

Curriculum Vitae

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I. EDUCATION:

- July 1994: **Doctor of Philosophy in Geography**
National Center for Geographical Information and Analysis (NCGIA), State
University of New York at Buffalo
Concentrations: GIS, Spatial Statistics, Urban Modeling in GIS Environment
- Jan. 1991: **Master of Arts in Urban Studies / Urban Planning**
The University of Akron
Concentrations: Urban and Regional Development, Urban Geography
- July 1978: **Diploma in Geography**
Anhui Normal University (China)
Concentrations: Physical Geography, Regional Geography

II. EMPLOYMENT HISTORY:

- Sept. 2001 - present: Founding Director, Institute for Geospatial Research and Education
(IGRE), Eastern Michigan University.
- Aug. 2013 – present: Super Professor, Eastern Michigan University.
- Aug. 2001 – Aug 13: Full Professor, Department of Geography and Geology, Eastern Michigan
University.
- Jan. 2005 – April. 08: Head, Department of Geography and Geology, Eastern Michigan
University.
- Sept. 1997 – Aug. 01: Founding Director, Center for Environmental Information Technology &
Application (CEITA), Eastern Michigan University.

Aug. 1996 – Aug. 01: Associate Professor, Department of Geography and Geology, Eastern Michigan University.

Aug. 1994 – May 97: GIS Program Coordinator, Institute for Community and Regional Development (ICARD), Eastern Michigan University.

Aug. 1994 - July 96: Tenure-track Assistant Professor, Department of Geography and Geology, Eastern Michigan University.

Aug. 1991 - July 94: Research Assistant to Dr. Michael Batty, Director of National Center for Geographical Information & Analysis, State University of New York at Buffalo.

III. MAJOR ACADEMIC AWARDS:

NSF (National Science Foundation) ITEST (Innovative Technology Experience for Students and Teachers) PI (Principal Investigator) Emeritus Award, February 2010, US National Science Foundation – ITEST Learning Center.

2004 Distinguished Scholarship Award, American Association of Geographers Regional Development & Planning Specialty Group, American Association of Geographers Philadelphia Centennial Meeting, Philadelphia, PA, March 14-19, 2004.

One-Hundred Researchers: Distinguished Overseas Scholar Award, 2003-2006, Chinese Academy of Sciences.

1999 Distinguished Faculty Scholarly/Creative Activity Award, Eastern Michigan University.

IV. GRANT AND RESEARCH ACTIVITIES:

Principal Investigator, *The Collaborative Project: GIS/T Resources and Applications for Career Education – GRACE* (2014 – 2018, DRL-1433712, \$2,000,000.00), funded by NSF Innovative Technology Experience for Students and Teachers Program.

Project Administrator, *Wayne County U.S. History & Geography Project: Building Competence in U.S. History through the Use of Geographic Information Systems*, 2013-2014, \$200,000.00, funded by Michigan Department of Education - Title II Program.

Project Director, *GIS Mapping System for Activity One B: Statewide Education Network for the 22i Technology Readiness Infrastructure*, 2013, \$48,000.00, funded by Michigan Department of Education - The 22i Grant, which supports implementation of online testing that will increase computer traffic to and from each k-12 building in the state.

Principal Investigator in Science, *Investigating Climate Change and Remote Sensing (ICCARS)*, 2010 – 2013, \$750,000.00, funded by US NASA.

Project Director, *Grassland Ecosystems and Societal Adaptations Under Changing Grazing Intensity and Climate on the Mongolian Plateau*, 2009 – 2013, \$458,298.00, funded by US NASA Land Cover and Land Use Change Program and University of Michigan.

Project Administrator and Co-PI, *Hyperspectral Remote Sensing and Science-Based Management of Invasive Species in the Detroit River International Wildlife Refuge*, 2010 – 2013, \$500,000.00, funded by the National Oceanic and Atmospheric Administration.

Project Administrator and Co-PI, *Coupled Remote Sensing and Biological Monitoring of Invasive Plant Species and Their Impacts on the Detroit River International Wildlife Refuge (CRSBM-DRIWR)*, 2009-2011, \$633,350.00, funded by the National Oceanic and Atmospheric Administration.

Project Director, *RAPIDS (Regional Air Pollutants Inventory & Database System) 3.0 Coding, Testing and Implementation*, 2009 – 2012, \$197,680.00
Project Director, *Regional Urban Tree Canopy Assessment and Implementation*, 2009 – 2011, \$163,381.00, funded by USDA Forest Service.

Principal Investigator, *(City of Detroit) Mayor's Youth Technology Corps - Creating Safe Communities through Information Technology Training in Homeland Security Applications*, 2008-2011, \$900,000.00, funded by the US National Science Foundation.

Project Director, *Design and Development of the CAROL Web Portal*, 2009-2010, \$117,680.00

Co- Principal Investigator, *DHB: LLMAP - Language and Location: A Map Annotation Project*, 2006 – 2010, \$600,000, funded by the US National Science Foundation.

