

LING BIAN

Department of Geography, University at Buffalo, State University of New York
Tel: 716-645-0484, Cell: 716-417-1092, E-mail: lbian@buffalo.edu

I. PROFESSIONAL EXPERIENCE

1. Education

Beijing Normal University	Geography	BS, 1982
University of Georgia	Geography	MA, 1986
University of North Carolina at Chapel Hill	Geography	PhD, 1991

2. Employment History

2014 -	Director, National Center for Geographic Information and Analysis - Buffalo
2008- present	Professor, Department of Geography, University at Buffalo, State University of New York
2000-2008	Associate Professor, Department of Geography, University at Buffalo, State University of New York
1995-2000	Assistant Professor, Department of Geography, University at Buffalo, State University of New York
1991-1995	Assistant Professor, Department of Geography, University of Kansas

3. Professional Memberships

Association of American Geographers (AAG)

4. Research Awards

The CPGIS Distinguished Scholar Award, 2016, by the International Association of Chinese Professionals in Geographic Information Sciences.

Best Poster Award at the 2010 University Consortium for Geographic Information Science (UCGIS) Summer Assembly, with Sam Copeland.

International Visiting Scholar Award at Queen's University, Canada, 2010.

2004 Leica Geosystems Award for Best Scientific Paper in Remote Sensing, as one of the three papers published in the journal *Photogrammetric Engineering and Remote Sensing*, awarded by the American Society of Photogrammetry and Remote Sensing.

Best Poster Award at the GIS/LIS '92 conference (the leading conference in GIS during the 1990s), San Jose, California, November 10-12 (with Bagby, J.).

5. Editorships and Editorial Boards

2016	Associate Editor, <i>UCGIS GIS&T Body of Knowledge 2</i>
2014-	Editorial Board, <i>Annals of the Association of American Geographers</i>

2013-	Editorial Board, <i>ISPRS Journal of Photogrammetry and Remote Sensing</i>
2012-2015	Editorial Board, <i>International Journal on Advances in Software</i>
2010-	Editorial Board, <i>International Journal of Society Systems Science</i>
2009-2010	Editorial Board, <i>The Professional Geographer</i>
2008-2014	Editorial Board, the <i>Open Remote Sensing Journal</i>
2008-2014	Editorial Board, the <i>Open Geography Journal</i>
2007-2015	Editorial Board, <i>Southeastern Geographer</i>
2006-2008	Associate Editor, <i>ISPRS Journal of Photogrammetry and Remote Sensing</i>
2006-	Editorial Board, <i>Transactions in GIS</i>
2004-	Editorial Board, <i>GIScience and Remote Sensing</i>
2004	Guest Editor, a special issue of <i>Computers, Environment and Urban Systems</i>
2002	Co-Guest Editor, a special issue of <i>Photogrammetric Engineering and Remote Sensing</i>

II. GRANTS AND CONTRACTS

1. Awarded

Aldstadt, J. and **Bian**, L., \$120,000. 2016. Academic Partner for Research Study on Gang Violence Under the Gun Involved Violence Elimination Initiative, Buffalo Police Department (flow through NY State Division of Criminal Justice Services).

Bian, L., Chen, Q., \$2,662,074. 2015. Three-population Three-scale Social Network Model to Assess Disease Dispersion, **NIH/NIGMS**.

Dong, W., Qiao, C., **Bian**, L. \$33,000. 2015. Smartphone Data Collection of Human Contact for Individual-Based Flu Tracking and Early Warning. Innovative Micro-Programs Accelerating Collaboration in Themes (IMPACT), **UB VPRED**.

Wang, Y., **Bian**, L. and Xue, H. (1 U54 HD070725-01, \$395,337. 2011-2014. Multilevel systems-oriented childhood obesity study in China. Co-I of Buffalo sub-contact, **NIH/NICHHD**.

Bian, L., Jin, Y., Zhang, Y., Feng, S. ¥350,000 (approx \$50,000). 2010-2012. A social network based flu dispersion simulation model. Chinese Natural Science Foundation.

Bian, L. \$150,000. 2009-2010. Modeling for infectious diseases incidents associated with biomedical research. **NIH**.

Bian, L. \$292,987. 2006-2007. Simulating possible health outcomes of communicable diseases for three communities. **NIH**.

Olson, J., **Bian**, L. and Rogerson, P. \$200,000 (approx). 2003-2008. Exposure assessment program: geo-spatial modeling. National Center for Disease Control (Jackson State University, flow through **CDC**).

Bian, L. and Zhang, A. \$50,000. 2003-2004. Content-based image retrieval for man made objects. National Geo-Intelligence Agency (**NGA**).

Loverde, P., **Bian**, L., Rogerson, P. and Mark, D. \$750,000. 2003-2008. Training in emerging and re-emerging diseases in Brazil. **NIH**.

Bian, L. \$75,000. 2003-2005. Interoperable hydrologic modeling: a component-based approach. Water Environment Research Foundation (**WERF**).

Mark, D., **Bian**, L., Rogerson, P. and Vena, J. \$1,564,000. 1999-2004. Spatio-temporal GIS analysis for environmental health. **NIH**.

Bian, L. and Zhang, A. \$175,000. 1998-2001. A multi-resolution geographical data retrieval system. National Imagery and Mapping Agency (**NIMA**).

Bursik, M. and **Bian**, L. \$108,000. 1998-2000. Tephrostratigraphic and satellite-imagery analysis of Kamchatka shoreline: Great earthquakes and mega-eruptions of Kamchatka, Russia. **NASA**.

Mark, D., Batta, R., DePinto, J., Smith, B. and Zubrow, E. \$2,240,000. 1998-2003. Faculty participants: Atkinson, J., **Bian**, L., Calkins, H., Casati, R., Eagles, M., Hornbuckle, K., Jorgensen, C., Krygier, J., Rabideau, A., Rogerson, P., Rump, C., Shapiro, S., Thill, J., Zhang, A. Integrate graduate education and research training in geographic information science. **NSF**.

Mark, D., Batta, R., Calkins, H., Munroe, D. and Rogerson, P. \$325,000. 1996-1999. Advancing geographic information science. Senior personnel: **Bian**, L. Bagchi-Sen, S., Cole, S., Meghan, C. and Woldenberg, M. **NSF**.

Calkins, H., DePinto, J., Batty, M. and **Bian**, L. \$73,539. 1995-1998. Predator-prey modeling of fish populations within three-dimensional GIS. **NSF**.

Bian, L. \$12,855. 1995-1996. Effects of spatial scale on watershed hydrologic modeling. Kansas Water Resources Research Institutes (flow through **USGS**).

Bian, L. and Koussis, A. \$43,000. 1994-1995. Development of an interface for the integration of GIS and hydrologic modeling. **Kansas Water Office**.

Bian, L. \$18,350. 1994-1995. Development of a habitat use model for elk in the Cimarron National Grassland. **Rocky Mountain Elk Foundation**.

Bian, L. Milton, H. and Killion, M. \$5,000. 1994. A GIS-based bald eagle winter habitat evaluation in Geary County, Kansas. **Kansas Department of Wildlife and Parks**.

Bian, L. \$14,000. 1993-1995. Assessment of impact of conservation reservation program on water quality in Barns Creek watershed. **National Fish and Wildlife Service**.

