

Wei Luo

Department of Geography

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Curriculum Vitae

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Last Update: Oct, 2016

Research interests: Cartography, Geovisualization, Geo-Social Visual Analytics, Spatial Analysis, Network Analysis, Complex Systems, Machine Learning, GEOINT, and Epidemic Modeling with applications to the geographic components of Big Data, Climate Change, Water Security, Spatial Epidemiology/Public Health, Nature-Society Interactions, Social Media, Economics, International Trade, Urban Dynamics, Crime Analysis, and Crisis Management.

APPOINTMENTS

- 2016 **Postdoctoral Scholar: Geography**
University of California, Santa Barbara
Project: Mathematical models to inform effective home-use HIV testing strategies for MSM
Supervisor: Dr. Susan Cassels
- 2015 **Postdoctoral Research Assistant: Computing, Informatics, and Decision Systems Engineering**
Arizona State University
Project: Water Security Risks Posed by Climate Change
Supervisor: Dr. Ross Maciejewski

EDUCATION

- 2014 **Doctor of Philosophy: Geography**
The Pennsylvania State University
Thesis: Geovisual Analytics Approaches for the Integration of Geography and Social Network Contexts
Advisor: Dr. Alan M. MacEachren
- 2009 **Master of Arts: Geography**
University at Buffalo
Thesis: Individual-based Modeling for SARS Transmission
Advisor: Dr. Ling Bian
- 2007 **Bachelor of Science: Urban and Environmental Science**
Northwest University, China

GRANTS

Awarded

2. **Spatial models of human migration, environment, and infectious disease transmission: The case of Zika virus disease**
Hellman Family Faculty Fellows Program, UCSB
Cassels, S (PI) 7/2016 – 6/2017
\$20,000 direct costs
Role: Co-PI
1. **Mexican migrant men who have sex with men, sexual networks, and prevention hotspots in San Bernardino County**
PIMSA 2015-2016 Research Award: Programa de Investigacion en Migration Y Salud
Cassels, S. & Magis-Rodriguez, C. (Multiple PI), 9/2017 – 2/2019
\$30,000 direct costs
Role: Co-PI

PUBLICATIONS

Refereed Journal Publications

8. **Luo W** 2016 Visual Analytics of Geo-Social Interaction Patterns for Epidemic Control. *International Journal of Health Geographics*. 15(28). [[doi](#)]
7. Zhang YF, **Luo W**, Mack AE, and Maciejewski R. 2016 Visualizing the Impact of Geographical Variations on Multivariate Clustering. *Computer Graphics Forum* 35(3). [[doi](#)]
6. Peuquet DJ, Robinson AC, Stehle S, Hardisty F, and **Luo W**. 2015 A method for discovery and analysis of temporal patterns in complex event data. *International Journal of Geographical Information Science* 29(9). [[doi](#)]
5. **Luo W**, Yin PF, Di Q, Hardisty F, and MacEachren AM. 2014 A Geovisual Analytic Approach to Understanding Spatial-Social Relationships in the International Trade Network. *PLoS ONE* 9(2): e88666. [[doi](#)]
4. **Luo W**, MacEachren AM. 2014 Geo-Social Visual Analytics. *Journal of Spatial Information Science*. 8. [[doi](#)]
3. Roth RE, Ross KS, Finch BG, **Luo W**, and MacEachren AM. 2013. Spatiotemporal crime analysis in U.S. law enforcement agencies: Current practices and unmet needs. *Government Information Quarterly*. [[doi](#)]
2. Blanford JI, Kumar S, **Luo W**, and MacEachren AM. 2012. It's a long, long walk: accessibility to hospitals, maternity and integrated health centers in Niger. *International Journal of Health Geographics*. 11(24). [[doi](#)]
1. Chen WL, Wu XS, **Luo W**, Yang XJ, and Zhao R. 2007. Risk Analysis of Land Use of large historic sites in the suburb—A case Study of Chang'an City of Han Dynasty. *Resources Science*. 29(3): 198-205. [[link](#)]

Book Chapters

1. **Luo W**, Wang YL, Liu X, and Gao S (submitted). Cities as Spatial and Social

Networks: towards a Spatio-Socio-Semantic Analysis Framework. In: Ye XY and Liu XJ ed. *Cities as Spatial and Social Networks*.

