CURRICULUM VITAE

SHAOWEN WANG

CONTACT INFORMATION

OFFICE & MAILING ADDRESS

Room 2046, Natural History Building
1301 W. Green Street, MC 150
University of Illinois at Urbana-Champaign
Urbana, IL 61801

OTHER

Telephone: (217) 333-7608
Fax: (217) 244-1785
E-mail: shaowen@illinois.edu
https://go.illinois.edu/ShaowenWang

RESEARCH AND TEACHING INTERESTS

- Geographic information science and systems (GIS)
- Advanced cyberinfrastructure and cyberGIS
- Complex social and environmental problems
- Computational and data sciences
- Geospatial science and technology
- High-performance and distributed computing
- Spatial analysis and modeling

EDUCATION

Ph.D.	The University of Iowa, Iowa City, Iowa, USA, 2004 Geography (Geographic Information Science)
M.C.S.	The University of Iowa, Iowa City, Iowa, USA, 2002 Computer Science (Systems and Networks)
M.S.	Peking University, Beijing, China, 1998 Geography (Geographic Information Systems and Remote Sensing)
B.S.	Tianjin University, Tianjin, China, 1995 Computer Engineering (Transportation Information Systems)

PROFESSIONAL APPOINTMENTS AND EXPERIENCES

ADMINISTRATIVE

2022-present **Faculty Fellow**, Office of the Vice Chancellor for Research and Innovation, University of Illinois at Urbana-Champaign (UIUC)

- Provided leadership for advancing geospatial research and innovation at UIUC

- Facilitated collaboration with the Taylor Geospatial Institute (https://taylorgeospatial.org)
- Built regional, national, and international partnerships to foster, promote, and fund geospatial research

2017-present **Department Head**, Department of Geography and Geographic Information Science, UIUC

- Led the process of developing and implementing a new strategic plan
- Built programs and put in place policies to enhance diversity, equity, and inclusion
- Led substantial faculty recruitment efforts (10+ new hires)
- Spearheaded the doubling of undergraduate majors
- Secured the first major gift (>$1M) in the history of the Department
- Tripled the amount of external funding
- Increased fiscal and human resources for long-term sustainability under decreased state resources and increasing demands
- Established a new online graduate certificate and M.S. degree in cyberGIS and geospatial data science

2013-present **Founding Director**, CyberGIS Center for Advanced Digital and Spatial Studies (CyberGIS Center, http://cybergis.illinois.edu/), UIUC

- Secured more than $1M external funding each year for conducting interdisciplinary and transdisciplinary research and education
- Partnered with the American Association of Geographers (AAG) and the University Consortium for Geographic Information Science (UCGIS) to conduct a series of summer schools focused on developing the next-generation workforce for advancing cyberGIS and geospatial data science to solve complex social, environmental, and urban problems
- Created the Geospatial Fellows program supported by the U.S. National Science Foundation (NSF) for advancing COVID-19 research and education through reproducible geospatial science
- Secured an NSF Harnessing the Data Revolution (HDR) institute grant ($15M) as the Principal Investigator (PI) and Director for leading a multi-institution and multidisciplinary team to establish the national Institute for Geospatial Understanding through an Integrative Discovery Environment (I-GUIDE, http://iguide.illinois.edu)

2014-17 **Lead**, Earth and Environment Theme, NCSA

- Partnered with many units at UIUC to recruit faculty for enhancing interdisciplinary and transdisciplinary research programs
- Advised NCSA Director on key challenges and opportunities in Earth and environment research enabled by computational and data sciences

- Served as a member of the leadership team for developing a new strategic plan for NCSA
- Collaborated with diverse national and international research communities to tackle grand challenges in Earth and environment sciences through data-intensive and computational approaches

2010-17 **Associate Director for CyberGIS**, NCSA

- Founded the CyberGIS Center for Advanced Digital and Spatial Studies
- Established an undergraduate internship program focused on applying cyberGIS and high-performance computing to solve real-world problems
- Contributed to the development and execution of externally funded research programs with more than $200M support
- Secured an NSF Major Research Instrumentation grant (>$2.5M) to establish ROGER – the first-ever geospatial supercomputer
- Launched a series of international conferences focused on advancing cyberGIS and related scientific problem solving

ACADEMIC

2020-present **Faculty Affiliate**
Discovery Partners Institute, the University of Illinois

2016-present **Faculty Affiliate**
Institute for Sustainability, Energy, and Environment (iSEE), UIUC

2013-present **Full Professor (with tenure)**
Department of Geography and Geographic Information Science, UIUC

2013-present **Faculty Affiliate**
School of Information Sciences, UIUC

2012-present **Faculty Affiliate**
Department of Urban and Regional Planning, UIUC