Bian, L. and Miller, R. \$41,000. 1993-1994. Geo-Referencing EPA Title III, Section 312 Facilities. **Kansas Water Office.**

Price, K., Slocum, T., Wiseman, R., McCleary, R. and **Bian, L.** \$90,704. 1993-1996. Enhancing analytical and physical geography curriculum at the University of Kansas. **NSF.**

Loeb, S., Grzymala-Busse, J. and **Bian, L.** \$200,000. 1991-1992. Expert system modification, integration of TRI data with environmental data into GIS, hazardous chemical classification system and integration of GIS into CAMEO. **EPA.**

III. PUBLICATIONS

1. In Refereed Journals

Ha, H., Rogerson, P., Olsen, J., Han, D., **Bian, L.** and Shao W. Analysis of Pollution Hazard Intensity: A Spatial Epidemiology Case. *International Journal of Environmental Research and Public Health* (published 9/14/2016)

Gao, P. and **Bian, L.** 2016. Scale effects on spatially embedded contact networks. *Computers, Environment and Urban Systems* 59(September)142-151. (accepted 6/13/2016, published online 6/25/2016 DOI: 10.1016/j.compenvurbsys.2016.06.002).

Li, H., Wang, Y., **Bian, L.** and Wang, T. 2016. Identifying geospatial services across heterogeneous taxonomies. *GeoCarto International* 31(10): 1058-1077.

Zhong, S. and **Bian, L.** 2016. A location-centric network approach to analyzing epidemic dynamics. *Annals of the Association of American Geographers* 106(2): 480-488.

Li, L., **Bian, L.**, Rogerson, P. and Yan, G. 2015. Point pattern analysis for clusters influenced by linear features - an application for mosquito larval sites. *Transactions in GIS* 19(6): 835-847.

Huang, Y. and **Bian, L.** 2015. Using ontologies to integrate heterogeneous tourism information for on-line tour planning. *IEEE Transactions on Emerging Topics in Computing* 3(2): 172-184.

Chen, C, **Bian, L.**, and Ma, J. 2014. From traces to trajectories: how well can we guess activity locations from mobile phone traces? *Transportation Research Part C* 46 (Sept) 326-337.

Ha, H., Olson, J R, **Bian, L.**, Rogerson P. 2014. Analysis of heavy metal sources in soil using kriging interpolation on principal components. *Environmental Science and Technology* 48(9) 4999-5007 (May 6, 2014).

Bian, L. 2013. Spatial approaches to modeling transmission of communicable diseases – a review. *Transactions in GIS* 17(1): 1-17.

Bian, L., Huang, Y., Liang, M., Lim, E., Lee, G., Yang, Y., Cohen, M. and Wilson, D. 2012. Modeling individual vulnerability to communicable diseases - a framework and design. *Annals of the Association of American Geographers* 102(5): 1016-1025.

Goodchild, M.F., Guo, H., Annoni, A., **Bian**, L., de Bie, K., Campbell, F., Craglis, M., Ehlers, M., van Genderen, J., Jackson, D., Lewis, A.J., Pesaresi, M., Remetej-Fülöpp, G., Simpson, R., Skidmore, A., Wang, C. and Woodgate P. 2012. Next generation Digital Earth. *Proceedings of National Academy of Sciences* 109(28): 11088–11094.

Liu, Y., **Bian**, L., Meng, Y., Wang, H., Zhang, S., Yang, Y., Shao, X. and Wang, B. 2012. Discrepancy measures for selecting optimal combination of parameter values in object-based image analysis. *ISPRS Journal of Photogrammetry and Remote Sensing* 68:(2012): 144-156.

Craglia, M., de Bie, K., Jackson, D., Pesaresi, M., Remetej-Fülöpp, G., Wang, C., Annoni, A., **Bian**, L., Campbell, F., Ehlers, M., van Genderen, J., Goodchild, M.F., Guo, H., Lewis, A., Simpson, R., Skidmore, A. and Woodgate, P. 2012. Digital Earth 2020: towards the vision for the next decade. *International Journal of Digital Earth*, 5(1): 4-21.

Mao, L. and **Bian**, L. 2011. Massive agent-based simulation for a dual-diffusion process of influenza and human preventive behavior. *International Journal of Geographical Information Science*, 25(9): 1371-1388.

Li, L., **Bian**, L., Yakob, L., Zhou, G., Yan, G. 2011. Analyzing the generality of spatially predictive mosquito habitat models. *Acta Tropica*, 119(2011): 30-37.

Zhang, H., Zeng, Y., **Bian**, L. 2010. Simulating multi-objective spatial optimization allocation of land use based on the integration of multi-agent system and genetic algorithm. *International Journal of Environmental Research*, 4(4): 765-776.

Zhang, H., Zeng, Y., **Bian**, L., and Yu, X. 2010. Modeling urban expansion using a multi agent-based model in the city of Changsha. *Journal of Geographical Sciences*, 20(4): 540-556.

Mao, L. and **Bian**, L. 2010. A dynamic social network with individual mobility for designing intervention strategies. *Transactions in GIS*, 14:(4) 533-545.

Huang, Y. and **Bian**, L. 2010. Ontology-driven tour planning systems: a conceptual framework. *Environment and Planning B*, 37(3): 483-499.

Mao, L. and **Bian**, L. 2010. Spatial-temporal transmission of influenza and its health risks in an urbanized area. *Computers, Environment and Urban Systems*, 34(3): 204-215.

Li, L., **Bian**, L., Zhou, G., Yakob, L., and Yan, G. 2009. Temporal and spatial stability of *Anophele gambiae* larval habitat distribution in western Kenya Highlands. *International Journal of Health Geographics*, 8:70.

Hu, S. and **Bian**, L. 2009. Interoperability of functions in environmental models - a case study in hydrological modeling. *International Journal of Geographical Information Science*, 23(5): 657-681.

Huang, Y and **Bian**, L. 2009. A Bayesian network and analytic hierarchy process based personalized recommendations for tourist attractions over the Internet, *Expert Systems with Applications*, 36(1):933-943.

Xie, Z and **Bian**, L. 2009. Using spatial continuity and discontinuity information to retrieve geographic entities. *Geocarto International* 24(1): 3-23.

Li, L., **Bian**, L., Yan, G. 2008. A study of the distribution and abundance of the adult malaria vector in western Kenya highlands. *International Journal of Health Geographics*, 2008, 7:50, doi:10.1186/1476-072X-7-50 (September 22, 2008)

Bian, L. and Hu, S. 2007. Identifying components for interoperable process models using concept lattice and semantic reference system. *International Journal of Geographical Information Science*, 21(9): 1009-1032.

Bian, L. 2007. Object-oriented representation of environmental phenomena – is everything best represented as an object? *Annals of the Association of American Geographers*, 97(2): 266-280.

Bian, L. and Liebner, D. 2007. A network model for dispersion of communicable diseases. *Transactions in GIS*, 11(2): 155-173.

Bian, L., Li, L. and Yan, G. 2006. Combining global and local estimates for spatial distribution of mosquito larval habitats. *GIScience and Remote Sensing*, 43(1): 95-108.

Mushinzimana, E., Munga, S., Minakawa, N., Li, L., Feng, C., **Bian**, L., Kitron, U., Schmidt, C., Beck, L., Zhou, G., Githeko, A.K. and Yan, G. 2006. Landscape determinants and remote sensing of anopheline mosquito larval habitats in the western Kenya highlands. *Malaria Journal*, 5(13).

Fang, L., Yan, L., Liang, S., de Vlas, S.J., Feng, D., Han, X., Zhao, W., Xu, B., **Bian**, L., Yang, H., Gong, P., Richardus, J.H. and Cao, W. 2006. Spatial analysis of hemorrhagic fever with renal syndrome in China. *BMC Infectious Diseases*, 6(77).

Bian, L. and Lee, J. 2005. Incorporating multiple index vectors and feedback to improve urban objects retrieval. *GIScience and Remote Sensing*, 42(2): 106-121.

Bian, L. and Xie, Z. 2004. A spatial dependence approach to retrieving industrial complexes from digital images. *The Professional Geographer*, 56(3): 381-393.

Bian, L. 2004. A conceptual framework for an individual-based spatially explicit epidemiological model. *Environment and Planning B*, 31(3): 381-395.

Bian, L. 2004. GIS for environmental modeling: an introduction. *Computers, Environment and Urban Systems*, 28(3): 171-173.