1. Gao S, Chen HZ, **Luo W**, Hu YJ, and Ye XY (submitted). Spatiotemporal-Network Visualization for Exploring Human Activities and Interactions in Physical and Virtual Space. In: Shaw SL and Sui D ed. *Human Dynamics Research in the Changing World*.

Refereed Conference Proceedings

8. Steptoe M, Krueger R, Zhang YF., Liang X, Garcia R, Kadambi S, **Luo W**, Ertl T, and Maciejewski R. 2015 VAST Challenge 2015: Grand Challenge - Team VADER/VIS Award for Outstanding Comprehensive Submission. In: *2015 IEEE Conference on Visual Analytics Science and Technology (VAST)*. Chicago, Illinois: Oct 25-30. [[doi](#)]
7. **Luo W**, Chang Z, Kong LL, Link R, Hejazi M, Clarke L, and Maciejewski R. 2015 Web-Based Visualization of the Global Change Assessment Model. In: *Proceedings of Visualization in Environmental Sciences (EnvirVis 2015), EuroVis 2015*. Cagliari, Italy: May 25-26. [[doi](#)]
6. Lukasczyk J, Liang X, **Luo W**, Ragan E, Middel A, Bliss N, White D, Hagen H, and Maciejewski R. 2015 A Collaborative Web-Based Environmental Data Visualization and Analysis Framework. In: *Proceedings of Visualization in Environmental Sciences (EnvirVis 2015), EuroVis 2015*. Cagliari, Italy: May 25-26. [[doi](#)]
5. Lei T, Liang X, Mascaro G, **Luo W**, White D, Westerhoff P, and Maciejewski R. 2015 An Interactive Web-Based Geovisual Analytics Tool to Explore Water Scarcity in Niger River Basin. In: *Proceedings of Visualization in Environmental Sciences (EnvirVis 2015), EuroVis 2015*. Cagliari, Italy: May 25-26. [[doi](#)]
4. **Luo W**, MacEachren AM, Yin PF, and Hardisty F. 2011. Spatial-Social Network Visualization for Exploratory Data Analysis. In: *Proceedings of 3rd ACM SIGSPATIAL International Workshop on Location-Based Social Networks (LBSN 2011), 19th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS 2011)*. Illinois, Chicago: November 1-4. [[doi](#)]
3. Savelyev, A, Janowicz, K, Thatcher, J, Xu, S, Mülligann, C, and **Luo, W**. 2011. Volunteered Geographic Services: Developing a Linked Data Driven Location-based Service. In: *SIGSPATIAL International Workshop on Spatial Semantics and Ontologies in conjunction with the ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL GIS 2011)*. Illinois, Chicago: November 1-4. [[doi](#)]
2. Thatcher, J, Mülligann, C, **Luo, W**, Xu, S, Guidero, E, and Janowicz, K. 2011. Hidden ontologies - how mobile computing affects the conceptualization of geographic space. In: *Proceedings of Workshop on Cognitive Engineering for Mobile, Conference on Spatial Information Theory: COSIT'11*. Belfast, Maine: September 12-16. [[link](#)]

1. Roth RE, Ross KS, Finch BG, **Luo W**, and MacEachren AM. 2010. A user-centered approach for designing and developing spatiotemporal crime analysis tools. In: *Proceedings of GIScience 2010*. Zurich, Switzerland: September 15. [[link](#)]

Other Publications and Reports

3. Savelyev A, MacEachren AM, Pezanowski S, Karimzadeh M, **Luo W**, Jonathan N, and Robinson, A.C. 2014: Report on New Methods for Representing and Interacting with Qualitative Geographic Information, Stage 2: Task Group 4: Message-focused use case. *Report on New Methods for Representing and Interacting with Qualitative Geographic Information, Contract #: W912HZ-12-P-0334*, University Park, PA: GeoVISTA Center, Department of Geography, The Pennsylvania State University. [[link](#)]
2. MacEachren AM, Savelyev A, **Luo W**, Pezanowski S, Karimzadeh M, Robinson AC and Mitra P. 2014: Report on New Methods for Representing and Interacting with Qualitative Geographic Information, Stage 2: Task Group 3: Social-focused use case. *Report on New Methods for Representing and Interacting with Qualitative Geographic Information, Contract #: W912HZ-12-P-0334*, University Park, PA: GeoVISTA Center, Department of Geography, The Pennsylvania State University. [[link](#)]
1. MacEachren AM, Karimzadeh M, Banerjee S, **Luo W**, Savelyev A, Pezanowski S, Robinson AC, and Mitra P. 2013: Report on New Methods for Representing and Interacting with Qualitative Geographic Information, Stage 2: Task Group 2: Tweeter-focused use case. *Report on New Methods for Representing and Interacting with Qualitative Geographic Information, Contract #: W912HZ-12-P-0334*, University Park, PA: GeoVISTA Center, Department of Geography, The Pennsylvania State University. [[link](#)]

