

# 吳怡華

## YI-HWA WU

Department of Geology/Geography  
Northwest Missouri State University  
800 University Drive  
Maryville, MO 64468

Phone: (660) 562-1869  
Fax: (660) 562-1055  
E-mail: [ywu@nwmissouri.edu](mailto:ywu@nwmissouri.edu)

### Research Interests

Geographic Information Science, Transportation, Time Geography, Spatial Analysis, Spatial Modeling, Geocomputation, GIS Customization, Visualization, Remote Sensing.

### Education

2003

#### Doctor of Philosophy

- Department of Geography, University of Utah, Salt Lake City, UT.
- Dissertation Title: Space-Time Accessibility Measures within Dynamic Transportation Network (chair: Professor Harvey J. Miller).
- Committee members:  
Professor Thomas M. Kontuly, Geography, University of Utah  
Professor Thomas J. Cova, Geography, University of Utah  
Professor Peter Martin, Civil Engineering University of Utah.  
Professor Richard Fowles, Economics, University of Utah
- Qualifying examination areas included Time Geography, Transportation, Geographic Information System in Transportation (GIS-T), Spatial Analysis.

1993

#### Master of Science

- Graduate Institute of Building and Planning, National Taiwan University, Taipei, Taiwan.
- Thesis Title: Development of a Vector-Based Three Dimensional Geographical Data Model (chair: Professor Chien-Yuan Lin).

1991

#### Bachelor of Science

- Department of Geography, National Taiwan University, Taipei, Taiwan.

### Professional Experience

- 08/05 – 04/08      Director  
Geo-Technical Service, Department of Geology and Geography, Northwest Missouri State University, Maryville, MO.
- 08/04 - present      Assistant Professor  
Department of Geology and Geography, Northwest Missouri State University, Maryville, MO.
- 01/04 - 05/04      Adjunct Professor  
Department of Geology and Geography, Northwest Missouri State University, Maryville, MO.
- 01/96 - 06/03      GIS Analyst  
Digitally Integrated Geographic Information Technologies (DIGIT) Laboratory, University of Utah, Salt Lake City, UT.
- 07/93 - 07/94      Assistant Director  
Landuse, Cartography & Remote-Sensing Laboratory, Department of Geography, National Taiwan University, Taiwan.
- 09/91 - 06/93      Research Assistant  
Graduate Institute of Building and Planning, National Taiwan University, Taiwan.
- 09/90 - 06/93      Research Assistant  
Landuse, Cartography & Remote-Sensing Laboratory, Department of Geography, National Taiwan University, Taiwan.

## **Awards**

- 2004                      CITE eAward in recognition of excellence in the use of instructional technology, Northwest Missouri State University, recipients: Hung, M.-C., Corson, M.W., Drews, P.L., Wu, Y.-H., & Haddock, G.
- 2002                      Finalist for the 2002 GISSG Student Paper Competition, *Association of American Geographers 98<sup>th</sup> Annual Meeting*.

## **Professional Associations**

- 06/09 - present      Member, American Society for Photogrammetry and Remote Sensing (ASPRS).

06/05 - present Member, Urban and Regional Information Systems Association (URISA).

09/03 - present Member, Association of American Geographers (AAG).

## **Teaching Experience**

### **A. Northwest Missouri State University**

Geog 32-465 Introduction to Customized GIS

Geog 32-499 Senior Seminar Geography

Geog 32-543 Application of Remotely Sensed Data (online course)

Geog 32-545 Principles of GIS (online course)

Geog 32-562-12 Digital Cartography and GeoVisualization (online course)

Geog 32-565 Advanced GIS

Geog 32-572 Issues in Cartographic Design (online course)

Geog 32-601 GIScience Research Seminar (online course)

Geog 32-611 Special Topic: Geoprocessing with Python (online course, developed and taught)

Geog 32-620 GIS Theory and Research (online course, developed and taught)

Geog 32-630 Raster GIS and Modeling (online course)

Geog 32-640 GIS Customization (online course)

Geog 32-660 Trends in GIS (online course)

### **B. Guest Lecture**

Geog 32-520 Fall 2009, GIS Application in Military, Military Geography taught by Dr. Mark Corson.  
Department of Geology/Geography, Northwest Missouri State University.