Bian, L. 2003. Retrieving urban objects using a wavelet transform approach. *Photogrammetric Engineering and Remote Sensing*, 69(2): 133-141.

Bian, L. 2003. The representation of the environment in the context of individual-based modeling. *Ecological Modeling*, 159(2-3): 279-296.

Walsh, S.J., **Bian**, L., McKnight, S., Brown, D.G. and Hammer, E.S. 2003. Solifluction steps and risers, Lee Ridge, Glacier National Park, Montana, USA: a scale and pattern analysis. *Geomorphology*, 55(1-4): 381-398.

Bian, L. and Walsh, S.J. 2002. Characterizing and modeling landscape dynamics: an introduction. *Photogrammetric Engineering and Remote Sensing*, 68(10): 999-1000.

Bian, L. 2000. Component modeling for the spatial representation of wildlife movements. *Journal of Environmental Management*, 59(4): 235-245.

Bian, L. 2000. Object-oriented representation for modelling mobile objects in an aquatic environment. *International Journal of Geographical Information Science*, 14 (7): 603-623.

Bian, L. and Butler, R. 1999. Comparing effects of aggregation methods on statistical and spatial properties of simulated spatial data. *Photogrammetric Engineering and Remote Sensing*, 65(1): 73-84.

Sheikoleslami, G., Zhang, A. and **Bian**, L. 1999. A Multi-Resolution Content-Based Retrieval Approach for Geographic Images. *Geoinformatica*, 3(2): 109-139.

Bian, L. 1998. Effects of watershed discretization on estimation of hydrologic parameters. *Transactions in GIS*, 4(2): 299-313.

Bian, L. and West, E. 1997. Modeling elk calving habitat in a prairie environment. *Photogrammetric Engineering and Remote Sensing*, 63(2): 161-167.

Bian, L. and Walsh, S.J. 1993. Scale dependencies of vegetation and topography in a mountainous environment of Montana. *The Professional Geographer*, 45(1): 1-11.

Brown, D.G., **Bian**, L. and Walsh, S.J. 1993. Response of a distributed watershed erosion model to variations in input data aggregation levels. *Computers and Geosciences*, 19(4): 499-509.

Walsh, S.J., Butler, D.R., Brown, D.G. and **Bian**, L. 1990. Cartographic models of snow avalanche path location within Glacier National Park, Montana: data integration and factor weighting through GIS. *Photogrammetric Engineering and Remote Sensing*, 56(5): 615-621

Walsh, S.J., **Bian**, L., Brown, D.G., Butler, D.R. and Malanson, G.P. 1989. Image enhancement of Landsat Thematic Mapper digital data for terrain evaluation, Glacier National Park, Montana, USA. *Geocarto International*, 3: 55-58.

2. Book Chapters

Bian, L. 2016. Chapter 18: Spatial Networks in Epidemiological Studies. In H. Onstrud and W. Kuhn (editors), *Advancing Geographic Information Science - the Past and Next Twenty Years*, GSDI Association Press, Needham, MA, 255-258.

Zhong, S and **Bian**, L. 2016 Chapter 30: From Infection Cases to Infection Tree. In H. Onstrud and W. Kuhn (editors), *Advancing Geographic Information Science - the Past and Next Twenty Years*, GSDI Association Press, Needham, MA, 325-332.

Bian, L. 2010. GIS: environmental model integration. In B. Warf (editor), *Encyclopedia of Geography*, Sage Publications: Thousand Oaks, CA, 1280-1281.

Bian, L. 2009. Spatial data models. In R. Kitchin and N. Thrift (editors), *International Encyclopedia of Human Geography*, Volume 10, Oxford: Elsevier, 337-344.

Bian, L. and Liebner, D. 2005. Simulating spatially explicit networks for dispersion of infectious diseases. In D. Maguire, M.F. Goodchild, and M. Batty (editors), *GIS, Spatial Analysis and Modeling*, ESRI Press: Redlands, CA, 245-264.

Bian, L. 2001. The GIS representation of wildlife movements: a framework. In A. Millington, S. Walsh, and P. Osborne (editors), *Remote Sensing and GIS Applications in Biogeography and Ecology*, Kluwer Academic Publishers: Norwell, MA, 213-228 (refereed)

Bian, L. 1997. Multiscale nature of spatial data in scaling up environmental models. In D. Quattrochi and M.F. Goodchild (editors), *Scale in Remote Sensing and GIS*, CRC/Lewis Publishers: Boca Raton, FL, 13-26 (refereed).

Walsh, S.J., Butler, D.R., Brown, D.G. and **Bian**, L. 1994. Form and pattern in the Alpine environment: an integrative approach to spatial analysis and modeling. In M.F. Price and D.I. Heywood, (editors), *Mountain Environments and Geographic Information Systems*, Taylor and Francis Publishing: London, 189-216 (refereed).

3. Conference Proceedings

Sun, T. and **Bian**, L. 2013. How geography influences the formation of social ties: A case study of gang rivalry relationship in Los Angeles. Conference proceedings, University Consortium for Geographic Information Science (UCGIS) Symposium, Fairfax, VA, May 21-23, 2013.

Bian, L., Whalen, T., Cohen, M., Huang, Y., Lee, G., Lim, E., Mao, L. and Yang, Y. Explicit spatial-temporal simulation of a rare disease. 2008. Proceedings, *11th Joint Conference on Information Sciences*, Shenzhen, China, December 15-20, 2008.

Huang, Y. and **Bian**, L. 2008. An ontology model for personalized tour planning recommendations on the Semantic Web. Extended and peer-reviewed abstract, *GIScience 2008*, Park City, Utah, September 23-26, 2008.

Li, L., **Bian**, L. and Yan, G. 2006. An integrated Bayesian modelling approach for predicting mosquito larval habitats. Proceedings, *the 2006 Summer Assembly of UCGIS*, Vancouver, Washington, June 28-July 1, 2006, CD and www.

Bian, L. and Lee, J. 2005. An integrated approach to retrieving industrial building complexes from high-resolution Images. Proceedings, *the 3rd International Symposium of Remote Sensing and Data Fusion over Urban Areas (URBAN 2005)*, Tempe, Arizona, March 14-16, 2005, CD and WWW.

Bian, L. and Liebner, D. 2004. Formalizing an individual-based and spatially explicit approach to assess effects of network topology on spatial and temporal dispersions of infectious diseases. Extended and refereed abstracts and poster summaries, *GIScience 2004*, Adelphi, Maryland, October 20-23, 2004, p31-34.

Bian, L. and Hu, S. 2004. Defining components for interoperable process models using concept lattices and semantic reference systems. Extended refereed abstracts and poster summaries, *GIScience 2004*, Adelphi, Maryland, October 20-23, 2004, p27-30.

Walsh, S.J., **Bian**, L., McKnight, S., Hammer, E.S. and Erlien, C.M. 2003. Characterizing the spatial pattern of solifluction steps and risers in an alpine environment: application of digital image enhancement and geostatistics. Proceedings, *ASPRS 2003 Annual Conference*, Anchorage, Alaska, May 5-9, 2003, p381-398.

Bian, L. and Yang, Z. 2000. Discovering fault lines and fault planes from geological data using Hough Transform. Extended abstract, *the 4th International Conference on Integrating Geographic Information Systems and Environmental Modeling: Problems, Prospects, and Needs for Research*, Banff, Alberta, Canada, September 2-8, 2000, CD and WWW.

Feng, C. and **Bian**, L. 1998. Representing uncertainty of remote sensing classification in an interoperable environment. Extended abstract, *GIS/LIS '98*, Fort Worth, Texas, November 10-12, 1998, CD and WWW.

Bian, L. 1997. Modeling mobile objects in three-dimensional aquatic system using object-oriented design. Proceedings, *GIS/LIS '97*, Cincinnati, Ohio, October 28-30, 1997, CD and WWW.