Submitted

1. **Luo W**, Feige K, Middel A, Röber N, Böttinger M, Rautenhaus M, Hagen H, and Maciejewski R (Two-Page Sketch Accepted). A Survey of Visualization Methods for Climate Change and its Cascading Impacts. *Computer Graphics Forum*.

In Preparation

4. **Luo W**, Yuan M. Spatial-Temporal Dimensions of International Trade. *International Journal of Geographical Information Science*.
3. **Luo W**, Chang Z, Link R, Hejazi M, Clarke L, and Maciejewski R. Spatial Inter-Comparison of Climate Scenarios: a Geovisual Analytics Approach. *Computer Graphics Forum*.
2. **Luo W** and Cassels S. Mathematical models to inform effective home-use HIV testing strategies for men who have sex with men. *JMIR Research Protocols*.
1. Lei T, Westerhoff P, Mascaro G, White D, **Luo W**, and Maciejewski R. Exploring Spatial-temporal Variation of Future Water Scarcity in Niger River Basin. *Water Research*.

PRESENTATIONS, PANEL, POSTER, AND SESSION ORGANIZATION

Invited Presentations

12. **Luo W.** 2016. Geovisual Analytics in Human-Environment Interactions. In: *Department of Geography, University of California, Santa Barbara. Santa Barbara, CA: Feb 19.*
11. **Luo W.** 2015. GIS Applications to Health-Related Behaviors. In: *School of Nutrition & Health Promotion, Arizona State University. Phoenix, AZ: Sep 10.*
10. **Luo W.** 2014. Geovisual Analytics Approaches for the Integration of Geography and Social Network Contexts. In: *GeoDa Center Arizona State University. Phoenix, AZ: Nov 5.*
9. **Luo W.** 2014. GeoVisual Analytics of Location-Based Social Networks (LBSN). In: *University at Buffalo. Buffalo, NY: Nov 2.*
8. **Luo W.** 2014. Geo-Social Visual Analytics. In: *Geography 560 – Interpersonal Relationships in Geographic Space in Penn State University. University Park, PA: Sep 17.*
7. **Luo W.** 2014. Geovisual Analytics Approaches for the Integration of Geography and Social Network Contexts. In: *Arizona State University. Phoenix, AZ: May 28.*
6. **Luo W.** 2014. Geovisual Analytics Approaches for the Integration of Geography and Social Network Contexts. In: *Vaccine Center Purdue University. West Lafayette IN: May 2.*
5. **Luo W.** 2014. A Geovisual Analytic Approach to Understanding Spatial-Social Relationships in the International Trade Network. In: *Network Science Seminars. University Park, PA: Feb 4.*
4. **Luo W.** 2013. Geovisual Analytics Approaches for the Integration of Geography and Social Network Contexts. In: *Geography Department Texas State University. San Marcos, TX: Nov 18.*
3. **Luo W.** 2013. A Geo-Social Visual Analytic Approach in the International Trade Network. In: *Geography 597A – Visual Analytics: Leveraging GeoSocial Data in Penn State University. University Park, PA: October 17.*
2. **Luo W.** 2012. Geo-Social Visual Analytics with Applications to Catastrophic Risk Management. In *Global Catastrophic Risk institute. October 24.*
1. **Luo W.** 2012. Geo-Social Visual Analytics. In: *Geography 597B – Visual Analytics: Leveraging GeoSocial Data in Penn State University. University Park, PA: October 10.*

Conference Presentations

22. Yuan M, **Luo W.** 2017. Space-Time Patterns in International Trade, 1901-2009. *113th Annual Meeting of the Association of American Geographers. Boston MA: Apr 5 – 9.*
21. **Luo W.** 2016. Visual Analytics of Geo-Social Interaction Patterns for Epidemic Control. *Workshop on measuring and analyzing interactions among mobile entities. UT-Austin. Nov 10-11.*
20. Gao S, Chen HZ, **Luo W.**, Hu YJ, and Ye XY. Spatiotemporal-Network Visualization

for Exploring Human Activities and Interactions in Physical and Virtual Space.
Workshop on measuring and analyzing interactions among mobile entities.
UT-Austin. Nov 10-11.