Geog 32-102-01 Spring 2008, Geography of Asia, People and Culture taught by Ms. Leah

- Manos.  
Department of Geology/Geography, Northwest Missouri State University.
- Comm 29-255 Spring 2008, Taiwanese Culture, Intercultural Communication taught by Dr. Bayo Oludaja.  
Department of Communication, Theatre, and Language, Northwest Missouri State University.
- Geog 32-511-14 Fall 2007, GIS Application in Military, Military Geography taught by Dr. Patricia Drews.  
Department of Geology/Geography, Northwest Missouri State University.
- Geog 32-365-14 Fall 2005, Lab demonstration, Geographic Information System taught by Dr. Mark Corson.  
Department of Geology/Geography, Northwest Missouri State University.
- Geog 32-102-01 Fall 2006, Culture shock from foreign point of view, People and Culture taught by Ms. Leah Manos.  
Department of Geology/Geography, Northwest Missouri State University.
- Geog 32-511-14 Fall 2005, GIS Application in Military, Military Geography taught by Dr. Mark Corson.  
Department of Geology/Geography, Northwest Missouri State University.

## **Publications**

### A. Monographs

- 2009 Hung, M.-C., Wu, Y.-H., and Patton, J., Database Management System and Interface for APEX, a final report submitted to Blackland Research and Extension Center (BREC), Texas AgriLife Research, Texas A&M University System, 49 pp (22 pp for user manual + 27 pp for final report).

### B. Peer-refereed Journals

- 2010 Wu, Y.-H. and Hung, M.-H., Non-Connective Linear Cartograms for Mapping Traffic Conditions, *Cartographic Perspectives*, Vol.65, pp.33-50.
- 2005 Ming-Chih Hung and Yi-Hwa Wu, "Mapping and visualizing the Great Salt Lake landscape dynamics using multi-temporal satellite images, 1972-1996," *International Journal of Remote Sensing*, 26(9), 1815-1834.
- 2002 Yi-Hwa Wu and Harvey J. Miller, "Computational tools for measuring

space-time accessibility within transportation networks with dynamic flow,” *Journal of Transportation and Statistics*, (special issue on accessibility), 4(2/3), 1-14.

- 2001 Yi-Hwa Wu, Harvey J. Miller and Ming-Chih Hung, “A GIS-based decision support system for analysis of route choice in congested urban road networks,” *Journal of Geographical Systems*, 3, 3-24.
- 2000 Harvey, J. Miller and Yi-Hwa Wu, “GIS software for measuring space-time accessibility in transportation planning and analysis,” *GeoInformatica*, 4, 141-159.

#### C. Conference Proceedings (peer-refereed)

- 1999 Harvey J. Miller, Yi-Hwa Wu and Ming-Chih Hung, “GIS-based dynamic traffic congestion modeling to support time-critical logistics,” *Proceedings of the Hawai'i International Conference on Systems Science*, January 5-8, 1999, Maui, Hawai'i.

#### D. Conference Proceedings (non-peer-refereed)

- 2010 Hung, M.-C. & Duckworth, R.P. & Wu, Y.-H. & Patton, J., 2010, GIS Database Design for APEX Model, *Proceedings of the American Society for Photogrammetry and Remote Sensing (ASPRS) 2010 Annual Conference*, April 26-30, 2010, San Diego, CA, USA
- 2005 Hung, M.-C. and Wu, Y.-H., Time Dependent Shortest Path on Urban Transportation Network, *Proceedings of the Urban and Regional Information Systems Association (URISA) 43rd Annual Conference*, Kansas City, MO, USA, Oct. 9-12, 2005.
- 2000 Ming-Chih Hung, Greg Gault. and Yi-Hwa Wu, “Mapping and monitoring great salt lake dynamics 1972 – 1996,” *Proceedings of ASPRS 2000 Annual Conference*, Washington, DC, USA, May 22-26, 2000.