2011-present **Faculty Affiliate**
Department of Computer Science, UIUC

2008-present **Faculty Affiliate**
Computational Science and Engineering Graduate Program, UIUC

2007-present **Founding Director**
CyberInfrastructure and Geospatial Information Laboratory (CIGI), UIUC (http://cigi.illinois.edu/)

2008-20 **Lead of Spatial Informatics Track**
Illinois Informatics Institute, UIUC

2014-19 **Research Faculty Affiliate**
Center of Excellence for Geospatial Information Science, U.S. Geological Survey (USGS)

2007-10 **Senior Research Scientist**
Research, Development, Consultation, and Management: Geospatial Cyberinfrastructure, National Center for Supercomputing Applications (NCSA), UIUC

2010-13 **Associate Professor (with tenure)**
Department of Geography and Geographic Information Science, UIUC

2007-10 **Assistant Professor (tenure-track)**
Department of Geography, UIUC

2005-07 **Research Scientist** (the Highest Rank of Research Staff at the University of Iowa)
Research, Development, Consultation, and Management: Computational Grids and Cyberinfrastructure, Academic Technologies – Research Services of Information Technology Services, the University of Iowa

2004-07 **Adjunct Assistant Professor**
Department of Geography, the University of Iowa

2003-07 **Founding Manager**
Grid Research and educatiOn group @ ioWa (GROW), Academic Technologies – Research Services of Information Technology Services, the University of Iowa

2002-05 **Assistant Research Scientist**
Research, Development, Consultation, and Management: Computational Grids and their Applications in Scientific, Engineering, and Medical Research and Education, Academic Technologies – Research Services of Information Technology Services, the University of Iowa

2002 **Research Assistant**
Participated in the U.S. Department of Agriculture (USDA) Funded Research Project: Uncertainty Visualization in Water Quality Protection, Department of Geography, the University of Iowa

2001-02 **Research Assistant**
Research and Development: Computer-Aided Design and Scientific Visualization, Academic Technologies – Research Services of Information Technology Services, the University of Iowa

1999-2001 **Research Assistant**
Research and Development: High-Performance Computing and Scientific Visualization, Advanced Research Computing Services (ARCS), the University of Iowa

1998-99 **Research Assistant**
Research and Development: GIS-Based Climatological Modeling, Department of Geography, the University of Iowa

1995-98 **Research Assistant**
Research and Development: Object-Oriented GIS, Institute of Environmental Engineering, Peking University, Beijing, China

1992-94 **Research Assistant**
Research and Development: Object-Oriented Methodology and Computer-Aided Design, Department of Computer Science, Tianjin University, Tianjin, China

SELECTED AWARDS AND HONORS

2022 Fellow of the American Association of Geographers (AAG)

2022 AAG Distinguished Scholarship Honors (citation)

2021 Fellow of the American Association for the Advancement of Science (AAAS)

2021 Getis-Ord Lecture in Spatial Analysis, the 60th Anniversary Meeting of the Western Regional Science Association

2020-21 Fellow of the Big Ten Academic Alliance (BTAA) Academic Leadership Program

2019 Borchert Lecture, the University of Minnesota

2019 Teacher Ranked as Excellent, Center for Teaching Excellence, UIUC

2019 Gerard Rushton Fellow, Department of Geographical and Sustainability Sciences, the University of Iowa

2018-21 Richard and Margaret Romano Professorial Scholar, College of Liberal Arts and Sciences, UIUC

2016 Disparate Data Challenge Award (Stage One: $10,000; Stage Two: University Team Award) of the National Geospatial-Intelligence Agency (NGA), with Nathan Casler, Yizhao Gao, Hao Hu, Yan Y. Liu, Johnathan Rush, Kiumars Soltani, Jeffrey Terstriep, and Dandong Yin

2016 Best Paper Award (Software and Software Environments), with Hao Hu (Lead Author and Graduate Advisee), Xingchen Hong, Jeff Terstriep, Yan Y. Liu, Michael P. Finn, Johnathan Rush, and Jeffrey Wendel, *the 5th Annual Conference on Extreme Science and Engineering Discovery Environment (XSEDE'16)*

2013-16 Centennial Scholar, College of Liberal Arts and Sciences, UIUC

2012 Teacher Ranked as Excellent, Center for Teaching Excellence, UIUC

2011-12 Helen Corley Petit Scholar, College of Liberal Arts and Sciences, UIUC

2011 Best Research Poster Award, with Yanli Zhao (Lead Author and Graduate Advisee), Anand Padmanabhan, and Yan Liu, *the 5th NSF TeraGrid Annual Conference*