19. **Luo W**, Hu Y, and Gao S 2016. Exploring Interactions between Virtual Space and Physical Space: A Data-Synthesis Approach. *In UCGIS 2016 Symposium.* Scottsdale, AZ. May 24-26.
18. Cassels S and **Luo W** 2016. Incorporating Geographical Space with Social and Sexual Network Space: HIV as a Case Study. *In UCGIS 2016 Symposium.* Scottsdale, AZ. May 24-26.
17. Li W, Elizabeth A and **Luo W** 2016. Space-time Pattern Analysis and Visualization. *In UCGIS 2016 Symposium.* Scottsdale, AZ. May 24-26.
16. **Luo W**, Maciejewski R. 2015 Climate Change Visual Analytics. *112th Annual Meeting of the Association of American Geographers.* San Francisco, CA: March 29 – April 2.
15. **Luo W**, Maciejewski R. 2015 Visual Analytics for Climate Change and its Cascading Threats. *Complexity and Global Security Session at European Conference on Complex Systems.* Tempe: Sep 30.
14. **Luo W**, Wang H, Kyle C, Maciejewski R. 2015 A Spatiotemporal visual analytics for event storytelling. *The 111th Annual Meeting of the Association of American Geographers.* Chicago: Apr 21-25.
13. **Luo W**, MacEachren AM. 2014. Geo-Social Visual Analytics. *The 110th Annual Meeting of the Association of American Geographers.* Tampa: Apr 8-12.
12. Peuquet, DJ, Stehle S, Hardisty F, Robinson A, **Luo W**, Di Q, Yang JI. 2013. STempo: An Integrated Statistical and Visualization Environment for Discovery and Analysis of Patterns in Complex Space-Time Event Data. *National Geospatial-Intelligence Agency (NGA) fall symposium.* Washington, DC.
11. **Luo W**, Yuan M. 2013. Spatial Dimensions of International Trade. *The 109th Annual Meeting of the Association of American Geographers.* Los Angeles: Apr 9.
10. **Luo W** and MacEachren AM. 2012. Geovisual Analytics Approaches for the Integration of Geography and Social Network Contexts. In: *Doctoral Colloquium VisWeek 2012.* Seattle, Washington. October 14-19.
9. **Luo W** and MacEachren AM. 2012. The Integration of Geography and Social Network Contexts. *In UCGIS 2012 Symposium.* Washington, D.C. May 30-June 1.
8. Peuquet, DJ, Hardisty F, Robinson A, Stehle S, **Luo W**, Di Q, Yang JI. 2012. STempo: An Integrated Statistical and Visualization Environment for Discovery and Analysis of Patterns in Complex Space-Time Event Data. *National Geospatial-Intelligence Agency (NGA) fall symposium.* Washington, DC.
7. **Luo W**, Yin PF, Hardisty F, and MacEachren AM. 2012. Understanding How Dynamic Social Interaction Shapes the Space: A Geovisual Analytic Approach. *The 108th Annual Meeting of the Association of American Geographers.* New York: Feb 24.
6. **Luo W**, Yin PF, Hardisty F, Blanford J, and MacEachren AM. 2011. Spatial social network visual analytic tool. *The 107th Annual Meeting of the Association of American Geographers.* Seattle: April 15.

5. **Luo W** and MacEachren AM. 2012. The Integration of Geography and Social Network Contexts. In *UCGIS 2012 Symposium*. Washington, D.C. May 30-June 1.
4. **Luo W**, Blanford J, Hardisty F, and MacEachren AM. 2010. A hierarchical framework to understand the characteristics of measles transmission. *The 106th Annual Meeting of the Association of American Geographers*. Washington, DC: April 15.
3. Roth RE, Ross KS, **Luo W**, Finch BJ, and MacEachren AM. 2010. A user-centered approach to extending spatiotemporal crime analysis tools. *The 106th Annual Meeting of the Association of American Geographers*. Washington, DC: April 15.
2. Ross KS, Roth RE, Finch BG, **Luo W**, McCabe CA, and MacEachren AM. 2010. Web-based geovisualization and geovisual analytics to support crime analysis. *Department of Homeland Security Summit*. Washington, DC: March 9.
1. **Luo W**, Mao L. 2009 "A two-layer scale-free network for the spread of infectious diseases" *The 105th Annual Meeting of the Association of American Geographers*. Las Vegas. March 22-27.