#### E. Papers presented at Professional Conferences

- 2010 Hung, M.-C. & Patton, J. & Wu, Y.-H. & Hoffman, D. & Wolfe, J., Nitrates in Groundwater, A Forty Year Northwest Missouri Assessment, *Presented at the Soil and Water Conservation Society (SWCS) 2010 Annual Conference*, Jul. 18-21, 2010, St. Louis, MO, USA.
- 2010 DiBiase, D. & Wu, Y.-H. & Hung, M.-C. & Harvey, F. & Wilson, J. & Anderson, S. & Fisher, T. & Drews, P. & Solem, M. & Flewelling, D. &

- Marshall, W., Community of Professional Graduate Programs in GIS&T Panel Session, *Association of American Geographers (AAG) 2010 Annual Meeting*, Apr. 14-18, 2010, Washington, D.C., USA.
- 2010 Wu, Y.H., Duckworth, R.P., Hung, M.-C., and Patton, J.J., Graphic User Interface Design to Integrate GIS and APEX Model, *Presented at the Association of American Geographers (AAG) 106th Annual Meeting*, April 14-18, Washington, D.C., USA.
- 2009 Hung, M.-C., Wu, Y.-H. & Patton, J.J., 2009, Adaption of Commercial Digital Cameras to Capture Close-Range Multispectral Images, *Presented at the Association of American Geographers (AAG) 105th Annual Meeting*, Mar. 22-27, 2009, Las Vegas, NV, USA.
- 2009 Wu, Y.-H., Hung, M.-C., and Chu, T.-H., 2009, High spatial resolution aerial photos to assess subpixel classification accuracy of Formosat-2 image, *Presented at the Association of American Geographers (AAG) 105th Annual Meeting*, Mar. 22-27, 2009, Las Vegas, NV, USA.
- 2009 Wu, Y.-H. and Hung, M.-C., 2009, Changes of urban land cover composition through space and time form Remote Sensing, *Presented at 12<sup>th</sup> Biennial State of Missouri GIS Conference*, Feb. 16-18, 2009, Osage Beach, MO, USA
- 2009 Wu, Y.-H. and Hung, M.-C., 2009, Modeling dynamic traffic conditions with GIS, *Presented at 12<sup>th</sup> Biennial State of Missouri GIS Conference*, Feb. 16-18, 2009, Osage Beach, MO, USA
- 2009 Hung, M.-C. and Wu, Y.-H. 2009, Commercial digital cameras and near infrared images, *Presented at 12<sup>th</sup> Biennial State of Missouri GIS Conference*, Feb. 16-18, 2009, Osage Beach, MO, USA
- 2008 Wu, Y.-H. and Hung, M.-C., A Simple Aerial Photo Database Query Interface to Facilitate Ground Truth Assessment, *Presented at the Association of American Geographers (AAG) 104th Annual Meeting*, Apr. 15-19, 2008, Boston, MA, USA
- 2008 Hung, M.-C., Wu, Y.-H., and Chu, T.-H., Formosat-2 Image to Estimate Urban Land Cover in Taipei, Taiwan, *Presented at the Association of American Geographers (AAG) 104th Annual Meeting*, Apr. 15-19, 2008, Boston, MA, USA.
- 2007 Hung, M.-C. and Wu, Y.-H., Character maps and fieldwork, *Presented at the North American Cartography Information Society (NACIS) Annual Meeting*, Oct. 10 - 13, 2007, St. Louis, MO, USA.

- 2007 Hung, M.-C., Wu, Y.-H., DiBiase, D., Drews, P., Johnson, L., Phoenix, M., Wilson, J., Wright, D., and Wolf, E., Distance Learning and GIScience Panel Session, *Association of American Geographers (AAG) 103rd Annual Meeting*, Apr. 17-21, 2007, San Francisco, CA, USA.
- 2007 Wu, Y.-H., Spatial interpolation of soil pH reading from farmland, *Presented at the Association of American Geographers (AAG) 103rd Annual Meeting*, April 17-21, 2007, San Francisco, CA, USA.
- 2006 Wu, Y.-H., Traffic congestion by linear cartogram, *Presented at the Association of American Geographers (AAG) 102nd Annual Meeting*, Mar. 7-11, 2006, Chicago, IL, USA.
- 2005 Wu, Y.-H. and Hung, M.-C., Dynamic shortest path on urban transportation network, *Presented at the Association of American Geographers (AAG) 101st Annual Meeting*, Apr. 5-9, 2005, Denver, CO, USA.
- 2004 Wu, Y.-H., Dynamic accessibility: Timing is more important than time, *Presented at the Association of American Geographers (AAG) 100th Annual Meeting*, Mar. 14-19, 2004, Philadelphia, PA, USA.
- 2003 Miller, H.J., Wu, Y.-H., and Hung, M.-C., A GIS toolkit for assessing vulnerability to transportation network disruption, *Presented at the Association of American Geographers (AAG) 99th Annual Meeting*, Mar. 4-8, 2003, New Orleans, LA., USA.
- 2001 Miller, H.J., Wu, Y.-H., and Hung, M.-C., GIS-based dynamic transportation congestion network modeling, *Presented at the 2001 annual meeting of Utah Geographic Information Council*, Park City, Utah, September 27-28, 2001
- 2000 Wu, Y.-H. and Miler, H.J., GIS tools for measuring space-time accessibility in networks with dynamic traffic flow,” *Presented at GIScience 2000 International Conference*, Savannah, Georgia, USA, Oct. 28-31, 2000
- 2000 Wu, Y.-H. and Hung, M.-C., Visualization of transportation network dynamics, *Presented at the Association of American Geographers 96th Annual Meeting*, Apr. 4 - 8, 2000, Pittsburgh, PA.
- 2000 Hung, M.-C., Wu, Y.-H., and Gault, G., Visualization of great salt lake dynamics from satellite images, *Presented at the Association of American Geographers 96th Annual Meeting*, Apr. 4 - 8, 2000, Pittsburgh, PA.
- 1999 Miller, H.J. and Wu, Y.-H., Measuring space-time accessibility in the presence of dynamic network congestion, *Discussion Paper for the 39<sup>th</sup>*