2009, 2010 Teacher Ranked as Excellent, Center for Teaching Excellence, UIUC

2009 NSF CAREER Award

2009 Delegate Invited by the U.S. National Academy of Sciences, China-U.S. Roundtable on Scientific Data Cooperation

2008 New Course Award for Spatial Informatics, Illinois Informatics Institute, UIUC

2007 NCSA Fellow

2007 Innovations in Instructional Computing Award, the University of Iowa, Iowa City, Iowa, USA

2006 Visiting (to Lund University) Scholarship, the NSF Office of International Science and Engineering

2006 Improving Our Workplace Award (IOWA), the University of Iowa, Iowa City, Iowa, USA

2002 Travel Scholarship, Global Grid Forum

2002 Esri Scholarship

EXTRAMURAL RESEARCH FUNDING

SUMMARY (funding received from the U.S. NSF, Centers for Disease Control and Prevention (CDC), Department of Energy (DOE), Illinois Environmental Protection Agency (Illinois EPA), National Aeronautics and Space Administration (NASA), National Institutes of Health (NIH), USDA, USGS, and industry): PI for more than **$30 million** competitive research grants; co-PI, investigator, and senior personnel for contributing to sponsored research with tens of millions of U.S. dollars; and PI for tens of millions of normalized computing hours of NSF supercomputing resources.

SELECTED GRANTS AWARDED BY U.S. FEDERAL AND STATE AGENCIES

2023-24 **Co-PI**, CC* Regional Computing: Taylor Geospatial Institute Regional AI Learning System (**$1 million**), with PI: William Kramer and Co-PI: Vasit Sagan

2021-26 **PI**, NSF HDR Institute: Geospatial Understanding through an Integrative Discovery Environment (**$15 million**), with Co-PIs: Deanna Hence, Mohan Ramamurthy, X. Carol Song, and David Tarboton

2021-26 **Co-PI**, NSF: ACES – Accelerating Computing for Emerging Sciences (**$12,249,999**), with PI: Honggao Liu and Co-PIs: Dhruva Chakravorty, Timothy M. Cockerill, and Lisa M. Perez

2020-23 **Co-PI**, USDA: DATAg: Scalable Real-time Satellite-based Crop Yield Forecasting Framework via Deep Learning (**$496,973**), with PI: Chunyuan Diao

2019-23 **Co-Investigator**, NIH R01: Development and Validation of Regional Models of HIV Vulnerabilities and Solutions (**$2,493,185**), with PIs: Dolores Albarracin and Sally Chan

2018-23 **Co-PI**, NSF CNH-L: Coupled dynamics of tourism and mosquito-borne disease transmission in the Americas (**$1,576,788**), with PI: Allison Gardner, and Co-PIs: Brian F. Allan and Sandra De Urioste-Stone

2018-22 **Co-PI**, Belmont Forum Collaborative Research Food-Water-Energy Nexus: Intelligent Urban Metabolic Systems for Green Cities of Tomorrow: An FEW Nexus-based Approach (**$750,000**), with PI: Luis Rodriguez and Co-PI: Yanfeng Ouyang

2017-22 **PI**, NSF: Collaborative Research: SI2-SSI: Cyberinfrastructure for Advancing Hydrologic Knowledge through Collaborative Integration of Data Science, Modeling and Analysis (**$699,999**)

2017-21 **PI**, NSF: SI2-S2I2 Conceptualization: Geospatial Software Institute (**$599,997**)

2016-22 **Co-PI**, NSF: Collaborative Research: Developing and Deploying SKOPE: Synthesizing Knowledge of Past Environments (**$884,627**), with PI: Bertram Ludäscher

2016-21 **Senior Personnel**, NSF: INFEWS/T4: The INFEWS-ER: A Virtual Resource Center Enabling Graduate Innovations at the Nexus of Food, Energy, and Water Systems (**$1 million**), with PI: Luis Rodriguez

2016-20 **Co-PI**, USDA: Using Precision Technology in On-farm Field Trials to Enable Data-Intensive Farm Management **($4 million**), with PI: David Bullock

2016-18 **Co-PI**, NSF: Conference: Agent-Based Modeling 2017: Agent-Based Models in the Social, Human-Environment, and Life Sciences (**$94,996**), with PI: Li An and Co-PIs: Piotr Jankowski, Steven Manson, and Billie Turner II

2016-18 **Co-I**, NASA: ACCESS to Terra Data Fusion Products (**$1 million**), with PI: Larry Di Girolamo

2016 **Co-PI**, NSF: 2016 Software Infrastructure for Sustained Innovation (SI2) Principal Investigators Workshop (**$104,947**), with PI: Francis Timmes and Co-PIs: Stanley Ahalt and Matthew Turk