Principal Investigator, *ENvironmental Disaster Urban REcovery (ENDURE) Model*, 2005-2006, \$50,000.00, funded by Pacific Disaster Center.

Project Director, *GPS/GIS SMRT Vehicle Management Integration Development*, 2004-2006, \$150,000.00, funded by Detroit Public Schools.

Project Director, *Detroit's Integrated Sidewalk Management System (ISMS)*, \$ 110,000.00, 2005-2006, funded by City of Detroit Engineering Department.

Principal Investigator, *VISIT: Virtual Immersion in Science Inquiry for Teachers*, 2001-2005, \$1,240,000.00, funded by the National Science Foundation Teacher Enhancement Program.

Principal Administrator, *WebPolis Consortium*, 2002-2004, \$250,000.00, funded by United States Department of Commerce Technology Opportunity Program.

Principal Investigator, *GIS/Mathematical Model for Predicting Wetland Plant Community*

Responses to Proposed New Lake-level Regulation Plans, 2003-2004, \$30,000.00, funded by USGS (Geological Survey).

Principal Investigator, *Dynamic Telecommunications Infrastructure Planning System (DTIPS)*, \$110,000.00, funded by MERIT Network, Inc. and Heart Of Michigan Planning Group, 2002-2003.

Co-PI, *Supporting Beginning Mathematics and Science Teachers*, 2001-2002, \$80,000.00, an Eisenhower grant from the State of Michigan.

Co-PI, *Teacher Learning that Supports Student Inquiry: Interdisciplinary Science Investigation of Contemporary Problems*, 2000-2001, \$75,000.00, an Eisenhower grant from the State of Michigan.

Lead Technology Researcher, *Digital Community and Collections for Science and Mathematics*, \$800,000.00, National Science Foundation for the National Science, Mathematics and Engineering Digital Library, 2000-2002.

Interim PI and Co-PI, *Work/Site Alliance: Community-Based GIS Education*, 1997-2000, \$1,200,000.00, funded by the National Science Foundation.

Principal Investigator, *Development of 3d Modeling Tools and the FIELDS System - Fully Integrated Environmental Location Decision Support*, \$100,000.00, USEPA-Region 5, 1999 - 2002.

Project Director, *GIS Applications Development and Technical Services*, \$100,000.00, Wayne County Department of Public Services, 2000.

Principal Investigator, *Technical Support For FIELDS – Fully Integrated Environmental Location Decision Support*, \$200,000.00, USEPA-Region 5, 1999 - 2000.

Project Director, *Flint Census Tract – Parcel Mapping*, the Greater Eastside Community Association of Flint, 1999.

Project Director, *Wayne County Transmap Quality Assurance Tool-Box and Quality Control*, Wayne County Department of Public Services, 1999-2001.

Principal Investigator, *Lakewide Information Management System for Lake Erie Lakewide Management Plan*, USEPA-Region 5, 1998 - 1999.

Project Director, *Macomb County Customized Arc/Info Training for County-wide GIS Applications*, Macomb County Department of Planning and Economic Development, 1999.

Co-Principal Investigator, *Lake Michigan Shoreline Damage Studies*, the US Army Corps of Engineers - Detroit District, 1998 - 1999.

Project Director, *Washtenaw County GIS Technical Support*, Washtenaw County Department of Information Technology Service, February – December 1998-99.

Project Director, *Great Lakes Water Use Database Management Systems*, Great Lakes Commission, Fall, 1998.

Project Director, *Online Spatial Data Sharing and Integrated Mapping: Great Lakes GIS Online*, 1997-1998, GLNPO (Great Lakes National Program Office) through GLC (Great Lakes Commission).

Project Director, *Mapping Ohio Online: An Integrated Spatial Data Project*, 1997-1998, Ohio-Environmental Protect Agency through GLC (Great Lakes Commission).

Project Director, *Geographic Information Services Project*, for the academic year 1995-1997, Michigan State Research Excellence Fund awarded through Eastern Michigan University.

GIS Coordinator, *Kellogg Groundwater Education and Research Grant*, 1994-1997, awarded by Kellogg Foundation.

Physical Scientist and GIS/Remote Sensing Consultant at US Army Corps of Engineers – Detroit District through Inter-government Personnel Act (IPA), 1995-1997.

Principal Investigator, *The FIELDS (Fully Integrated Environmental Location Decision Support) System Technical Support and Enhancement Project*, awarded by USEPA-Region 5 in 1997.

Principal Investigator, *The Information Synthesis Support for Lake Erie Lakewide Management Plan*, awarded by USEPA-Region 5 in 1997.

Principal Investigator, *The Ashtabula (Ohio) Site Environmental Decision Support Project*, awarded by USEPA-Region 5 in 1997.