*European Congress of the Regional Science Association International*,  
Dublin, Ireland, August 23-27, 1999.

- 1999 Hung, M.-C. and Wu, Y.-H., Visualization of Landscape Change by Remotely Sensed Data, *Presented at the International Association for Landscape Ecology 5th World Congress*, Jul. 29 - Aug. 3, 1999, Snowmass, CO.
- 1998 Miller, H.J. and Wu, Y.-H., Beyond throughput: Using GIS to model and map accessibility in transportation analysis and planning, *GISPlaNNet'98*, CD-ROM (extended abstract).

## Research Experience

- 2009-2010 A Pilot Study for an Early Detection and Warning System for Invasive Plants in Aquatic Environments using Remote Sensing.  
Co- PI, \$13,000.00, Department of Geology/Geography, Northwest Missouri State University.  
Sponsor: United States Department of Interior, U.S. Fish and Wildlife Service.
- 2009-2010 Measure the Changes in Well Water Quality in Nodaway County between 1970 and 2010.  
PI, \$3,400.00, Department of Geology/Geography, Northwest Missouri State University.  
Sponsor: Northwest Missouri State University, Applied Research Funding.
- 2009-2010 Surveying Well Water Quality in Nodaway County.  
Co- PI, \$1,150.00, Department of Geology/Geography, Northwest Missouri State University.  
Sponsor: College of Arts and Sciences, Northwest Missouri State University, Dean's Research Assistance Award.
- 2008-2009 Database Management System and Interface for APEX.  
Co-PI, \$40,516, Department of Geology/Geography, Northwest Missouri State University.  
Sponsor: Blackland Research and Extension Center (BREC), Texas AgriLIFE Research, Texas A&M University System.
- 2008-2009 Using Color-Infrared Photography to Create Color Vision Impairment Friendly Character Maps.  
Co-PI, \$2,282.00, Department of Geology/Geography, Northwest Missouri State University.

Sponsor: Northwest Missouri State University, Applied Research Funding.

- 2007-2008      Creating a Kansas City Digital Aerial Photo Database  
PI, \$2,817, Department of Geology/Geography, Northwest Missouri State University  
Sponsor: Northwest Missouri State University, Applied Research Funding.
- 2007-2008      Adapting commercial digital cameras to capture multi-spectral images  
Co-PI, \$2,800.00, Department of Geology/Geography, Northwest Missouri State University  
Sponsor: Northwest Missouri State University, Applied Research Funding.
- 2006-2008      Purchase of LiDAR data for topography related applications in the MS in GIScience curriculum.  
PI, \$3,600.00, Department of Geology/Geography, Northwest Missouri State University  
Sponsor: Northwest Missouri State University, Culture of Quality Funding from the Improvement of Teaching and Learning Committee.
- 2005-2007      A GIS based transportation movement control training simulator  
Co-PI, \$7,630.00, Department of Geology/Geography, Northwest Missouri State University  
Sponsor: Northwest Missouri State University, Applied Research Funding
- 2002-2003      University Center for Research on the use of geospatial technologies in transportation related hazards and disaster assessment.  
Department of Geography, University of Utah.  
Sponsor: U.S. Department of Transportation.
- 2001-2002      Developing a departmental online course  
Digitally Integrated Geographic Information Technologies (DIGIT) Laboratory, Department of Geography, University of Utah.  
Sponsor: Department of Geography, University of Utah
- 2000-2001      Developing interactive campus query system  
DIGIT Lab, Department of Geography, University of Utah.  
Sponsor: University of Utah
- 2000              Monitoring and visualizing Great Salt Lake dynamics  
DIGIT Lab, Department of Geography, University of Utah.  
Sponsor: Utah Reclamation, Mitigation, and Conservation

Commission, Utah, USA.