2015-17 **PI**, NSF: CyberGIS Curriculum Workshop for Synthesizing Education Materials (**$49,987**)

2015-16 **PI**, NSF: Interoperating CyberGIS and HydroShare for Integrated Food, Energy and Water Research (**$374,821**), with Co-PI: David Tarboton

2014-17 **PI**, NSF MRI: Acquisition of a National CyberGIS Facility for Computing and Data-Intensive Geospatial Research and Education (**$2,553,335**), with Co-PIs: Praveen Kumar, Carole Palmer, Robert Pennington, and E. Lynn Usery

2014-18 **PI**, NSF CIF21: DIBBs: Scalable Capabilities for Spatial Data Synthesis **($1,499,998**), with Co-PIs: Katarzyna Keahey and Anand Padmanabhan

2014-19 **PI**, USGS: CyberGIS Capabilities for the National Map (**$632,148**)

2013-16 **PI**, EAGER: CISSDA: A Unified Cyberinfrastructure Framework for Scalable Spatiotemporal Data Analytics (**$300,000**), with Co-PIs: Roy Campbell, Jiawei Han, Sara McLafferty, and Mei-Po Kwan

2012-14 **PI**, Illinois EPA: Next-Generation Resource Management Mapping Services (**$349,923**)

2012-13 **PI**, NSF EAGER: Collaborative Research: EarthCube Interoperability Testbed – Assessing a Layered Architecture for Integration of Existing Capabilities (**$18,000**)

2012-17 **PI** of the University of Illinois, The Open Science Grid: Distributed High Throughput Computing for the Nation's Scientists, Researchers, Educators, and Students (**$855,000**), a major U.S. national cyberinfrastructure project jointly funded by DOE and NSF

2010-18 **PI**, NSF SI2-SSI: CyberGIS Software Integration for Sustained Geospatial Innovation (**$4.8 million**), with Co-PIs: Luc Anselin, Budhendra Bhaduri, Timothy Nyerges, and Nancy Wilkins-Diehr

2010-14 **Investigator**, NSF SDCI: Open Gateway Computing Environments – Tools for Cyberinfrastructure-Enabled Science and Education (**$225,000**), a sub-award through Indiana University, PI: Marlon Pierce

2009-14 **PI**, NSF CAREER: Formalizing and Resolving Computational Intensity of Spatial Analysis to Establish a Cyber-GIS Framework **($470,000**)

2008-09 **Investigator and Technical Director**, CDC: Global Malaria Map Application (**$50,000**)

2007-11 **Investigator**, Development and Operation of the TeraGrid GIScience Gateway (**$700,000)**, the NSF TeraGrid Science Gateway Program

2007-08 **Co-PI**, NSF CSR-AES: Troubleshooting Large Scale Computing Grids with Machine Learning Techniques (**$29,999**), with Nitesh Chawla (PI), and other Co-PIs: Xiaohui Song and Douglas Thain

2006-12 **PI** of the University of Iowa, UIUC, and National Center for Supercomputing Applications, Sustaining and Extending the Open Science Grid – Improving the Reliability of Distributed Systems (**$1.3 million**)

2006-07 **Co-PI and Technical Director**, Building and Sustaining Information Provider Solutions for Production Grids (**$105,000**), DOE and NSF Joint Data Grid Program, with Yasar Onel (PI)

2005-06 **PI**, The Open Science Grid Generic Information Provider (**$100,000**), a sub-award through the University of Florida NSF-ITR (Information Technology Research) Project: international Virtual Data Grid Laboratory for Data-Intensive Science (iVDGL), PI: Paul Avery

2005 **Co-PI and Technical Director**, Interoperability of the Open Science Grid and Large Hadron Collider Computing Grid (**$115,000**), DOE and NSF Joint Data Grid Program, with Yasar Onel (PI)

SELECTED SUPERCOMPUTING RESOURCE AWARDS BY NSF

2019-21 **Co-PI**, Powering the HydroShare Science Gateway (**650,000 SUs** (Service Units) – one service unit equivalent to one normalized computing hour), with PI: David Tarboton

2017-19 **PI**, Interoperating CyberGIS and HydroShare for Scalable Geospatial and Hydrologic Sciences (**36,000 SUs**), with Co-PI: David Tarboton

2013-14 **PI**, Sustaining the CyberGIS Discovery Environment (**9.35 million SUs**), with Co-PIs: Yan Liu, Anand Padmanabhan, and Wenwu Tang

2013-14 **PI**, An Extreme-Scale Computational Approach to Redistricting Optimization (NSF Blue Waters Allocation Award – 600K node hours – approximately **9.6 million** normalized computing hours), with Co-PIs: Wendy K. Tam Cho and Yan Liu

