

Biographical Sketch - Wenwen Li

Professional Preparation

Beijing Normal University, Beijing, China, Computer Science, B.S., 2004
Chinese Academy of Sciences, Beijing, China, Signal and Information Processing, M.S., 2007
George Mason University, Fairfax, VA, Earth System & Geoinformation Science, Ph.D., 2010

Appointments

2017-present, Associate Professor, Arizona State University
2016-present, Senior Sustainability Scientist, Julie Ann Wrigley Global Institute of Sustainability;
2016-present, Graduate Faculty, Computer Science Program;
2014-present, Honors Faculty, Barrett, The Honors College;
2012-2017, Assistant Professor, School of Geographical Sciences and Urban Planning.
2010-2012, Research Specialist, Department of Geography, University of California, Santa Barbara.

Products

Five Most Closely Related to Proposal

1. Li, W. (2017). Lowering the Barriers for Accessing Distributed Geospatial Big Data to Advance Spatial Data Science: The PolarHub Solution. *Annals of the American Association of Geographers*, 1-21.
2. Li, W., and S. Wang. 2017. PolarGlobe: A web-wide virtual globe system for visualizing multidimensional, time-varying, big climate data. *International Journal of Geographical Information Science* 31(8):1562-1582 DOI: 10.1080/13658816.2017.1306863.
3. Li, W., S. Wang, and V. Bhatia. 2016. PolarHub: A large-scale web crawling engine for OGC service discovery in cyberinfrastructure. *Computers, Environment and Urban Systems* 59:195-207 DOI: 10.1016/j.compenvurbsys.2016.07.004.
4. Li, W., S. Wu, M. Song and X. Zhou. 2016. A scalable cyberinfrastructure solution to support big data management and multivariate visualization of time-series sensor observation data. *Earth Science Informatics* 9(4):449-464 DOI: 10.1007/s12145-016-0267-1.
5. Li, W., H. Shao, S. Wang, X. Zhou, and S. Wu. 2016. A2CI: A cloud-based, service-oriented geospatial cyberinfrastructure to support atmospheric research. Pp. 137-161 in T. C. Vance, N. Merati, C. Yang, and M. Yuan, eds., *Cloud Computing in Ocean and Atmospheric Sciences*, Academic Press.

Five Other Significant Products

1. Li, W., C. Yang, D. Nebert, R. Raskin, and H. Wu. 2011. Semantic-based service chaining for building a virtual Arctic spatial data infrastructure. *Computers & Geosciences* 37(11):1752-1762.
2. Li, Z., M. E. Hodgson, and W. Li. 2016. A general-purpose framework for parallel processing of large-scale LiDAR data. *International Journal of Digital Earth*, 11(1):26-47
3. Li, W., K. Cao, and R. L. Church. 2016. Cyberinfrastructure, GIS and spatial optimization: Challenges and opportunities. *International Journal of Geographical Information Science* 30(3):427-431.
4. Song, M., W. Li, B. Zhou, and T. Lei. 2016. Spatiotemporal data representation and its effect on the performance of spatial analysis in a cyberinfrastructure environment. *Computers and Geosciences* 87(2016):11-21.
5. Anselin, L., S. Rey and W. Li. 2014. Metadata and provenance for spatial analysis: The case of spatial weights. *International Journal of Geographical Information Science* 28:11, 2261-2280 DOI: 10.1080/13658816.2014.917313.

Synergistic Activities:

1. NSF CAREER Award (PI), “Cyber-knowledge Infrastructure for Geospatial Data,” supports research and education activities that advance understanding of problems with space-time dynamics, such as polar climate change, through the development of cutting-edge semantic search, intelligent data processing and visualization. Portal: <http://cici.lab.asu.edu/gci2>
2. PI of NSF PolarHub (<http://cici.lab.asu.edu/polarhub3>), a large-scale web crawler for GIS data.
3. PI of NSF PolarGlobe (<http://cici.lab.asu.edu/polarglobe>), a space-time visualization tool for climate simulation data.
4. Chair, Cyberinfrastructure Specialty Group, American Association of Geographers, 2013-2014.
5. 80+ papers in peer-reviewed journals, conference proceedings and books; 1.7 million research funding from NSF, USGS, OGC as PI.