Sheikoleslami, G., Zhang, A. and **Bian**, L. 1997. Geographical image classification and retrieval. Proceedings, *the 5th ACM Workshop on Geographic Information Systems*, Las Vegas, Nevada, November 10-14, 1997, p58-61.

Bian, L., Sun, H., Blodgett, C.F., Egbert, S.L., Li, W., Ran, L. and Koussis, A.D. 1996. Integration architecture and internal database for coupling a hydrologic model and ARC/INFO. Proceedings, *Application of Geographic Information Systems in Hydrology and Water Resources Management (HydroGIS'96)*, Vienna, Austria, April 16-19, 1996, p11-17.

Bian, L., Sun, H., Blodgett, C.F., Egbert, S.L., Li, W., Ran, L. and Koussis, A.D. 1996. An integrated interface system to couple the SWAT model and Arc/Info. Proceedings, *the Third International Conference on Integrating Geographic Information Systems and Environmental Modeling*, Santa Fe, New Mexico, January 20-25, 1996, CD and WWW.

Blodgett, C.F., Egbert, S.L., Sun, H. and **Bian**, L. 1995. Developing graphic links between Arc/Info, Visual Basic, and SWAT. Proceedings, *GIS/LIS' 95*, Nashville, Tennessee, November 14-16, 1995, p62-69.

D'Attilio, M.G., Shaw, K.D. and **Bian**, L. 1995. The second day at Gettysberg: a GIS model of vulnerability during an American civil War battle. Proceedings, *GIS/LIS' 95*, Nashville, Tennessee, November 14-16, 1995, p225-233.

Sun, H. and **Bian**, L. 1995. An object-oriented database for integrating GIS and hydrologic model. Proceedings, *GIS/LIS' 95*, Nashville, Tennessee, November 14-16, 1995, p960-960.

Wang, Q. and **Bian**, L. 1995. Price effects of land use on house values: an empirical study of Lawrence, Kansas. Proceedings, *GIS/LIS' 95*, Nashville, Tennessee, November 14-16, 1995, p1006-1015.

West, E. and **Bian**, L. 1994. Prairie land use management and elk habitat: a GIS/export system analysis. Proceedings, *GIS/LIS' 94*, Phoenix, Arizona, October 25-27, 1994, p818-824.

Walsh, S.J., Brown, D.B., **Bian**, L. and Allen, T.R. 1994. Spatial scale and data sensitivity: factors affecting the certainty of biophysical models. Proceedings,

International Symposium on the Spatial Accuracy of Natural Resource Data Bases, Williamsburg, Virginia, May 16-20, 1994, p151-160.

Bian, L., Miller, K. and Ran, L. 1993. Accuracy assessment of geo-coding hazardous facilities. Proceedings, *GIS/LIS '93*, Minneapolis, Minnesota, November 2-4, 1993, p58-64.

Bian, L. 1992. Integration of GIS and CAMEO for on-site assessment of environmental hazards. Proceedings, *GIS/LIS '92*, San Jose, California, November 10-12, 1992, p64-69.

Bagby, J. and **Bian**, L. 1992. Urbanization and its impact on white-tailed deer habitat: a GIS/remote sensing approach. Proceedings, *GIS/LIS'92*, San Jose, California, November 10-12, 1992, p42-50.

Walsh, S.J., **Bian**, L. and Brown, D.G. 1991. Issues of spatial dependency for surface representation through remote sensing and GIS. Proceedings, *American Society for Photogrammetry and Remote Sensing, A Special Proceedings on Integration of Remote Sensing and GIS*, Baltimore, Maryland, March 25-28, 1991, p175-183.

Bian, L. and Walsh, S.J. 1990. Reduction of the effects of clouds on remotely-sensed digital data through the integration of spectral information from complementary satellites. Proceedings, *the 13th Canadian Symposium on Remote Sensing*, Fredericton, New Brunswick, Canada, July 16-19, 1990, p78-85.

Walsh, S.J., Brown, D.G. and **Bian**, L. 1990. Comparison of Landsat Thematic Mapper digital enhancements of snow-avalanche Paths: validation through GIS/remote sensing integration. Proceedings, *the 1990 International Geoscience and Remote Sensing Symposium*, Washington DC, May 20-24, 1990, p1161-1164.

Walsh, S.J. and **Bian**, L. 1988. Comparison of AVHRR and MSS data to in-situ measures of plant biomass and soil characteristics. Proceedings, *the American Society for Photogrammetry and Remote Sensing*, Virginia Beach, Virginia, September 11-16, 1988, p299-309.

4. Position Papers

Bian, L. 1998. Status of GIS use in physical sciences. Position paper for the specialist meeting on Status and Trends in Spatial Analysis, Project Varenus, NCGIA. Santa Barbara, California, December 10-12, 1998.

Bian, L. 1998. Interaction of objects and fields. Position paper for the specialist meeting on The Ontology of Fields, Project Varenus, NCGIA. Bar Harbor, Maine, June 10-13, 1998.

Bian, L. 1997. Opening environmental models. Position paper for the International Conference and Workshop on Interoperating Geographic Information Systems. NCGIA Research Initiative 20, Santa Barbara, California, December 5-6, 1997.

5. Technical Reports

Bian, L. Mao, L., Copeland, S. and Gao, P. 2010. Modeling for Infectious Diseases Incidents Associated With Biomedical Research. Funded by NIH.

Bian, L. 2007. Simulating Possible Health Outcomes of Communicable Diseases for Three Communities. Funded by NIH.

Bian, L. 2005. WERF Progress Reports (series) Interoperable Hydrologic Modeling: A Component-Based Approach. Funded by Water Environment Research Foundation (WERF).

Bian, L. and Xie, Z. 2001. Retrieving Urban Objects from Digital Aerial Photographs Using a Wavelet Transform Approach and a Spatial Dependence Approach. Funded by NIMA.

Bian, L., Zhang, A., Yu, D. and Hofmeier, M. 1999. NIMA project progress report: GiView: a multi-resolution geographical data retrieval system. Funded by NIMA.

Koussis, A.D., Sophocleous, M., **Bian**, L. and Zou, S.M. 1994. Lower Republican River Basin: Stream-Aquifer Study. Funded by the Kansas Water Office.

Bian, L. 1994. A Preliminary Assessment of Impact of the Conservation Reserve Program Land Use Practice on the Water Quality of the Barns Creek Watershed of Northeast Kansas Using Geographic Information Systems (GIS). Funded by the Kansas Department of Wildlife and Parks and National Fish and Wildlife Service.

Bian, L. and Miller, R. 1994. Georeferencing EPA Title III, Section 311 Facilities. Funded by the Kansas Water Office.

Loeb, S.L. and **Bian**, L. 1992. Integration of Toxic Release Inventory (TRI) and Other SARA Title III Data with Additional Environmental Data into a Geographic Information System(GIS) and into the CAMEO System. Funded by the Kansas Department of Health and Environment (flow through EPA).

6. Other Publication

Bian, L. 2001. Instructor's Manual (the Geoscience section) for Geographic Information Systems and Science, Longley, P., Goodchild, M., Maguire, D. and Rhind, D. John Wiley & Sons.

IV. CONFERENCES

1. Invited Lectures

“A dual representation of spatial-temporal dynamics of disease dispersion” Space-Time Analytics, Session 1, Space-time analytics methods, the Symposium on Human Dynamics Research, at the Association of American Geographers, Annual Meeting, San Francisco, California, March 29 – April 2, 2016.

A dual representation of spatial-temporal dynamics of disease dispersion”. Bian, L. Abstract, the Association of American Geographers, Annual Meeting, San Francisco, March 29-April 2, 2016 (presented by Bian).