2012-13 **PI**, Extending the CyberGIS Discovery Environment (**5.58 million SUs**), with Co-PIs: Yan Liu, Anand Padmanabhan, and Wenwu Tang

2011-12 **PI**, Establishing the CyberGIS Gateway (**3.1 million SUs**), with Co-PIs: Yan Liu, Anand Padmanabhan, and Wenwu Tang

2010-11 **PI**, Expanding the TeraGrid GIScience Gateway (**1.2 million SUs**), with Co-PIs: Yan Liu, Anand Padmanabhan, and Wenwu Tang

2009-10 **PI**, Extending the TeraGrid GIScience Gateway (**625,500 SUs**), with Co-PIs: Yan Liu and Wenwu Tang

2008-09 **PI**, Sustaining the TeraGrid GIScience Gateway (**310,500 SUs**), with Wenwu Tang (Co-PI)

2007-08 **PI**, Extending and Sustaining GISolve as a GIScience Gateway Toolkit for Geographic Information Analysis (**108,500 SUs**), with Co-PIs: Marc P. Armstrong, Mary Kathryn Cowles, Brian J. Smith, and Jun Yan

2006-07 **PI**, Developing GISolve as a GIScience Gateway Toolkit for Geographic Information Analysis (**30,000 SUs**), with Co-PIs: Marc P. Armstrong, Mary Kathryn Cowles, and Jun Yan

2005-06 **PI**, Prototyping an Interoperable Solution to Using the TeraGrid as a Resource on the Open Science Grid and Using the Open Science Grid as a Resource from the TeraGrid (**30,000 SUs**), with Co-PIs: Chris Baumbauer, Julian J. Bunn, Greg Cross, Vladimir Litvin, Fred C. Luehring, and Mike Shuey

SELECTED UNIVERSITY RESEARCH AND EDUCATION GRANTS

2021 **Co-PI**, RURAL: Resilient Urban-Rural Analysis for Livability (**$30,000**), Institute for Sustainability, Energy, and Environment (iSEE), UIUC, with PI: Amy Ando

2019-22 **Co-PI**, Growth for the School of Earth, Society and Environment (**$1,488,106**), Office of the Provost, UIUC, with PI: Robert M. Rauber and Co-PIs: Robert J. Trapp and Thomas M. Johnson

2018-20 **PI**, Creating Critical Mass of Big Data Sciences (**$60,000**), Office of the Provost and Vice Chancellor for Academic Affairs, UIUC

2015-18 **Co-PI**, Engineering the Microbial and Stormwater Environment for Mosquito Control (**$350,000**), Institute for Sustainability, Energy, and Environment (iSEE), UIUC, with PI: Brian F. Allan

2015-18 **Senior Personnel**, Interdependent Critical Infrastructure Systems for Synergized Utilization of Multiple Energy Sources toward Sustainable Vehicular Transportation (**$350,000**), Institute for Sustainability, Energy, and Environment (iSEE), UIUC, with PI: Thomas Overbye

2013-17 **PI**, Establishing the CyberGIS Center for Advanced Digital and Spatial Studies (**$2.166 million**), UIUC

2014-16 **Co-PI**, Detection of the Illicit Movement of Nuclear Materials with Big Data (**$150,000**), UIUC, with Roy Campbell (Co-PI) and Clair Sullivan (PI)

2011 **PI**, Critical Spatial Thinking and the Future of Geographic Information Technologies – MillerComm Lecture by Michael F. Goodchild (**$3,200**), Center for Advanced Study at UIUC

2008 **PI** (Guest Lecturers: Dr. Jiawei Han and Dr. James Myers), Developing a New Informatics Course – Principles of GIS (**$11,046**), Illinois Informatics Institute at UIUC

2007 **Co-PI**, Developing a Curriculum for Statistical Analysis of Spatiotemporal Data Using Cyberinfrastructure (**$26,000**), the University of Iowa Innovations in Instructional Computing Awards, with Marc P. Armstrong (Co-PI), and Mary Kathryn Cowles (PI), Brian J. Smith (Co-PI), and Jun Yan (Co-PI)

2005 **PI**, Prototyping, Testing, and Operating an Intra-campus Research Grid – HawkGrid: An Application-Driven Approach (**$45,608**), the Mathematical & Physical Sciences Funding Program of the University of Iowa Internal Funding Initiative, with Terry A. Braun (Co-PI), Gregory R Carmichael (Co-PI), Boyd M. Knosp (Co-PI), Jun Ni (Co-PI), and Yasar Onel (Co-PI)