- 1999-2001      Creating Compressed Arc Digitized Raster Graphic (CADRG) data from vector topography maps  
DIGIT Lab, Department of Geography, University of Utah.  
Sponsor: Evans & Sutherland Inc.
- 1999-2000      Creating vector topography maps by Map Production System  
DIGIT Lab, Department of Geography, University of Utah.  
Sponsor: Evans & Sutherland Inc.
- 1999            Measuring space-time accessibility benefits within transportation networks: basic theory and computational procedures  
DIGIT Lab, Department of Geography, University of Utah.  
Sponsor: University of Utah.
- 1998            Creating Casper City geodetic database  
DIGIT Lab, Department of Geography, University of Utah.  
Sponsor: Casper City, Wyoming, USA.
- 1997            Implementing dynamic traffic assignment for urban transportation  
DIGIT Lab, Department of Geography, University of Utah, and University of Tennessee Transportation Center.  
Sponsor: The Military Traffic Management Command - Transportation Engineering Agency, USA.
- 1996            Developing the Front-end Terrain Tool  
DIGIT Lab, Department of Geography, University of Utah.  
Sponsor: Evans & Sutherland Inc., Utah, USA.
- 1993-1994      National Land Information System Spatial Data Transfer Standards.  
Department of Geography, National Taiwan University.  
Sponsor: Ministry of Interior, Taiwan.
- 1992-1993      Integrating and building military geographic information systems  
Department of Geography, National Taiwan University.  
Sponsor: Department of Defense, Taiwan.
- 1991-1992      Research on the Initial Planning Management of Industrial Area.  
Graduate Institute of Building & Planning, National Taiwan University.  
Sponsor: Department of Economic, Taiwan.
- 1991-1992      Developing a topographic map management system  
Department of Geography, National Taiwan University.  
Sponsor: Ministry of Interior, Taiwan.

- 1990-1993      The Administration & Development of Taiwan Seashore Land.  
 Department of Geography, National Taiwan University.  
 Sponsor: Ministry of Interior, Taiwan.
- 1990            Geographic Information Application for Internal Affairs Department,  
 R.O.C.: The Review Planning, and Application of Census Data.  
 Department of Geography, National Taiwan University.  
 Sponsor: Ministry of Interior, Taiwan.

### Graduate Student Advisees

#### A. Finished Theses (as Thesis Advisor)

- Banker, Samantha      The Use of GIS and Remote Sensing in Geologic and Volcanic Hazards  
 Detection and Mapping, Summer 2008
- Bennett, Kathryn      Development and Evaluation of Movement Corridors used by Rocky  
 Mountain Elk within the Vicinity of Los Alamos National Laboratory,  
 Los Alamos, New Mexico, Spring 2006
- Bird, William      Using GIS Technology in Improving Medical Service Delivery by Volunteer  
 Drivers to VA Medical Facilities, Spring 2010
- Cervantes, Danielle      Using GIS to Create an Interactive GeoPDF Mapbook for the Big Island of  
 Hawaii, Summer 2009
- Chapkowski, Andrew      Geographical Distribution of *Pediobius foveolatus* in New Jersey Soybean  
 Fields to Control the Mexican Bean Beetle Population, Summer 2008
- Fisher, Bradley      Spatio-Temporal GIS Modeling of the Relationship between Precipitation and  
 Streamflow, Spring 2009
- Peterson, Deborah      An Interactive GIS Map of Autism Family Services in Missouri, Summer  
 2009
- Peterson, Dirk      Using Large Scale Aerial Photography for 3D Visualization, Fall 2008
- VerBrugge, Lydia      Separating Individual Components of the Goss-Gasconade-Rock Outcrop  
 Complex in Callaway County, Missouri using the Soil Land Inference  
 Model (SoLIM), Summer 2006
- Wood Nathan      Woody Corridor Levee Protection along the Missouri River: Mapping Areas  
 That Can Benefit, Fall 2008