“ Spatial networks for modeling disease dispersion” 2015 Forum: Strengthening the International Geo-Eco Global Health Research Collaborations: Challenges and Opportunities. Wuhan, China, June 17-18, 2015.

“Spatial approaches to the dispersion of communicable diseases.” Queen’s University, Kingston, Ontario, Canada, October 5, 2010.

“Spatial approaches to modeling disease dispersion.” Plenary presentation, Institute of Systems Science and Health, sponsored by NIH and CDC, Columbia University, New York City, New York, June 13-18, 2010.

“Dynamic social network for disease transmission.” Worldwide Universities Network Virtual Seminars, October 28, 2009.

“Spatial approaches to modeling dispersion.” Mid-Atlantic Invasive Plant Conference, University of Pittsburgh, Johnstown, Pennsylvania, August 11-12, 2009.

“A network-based simulation model for dispersion of communicable diseases.” MITACS/GEOIDE/PHAC - Mathematical Modeling and Geosimulations for Disease Spread, Ottawa, Canada, February 17-18, 2009.

“How to write good journal papers.” (on behalf of editors of the ISPRS Journal of Photogrammetry and Remote sensing) The XXI Congress of International Society of Photogrammetry and Remote Sensing, Beijing, China, July 4, 2008 (Congress, 3-11, 2008).

“GIS modeling in medical geography: a case study of SARS in Beijing.” Central Connecticut State University, New Britain, Connecticut, March 11, 2008.

“An agent-based explicitly spatial and temporal model for dispersion of communicable diseases.” University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, November 16, 2007.

“Spatial approaches to modeling the spatial dispersion of infectious diseases.” Western Michigan University, Kalamazoo, Michigan, October 5, 2007.

“A-BEST community disease modeling: approaching a new frontier.” National Institutes of Health, Bethesda, Maryland, May 15, 2007.

“A-BEST community disease modeling: approaching a new frontier.” National Institutes of Health, Bethesda, Maryland, September 26, 2007 (I was invited back to NIH to give the same presentation the second time).

“Spatial modeling of infectious diseases.” Columbia University, New York City, New York, April 28, 2006.

“Effects of network topology on spatial and temporal dispersions of infectious disease.” University of Michigan, Ann Arbor, Michigan, February 23, 2005.

“Modeling the spread of disease.” State University of New York at Geneseo, Geneseo, New York, March 3, 2005.

“Individual-based modeling for epidemiology.” Rutgers University, New Brunswick, New Jersey, September 16, 2004.

“A spatially explicit network model for dispersion of diseases.” the Modeling and GIS Workshop, Environment Systems Research Institute (ESRI), Redlands, California, September 25, 2003.

“A conceptual framework for an individual-based and spatially explicit epidemiological model.” University of California at Berkeley, Berkeley, California, May 6, 2002.

“Urban and Aerial photographs.” University of North Carolina at Greensboro, Greensborough, North Carolina, October 3, 2001.

“Retrieving urban objects from digital aerial photographs.” University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, October 12, 2001.

“GIS implementation: case studies in fish ecology and elk habitat analysis.” Mapping the Catskills for the 21st Century, sponsored by the Catskills Institute for the Environment, Stone Ridge, New York, October 23, 1998.

2. Conference Presentations and Abstracts (/Proceedings)

“Epidemic Spreading in Contact Networks with Cluster Structure”. Gao, P. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, San Francisco, March 29-April 2, 2016 (presented by Gao).

“Location-centric prediction of influenza dynamics using deep learning approaches”, Zhong, S. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, San Francisco, March 29-April 2, 2016 (presented by Zhong).

“Cluster Analysis of Pandemic (H1N1) 2009 and Influenza-Like Illness in a Metropolitan Area”. Cheng, X. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, San Francisco, March 29-April 2, 2016 (presented by Cheng).

“Mobile phone sensing for infectious disease: data collection and validation issues’. Abstract, NIH (NIAID) Workshop: Infectious Disease Research:

Quantitative Methods and Models in the era of Big Data. November 9-10, 2015.
Chen, C. and Bian, L. (poster presentation).

“Spatial networks in epidemiological studies”. Bian, L. Extended and peer-reviewed abstract, *National NCGIA conference – Advancing Geographic Information Science: the Past and Next Twenty Years*, Bar Harbor, ME, June 29-July 3, 2015 (presented by Bian).

“From infection cases to infection tree”. Zhong, S. and Bian, L. Extended and peer-reviewed abstract, *National NCGIA conference – Advancing Geographic Information Science: the Past and Next Twenty Years*, Bar Harbor, ME, June 29-July 3, 2015 (Presented by Zhong).

“Spatial Networks for modeling disease dispersion”. Abstract, the Association of American Geographers, Annual Meeting, Chicago, IL, April 19-25, 2015 (presented by Bian).

“Link prediction dynamic networks of disease dispersion using a deep learning approach” Zhong S. and Bian L. Abstract, the Association of American Geographers, Annual Meeting, Chicago, IL, April 19-25, 2015 (presented by Zhong).

“Interactions between network clusters and spatial clusters in spatially embedded contact networks” Gao P. and Bian L. Abstract, the Association of American Geographers, Annual Meeting, Chicago, IL, April 19-25, 2015 (presented by Gao).

“Scale effect on contact networks” Gao P. and Bian L. Abstract, the Association of American Geographers, Annual Meeting, Tampa, FL, April 8-12, 2014 (presented by Gao).

“Analysis of Influenza Transmission using Dynamic Location Networks” Zhong S. and Bian L. Abstract, the Association of American Geographers, Annual Meeting, Tampa, FL, April 8-12, 2014 (presented by Zhong).

“Infectious disease process in a people-location two-mode network” Sun T. and Bian L. Abstract, the Association of American Geographers, Annual Meeting, Tampa, FL, April 8-12, 2014 (presented by Sun).

“The response of location-based disease transmission networks to dynamics of epidemics” Bian L and Zhong S. Abstract, the Association of American Geographers, Annual Meeting, Tampa, FL, April 8-12, 2014 (presented by Bian).

“How geography influences the formation of social ties: A case study of gang rivalry relationship in Los Angeles” Sun T. and Bian L. Conference proceedings, University Consortium for Geographic Information Science (UCGIS) Symposium, Fairfax, VA, May 21-23, 2013 (presented by Sun).

“Cluster Analysis of Pandemic (H1N1) 2009 and Influenza-Like Illness in Lanzhou, China” Cheng, X. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Los Angeles, CA, April 9-13, 2013 (presented by Bian).

“Indoor transmission of influenza: Modelling seating interventions in a hospital waiting room” Copeland S. and Bian, L. Extended and peer-reviewed abstract, GIScience 2012, Columbus, Ohio, September 18-21, 2012 (presented by Copeland).

“Impact of cluster structure on disease transmission networks” Gao, P. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, New York City, NY, February 24-28, 2012 (presented by Gao).

“Geographic variation of soil lead concentrations in Anniston, Alabama” Ha, B., Rogerson, P., Olson, J., and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, New York City, NY, February 24-28, 2012 (presented by Ha).

“Spatio-temporal relationship meta-information for interoperable environmental models” Bian, L. and Hu, S. Abstract, the Association of American Geographers, Annual Meeting, Seattle, Washington, April 12-16, 2011 (presented by Bian).

“Modeling fine scale influenza transmission.” Copeland, S. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Seattle, Washington, April 12-16, 2011 (presented by Copeland).

“Fine-scale simulation of influenza in an ER waiting room.” Copeland, S. and Bian, L. Poster, the University Consortium for Geographic Information Science, Summer Assembly, Hilton Head, South Carolina, June 15-16, 2010 (presented by Copeland).

“Effects of home-workplace link on spatial pattern of communicable disease transmission.” Bian, L. and Mao, L. Abstract, the Association of American Geographers, Annual Meeting, Washington, DC, April 14-18, 2010 (presented by Bian).