2003 **Co-PI**, Grid-based Spatial Statistics Middleware: Theory, Design, Implementation, and Evaluation (**$25,200**), the Iowa Informatics Initiative (III) of the University of Iowa, with Marc P. Armstrong (PI), and Mary Kathryn Cowles (Co-PI)

CREATIVE WORKS

ART

[1] The Great Flood. Led the CIGI Laboratory to contribute geospatial data retrieval and analysis in a collaboration with NCSA's Advanced

Visualization Laboratory to the creation of data-driven visualization of the Mississippi River Valley showing the extent of destructive 1927 floodwaters for the 75-minute multimedia work: "The Great Flood". The work features Grammy Award-winning guitarist and composer Bill Frisell performing original music with accompanying film and staging by Obie-wining experimental filmmaker Bill Morrison. It premiered in September 2011 at the University of Illinois Krannert Center for the Performing Arts.

PATENT

[2] **Wang, S.**, Liu, Y., Padmanabhan, A. High-Performance, Distributed, and Collaborative CyberGIS Platform, disclosure filed

SOFTWARE

[3] GISolve Toolkit. Invented this first cyberGIS software and have been leading the research and development of the software. For more than fifteen years, GISolve has been deployed within multiple national and international cyberinfrastructure environments and used by numerous users from a broad range of fields (e.g., agriculture, biology, computer science, environmental science, geography, hydrology, linguistics, public health, and statistics).

[4] SimpleGrid Toolkit. Co-invented this software for learning and prototyping science gateways to advanced cyberinfrastructure, co-led the research and development of the software, and taught tutorials for hundreds of users at a variety of conferences and workshops.

[5] The Open Science Grid Generic Information Provider. Led the research and development of this distributed information system software for cyberinfrastructure resource management through several projects funded by DOE and NSF. For more than ten years, the software was widely deployed and used for distributed scientific computing in the U.S. and multiple other countries, enabling scientists of many fields to tackle data-intensive and computational challenges.

SUPERCOMPUTER

[6] ROGER (Resourcing Open Geospatial Education and Research). Led a multidisciplinary and multi-institution team to create and operate the first-ever geospatial supercomputer supported by an NSF Major Research Instrumentation grant. ROGER is also the first general-purpose supercomputer that seamlessly integrates high-performance computing with Graphic Processing Units (GPUs), data-intensive computing (based on Hadoop and Spark), and cloud computing (based on OpenStack), supporting researchers and educators to flexibly take advantage of one or multiple of these computing modalities all connected by a fast network and common storage backbone. ROGER has enabled broad and significant scientific advances in interdisciplinary, bio, engineering, geo, and social sciences.

PUBLICATIONS (An underline denotes a postdoc or student advisee.)

JOURNALS

[1] Lyu, F., Wang, S. H., Han, S. Y., Catlett, C. E., and **Wang, S.** (2022) "An Integrated CyberGIS and Machine Learning Framework for Fine-Scale Prediction of Urban Heat Island Using Satellite Remote Sensing and Urban Sensor Network Data". *Urban Informatics*, accepted

[2] Kang, J. K., Farkhad, B. F., Chan, M. S., Michels, A., Albarracin, D., and **Wang, S.** (2022) "Spatial Accessibility to HIV Testing, Treatment, and Prevention Services in Illinois and Chicago, USA". *PLOS ONE*, https://doi.org/10.1371/journal.pone.0270404

[3] Michels, A., Kang, J. Y., and **Wang, S.** (2022) "Particle Swarm Optimization for Calibration in Spatially Explicit Agent-Based Modeling". *Journal of Artificial Societies and Social Simulation*, https://www.jasss.org/25/2/8.html, DOI: 10.18564/jasss.4796

[4] Wang, C., Lyu, F., Wu, S., Wang, Y., Xu, L., Zhang, F., **Wang, S.**, Wang, Y., and Du, Z. (2022) "A Deep Trajectory Clustering Method Based on Sequence-to-Sequence Autoencoder Model". *Transactions in GIS*, https://doi.org/10.1111/tgis.12905

[5] Guo, C., Hu, H., **Wang, S.**, Rodriguez, L. F., Ting, K. C., Lin, T. (2022) "Multiperiod Stochastic Programming for Biomass Supply Chain Design under Spatiotemporal Variability of Feedstock Supply". Renewable Energy, 186: 378-393. https://doi.org/10.1016/j.renene.2021.12.144

[6] Jiang, Z., He, W., Kirby, M. S., Sainju, A. M., **Wang, S.**, Stanislawski, L. V., Shavers, E. J., Usery, E. L. (2022) "Weakly Supervised Spatial Deep Learning for Earth Image Segmentation Based on Imperfect Polyline Labels". *ACM Transactions on Intelligent Systems and Technology*, https://doi.org/10.1145/3480970