## B. Finished Theses (as Committee Member)

- Brundage, Robert      Implementing a Temporal GIS Template Utilizing ArcMap GIS software and the Personal Geodatabase, Fall, 2006
- Foster, Eric      A GIS Model for Street Road and Highway Functional Classification, Summer 2008
- Germaine, Kreh      An Automated Methodology for the Delineation of Impervious Surfaces From High-Resolution Multispectral Imagery and LiDAR, Summer 2007
- Harper, Erik      The Use of Free and Open-Source Technologies in Web-Based GIS and Mapping, Spring 2006
- Lynch, Chad      Examining the Relationship between Property Valuation and Urban Sprawl in Canyon County, Idaho, Spring 2007
- McLean, Chris      Potential Release Site Sediment Concentrations Related to Storm Water Station Runoff through GIS Modeling, Spring 2005
- Morgan, Jennifer      Spatial Implications of Municipal and State Sex Offender Residency Restrictions in Bay County, Florida, 2005-2007, Summer 2008
- Paul, Nathan      A Querying and Mapping Interface of Various Natural Disasters Using GIS, Fall 2009
- Riley, Melanie      Automated Detection of Prehistoric Conical Burial Mounds from Lidar Bare-Earth Digital Elevation Models, Summer 2009
- Wolf, Eric      Low-Cost Local-Scale Aerial Photography for High-Temporal Resolution Remote Sensing, Spring 2006

## C. Ongoing Thesis Research (as Thesis Advisor)

- Bocian, Erika      Using GIS for Safe Bicycle Routing – Morris County, New Jersey
- Bowman, April      Utilizing LiDAR Data to Create and Update Planimetric Spatial Data
- Bunch, Jennifer      Roadway Feature Inventory Utilizing Linear Referencing and the Geodatabase Model
- Conklin, Julie      Using GIS to Prove the Need for a New International Electronic Navigational Chart Feature

De Long, Rosalie	GIS and Commercial Real Estate: Using Xceligent. Inc as a Case Study.
Masters, Max	GIS Analysis of the Effect of Lahars of Mount Rainier, Washington on Area Water Sources.
Morris, Dinah	Using GIS as a Transportation Planning Model: An Assessment and Implementation of Regional Light Rail in Hampton Roads
Papajohn, Jerome	A Change-Detection Analysis: Using Remotely Sensed Imagery To Assess the Effects of Agricultural and Infrastructure development due to Urban growth in Jefferson County, West Virginia from 1997 to 2007.
Samek, James	Relationships between Tornado Events and Landforms in the State of Kansas, 1990 to 1999
Weibel, David	GIS Market Analysis for Small Businesses
Weiler, Scott	Using GIS to Examine Population growth and Decline due to Roadway Construction.

## Services

	Manuscript Reviewer, International Journal of Geographical Information Science. (2: 11/2008, 01/2009).
	Grant proposal reviewer, Geography and Regional Science (GRS) Program, National Science Foundation (NSF). (1: 09/2008).
	Manuscript Reviewer, Journal of Geographical Information. (1: 02/07).
	Manuscript Reviewer, ISPRS Journal of Photogrammetry and Remote Sensing. (1: 08/06).
09/10-11/10	Coordinator, 2010 Geography Awareness Week/GIS Day Poster Competition, Department of Geology/Geography, Northwest Missouri State University and St. Louis Region, American Society for Photogrammetry & Remote Sensing (ASPRS).
08/10-present	Department curriculum coordinator, Departments of Geology/Geography, Northwest Missouri State University.
08/10 - 05/11	Member, Faculty Welfare, Northwest Missouri State University.