Co-Principal Investigator, *Detroit River GIS on Internet*, funded by the Michigan Department of Environmental Quality, January - July, 1997.

Project Director, *Design of Database Management and Query Interface for Analyzing Contaminated Sediments in the Great Lakes*, the US Environmental Protection Agency - Region 5, and the US Army Corps of Engineers - Detroit District, Fall, 1995.

Project Director, *Desktop GIS Demonstration and Training for Analyzing Contaminated Sediments in the Great Lakes*, the US Environmental Protection Agency - Region 5, and the US Army Corps of Engineers - Detroit District, Fall, 1995.

Project Director, *Exploring Potential Usage of Satellite Imagery in Community-based GIS Applications*, Research Seed Grant, 1995-1996, awarded by NASA-Michigan Space Grant Consortium.

V. PUBLICATIONS-I (Books and Journal Special Issues)

- Bian, F. and **Xie, Y.** (Eds.), 2016. Geo-Informatics in Resource Management and Sustainable Ecosystem Third International Conference, GRMSE 2015, Wuhan, China, October 16-18, 2015, Revised Selected Papers, ISBN 978-3-662-49155-3, Springer © 2016.
- Xie, Y and Ye, X.Y. (Eds.), 2015. Special Issue "Geo-Informatics in Resource Management & Sustainable Ecosystem" in *Journal of Sustainability*, (ISSN 2071-1050).
- Bian, F. and **Xie, Y.** (Eds.), 2015. Geo-Informatics in Resource Management and Sustainable Ecosystem Second International Conference, GRMSE 2014, Ypsilanti, USA, October 3-5, 2014, Proceedings, ISBN 978-3-662-45737-5, Springer © 2015.
- Bian, F., **Xie, Y.**, Cui, X., Zeng, Y. (Eds.), 2013. Geo-Informatics in Resource Management and Sustainable Ecosystem First International Symposium, GRMSE 2013, Wuhan, China, November 8-10, 2013, Proceedings, Part II, ISBN 978-3-642-41908-9, Springer © 2013.
- Bian, F., **Xie, Y.**, Cui, X., Zeng, Y. (Eds.), 2013. Geo-Informatics in Resource Management and Sustainable Ecosystem First International Symposium, GRMSE 2013, Wuhan, China, November 8-10, 2013, Proceedings, Part I, ISBN 978-3-642-45025-9, Springer © 2013.
- Xie, Y., and Brown, D. (Eds.), 2007. Simulation in Spatial Analysis and Modeling. *Computers, Environments and Urban Systems* 31(3).
- Brown, D. and **Xie, Y.**, 2006 (Eds.). Spatial Agent-Based Modeling. *International Journal of Geographic Information Science* 20(9).
- Zhou, C., Sun, Z. and **Xie, Y.**, 1999. *Studies on Geo-Cellular Automata* (Geographical Information Science Series), Science Press of China, Beijing.

VI. PUBLICATIONS-II (Peer-reviewed Journal Articles) (* indicating the corresponding author if I am not the first author)

- Xie, Y., Crary, D., Bai, Y., Cui, X. and Zhang, A. 2016. Modeling grassland ecosystem responses to coupled climate and socioeconomic influences from multi-spatial-and-temporal scales. *Journal of Environmental Informatics* (in press).
- Xie, Y. and Ma, T., 2015. A method for delineating a hierarchically networked structure of urban landscape. *Urban Geography* 36(6): 947-963 (Impact Factor 1.355).
- Chen, D., Cheng, J.H., Chu, P.F., Mi, J. Hu S.J., **Xie, Y.**, Tuvshintogtokh, I., & Bai, Y.F., 2015. Effect of diversity on biomass across grasslands on the Mongolian Plateau: contrasting effects between plants and soil nematodes, *Journal of Biogeography*, doi:10.1111/jbi.12683 (Impact Factor 4.59).