Conference Posters

5. Steptoe M, Krueger R, Zhang YF., Liang X, Garcia R, Kadambi S, **Luo W**, Ertl T, and Maciejewski R. (2015) VAST Challenge 2015: Grand Challenge - Team VADER/VIS. In: *2015 IEEE Conference on Visual Analytics Science and Technology (VAST)*. Chicago, Illinois: Oct 25-30.
4. **Luo W**, MacEachren AM, Yin PF, and Hardisty F, 2012. Understanding Social and Spatial Relationships in the International Trade Network: A Geovisual Analytic Approach. *EMS Graduate Student Poster Exhibition in Penn State University*. University Park, PA: September 20.
3. **Luo W**, MacEachren AM, Yin PF, and Hardisty F, 2012. GeoSocialApp: A Visual Exploratory Data Analysis Tool for Spatial-Social Network. CyberGIS'12 Poster Exhibition. Champaign, IL: August 7.
2. **Luo W**, MacEachren AM, Yin PF, and Hardisty F, 2012. Understanding Social and Spatial Relationships in the International Trade Network: A Geovisual Analytic Approach. *2012 Graduate Exhibition in Penn State University*. University Park, PA: March 25.
1. **Luo W**, MacEachren AM, Yin PF, and Hardisty F, 2011. GeoSocialApp: A Visual Exploratory Data Analysis Tool For Spatial-Social Network. *EMS Graduate Student Poster Exhibition in Penn State University*. University Park, PA: September 29.

Panel

1. Research Design in Physical Geography and GIScience, 2012 In: *No)Boundaries Interdisciplinary Student Conference*. University Park, PA: March. 31.

Session Organization

6. Co-organize, 2017. Symposium on Spatiotemporal Thinking, Computing and Applications (ST symposium). *113th Annual Meeting of the Association of American Geographers*. Boston, MA: Apr 5 – 9.

5. Organize, 2016. Geovisual Analytics. *112th Annual Meeting of the Association of American Geographers*. San Francisco, CA: March 29 – April 2.
4. Co-organize, 2016. Complexity Theories in Geography. *112th Annual Meeting of the Association of American Geographers*. San Francisco, CA: March 29 – April 2.
3. Co-organize 2015. Urban Metabolism, Morphology and Microclimate Under Global Change. *AGU Fall Meeting*. San Francisco, California: Dec 14 – 18.
2. Co-organize 2015. Complexity and global security: Sustainability in an increasingly connected and urbanizing world. *European Conference on Complex Systems (CSS2015)*. Tempe, Arizona: Sep 28 – Oct 2.
1. Co-organize a series of sessions, 2013. Spatial/Spatiotemporal Data Mining and Visualization. *109th Annual Meeting of the Association of American Geographers*. Los Angeles, CA: April 9-13.

TEACHING EXPERIENCE

- 2014 **Instructor**
Department of Geography, Penn State University
 Geography 160 Web (Mapping Our Changing World —one semester)
- 2013 **Laboratory Teaching Assistant**
Department of Geography, Penn State University
 Geography 160 (Mapping Our Changing World —one semester)
- 2010-2012 **Laboratory Teaching Assistant**
Department of Geography, Penn State University
 Geography 363 (Geographic Information Systems—four semesters)

Invited Lectures

5. **Luo W.** 2016. Introduction to Spatial Autocorrelation In: *Geog 172: Intermediate geographical data analysis*, Santa Barbara, CA: Nov 2.
4. **Luo W.** 2014. Career Module 1 In: *ASU 101-FSE Tempe, AZ*: Oct 16.
3. **Luo W.** 2014. Exploratory Geovisualization EDA, ESDA, and Interacting with Data In: *Geography 461W: Dynamic Cartographic Representation (geovisualization)* University Park, PA: Feb 14.
2. **Luo W.** 2013. Introduction to Geovisualization. In: *Geography 160 (Mapping Our Changing World)*. University Park, PA.
1. **Luo W.** 2012. Geovisualization. In: *Geography 363 (Geographic Information Systems)*. University Park, PA.

PAST WORK EXPERIENCE

- 2016-Present **Postdoctoral Scholar**

Department of Geography, University of California, Santa Barbara
Mathematical models to inform effective home-use HIV testing strategies for MSM. The project is supervised by Dr. Susan Cassels. Duties include developing agent-based network models and visual analytics tools related to HIV testing strategies with R, JAVA, and Javascript, authorship/co-authorship of numerous publications and reports.

