

ZENGWANG XU, PH.D

ASSISTANT PROFESSOR
DEPARTMENT OF GEOGRAPHY
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POSITION

University of Wisconsin – Milwaukee, Milwaukee, Wisconsin
Assistant Professor, Department of Geography, 2011-

EDUCATION

Texas A&M University, College Station, Texas
Ph.D., Geography, 2007

Nanjing University, Nanjing, China
M.S., Geography, 1998

Southwestern JiaoTong University, Chengdu, China
B.E., Surveying Engineering, 1995

RESEARCH INTERESTS

- Investigating the structures and dynamics of geospatial complex networks/systems by integrating GIS, complex networks/systems theory, spatial analysis and spatial statistics
 - Complex urban systems
 - Transportation networks
 - Epidemics diffusion on social networks
 - Online social networks
- Individual-based modeling on diffusion phenomenon, e.g., epidemic diffusion
- GIS-based spatial and statistical analysis and modeling on hazards and urban environmental health

- Population vulnerability and resilience to natural hazards

REPRESENTATIVE PUBLICATIONS

- Zengwang Xu and Robert Harriss, 2010, A spatial and temporal autocorrelated growth model for city rank size distribution, *Urban Studies*, Vol.47, No.2, 321-335
- Zengwang Xu and Daniel Z. Sui, 2009, The effect of small-world networks on epidemic propagation and intervention, *Geographical Analysis*, Vol.41, No.3, 263-282.
- Zengwang Xu and Robert Harriss, 2008, Exploring the structure of the U.S. inter-city passenger air transportation network: a weighted complex network approach, *GeoJournal*, Vol. 73, No.2, 87-102.
- Zengwang Xu and Daniel Z. Sui, 2007, Small-world characteristics on transportation networks: A perspective from network autocorrelation, *Journal of Geographical Systems*, Vol.9, No.2, 189-205.
- C. Brannstrom, W. Jepson, A. Filippi, D. Redo, Zengwang Xu, 2008, Land Change in the Brazilian Savanna (Cerrado), 1986-2002: Comparative analysis and implications for land use policy, *Land Use Policy*, Vol.25, No.4, 455-608

RESEARCH EXPERIENCE

- Brown University**, S4, Population Study and Training Center, Department of Sociology, Brown University, Providence, RI 09/2009-08/2011
Research Associate (post doctoral)
 Population vulnerability and resilience to hurricane damage in the Gulf Coast 1950-2005
 Bridge 2000 and 2010 Census using area and population weighting interpolation
- Houston Advanced Research Center**, Woodlands, Texas 07/2007-09/2009
Research Scientist (post doctoral)
 Analyzing, modeling, and visualizing geospatial complex systems and network diffusion simulation in urban, transport, and health geographies
- Analyzed and modeled US air transportation network using complex weighted network approaches
 - Modeled the growth of cities in Texas from 1850 -2000 using a spatial and temporal autocorrelated growth model
 - Working on epidemic diffusion along US air transportation network
 - Working on studying other aspects of complexity in Texas urbanization 1850-2000

TEACHING

University of Wisconsin – Milwaukee, Department of Geography, Milwaukee, WI

Instructor

GEOG525, Geographical Information Science, fall 2011

Texas A&M University, Department of Geography, College Station, TX 05/2006-05/2007

Instructor

GEOG390, Principles of GIS

One class, 13 undergraduate students, Summer 2006

Two classes, 55 undergraduate and graduate students, Fall 2006

Two classes, 35 undergraduate and graduate students, Spring 2007

Texas A&M University, Department of Geography, College Station, TX 09/2003-05/2006

Teaching Assistant

GEOG332, 390, Cartography, Principles of GIS

Responsibility: created lab instructions, taught labs, and provided technical support

Texas A&M University, Department of Geography, College Station, TX 01/2002-05/2003

Teaching Assistant

GEOG332, Thematic Cartography

Responsibility: lab teaching and technical support

CONFERENCE ABSTRACTS AND PRESENTATIONS

Evolution of Texas Cities 1850 -2000 (With Robert Harriss), Second International Science and Policy Conference, Resilience 2011, Resilience, Innovation, and Sustainability: Navigating the Complexities of Global Change, Tempe, Arizona, USA, March 11-16, 2011,

Discontinuities in Texas urban evolution 1850-2000, AAG Annual conference, Washington DC, April 14-18, 2010

Epidemic diffusion and intervention in the US intercity air passenger network, AAG Annual conference, Las Vegas, NV, March 22-27, 2009

Exploring the architecture of the U.S. inter-city passenger air transportation network: a weighted complex network approach, AAG Annual conference, Boston, MA, April 15-19, 2008.

Epidemic diffusion and intervention in US intercity airline network, 2007 TAMU symposium on “Geospatial Technologies and Public Health: Mapping disease, promoting health”, College Station, TX, Nov.17, 2007.

Evaluating small-world characteristics of transportation networks: A spatial autocorrelation approach, GeoComputation 2007, NUI Maynooth, Ireland, September 3-5, 2007 (Co-authored with Daniel Z. Sui) .

Spatial dimensions of complex network modeling, AAG Annual Meeting, San Francisco, CA, April 17-21, 2007.

The effect of small-world network on epidemic diffusion, AAG Annual Meeting, Chicago, IL, March

7-11, 2006.

A spatial diffusion model based on small-world theory, AAG Annual Meeting, Denver, CO, April 5-9, 2005.

Small-world network: a perspective from network autocorrelation, SWAAG Annual Meeting, Fayetteville, AR, November 9-12, 2005.

An exploratory analysis of traffic accidents and accessibility in Houston Galveston area, SWAAG Annual Meeting, Nacogdoches, TX, November 11-13, 2004.

Spatial and temporal patterns of the SARS epidemic: An initial exploration using the small-world theory, AAG Annual Meeting, Philadelphia, PA, March 14-19, 2004.

Traffic accident and accessibility: an exploratory analysis, SWAAG Annual Meeting, Stillwater, OK, October 23-25, 2003.

HONORS AND AWARDS

Reta Haynes Outstanding Graduate Fellowship, 2006.

Graduate Enhancement Fund, Office of Graduate Studies, Texas A&M, 2004–2006.

Geosciences Incentive scholarship, College of Geosciences, Texas A&M, 2002.

Outstanding graduate award (first class), Nanjing University, 1997

PROFESSIONAL SERVICE

Executives

Executive Committee, Association of Geography Graduate Students, 2005 – 2006.

Faculty Representative, Association of Geography Graduate Students, 2004 – 2005.

Professional affiliation

Association of American Geographers (AAG)

Specialty groups: Geographical Information Science and Systems, Cartography, Medical Geography, Urban Geography, Transportation Geography

Reviewer

International Journal of Geographical Information Science, Annals of AAG, Computers, Environment and Urban Systems, GeoJournal

Editorial review board

International Journal of Applied Geospatial Research (IJAGR)