- Chen, D., Cheng, J.H., Chu, P.F., Mi, J. Hu S.J., **Xie, Y.**, Tuvshintogtokh, I., & Bai, Y.F., 2015. Regional-scale patterns of soil microbes and nematodes across grasslands on the Mongolian plateau: relationships with climate, soil, and plants, *Ecography* 38: 001–010, doi: 10.1111/ecog.01226 (Impact Factor 4.207).
- Xie, Y., Zhang, A. & Welsh, W. 2015. Mapping Wetlands and Phragmites Using Publically Available Remotely Sensed Images. *Photogrammetric Engineering & Remote Sensing*, 81(1): 69-78 (Impact Factor 2.07).
- Xie, Y., 2014. Advancing STEM Career and Learning through Civic Engagement. *Journal of Technology Education*, 26(1): 47 - 63.
- Sha, Z., Brown, D. G., **Xie, Y.**, Welsh W. F. & Bai, Y. 2014. Response of spectral vegetation indices to a stocking rate experiment in Inner Mongolia, China, *Remote Sensing Letters*, 5:10, 912-921, DOI: [10.1080/2150704X.2014.976882](https://doi.org/10.1080/2150704X.2014.976882) (Impact Factor 1.43).
- Mi, J., Li, J., Chen, D., **Xie, Y.**, & Bai, Y., 2014. Predominant control of moisture on soil organic carbon mineralization across a broad range of arid and semiarid ecosystems on the Mongolia plateau. *Landscape Ecology* (published online 18 May 2014; DOI 10.1007/s10980-014-0040-0) (Impact Factor 2.897).
- Chen, D., Mi, J., Chu, P., Cheng, J., Zhang, L., Pan, Q., **Xie, Y.**, & Bai, Y., 2014. Patterns and drivers of soil microbial communities along a precipitation gradient on the Mongolian Plateau. *Landscape Ecology* (published online 15 February 2014; DOI 10.1007/s10980-014-9996-z) (Impact Factor 2.897).
- Xie, Y., Henry, P.A., Bydlowski, D. & Musial, J., 2014. Linking Climate Change Education and Remote Sensing through the Integration of a Kite-Borne Remote Sensing System and Project-Based Learning, *International Journal of Technology and Science Education*, 4(3): 120-137.
- Xie, Y., Fan, S., 2014. Multi-city Sustainable Regional Urban Growth Simulation - MSRUGS: A Case Study along the Mid-Section of Silk Road of China. *Stochastic Environmental Research and Risk Assessment*, 28:829–841, DOI 10.1007/s00477-012-0680-z (Impact Factor 1.961).
- Zhang, A., Xie*, Y., 2014. A chaos-theory-based data-mining technique for image endmember extraction: Laypunov Index and Correlation Dimension (L&D). *IEEE Transactions on Geoscience and Remote Sensing*, 52(4), 1935-1947 (DOI: 10.1109/TGRS.2013.2256790) (Impact Factor 2.895).
- Xie, Y. & Reider, D., 2014. Integration of Innovative Technologies for Enhancing Students' Motivation for Science Learning and Career. *Journal of Science Education and Technology*, 23:370-380, DOI: 10.1007/s10956-013-9469-1 (Impact Factor 0.87).

- Brown, D.G., Agrawal, A., Sass, D.A., Wang, J., Hua, J., & **Xie, Y.**, 2013. Responses to Climate and Economic Risks and Opportunities across National and Ecological Boundaries: Changing Household Strategies on the Mongolian Plateau, *Environmental Research Letters*, 8 (045011), [doi:10.1088/1748-9326/8/4/045011](https://doi.org/10.1088/1748-9326/8/4/045011), 9pp (Impact Factor 3.582).
- Ting, M., Zhou, C., Tao, P., & **Xie, Y.**, 2013. A comparative analysis of changes in the phasing of temperature and satellite-derived greenness at northern latitudes, *Journal of Geographical Sciences*, 23(1): 57-66 (Impact Factor 0.907).
- Lan, H., Xie*, Y., 2013. A semi-ellipsoid-model based fuzzy classifier to map grassland in Inner Mongolia, China. *ISPRS Journal of Photogrammetry and Remote Sensing*, 85: 21-31(DOI: 10.1016/j.isprsjprs.2013.07.011) (Impact Factor 2.885).
- Li, S., Xie*, Y., Brown, D.G., Bai, B., Jinhua, J., & Judd, K., 2013. Spatial variability of the adaptation of grassland vegetation to climatic change in Inner Mongolia of China. *Applied Geography*, 43: 1-12, DOI: 10.1016/j.apgeog.2013.05.008 (Impact Factor 3.01).
- Liu, Y. and Xie*, Y. 2013. Measuring the dragging effect of natural resources on economic growth: evidence from a space-time panel filter modeling in China. *Annals of Association of American Geographers*, 103(6), 1539-1551. (Impact Factor 2.110).
- Li, S., and Xie*, Y. 2013. Investigating Coupled Impacts of Climate Change and Socioeconomic Transformation on Desertification by Using Multi-temporal Landsat Images: a Case Study in Central Xilingol, China, *IEEE Geoscience and Remote Sensing Letters*, 10(5): 1244-1248. (DOI: 10.1109/LGRS.2013.2257158) (Impact Factor 1.56).
- Liu, Y. and Xie*, Y. 2013. Asymmetric adjustment of the dynamic relationship between energy intensity and urbanization in China. *Energy Economics*, 36: 43-54 (DOI: 10.1016/j.eneco.2012.12.003) (Impact Factor 2.344).
- Xie, Y., Sha, Z., 2012. Quantitative Analysis of Driving Factors of Grassland Degradation: A Case Study in Xilin River Basin, Inner Mongolia. *The Scientific World Journal*, Volume 2012, Article ID 169724, 14 pages, doi:10.1100/2012/169724 (Impact Factor 1.730).
- Ye, X., and **Xie, Y.**, 2011. Re-examination of Zipf's Law and Urban Dynamic in China: A Regional Approach. *The Annals of Regional Science*, 49(1): 135-156, doi: 10.1007/s00168-011-0442-8 (Impact Factor 1.523).
- Xie, Y.**, Sha, Z., and Bai Y., 2010. Classifying historical remotely sensed imagery using a tempo-spatial feature evolution (T-SFE) model. *ISPRS Journal of Photogrammetry and Remote Sensing*, 65: 182-190 (Impact Factor 2.885).
- Fang, C.L. and **Xie, Y.**, 2010. Sustainable urban development in water-constrained Northwest China: A case study along the mid-section of Silk-Road – He-Xi Corridor. *Journal of Arid Environments* 74 (2010) 140–148 (Impact Factor 1.723).

