriculture and Agri-Food Canada. Report to Canadian Space Agency, 21 pages.
4. Smith, A. M., **Zhang, Y.**, Buckley, J., Bouchier, R. 2009. Developing Earth Observation Tools to Measure the Current and Future Spatial Extent and Productivity in Grasslands of Western Canada, Report to Agriculture and Agri-Food Canada, 34 pages.
5. **Zhang, Y.**, Miller, J.R., Noland, T.L. 2009. Remote Sensing Forest Nitrogen Content of Northern Boreal Ecosystems. Report to Ontario Ministry of Natural Resources, 22 pages.
6. Chen, Jing M., **Zhang, Y.**, 2007. Optimum Bands and Angle Selection for Designing a Hyperspectral and Multiple Remote Sensing Sensor. Report to Canadian Space Agency, 16 pages.
7. **Zhang, Y.**, Chen, Jing M., 2005. Natural and stress-induced effects on leaf spectral reflectance in Ontario species. Report to Ontario Ministry of Natural Resources, 18 pages.
8. Chen, Jing M., **Zhang, Y.**, 2003. Land cover classification of Boreal Forests for forest health detection using remote sensing approaches. Report to Ontario Forest Research Institute, 10 pages.

Invited Presentations

Zhang, Y., 2015. Quantitative information extraction from geospatial data sources and applications to agricultural research. USDA-Agricultural Research Service, Crop Production Systems Research Unit, May 20. Stoneville, MS

Zhang, Y., Smith, A.M. 2009. Quantitative retrieval of vegetation structural and biochemical information from multi-angle hyperspectral remote sensing data. Oct. 20, University of Lethbridge, Alberta, Canada.

Zhang, Y. 2009. Hyperspectral remote sensing algorithms for retrieving forest chlorophyll content, Plenary speech on “30th Canadian Symposium on Remote Sensing-Bridging Excellence”. June 22-25. Lethbridge, Alberta, Canada.

Zhang, Y. 2008. Hyperspectral remote sensing applications for forest biochemical and biophysical parameters retrieval. January 8, University of Western Ontario, London, Canada.

Zhang, Y., Chen, J.M., Miller, J.R. 2007. Mapping forest chlorophyll content using CASI hyperspectral remote sensing imagery, Oct. 15, University of Toronto, Toronto, Canada.

Workshop Presentations

Zhang, Y., Chen, J.M., Miller, J.R., and Noland, T.L. 2008. Hyperspectral remote sensing of leaf biochemicals for ecological modeling. The International Workshop on Remote Sensing Science and Technology. Oct. 3, Toronto, Canada.

Zhang, Y., and Chen, J.M. 2004. Retrieval of structural characteristics of black spruce forest from different optical measurements. Annual GEOIDE Progress Workshop. April 29, York University, Toronto, Ontario, Canada.

Chen, J.M., Li, Y., and **Zhang, Y.** 2002. Preliminary evaluation of compression algorithms for forestry applications. Canadian Space Agency Workshop. May 20, Quebec, Canada.

RESEARCH CITATIONS

The total citation for 8 of my recent publications is 575 times. My two most highly cited papers, as the first author, have 222 and 118 citations. The two papers are published in tier I journals Agriculture and Forest Meteorology and Remote Sensing of Environment.

PROFESSIONAL SERVICE

- 2011-now **Chair**, Curriculum Committee for the Master of Applied Science in Geospatial Information Technologies (MAS-GIT) program, Delta State University
- 2011-now **Chair**, Admission Committee for the Master of Applied Science in Geospatial Information Technologies (MAS-GIT) program, Delta State University
- 2011-now Committee member of Biology and Environmental Science Curriculum, Delta State University
- 2012-now Committee member of the Master of Science and Natural Science program curriculum, Delta State University
- 2014-now Committee member, Undergraduate Attendance and Grievance Appeals Committee, Delta State University
- 2014 Committee member of Distance Education Policy Review Committee, Delta State University
- 2014 Committee member of Faculty/Staff Benefits Committee, Delta State University
- 2014 Scientific Committee member for the 2015 IEEE/GRSS International Geoscience and Remote Sensing Symposium (IGARSS)
- 2014 Member of International Faculty Association, Delta State University
- 2013-now Committee member of University Research Committee, Delta State University
- 2013 Search Committee member for the Dean of College of Arts and Science, Delta state University

- 2013 Committee member of Library Service, Delta State University
- 2013 Committee member of Graduate Attendance and Grievance Appeal Committee, Delta State University
- 2012 Committee Member of University Research Committee at Delta State University
- 2009-12 Committee Member of International Society for Photogrammetry and Remote Sensing (for Working Group “Agriculture, Ecosystem and Biodiversity”)
- 2008 Member of the Organization Committee
The International Workshop on Remote Sensing Science and Technology, Toronto, Canada
- 2007 Chair, “Remote Sensing Applications” session, The 15th International Conference on Geoinformatics, Nanjing, China
- 2003 Organization Committee, The 12th International Conference on Geoinformatics, Toronto, Canada

SUPERVISION AND CONSULTING

- 2011-now Academic Advisor of MAS-GIT program. Supervised 44 graduate students on Capstone project and project paper writing to receive master degrees, Delta State University
- 2012-now Remote Sensing Consultant, Crop Production Systems Research Unit, USDA Agricultural Research Services, Stoneville, MS
- 2012-now Judge, Region III K-12 Science Fair, Mississippi
- 2012-now Research Scientist, Science and Education Team of the Global Learning and Observation to Benefit the Environment (GLOBE) program
- 2010 Federal Government Consultant to Public, provide consulting to rangeland managers and industrial sectors on rangeland productivity and land use change
- 2010 Evaluator for Students’ Poster and Oral Presentation Award, Prairie Summit-The 31st Canadian Remote Sensing Symposium, Regina, Saskatchewan, Canada.
- 2002-07 Lab Administrator of the Remote Sensing and GIS Laboratory, University of Toronto

PROFESSIONAL SERVICE AS A REVIEWER

Urban Forestry & Urban Greening
 Canadian Journal of Remote Sensing
 Transactions on Geoscience and Remote Sensing
 Agricultural and Forest Meteorology
 New Phytologist
 International Journal of Remote Sensing
 Remote Sensing of Environment
 Canadian Journal of Forest Research

PROFESSIONAL TRAINING

- 2016 UAS Flight Knowledge and Operation Training for FAA Certification, Delta State University
- 2013 Instructional Management System Training, Canvas, Delta State University
- 2011 Online Teaching Methods and Technologies, Delta State University
- 2011 New Faculty Orientation, Institutional Research and Planning, Delta State University
- 2009 Workplace Hazardous Materials Information System
- 2005 Six-day training workshop, Practical GPS
GEOIDE 2005 Summer School, Université Laval, Quebec
- 2005 Six-day training workshop, GIS Analysis
GEOIDE 2005 Summer School, Université Laval, Quebec
- 2003 Five-day training programme
MATLAB, Simulink and Real-Time Workshop Training, University of Toronto

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

American Society for Photogrammetry and Remote Sensing (ASPRS)

Association of American Geographers (AAG)

Canadian Remote Sensing Society (CRSS)

Canadian Aeronautics and Space Institute (CASI)

Earth Science Women's Network (ESWN)

Canadian Meteorological and Oceanographic Society (CMOS)

Canadian Association of Geographers (CAG)

Geomatics for Informed Decisions Network (GEOIDE)