“3D modeling of nosocomial disease diffusion.” Copeland S. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Washington, DC, April 14-18, 2010 (presented by Copeland).

“Social network analysis of geography academics.” Ticoalu, A. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Washington, DC, April 14-18, 2010 (presented by Ticoalu).

“Validating an individual-based spatially explicit epidemiological model for dispersion of communicable diseases.” Bian, L. and Mao, L. Abstract, the Association of American Geographers, Annual Meeting, Las Vegas, Nevada, March 22-27, 2009 (presented by Bian).

“Individual based disease modeling - an environmental focus.” Copeland, S. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Las Vegas, Nevada, March 22-27, 2009 (presented by Copeland).

“Vaccination strategies in a scale-free social network with individual mobility.” Mao, L. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Las Vegas, Nevada, March 22-27, 2009 (presented by Mao).

“Explicit spatial-temporal simulation of a rare disease.” Bian, L. Whalen, T., Cohen, M., Huang, Y., Lee, G., Lim, E., Mao, L., Yang Y. Proceedings, 11th Joint Conference on Information Science, Shenzhen, China, December 15-20, 2008 (presented by Bian).

“An ontology model for personalized tour planning recommendations on the semantic web.” Huang, Y. and Bian, L. Extended and peer-reviewed abstract, GIScience 2008, Park City, Utah, September 23-26, 2008 (presented by Huang)

“Modeling from individuals to populations in the dispersion of communicable diseases.” Bian, L. 2008. Abstract, the Association of American Geographers, Annual Meeting, Boston, Massachusetts, April 15-19, 2008 (presented by Bian).

“Relevance feedback to improve urban objects retrieval from geographic images based on a Bayesian query point movement approach.” Lee, J. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Boston, Massachusetts, April 15-19, 2008 (presented by Lee).

“An agent-based system for personalized recommendations of tourist attractions.” Huang, Y. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Boston, Massachusetts, April 15-19, 2008 (presented by Huang).

“An integrated approach to modeling the distribution of mosquito larval habitats in Kenya highlands.” Li, L., Bian, L. and Yan, G. Abstract, the Association of American Geographers, Annual Meeting, Boston, Massachusetts, April 15-19, 2008 (presented by Li).

“Effects of network structures on vaccination strategies for infectious diseases.” Mao, L. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Boston, Massachusetts, April 15-19, 2008 (presented by Mao).

“Modeling vulnerability to communicable diseases for communities.” Bian, L., Huang, Y., Lee, G., Lim, E., Mao, L., Yan, Y., Wilson, D. and Cohen, M. Abstract, the Association of American Geographers, Annual Meeting, San Francisco, California, April 17-21, 2007 (presented by Bian).

“Formalizing and integrating tourist attraction categorizations using formal concept analysis.” Huang, Y. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, San Francisco, California, April 17-21, 2007 (presented by Huang).

“Modeling spatial and temporal patterns of mosquito larval habitats in the Kenya Highlands.” Li, L., Bian, L. and Yan, G. Abstract, the Association of American Geographers, Annual Meeting, San Francisco, California, April 17-21, 2007 (presented by Li).

“Intervention strategies in an individual-based spatially explicit model of epidemiology.” Mao, L. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, San Francisco, California, April 17-21, 2007 (presented by Mao).

“Network modeling for spatial heterogeneity in the dispersion of communicable diseases.” Bian, L. Abstract, 54th Annual North American Meetings of the Regional Science Association International, Toronto, Canada, November 16-18, 2006 (presented by Bian).

“A comparison of spatial modeling approaches to the dispersion of infectious diseases.” Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Chicago, Illinois, March 7-11, 2006 (presented by Bian).

“Incorporating relevance feedback to improve urban objects retrieval from high-resolution images.” Lee, J. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Chicago, Illinois, March 7-11, 2006 (presented by Lee).

“Locally varying relationships between mosquito habitat and environmental factors.” Li, L., Bian, L. and Yan, G. Abstract, the Association of American Geographers, Annual Meeting, Chicago, Illinois, March 7-11, 2006 (presented by Li).

“Return of the ring - effects of link between daytime and night populations on spatial and temporal dispersion of infectious diseases.” Bian, L. and Liebner, D. Abstract, the Association of American Geographers, Annual Meeting, Denver, Colorado, April 5-9, 2005 (presented by Bian).

“Mosquito larvae habitat modeling in Western Kenya highlands.” Li, L., Bian, L. and Yan, G. Abstract, the Association of American Geographers, Annual Meeting, Denver, Colorado, April 5-9, 2005 (presented by Li).

“Formalizing an individual-based and spatially explicit approach to assess effects of network topology on spatial and temporal dispersions of infectious disease.” Bian L. and Liebner, D. Extended and peer-reviewed abstract, GIScience 2004, Adelphi, Maryland, October 20-23, 2004 (presented by Bian).

“Defining components for interoperable process models using concept lattices and semantic reference systems.” Bian, L. and Hu, S. Extended and peer-reviewed abstract, GIScience 2004, Adelphi, Maryland, October 20-23, 2004 (presented by Bian).

“Content-based image retrieval for man-made objects.” Bian, L. Proceedings, GeoInt Symposium 2004, New Orleans, Louisiana, October 12-14, 2004 (presented by Bian).

“Effects of network topology of human connection on spatial and temporal dispersion of infectious diseases.” Bian, L. and Leibner, D. Abstract, the Association of American geographers, Annual Meeting, Philadelphia, Pennsylvania, March 14-19, 2004 (presented by Bian).

“Spatially explicit, individually-based simulation of transmission and control of SARS.” Huang, Y. and Bian, L. Abstract, the Association of American geographers, Annual Meeting, Philadelphia, Pennsylvania, March 14-19, 2004 (presented by Huang).

“Effects of community characteristics on spatial and temporal dispersion of infectious diseases.” Bian, L. and Huang, Y. Abstract, the Association of American geographers, Annual Meeting, New Orleans, Louisiana, March 5-8, 2003 (presented by Huang).

“Retrieving man-made features from digital images using spatial continuity and discontinuity information.” Xie, Z. and Bian, L. Abstract, ASPRS 2003 Annual Conference, Anchorage, Alaska, May 5-9, 2003 (presented by Xie).

“Characterizing solifluction lobes and terraces in an alpine environment through remote sensing and geostatistics.” Walsh, S.J., Brown, D.G. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, Los Angeles, California, March 19-24, 2002 (presented by Walsh).

“An individual-based and spatially explicit epidemiological model of infectious diseases.” Bian, L. Abstract, Southeastern Division of Association of American Geographers, Annual Meeting, Lexington, Kentucky, November 17-20, 2001 (presented by Bian).

“A component-based simulation of individual and group interactions in the context of environmental epidemiology.” Bian, L., Feng, C. and Sorokine, A. Abstract, Association of American Geographers, Annual Meeting, New York City, New York, February 27-March 3, 2001 (presented by Bian).

“Developing GIS components for the simulation of wildlife movements.” Bian, L. (paper published in a refereed journal) The 4th International Conference on Integrating Geographic Information Systems and Environmental Modeling: Problems, Prospects, and Needs for Research. Banff, Alberta, Canada, September 2-8, 2000 (presented by Bian).

“Identifying man-made features using wavelet-based indices.” Bian, L. Abstract, Association of American Geographers, Annual Meeting, Pittsburgh, Pennsylvania, April 4-8, 2000 (presented by Bian).

“Discovering fault lines and fault planes from geological data using Hough Transform.” Bian, L. and Yang, Z. Extended abstract, the 4th International Conference on Integrating

Geographic Information Systems and Environmental Modeling: Problems, Prospects, and Needs for Research, Banff, Alberta, Canada, September 2-8, 2000 (presented by Bian).