[7] Fu, P., Jaiswal, D., McGrath, J. M., **Wang, S.**, Long, S. P., and Bernacchi, C. J. (2021) "Drought Imprints on Crops Can Reduce Yield Loss: Nature's Insights for Food Security". *Food and Energy Security*, https://doi.org/10.1002/fes3.332

[8] Chen, L., Chen, W., Xu, Z., Huang, H., **Wang, S.**, Zhu, Q., Li, H. (2021) "DAPnet: A Double Self-attention Convolutional Network for Point Cloud Semantic Labeling." *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, https://doi.org/10.1109/JSTARS.2021.3113047

[9] Kang, J. Y., Michels, A., Crooks, A., Aldstadt, J., and **Wang, S.** (2021) "An Integrated Framework of Global Sensitivity Analysis and Calibration for Spatially Explicit Agent-Based Models". *Transactions in GIS*, https://doi.org/10.1111/tgis.12837

[10] Lyu, F., Xu, Z., Ma, X., Wang, S. H., Li, Z., and **Wang, S.** (2021) "A Vector-Based Method for Drainage Network Analysis Based on LiDAR Data". *Computers & Geosciences*, https://doi.org/10.1016/j.cageo.2021.104892

[11] Chen, H., Sheng, S., Xu, C-Y., Li, Z., Zhang, W., **Wang, S.**, Guo, S. (2021) "A Spatiotemporal Estimation Method for Hourly Rainfall Based on F-SVD in the Recommender System". *Environmental Modelling and Software*, https://doi.org/10.1016/j.envsoft.2021.105148

[12] Soltani, K., Padmanabhan, A., and **Wang, S.** (2021) "GeoBalance: Workload-aware Partitioning of Real-time Spatiotemporal Data". *GeoInformatica*, http://dx.doi.org/10.1007/s10707-021-00444-z

[13] Choi, Y. D., Goodall, J. L., Sadler, J. M., Castronova, A. M., Bennett, A., Li, Z., Nijssen, B., **Wang, S.**, Clark, M. P., Ames, D. P., Horsburgh, J. S., Yi, H., Bandaragoda, C., Seul, M., Hooper, R., and Tarboton, D. G. (2021). "Toward Open and Reproducible Environmental Modeling by Integrating Online Data Repositories, Computational Environments, and Model Application Programming Interfaces". *Environmental Modelling and Software*, 135, https://doi.org/10.1016/j.envsoft.2020.104888

[14] Stanislawski, L. V., Shavers, E. J., **Wang, S.**, Jiang, Z., Usery, E. L., Moak, E., Duffy, A., and Schott, J. (2021). "Extensibility of U-Net Neural Network Model for Hydrographic Feature Extraction and Implications for Hydrologic Modeling". *Remote Sensing*, 13(12), https://doi.org/10.3390/rs13122368

[15] Xu, J., Gao, J., Holanda, H., Rodriguez, L., Caixeta-Filho, J. V., Zhong, R., Jiang, H., Li, H., Du, Z., Wang, X., **Wang, S.**, Ting, K. C., Ying, Y., and Lin, T. (2021) "Double Cropping and Cropland Expansion Boost Grain Production in Brazil". *Nature Food*, https://doi.org/10.1038/s43016-021-00255-3

[16] Zhang, Z., Yin, D., Virrantaus, K., Ye, X., and **Wang, S.** (2021) "Modeling Human Activity Dynamics: An Object-class Oriented Space-time Composite Model Based on Social Media and Urban Infrastructure Data". *Computational Urban Science*, https://doi.org/10.1007/s43762-021-00006-x

[17] Xu, Z., **Wang, S.**, Stanislawski, L. V., Jiang, Z., Jaroenchai, N., Sainju, A. M., Shavers, E., Usery, E. L., Chen, L., Li, Z., and Su, B. (2021) "An Attention U-Net Model for Detection of Fine-scale Hydrologic Streamlines". *Environmental Modelling and Software*, https://doi.org/10.1016/j.envsoft.2021.104992

[18] Jiang, H., Hu, H., Li, B., Zhang, Z., **Wang, S.**, and Lin, T. (2021) "Understanding the Non-stationary Relationships between Corn Yields and Meteorology via a Spatiotemporally Varying Coefficient Model". *Agricultural and Forest Meteorology*, https://doi.org/10.1016/j.agrformet.2021.108340

[19] Chen, L., Xu, Z., Li, Q., Peng, J., **Wang, S.**, Li, H. (2021) "An Empirical Study of Adversarial Examples on Remote Sensing Image Scene

Classification". *IEEE Transactions on Geoscience and Remote Sensing*, https://doi.org/10.1109/TGRS.2021.3051641