2014-2015

Postdoctoral Research Assistant

Computing, Informatics, and Decision Systems Engineering, Arizona State University

Develop visual analytics tools to address water risks posed by climate change. The [Foresight Initiative](#) project is supervised by a big interdisciplinary team: Dr. Nadya Bliss, Dr. Ross Maciejewski, Dr. Dave White, and other 15 CO-PIs. This project also collaborates with another three national labs including Pacific Northwest National Laboratory, Oak Ridge National Laboratory, and Argonne National Laboratory. Duties include leading the team to design and development of geo-visual analytic applications (e.g., climate change, water modeling, social media) with Java, Javascript, MongoDB, mentor graduate students, authorship/co-authorship of numerous publications and reports.

2009-2014

Research Assistant

GeoVISTA Center, Penn State University

Projects include [Vaccine Modeling Initiative](#) (Fall 2009 to Fall 2011), [GeoSocialApp](#) (Fall 2010 to present), [PSUMobile](#) (Spring 2011 to Summer 2011), Vaccine: Visual Analytics for Command, Control, and Interoperability Environments Center of Excellence ([CrimeViz](#) and [Senseplace2](#)) (Fall 2009 to Summer 2014), [STempo](#) (Spring 2012 to Summer 2014). Projects are supervised by Dr. Alan MacEachren, Dr. Donna Peuquet, Dr. Krzysztof Janowicz, and myself. Duties include design and development of geo-visual analytic applications (desktop-based, web-based, and mobile-based) with Java, Javascript, Servlet, and PostgreSQL, and epidemic models with R and Matlab, user interface evaluation, authorship/co-authorship of numerous publications, posters, and reports.

2008

Student Assistant

ESRI International User Conference

2007-2009

Research Assistant

Geography Department, University at Buffalo

Conduct extensive data analysis via Matlab and Java, including spatial statistics and social network analysis. Develop agent-based epidemic models to evaluate control scenarios with Matlab.

2006-2007

Research Student

Northwest University

Projects include National Natural Science Fund on Topographic Factors based on Regional Soil Loss DEM, Settlement Observation of XIAN Project, and World Bank Shaanxi Urban Transport Project. Projects are supervised by Dr. Mudan Zhao, Dr. Tianwen Li and Dr. Mingming Cao. Duties include design of questionnaire, collection of field survey data, report writing, and spatial data analysis with ArcGIS.

2006-2007

Project Manager and Cartographer

Chang'an Cultural Relics Bureau

Heritage Tourism Map of Chang'an District Project. Duties include cartographic design and development with CorelDraw.

Honors & Awards

7. **Award for Outstanding Comprehensive Submission** from VADER/VIS-Grand Challenge 2015. Nominated along with M Steptoe, R Krueger, YF. Zhang, X Liang, R Garcia, S Kadambi, **W Luo**, T Ertl, R Maciejewski.
6. **Best Presentation** from National Geospatial-Intelligence Agency (NGA) fall symposium 2013. Nominated along with DJ. Peuquet, S Stehle, F Hardisty, A Robinson, **W Luo**, Q Di, JI Yang for the title: STempo: An Integrated Statistical and Visualization Environment for Discovery and Analysis of Patterns in Complex Space-Time Event Data.
5. **Academic Enrichment Award** from the **Ruby S. Miller Endowment Fund** 2012. Received for the title: Geovisual Analytics Approaches for the Integration of Geography and Social Network Contexts at VisWeek 2012. (\$404.10)
4. **E. Willard Miller Award in Geography, PhD Level: 1st Place.** 2012. Received for the title "Geo-Social Visual Analytics". (\$600)
3. **Academic Enrichment Award** from the **Ruby S. Miller Endowment Fund.** 2011. Received for the title: Spatial-Social Network Visualization for Exploratory Data Analysis at the 19th Annual ACM SIGSPATIAL Conference. (\$174)
2. **GIScience Best Paper Award: Finalist, Extended Abstract Category.** 2010. One of four extended abstracts (of 98) nominated for best in category. Nominated along with KS Ross, BG Finch, **W Luo**, and AM MacEachren for the title "A user-centered approach for designing and developing spatiotemporal crime analysis tools" at GIScience 2010.
1. **University Scholarship.** 2004-2006. Northwest University