- 07/10-present Department geography lab coordinator, Departments of Geology/Geography, Northwest Missouri State University.
- 03/10 Geography Scholarship Committee, Northwest Missouri State University.
- 02/10-present Person of Contact, Comprehensive Crisis Response (CCR) Minor between Departments of Geology/Geography, History, Humanities, Philosophy and Political Science, Psychology, Sociology, and Counseling, and Communication, Theatre, and Languages, Northwest Missouri State University.
- 01/10 – 10/10 Judge, URISA 2010 Student Paper Competition, Urban and Regional Information Systems Association (URISA) 2010 Annual Conference, Sep. 28 - Oct. 1, 2010, Orlando, FL, USA.
- 01/10 Supervisor, Road Scholar event, 2010 Junior High Science Olympiad, Northwest Missouri State University.
- 11/09 Judge, 2009 Geography Awareness Week/GIS Day Poster Competition, Department of Geology/Geography, Northwest Missouri State University and St. Louis Region, American Society for Photogrammetry & Remote Sensing (ASPRS), Nov. 15 – 21, 2009, Maryville, MO, USA.
- 09/09-04/10 Co-Organizer (with Mr. David DiBiase of Penn State University), Community of Professional Graduate Programs in GIS&T Panel Session, Association of American Geographers (AAG) 106th Annual Meeting, April 14-18, 2010, Washington, DC, USA.
- 09/09-11/09 Coordinator, 2009 Geography Awareness Week/GIS Day Poster Competition, Department of Geology/Geography, Northwest Missouri State University and St. Louis Region, American Society for Photogrammetry & Remote Sensing (ASPRS).
- 08/09 - 05/10 Member, Academic Appeals, Northwest Missouri State University.
- 04/09-present Academic advisor, Gamma Theta Upsilon (GTU, the International Geography Honor Society), Zeta Theta Chapter, Northwest Missouri State University.
- 01/09 - 10/09 Judge, URISA 2009 Student Paper Competition, Urban and Regional Information Systems Association (URISA) 2009 Annual Conference, Sep. 29 - Oct. 2, 2009, Anaheim, CA, USA.
- 01/09 Supervisor, Road Scholar event, 2009 Junior High Science Olympiad, Northwest Missouri State University.
- 11/08 Judge, 2008 Geography Awareness Week/GIS Day Poster Competition,

Department of Geology/Geography, Northwest Missouri State University and St. Louis Region, American Society for Photogrammetry & Remote Sensing (ASPRS), Nov. 9-15, 2008, Maryville, MO, USA.

- 10/08 Invite Mrs. Kari Craun (Director, National Geospatial Technical Operations Center, U.S. Geological Survey) for a presentation “The National Map: The Nation’s Topographic Map for the 21st Century”. In Department of Geology/Geography Fall 2008 Colloquium Series.
- 07/08 Mapping online MS in GIScience graduates, Department of Geology/Geography, Northwest Missouri State University.
- 05/08 - 06/08 Representative, NWMSU International Recruitment Team to Taiwan Universities and Agents, May 11-Jun. 5, 2008, Taiwan.
- 04/08 Translator for Missouri Academy of a parent supporting letter (from Chinese to English).
- 02/08 Mapping online MS in GIScience graduates, Department of Geology/Geography, Northwest Missouri State University.
- 02/08 Mapping online MS in GIScience student hometowns, Department of Geology/Geography, Northwest Missouri State University.
- 02/08 Supervisor, Road Scholar Event, 2008 Junior High Science Olympiad, Northwest Missouri State University.
- 12/07 - 07/08 Mapping US Fish and Wildlife Service Midwest Region Fish Habitat Partnership Boundaries, United States of Fish and Wildlife Service (Maurren Gallagher, Region 3 Coordinator).
- 11/07 Judge, 2007 Geography Awareness Week/GIS Day Poster Competition, Department of Geology/Geography, Northwest Missouri State University and St. Louis Region, American Society for Photogrammetry & Remote Sensing (ASPRS), Nov. 11-17, 2007, Maryville, MO, USA.
- 10/07 Mapping Missouri Academy Student Origins, Classes of 2002-2009, Missouri Academy of Science, Mathematics and Computing, Northwest Missouri State University.
- 09/07 Mapping online MS in GIScience graduates, Department of Geology/Geography, Northwest Missouri State University.
- 09/07 Mapping online MS in GIScience student hometowns, Department of Geology/Geography, Northwest Missouri State University.

08/07 Map of Uganda, Northwest Missourian, Northwest Missouri State University

03/07 Mapping the Location of Northwest Missouri State University Kansas City Center, Outreach McKemy Center, Northwest Missouri State University

03/07 Mapping the Distribution of High School for the Building Bridge Project, President's Office, Northwest Missouri State University

02/07 Online MS GIScience text-out exam co-writer, Department of Geology/Geography, Northwest Missouri State University.

02/07 Supervisor, Road Scholar Event, 2007 Junior High Science Olympiad, Northwest Missouri State University.

01/07 Mapping online MS in GIScience graduates, Department of Geology/Geography, Northwest Missouri State University.