- Sha, Z. and Xie, Y., 2010. Design of service-oriented architecture for spatial data integration and its application in building web-based GIS systems. *Geo-Spatial Information Science*, 13(1): 8-15.
- Meng, X., Xie, Y., and Bian, F., 2010. Distributed Geospatial Analysis through Web Processing Service: A Case Study of Earthquake Disaster Assessment, *Journal of Software*, 5(6): 671-679.
- Ma., T., Zhou, C., Xie*, Y., and Qin, B., 2009. A discrete square global grid system based on the parallels plane projection. *International Journal of Geographic Information Science* Volume 23 (10): 1297 – 1313 (Impact Factor 1.472).
- Xie, Y., Sha, Z., Yu, M., Bai Y., and Zhang, L., 2009. A comparison of two models with Landsat data for estimating above ground grassland biomass in Inner Mongolia, China, *Ecological Modelling* 220: 1810-1818 (Impact Factor 2.326).
- Wilcox, D.A., and Xie, Y., 2008. Predicted Effects of Proposed New Regulation Plans on Sedge/Grass Meadows of Lake Ontario. *J. Great Lakes Res.* 34:745–754 (Impact Factor 1.521).
- Xie., Y., Sha, Z., and Yu, M., 2008. Remote sensing imagery in vegetation mapping: a review. *Journal of Plant Ecology* 1: 9-23 (Impact Factor 1.167).
- Sha, Z., Bai Y., Xie*, Y., Yu, M., and Zhang, L., 2008. Using a hybrid fuzzy classifier (HFC) to map typical grassland vegetation in Xilin River Basin, Inner Mongolia, China, *International Journal of Remote Sensing* 29(8): 2317 – 2337 (Impact Factor 1.117).
- Fang, C., and Xie*, Y., 2008. Site planning and guiding principles of hi-tech parks in China: Shenzhen as a case study, *Environment and Planning B, Planning and Design*, 35: 100-121(Impact Factor 0.826).
- Xie, Y., Batty, M., and Zhao, K., 2007. Simulating Emergent Urban Form Using Agent-Based Modeling: Desakota in the Suzhou-Wuxian Region in China. *Annals of Association of American Geographers*, 97(3): 477-495 (Impact Factor 2.173).
- Xie, Y., and Ye, X., 2007. Comparative Tempo-Spatial Pattern Analysis: CTSPA. *International Journal of Geographic Information Science*, 21(1): 49-69 (Impact Factor 1.472).
- Wilcox, D., and Xie, Y., 2007. Predicting Wetland Plant Community Responses to Proposed Water-Level-Regulation Plans for Lake Ontario: GIS-Based Modeling, *International Journal of Great Lakes Research* 33:751–773 (Impact Factor 1.521).
- Xie, Y., Fang, C., Lin, C., Gong, H., and Qiao, B., 2007. Tempo-Spatial Patterns of Land Use Changes and Urban Development in Globalizing China: A Study of Beijing, *Sensors* 7:

- 2881-2907 (Impact Factor 1.739).
- Xie, Y., and Brown, D., 2007. Simulation in Spatial Analysis and Modeling. *Computers, Environments and Urban Systems* 31(3): 229-231 (Impact Factor 1.795).
- Xie, Y., Fang, C., Qiao, B., and Ward, R., 2007. Urban System in West China: A Case Study along the Mid-Section of Ancient Silk Road – He-Xi Corridor, *Cities* 24(1): 60-73 (Impact Factor 1.143).
- Tian, G., Yang, Z. and **Xie, Y.**, 2007. Detecting Landscape Spatio-temporal Dynamic Pattern Using Remote Sensing and Lacunarity Index: A Case Study of Haikou City, China, *Environment and Planning B, Planning and Design* 34(3) 556 – 569 (Impact Factor 0.826).
- Xie, Y., M. Yu, Y. Bai, and X. Xing, 2006. Ecological Analysis of An Emerging Urban Landscape Pattern - Desakota: A Case Study in Suzhou, China. *Landscape Ecology* 21(8): 1297- 1309 (Impact Factor 3.061)
- Brown, D. and **Xie, Y.**, 2006. Spatial Agent-Based Modeling. *International Journal of Geographic Information Science* 20(9): 941-944 (Impact Factor 1.472).
- Xie, Y., 2005. A Prototype Web-based Community Decision Support System. *International Journal of Computer & Information Science*, 6(1): 48-57 (Impact Factor 0.421).
- Xie, Y., M. Yu, G. Tian, and X. Xing, 2005. Socio-economic driving forces of arable land conversion: a case study of Wuxian City, China. *Global Environmental Change* 15: 238-252 (Impact Factor 6.868).
- Yu, M., **Xie, Y.**, and Zhang, X., 2005. Quantification of Intrinsic Water Use Efficiency along a Moisture Gradient in Northeastern China, *J. Environmental Quality* 34: 1311-1318 (Impact Factor 2.32).
- Tian, G., Liu, J., **Xie, Y.**, Yang, Z., Zhuang, D., and Niu, Z., 2005. Analysis of spatio-temporal dynamic pattern and driving forces of urban land in China in 1990s using TM images and GIS, *Cities* 22(6): 400–410 (Impact Factor 1.143).
- Xie, Y., D. Goby, R. Raymond, and R. Pizzy, 2004. Going Beyond Automatic Vehicle Location. *GIS Development*, 8(11): 30-33, November 2004 (ISSN 0971-9377).
- Xie, Y., and Z. Fan, 2003. Examine Urban Expansion from Remote Sensing and GIS: A Case Study in Beijing, *Asian Geographer*, 22(1/2): 119-132.
- Hunter, B. and **Xie, Y.**, 2001. Data Tools for Real-World Learning, *Learning & Leading with Technology*, 28(7): 18-24.
- Batty, M. and **Xie, Y.**, 1999. Self-organized Criticality and Urban Development, *Discrete*

- Dynamics in Nature and Society*, 3:109-124.
- Batty, M., **Xie, Y.**, and Z. Sun, 1999. Modeling Urban Dynamics through GIS-Based Cellular Automata, *Computers, Environments and Urban Systems*, 23(3): 205-233.
- Xie, Y., and Batty, M., 1997. Automata-Based Exploration of Emergent Urban Form, *Geographical Systems*, Vol. 4:83-102.
- Klosterman, R. and Xie, Y., 1997. Retail Impact Analysis with Loosely Coupled GIS and a Spreadsheet, *International Planning Studies*, 2(2): 175-192.
- Batty, M. and **Xie, Y.**, 1997. Possible Urban Automata, *Environment and Planning B*, 24(2): 175-192.
- Batty, M. and **Xie, Y.**, 1996. Preliminary Evidence for a Theory of the Fractal City, *Environment and Planning A*, 28: 1745-1762.
- Xie, Y., 1996. A Generalized Model for Cellular Urban Dynamics, *Geographical Analysis*, 28(4): 350-373.
- Xie, Y., 1995. The Overlaid Network Algorithms for Areal Interpolation Problem, *Computers, Environments and Urban Systems*, 19(4): 287-306.
- Mesev, T.V., Batty, M., Longley, P.A., **Xie, Y.**, 1995. Morphology from Imagery: Detecting and Measuring the Density of Urban Land Use, *Environment and Planning A*, 27: 759-780.
- Xie, Y., and Costa, F., 1995. City Size and Socioeconomic Development in the People's Republic of China, *Asian Profile*, 23(3): 181-203.
- Batty, M. and **Xie, Y.**, 1994. From Cells to Cities, *Environment and Planning B*, 21: 31-48.
- Batty, M. and **Xie, Y.**, 1994. Modeling Inside GIS: Part II: Selecting and Calibrating Urban Models Using ARC/INFO, *International Journal of Geographical Information Systems*, 8(5): 451-470.
- Batty, M. and **Xie, Y.**, 1994. Modeling Inside GIS: Part I: Model Structures, Exploratory Spatial Data Analysis, and Aggregation, *International Journal of Geographical Information Systems*, 8(3): 291-307.
- Batty, M. and **Xie, Y.**, 1994. Urban Analysis in a GIS Environment: Population Density Modeling Using ARC/INFO, in S. Fotheringham and P. Rogerson (eds), *GIS and Spatial Analysis*, Taylor and Francis, London, pp.189-219.
- Xie, Y., 1993. Retrospective of China's Urbanization and Regional Development in the Era of Economic Reforms, *GeoJournal*, 29(2): 197-200.