TRAVEL GRANTS

7. **NSF Travel Grant** 2016. Received for the title: Visual Analytics of Geo-Social Interaction Patterns for Epidemic Control at workshop on measuring and analyzing interactions among mobile entities at UT-Austin. (\$750)
6. **NSF Travel Grant** 2015. Received for the title: Visual Analytics for Climate Change and its Cascading Threats at CCS 2015. (\$1000)
5. **NSF Travel Grant** 2015. Received for the title: A Spatiotemporal visual analytics for event storytelling at AAG 2015. (\$1000)
4. **VisWeek Travel Grant** 2012. Received for the title: Geovisual Analytics Approaches for the Integration of Geography and Social Network Contexts at VisWeek 2012. (\$1,517)
3. **NSF Travel Grant** 2012. Received for the title: GeoSocialApp: A Visual Exploratory Data Analysis Tool for Spatial-Social Network at CyberGIS'12. (\$800)
2. **NSF Travel Grant.** 2011. Received for the title: Spatial-Social Network Visualization for Exploratory Data Analysis at the 19th Annual ACM SIGSPATIAL Conference. (\$882.93)
1. **University Travel Grant.** 2009. Received for the title: A Two-layer Scale-free Network for the Spread of Infectious Diseases at the 105th Annual Meeting of the Association of American Geographers. (\$250)

EDUCATION COMMITTEES

Arizona State University

Membership on Master's Committees

2014 – 2015 Zheng Chang, School of Computing, Informatics and Decision Systems Engineering

ACADEMIC SEARVICE

Reviewing

- *International Journal of Geographical Information Science*
- *Cartography and Geographic Information Science*
- *Spatial Cognition and Computation: An Interdisciplinary Journal*
- *Applied Geography*
- *ACM SIGSPATIAL*
- *ISPRS International Journal of Geo-Information*
- *Big Data & Society*
- *EuroVis*
- *Journal of Information Technology*
- *Journal of Information Science and Engineering*
- *Geographical Information Systems: Trends and Technologies*
- *International Journal of Health Geographics*
- *Annals of GIS*
- *Journal of Spatial Information Science*
- *Frontiers of Earth Science*

- *Cities as Spatial and Social Networks*

External Service

2017	Sponsorship Committee: Facilitate SuperMap sponsorship to the 25 TH International Conference on Geoinformatics, 2017, Buffalo, U.S. (\$10,000)
2016	Election Committee: The International Association of Chinese Professionals in Geographical Information Sciences CPGIS
2016	International Steering Committee: International Conference on Cartographic Visualization of Big Data for Early Warning and Disaster/Crisis Management (EW & CM): Methodology, Techniques and Applications
2016-	Research Committee: University Consortium for Geographic Information Science (UCGIS)
2016-	Education Committee Chair: The International Association of Chinese Professionals in Geographical Information Sciences CPGIS
2015-2017	Board Members: CPGIS
2014-2016	Program Committee: 7 th , 8 th , and 9 th ACM SIGSPATIAL International Workshop on Location-Based Social Networks
2014	Program Committee: IEEE Big Data on Spatial Connectivity
2014-	Health GIS Committee: CPGIS
2011- 2016	Education Committee: CPGIS

Internal Service

2016-	UCSB Postdoc Union Stewards
2014	Global Program Orientation Leader
2012-2014	President: Innovation Interdisciplinary Collaboration Community
2012	No)Boundaries Interdisciplinary Student Conference Committee
2011-2014	Department Representative: EMS Graduate Student Council
2011-2013	PSU Department of Geography Graduate School Mentor Program
2010-2011	Treasurer: Network Science Reading Group

Academic Memberships

2008-	AAG (Association of American Geographers)
2008-	CPGIS (The International Association of Chinese Professionals in Geographical Information Sciences)
2011-	ICA (International Cartographic Association) Commission on Cognitive Visualization

COMPUTING SKILLS

- Computing Environments: High Performance Computing, Cloud Computing
- Programming Language: Java, JavaScript, HTML, CSS, Python, C++, Visual Basic
- Statistical Analysis: Matlab, R, SPSS

- GIS/RS Software: ArcGIS, MapInfo, ENVI, Erdas
- Database: PostGIS, MongoDB, Visual FoxPro, Microsoft Access
- Libraries: Graphviz, Leaflet, CartoDB, D3, JQuery, Processing, Gephi, GeoViz, Weka, JUNG, JFreeChart