01/07 Mapping online MS in GIScience student hometowns, Department of Geology/Geography, Northwest Missouri State University.

01/07 Mapping the Distribution of K-12 Students Enrollment in Spring 2007 by School District, President's Office, Northwest Missouri State University.

01/07 Mapping the Distribution of Northwest Students in Fall 2006 by School District, President's Office, Northwest Missouri State University.

11/06 Four Year Plan Writer, B.S. degree with Major in Geography and Minor in Geographic Information System, Department of Geology/Geography, Northwest Missouri State University.

11/06 Four Year Plan co-writer, B.S. degree with Comprehensive Major in Geographic Information Science, Department of Geology/Geography, Northwest Missouri State University.

10/06 - 04/07 Writer, Memorandum of Understanding Between Northwest Missouri State University and the City of Scottsbluff, NE, Data Sharing of the City Scottsbluff's aerial photography and LiDaR information for Northwest Missouri State University educational and research activities.

10/06 Mapping the Distribution of Northwest students in the 4-State Region, President's Office, Northwest Missouri State University.

10/06 Mapping the World with Various Projections, Department of English, Northwest Missouri State University (Dr. Jenny Rytting).

09/06 Mapping online MS in GIScience graduates, Department of

Geology/Geography, Northwest Missouri State University.

- 09/06 Mapping of Health Emergency Lifeline Program Service Area, Office of the Vice President for Finance, Northwest Missouri State University.
- 09/06 – 04/07 Co-Organizer, Distance Learning and GIScience Panel Session, Association of American Geographers (AAG) 103rd Annual Meeting, Apr. 17-21, 2007, San Francisco, CA, USA.
- 09/06 – 05/09 Member, Sub-Committee on Designated Curriculum Matters, Northwest Missouri State University.
- 08/06 Mapping Upward Bound Math and Science High Schools Students Attended 2000 - 2006, Missouri Academy of Science, Mathematics and Computing, Northwest Missouri State University.
- 08/06 Discussion Panelist, 2006 Fall New Faculty Orientation, Northwest Missouri State University.
- 04/06 Mapping online MS in GIScience graduates, Department of Geology/Geography, Northwest Missouri State University.
- 04/06 2006 Spring, MidAmerica GIS Symposium, developing student recruiting presentation and flyers: Introduction to Online MS in GIScience Program, Northwest Missouri State University.
- 04/06 Geography Advisory Committee Meeting, Northwest Missouri State University.
- 03/06 Geography Scholarship Committee, Northwest Missouri State University.
- 02/06 Geog32-101-04 Introduction to Geography – Honors (Dr. Mark Corson), developing “Introduction to GIS” lab materials, Northwest Missouri State University.
- 01/06 Mapping online MS in GIScience student hometowns, Department of Geology/Geography, Northwest Missouri State University.
- 10/05 Geog32-221 Economic Geography (Ms. Leah Manos), developing maps for comparisons between US and foreign countries, Northwest Missouri State University.
- 10/05 Developing student recruiting presentation materials: Introduction to Spatial Technologies, Northwest Missouri State University.
- 10/05 – 05/06 Member, Society of International Ambassadors, Northwest Missouri State

University.

- 10/05 Mapping Upward Bound Math and Science High Schools Students Attended 2000, Missouri Academy of Science, Mathematics and Computing, Northwest Missouri State University.
- 10/05 Mapping Student Hometowns, University Relation, Northwest Missouri State University.
- 09/05 Mapping online MS in GIScience student hometowns, Department of Geology/Geography, Northwest Missouri State University.
- 09/05 Providing Technical Support for Searching Potential Sister Cities in Hurricane Katrina Affected Areas, President's Office, Northwest Missouri State University.
- 09/05 Mapping Hurricane Katrina Damage Areas, President's Office, Northwest Missouri State University.
- 09/05 - 04/06 Member, Educational Technology Committee, Northwest Missouri State University.
- 04/05 Geography Advisory Committee Meeting, Northwest Missouri State University.

## **Technical Proficiency**

### GIS/Remote Sensing Related Software

Arc/Info, ArcView, IMAGINE/ERDAS, Genamap, Grass, Idrisi

- AML for Arc/Info
- Avenue for ArcView
- MapObjects with MSVB/MSVC

### Computer Programming Languages

C/C++/MSVC, Basic/MSVB, Java, Scheme, Clipper, Pascal, SQL.