- Xie, Y., and Costa, F., 1993. Theory and Practice of Urban Planning in Socialist China, *CITIES*, 10(2): 103-114.
- Xie, Y., and Dutt, A., 1993. Foreign Joint Ventures in the People's Republic of China, 1979 to 1985, *GeoJournal*, 29(4): 385-397.
- Xie, Y., and Costa, F., 1991. The Impact of Economic Reforms on the Urban Economy of the People's Republic of China, *The Professional Geographer*, 43(3): 318-335.
- Xie, Y., and Costa, F., 1991. Urban Design Practice in Socialist China, *Third World Planning Review*, 13(3): 277-296.
- Xie, Y., and Dutt, A., 1991. Spatial Disparities of Urban Socio-Economic Development in the People's Republic of China, *Geoforum*, 22(1): 55-67.
- Xie, Y., and Dutt, A., 1990. Perspectives on City-size and Investment Effectiveness in China, *GeoJournal*, 21(1/2): 33-38.
- Xie, Y., and Dutt, A., 1990. Regional Investment Effectiveness and Development Levels in China, *GeoJournal*, 20(4): 393-407.
- Fang, J. and Xie, Y., 1990. Territorial Exploitation in Chinese Subtropical Mountainous Regions, South Anhui as a Case Study, *GeoJournal*, 21(1/2): 73-81.
- Yu, Y., Zhu, Y., and Xie, Y., 1988. Assessing the Influence of Environmental Parameters on the Hydrological Cycle, *Hydrological Process*, Vol.2: 285-289.

VII. PUBLICATIONS- III (Book Chapter, Peer-reviewed Proceedings Paper):

- Chen, J., R. John, D.G. Brown, C. Shao, G.R.H. Allington, Q. Zhuang, J. Xiao, Y. Xie, G. Sun, P. Fan, J. Qi. (2015) LCLUC Synthesis: Ecosystem-society interactions on a changing Mongolian Plateau. 2015 NASA Carbon Cycle & Ecosystems Joint Science Workshop, Washington, D.C.
- Xie, Y. and Hoff. A. 2015. Geographical Information Science and Technology Based STEM Education in e-Learning. In C. Watson (Edt.), *Proceedings of the 10th International Conference on e-Learning (ICEL 2015)*, pp. 323- 330. College of the Bahamas, Nassau, 25-26 June 2015. ISBN: 978-1-910810-26-2.
- Anderson, D. & Xie, Y., 2015. Using inquiry-based Geographic Information System Modules for Addressing NGSS Standards: The GRACE Program. In *Proceedings of World Conference on Educational Media and Technology 2015* (pp. 92-104). Association for the Advancement of Computing in Education (AACE). ISBN 978-1-939797-16-2.
- Xie, Y. and Zhang, A. 2012. Development of Remote Sensing Methods for Detection of Invasive Wetland Plants. Proceedings of State of the Strait Conference, November 2, 2011, Eastern Michigan University, Ypsilanti, Michigan.

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VIII. CURRICULUM DEVELOPMENT:

1. New Graduate and Undergraduate Programs

I, as the principal professor, have developed the following new programs at Eastern Michigan University. I conducted the market needs analyses, wrote the proposals, developed most of the syllabi, and obtained the approvals from various committees at the department, the college, and the university levels. These new programs include,

- GIS Concentration in Doctoral Degree of Technology
- MS Degree Program of Geographic Information System
- Graduate Certificate Program for GIS Professionals

- Graduate Certificate Program for GIS Educators (Online)
- GIST Undergraduate Major Program

2. *Ph.D. Supervising Committees*

I have also served in Ph.D. supervising committees in several institutions, including,

- College of Education, and College of Technology, Eastern Michigan University
- Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China
- Institute of Botany, Chinese Academy of Sciences, Beijing, China

3. *Supervision of Ph.D. Dissertation, Master Thesis, and Post-doctor Fellows*

Ph.D.: Cheryl **Hanewicz**, Utah Valley State College; John **Bayerl**, Michigan Dearborn School District; Zhanli **Sun**, Chinese Academy of Sciences; David **Bennion**, USGS Great Lakes Science Center; Arwa **Al-Madan**, Allison **Hoff**, Siyu **Fan**, Zachary **Jones**, Queen **Umeana**, Eastern Michigan University.

M.S.: Anthony **Bedogne**, Washtenaw County Department of Information Technology; Rugui **Chen**, Consulting Engineering Associates, Detroit; Zuojiang **Fan**, L-3 Communication (Titan Group), San Francisco; David **Harris**, Washtenaw County Department of Information Technology; Xiaojin **Tan**, Stanford University; Li **Wu**, George Mason University; Le **Xu**, Toledo University; Xilin **Yang**, Ohio State University; Xinyue **Ye**, Balling Green State University; Ling **Zhang**, Davis Demographics & Planning, Inc., Riverside, CA.

Post-doctor Scholar Sponsor: Aimin **Fan**, University of Windsor, Canada; Min **Ji**, Shandong Science & Technology University, China; Xianhua **Liu**, University of North Carolina, Chapel Hill; Ting **Ma**, Zhangbao **Ma**, Eastern Michigan University; Zhanli **Sun**, Chinese Academy of Sciences; Lei **Zhang**, Chinese Academy of Sciences; Qiang **Zhou**, MWH Global, California; Shuang **Li**, Huaqing **Mao**, Xiaoliang **Meng**, Zongyao **Sha**, Huaming **Wang**, Zongliang **Yang**, Wuhan University of China; Anbin **Zhang**, Hebei University of Science & Technology of China; Chao **Liu**, Anhui University of Science and Technology of China.