“Semantic interoperability in the use of remote sensing classification error.” Feng, C. and Bian, L. Abstract, Association of American Geographers, Annual Meeting, Pittsburgh, Pennsylvania, April 4-8, 2000 (presented by Feng).

“Discovering linear and planar patterns from spatial point data using Hough Transform.” Yang, Z. and Bian, L. Abstract, Association of American Geographers, Annual Meeting, Pittsburgh, Pennsylvania, April 4-8, 2000 (presented by Yang).

“Developing prototype components for simulating wildlife movement.” Bian, L. Abstract, Association of American Geographers, Annual Meeting, Honolulu, Hawaii, March 23-27, 1999 (presented by Bian).

“Spatial interpolation and simulation of prey fish data in an aquatic environment.” Bian, L. Abstract, Association of American Geographers, Annual Meeting, Boston, Massachusetts, March 25-29, 1998 (presented by Bian).

“Effects of aggregation methods on statistical properties of spatial data.” Hanson, C. and Bian, L. Abstract, Association of American Geographers, Annual Meeting, Boston, Massachusetts, March 25-29, 1998 (presented by Bian).

“Geostatistical modeling of forest canopy structure, Grant Teton National Park.” Blodgett, C., Jakubauskas, M., Price, K. and Bian, L. Abstract, Association of American Geographers, Annual Meeting, Boston, Massachusetts, March 25-29, 1998 (presented by Blodgett).

“Integrating environmental models with GIS in the framework of GIS interoperability.” Bian, L. Proceedings, International Conference on Interoperating Geographic Information Systems, Santa Barbara, California, December 3-4, 1997 (presented by Bian).

“Spatial interpolation of Lake Ontario fisheries data.” Bian, L. and Trice, M. Abstract, Association of American Geographers, Annual Meeting, Fort Worth, Texas, April 1-5, 1997 (presented by Bian).

“Comparison of spatial interpolators of mapping optical plankton counter data collected in Lake Ontario.” Trice, M. and Bian, L. Abstract, Annual Assembly and Summer Retreat of University Consortium for Geographic Information Science (UCGIS), Bar Harbor, Maine, June 15-21 (presented by Trice).

“Effects of watershed discretization on estimating hydrologic parameters.” Bian, L. Proceedings, GIS/LIS '96 Annual Conference, Denver, Colorado, October 19-21, 1996 (presented by Bian).

“An integrated interface system to couple the SWAT model and Arc/Info.” Bian, L., Sun, H., Blodgett, C.F., Egbert, S.L., Li, W., Ran, L. and Koussis, A.D. Proceedings, the Third International Conference on Integrating Geographic Information Systems and Environmental Modeling, Santa Fe, New Mexico, January 20-25, 1996 (presented by Bian).

“An object-oriented database for integrating GIS and hydrologic model.” Sun H. and Bian. L. Proceedings, GIS/LIS '95 Annual Conference, Nashville, Tennessee, November 14-16, 1995 (presented by Bian).

“A spatial analysis of winter habitat for bald eagles in Geary County, Kansas.” Killion, M.J. and Bian, L. Abstract, Association of American Geographers, Annual Meeting, Nashville, Tennessee, November 14-16, 1995 (presented by Killion).

“A GIS analysis of elk habitat in the Kansas prairie.” West, E. and Bian, L. Abstract, the Association of American Geographers, Annual Meeting, p323, Nashville, Tennessee, November 14-16, 1995 (presented by West).

“Characterizing spatial variation of the Dakota Aquifer in southwestern Kansas.” Bian, L. Abstract, Association of American Geographers, Annual Meeting, San Francisco, California, March 29-April 2, 1994 (presented by Bian).

“Accuracy assessment of geo-coding hazardous facilities.” Bian, L., Miller, K. and Ran, L. Proceedings, GIS/LIS '93 Annual Conference, Minneapolis, Minnesota, November 2-4, 1993 (presented by Bian).

“Accuracy assessment for location information of toxic facilities.” Bian, L. and Miller, K. Abstract, Association of American Geographers, Annual Meeting, Atlanta, Georgia, April 6-10, 1993 (presented by Bian).

“Integration of GIS and CAMEO for on-site assessment of environmental hazards.” Bian, L. Proceedings, GIS/LIS '92 Annual Conference, San Jose, California, November 10-12, 1992 (presented by Bian).

“Modeling spatial distribution of vegetation based on climatic information.” Bian, L. Proceedings, Annual Conference of the American Society for Photogrammetry and Remote Sensing, Washington, DC, August 3-7, 1992 (presented by Bian).

“Modeling potential natural vegetation through a GIS approach.” Bian, L. Abstract, Great Plains/Rocky Mountain Division, Association of American Geographers, Annual Meeting, Manhattan, Kansas, October 8-10, 1992 (presented by Bian).

“The multiscale nature of a mountainous environment.” Bian, L. Abstract, Association of American Geographers, Annual Meeting, San Diego, California, April 18-22, 1992 (presented by Bian).

“Effect of spatial scale on estimating the relationship between landscape and topography.” Bian, L. Abstract, Association of American Geographers, Annual Meeting, Miami, Florida, April 13-17, 1991 (presented by Bian).

“Fractal dimension and spatial patterns of variable interaction within a distributed watershed erosion model.” Brown, D.G., Bian, L. and Walsh, S.J. Abstract, Association of American Geographers, Annual Meeting, Miami, Florida, April 13-17, 1991 (presented by Brown).

“Reduction of the effects of clouds on remotely-sensed digital data through the integration of spectral information from complementary satellites.” Bian, L. and Walsh, S. Proceedings, the 13th Canadian Symposium on Remote Sensing, Fredericton, New Brunswick, Canada, July 16-19, 1990 (presented by Bian).

“Fractal dimension and areal units compatibility of GIS databases.” Bian, L. Abstract, Association of American Geographers, Annual Meeting, Toronto, Canada, April 19-22, 1990 (presented by Bian).

“Runoff control on nitrogen loss in surface water from agricultural and forested watersheds.” Meentemeyer, V. and Bian, L. Abstract, Association of American Geographers, Annual Meeting, Baltimore, Maryland, March 19-22, 1989 (presented by Bian).

“The relationship of leaf area index (LAI) of mature vegetation with climate.” Bian, L. and Meentemeyer, V. Abstract, Bulletin of the Ecological Society of America, Vol. 68, No.3, p263. The 38th Annual American Institute of Biological Sciences Meeting, Columbus, Ohio, August 9-13, 1987 (presented by Bian).

“Modeling vegetation-climate relationships of China.” Bian, L. Abstract, Association of Southeastern Biologists Bulletin, Vol.33, No.2, p70. The 47th Annual Meeting of Association of Southeastern Biologists, Columbia, South Carolina, April 9-11, 1986 (presented by Bian).

3. Invited Participation in Workshops/Conferences

Forum: Strengthening the International Geo-Eco Global Health Research Collaborations: Challenges and Opportunities. Wuhan, China, June 17-18, 2015.

Digital Earth 2020 Vision Beijing Workshop, sponsored by International Society for Digital Earth and Center for Earth Observation and Digital Earth, Chinese Academy of Science, Beijing, China, March 16-19, 2011.

Institute of Systems Science and Health, sponsored by NIH and CDC, University of Michigan, Ann Arbor, Michigan, May 3-8, 2009.

Contribution of Remote Sensing for Decisions about Human Welfare, sponsored by the National Academy of Science, Washington, DC, January 30-31, 2006.

Modeling and GIS Workshop, sponsored by ESRI, Redlands, California, September 25-26, 2003.

Specialist Meeting on Ontology of Fields, sponsored by the National Center for Geographic Information and Analysis (NCGIA), Bar Harbor, Maine, June 11-13, 1998.

Specialist Meeting on Interoperating GISs, sponsored by the National Center for Geographic Information and Analysis (NCGIA), Santa Barbara, California, December 5-6, 1997.