Total graduate students advised 18; total postgraduate scholars sponsored: 16

IX. OTHER ACADEMIC ACTIVITIES:

- *Co-Editor*, Journal of Plant Ecology, since 2007.
- *Co-Editor*, Annals of GIS, 2008 – 2013.
- *Panelist*, NSF Office of International Science & Engineering - Partnerships for International Research Experience for Students (IRES) Program – Geo-Science Panel – Full Proposal Review, November 9-10, 2015.

- **Panelist**, NSF Office of International Science & Engineering - Partnerships for International Research and Education (PIRE) Program – Geo-Science Panel – Full Proposal Review, June 30 – July 1, 2015.
- **Panelist**, NSF Office of International Science & Engineering - Partnerships for International Research and Education (PIRE) Program – Geo-Science Panel – Preproposal Review, January 26-27, 2015.
- Member of American Society of Photogrammetry and Remote Sensing (ASPRS)
- Member of Institute of Electrical and Electronics Engineers (IEEE)
- Member of American Association for the Advancement of Science (AAAS)
- Member of the American Geophysical Union (AGU)
- Member of the Association of American Geographers (AAG)
- **Advisory board member**, the *Geographic Information Science and Technology Body of Knowledge*

X. INTERNATIONAL EXCHANGE PROGRAMS AND

- **Distinguished Overseas Research Professor**, September 2002 to present, Institute of Botany, Chinese Academy of Sciences, Beijing, China
- **Senior Guest Research Professor**, September 2004 to present, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China
- **Distinguished Guest Professor**, May 2006 to present, Wuhan University, Wuhan, China
- **Senior Guest Professor**, September 2004 to present, Tianjin Institute of Urban Construction, Tianjin, China
- Co-Chair of the Organizing Committee, ***The First International Conference of Geo-informatics in Resource Management and Sustainable Ecosystem (GRMSE 2013)***, Wuhan, China, November 8-10, 2013
- Co-Chair of the Organizing Committee, ***The Second International Conference of Geo-informatics in Resource Management and Sustainable Ecosystem (GRMSE 2014)***, Ypsilanti, Michigan, USA, October 3-5, 2014
- Co-Chair of the Organizing Committee, ***The Third International Conference of Geo-informatics in Resource Management and Sustainable Ecosystem (GRMSE 2015)***, Wuhan, China, October 16-16, 2015

- Co-Chair of the Organizing Committee, *The 8th International Conference on GeoComputation (GeoComputation 2005)*, Ann Arbor, Michigan, August 1-3, 2005
- **Coordinator**, developing an Agreement on a Program to Offer a Dual Masters Degree in Geographic Information System between Tianjin Normal University, China and Eastern Michigan University, U.S.A (waiting for approval from Chinese Ministry of Education)
- **Facilitator**, developing an Agreement on a Program to Offer a Masters Degree in Computer Science from Eastern Michigan University, U.S.A and a Masters Degree in Software Engineering from Beihang University (Beijing University of Aeronautics and Astronautics), China (waiting for approval from Chinese Ministry of Education)
- **Facilitator**, developing an Agreement on a Program to Offer a Dual Masters Degree in Economics between Tianjin Normal University, China and Eastern Michigan University, U.S.A (waiting for approval from Chinese Ministry of Education)
- North America Director, 1998 – 2004, *Joint Center for Environmental Information Technology and Analysis (CEITA)* between Eastern Michigan University and LREIS (National Key Lab of Resources and Environmental Information Systems) at Chinese Academy of Sciences
- North America Coordinator, *Shanghai International Urban Toxics and Water Quality Modeling Workshop*, Shanghai Municipal Bureau of Environmental Protection, Shanghai Academy of Environmental Sciences, US EPA Region 5, US Geological Survey, and the City of Chicago Department of Environment, May 3 - 5, 2000, Shanghai, China
- North America Organizer, *Shanghai International Workshop: Fully Integrated Environmental Location Decision Support*, Shanghai Municipal Bureau of Environmental Protection, Shanghai Academy of Environmental Sciences, and US EPA Region 5, November 9-10, 1999, Shanghai, China
- North America Organizer, *Beijing International Workshop: Fully Integrated Environmental Location Decision Support*, State Environmental Protection Administration of China (SEPA), Beijing Academy of Environmental Sciences, and US EPA Region 5, November 4-5, 1999, Beijing, China
- Co-Chair of the Organizing Committee and Chair of Local Organizing Committee, *the First International Conference on GIS Education*, Ypsilanti, Michigan, October, 1998