V. SERVICES

1. NSF and NIH Panels

- 2013 NIH review panel for the Healthcare Delivery and Methodologies (HDM) Integrated Review Group (Nursing Related Clinical and Intervention Studies)
- 2012-16 NIH review panel for the Systems Science Program and Modeling Social Behavior Program
- 2002-03 NSF Geography and Regional Science Senior Advisory Panel
- 2001 NSF Social, Behavioral, and Economic Division, Major Research Instrument Program

2. Conference Board/Committees

- 2016 Organizer of the Ontological Approaches to Sensor Data Analysis Conference
- 2016 Program Committee for SBP-BRiMS conference 2016 Conference (Social Computing Behavioral-Cultural Modeling & Prediction, Behavior Representation in Modeling and Simulation
- 2016 Co-Chair of the International Steering Committee for Geoinformatics 2016 Conference
- 2016 Program Committee for Geoinformatics 2016 Conference
- 2016 Organizing Committee for the Symposium on International Geospatial Health Research: Creating Synergies at the 2016 AAG Annual Meeting.
- 2015 Co-Chair of the International Steering Committee for Geoinformatics 2015 Conference
- 2015 Organizing Committee, Program Committee, 2015 Summer Institute in Geographic Information. Advancing Geographic Information Science: The past and next twenty years. June 29-July 3, 2015.
- 2015 Co-Chair of the International Steering Committee for Geoinformatics 2015 Conference
- 2015 Program Committee for Geoinformatics 2015 Conference
- 2015 Program Committee for the International Workshop on Spatiotemporal Computing
- 2015 Organizing committee for international health symposium at the 2015 AAG
- 2014 Program Committee for GIScience 2014 Conference
- 2014 Program Committee for GEOProcessing 2014 Conference
- 2014 Program Committee for Geoinformatics 2014 Conference
- 2013 Organizing committee for the special symposium on Geography, GIScience, and Health: Spatial Frontiers of Health Research and Practice, at the Los Angeles AAG

- 2013â International Scientific Committee, 8th International Symposium on Digital Earth
- 2013 Program Committee for Geoinformatics 2013 Conference
- 2013 Program Committee for GEOProcessing 2013 Conference
- 2012 Program Committee for UCGIS 2012 Symposium
- 2012 Program Committee for GIScience 2012 Conference
- 2012 Program Committee for Geoinformatics 2012 Conference
- 2012 Program Committee for GEOProcessing 2012 Conference
- 2011 Program Committee for Geoinformatics 2011 Conference
- 2011 Program Committee for GEOProcessing 2011 Conference
- 2010 Program Committee for Geoinformatics 2010 Conference
- 2010 Program Committee for GIScience 2010 Conference
- 2010 Program Committee for GEOProcessing 2010 Conference
- 2009 Program Committee for GEOWS 2009 (renamed as GEOProcessing series) Conference
- 2008 Program Committee for GIScience 2008 Conference
- 2008 Technical Committee for Geoinformatics 2008 Conference
- 2007 Technical Committee for Geoinformatics 2007 Conference
- 2005 Scientific Board for the GISPlanet 2005, the International Conference on Geographic Information

3. Executive Committee, Board of Directors, Advisory Board

- 2013-15 Council of International Society for Digital Earth
- 2011-14 Executive Committee of International Society for Digital Earth
- 2010-13 Board of Directors, UCGIS
- 2003 Co-leader (with Maguire, D, Goodchild, M., Batty, M.), Modeling and GIS Workshop, sponsored by ESRI, Sept 25-26, 2003, Redlands, CA
- 2002-04 Advisory and Outreach Board, Geosalar Program, Quebec, Canada

4. Other Professional Committees and Services

- 2014 UCGIS Nomination Committee
- 2012 UCIS Research Award Committee
- 2002-05 Chair, Communications Committee, UCGIS
- 2000-02 UCGIS student paper evaluation committee
- 2001 Organized four sessions of 20 presentations at annual AAG conference
- 1999 ESRI Award Selection Committee for American Society of Photogrammetric Engineering and Remote Sensing (ASPRS)
- 1999 Honor Committee for Remote Sensing Specialty Group of AAG
- 1998 Conducting a workshop OOGIS: Theory and Applications, at the UCGIS Summer Assembly, June 24, 1998, Park City, Utah
- 1996-99 Mapping Science Advisory Committee member for Ann Arbor Press
- 1995-98 Middle States Regional Councilor for Remote Sensing Specialty Group of AAG

5. University Committees

- 2016 Search Committee for hiring an Ice Sheet Modeler in the Geology department
- 2016 Committee to evaluate Renew Sustainable Urban Environments

- 2016 Committee to evaluate NSF-NRT pre-proposals (ad hoc)
- 2015- Director, National Center for Geographic Information and Analysis at Buffalo
- 2015- Sustainability Research Committee
- 2014 Committee to evaluate NSF-Major Research Instrumentation pre-proposals (ad hoc)
- 2013-14 Acting Director of National Center for Geographic Information and Analysis at Buffalo,
- 2011-14 Faculty Advisory Committee for the Information and Computing Technology Academic and Strategic Strength
- 2007- Executive Committee of Institute of Research and Education on Woman and Gender
- 2002-06 Steering Committee of Institute of Research and Education on Woman and Gender
- 2000-07 Steering Committee of Environment and Society Institute
- 1999-00 Faculty Senate
- 1999 Graduate Curriculum Committee of Environment and Society Institute
- 1998-99 Faculty Senate alternate
- 1993 Search Committee for Assistant Director of International Student Service (Kansas)

6. College Committees

- 2004 Assistant Marshall for CAS graduation commencement
- 1999 Search Committee for GIS support technician
- 1998 Search Committee for GIS support technician
- 1994 Dean's Scholar's Program for minority students (Kansas)

7. Department Committees

- 2015 Promotion to full rank advocate
- 2015 Organized HTML5 workshop
- 2015 AAG Party
- 2014 Mentor for Associate Professors
- 2014 Tenure and promotion advocate
- 2013 Tenure and promotion advocate
- 2012 Helped develop departmental workshops ArcObjects
- 2012 Associate Professors evaluation committee
- 2012 Assistant Professors evaluation committee
- 2012 P&T Committee for Associate professors
- 2012 Revision of MS Degree Program Committee
- 2011 Executive Committee
- 2011- Alumni Committee
- 2011 Developed new course proposal for GEO281 Web-Based GIS
- 2010- Associate Professors evaluation committee
- 2010- Junior faculty evaluation committee
- 2009 Search Committee for Assistant to the Chair
- 2007-2010 Executive Committee
- 2007-08 Chair of the search committee for a senior GIScience position
- 2008 Organized Geography Career Fair 2008
- 2007 Geography representative to the university CareerFest

2006 Organized Geography Career Fair 2006
2006-08 Award Committee
2005 Faculty representative to the departmental Job Fair
2005- Alternate UB delegate to UCGIS
2003-05 Lead UB delegate to UCGIS
2003 Graduate committee
2002-04 Teaching committee
2002 Search committee for the physical geography position
2001 Developed the portfolio option for GIS MA program
2000 Director of undergraduate studies
1998-00 Graduate committee
1999 Search Committee for a junior GIS faculty position
1998 Technology Committee
1997 Search Committee for a senior GIS faculty position
1996-03 UCGIS, delegate for SUNY Buffalo
1995 Search Committee for two GIS faculty positions
1995 Search Committee for GIS support technician
1995 Search Committee for Sun systems technician
1995 Student travel committee
1994 Chair, Student Affairs Committee (Kansas)
1993 Chair, Student Affairs Committee (Kansas)
1992 Student Affairs Committee, student admission, and TA evaluation (Kansas)
1991 Search Committee for Computer Technician (Kansas)
1991 Staff Committee (Kansas)

8. Tenure and Promotion Case Evaluation

21 cases