[20] Vandewalle, B., Barley, W. C., Padmanabhan, A., Katz, D. S., and **Wang, S.** (2020) "Understanding the Multifaceted Geospatial Software Ecosystem: A Survey Approach". *International Journal of Geographical Information Science (IJGIS)*, https://doi.org/10.1080/13658816.2020.1831514

[21] Calyam, P., Wilkins-Diehr, N., Miller, M., Brookes, E. H., Arora, R., Chourasia, A., Jennewein, D. M., Nandigam, V., Drew LaMar, M., Cleveland, S. B., Newman, G., **Wang, S.**, Zaslavsky, I., Cianfrocco, M. A., Ellett, K., Tarboton, D. G., Jeffery, K. G., Zhao, Z., González-Aranda, J., Perri, M. J., Tucker, G., Candela, L., Kiss, T., and Gesing, S. (2020) "Measuring Success for a Future Vision: Defining Impact in Science Gateways/Virtual Research Environments". *Concurrency and Computation: Practice and Experience*, https://doi.org/10.1002/cpe.6099

[22] Davis, A. and **Wang, S.** (2020) "A Concurrent Entity Component System for Geographical Wildlife Epidemiological Modeling". *Geographical Analysis*, http://dx.doi.org/10.1111/gean.12258

[23] Kang, J. Y., Michels, A., Lyu, F., Wang, S. H., Agbodo, N., Freeman, V. L., and **Wang, S.** (2020) "Rapidly Measuring Spatial Accessibility of COVID-19 Healthcare Resources: A Case Study of Illinois, USA". *International Journal of Health Geographics*, 19, https://doi.org/10.1186/s12942-020-00229-x

[24] Jiang, H., Hu, H., **Wang, S.**, Ying, Y., and Lin, T. (2020) "Understanding the Impact of Sub-Seasonal Meteorological Variability on Corn Yield in the U.S. Corn Belt". *Science of the Total Environment*, https://doi.org/10.1016/j.scitotenv.2020.138235

[25] Kang, J. Y., Aldstadt, J., Vandewalle, R., Yin, D., and **Wang, S.** (2020) "A CyberGIS Approach to Spatiotemporally Explicit Uncertainty and Global Sensitivity Analysis for Agent-based Modeling of Vector-borne Disease Transmission". *Annals of the American Association of Geographers*, https://doi.org/10.1080/24694452.2020.1723400

[26] Li, T., Stanislawski, L.V., Brockmeyer, T, **Wang, S.**, and Shavers, E. (2020) OpenCLC: An Open-Source Software Tool for Similarity Assessment of Linear Hydrographic Features. *SoftwareX*, DOI:10.1016/j.softx.2020.100401

[27] Cai, Y., Guan, K., Nafziger, E., Chowdhary, G., Peng, B., Jin, Z., **Wang, S.**, and Wang, S-B. (2020) "Detecting In-Season Crop Nitrogen Stress of Corn for Field Trials Using UAV- and CubeSat-Based Multispectral Sensing". *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, https://doi.org/10.1109/JSTARS.2019.2953489

[28] Yin, D., **Wang, S.**, and Ouyang, Y. (2020) "ViCTS: A Novel Network Partition Algorithm for Scalable Agent-Based Modeling of Mass Evacuation". *Computers, Environment and Urban Systems*, https://doi.org/10.1016/j.compenvurbsys.2019.101452

[29] Li, T., Gao, Y., and **Wang, S.** (2020) "ESCIP: An Expansion-based Spatial Clustering Method for Inhomogeneous Point Processes". *Annals of the Association of American Geographers*, 110(1): 59–276, https://doi.org/10.1080/24694452.2019.1625747

[30] Jiang, H., Hu, H., Zhong, R., Xu, J., Xu, J., Huang, J., **Wang, S.**, Ying, Y., Lin, T. (2019) "A Deep Learning Approach to Conflating Heterogeneous Geospatial Data for Corn Yield Estimation: A Case Study of the U.S. Corn Belt at the County Level". *Global Change Biology*, https://doi.org/10.1111/gcb.14885

[31] Bandaragoda, C., Castronova, A., Istanbulluoglu, E., Strauch, R., Phuong, J., Adams, J., Gasparini, N., Barnhart, K., Hutton, E., Hobley, D., Lyons, N., Tucker, G., Tarboton, D. G., Isaszak, R., and **Wang, S.** (2019) "Enabling Collaborative Numerical Modeling in Earth Sciences Using Knowledge Infrastructure". *Environmental Modelling and Software*, https://doi.org/10.1016/j.envsoft.2019.03.020

[32] Jeong, M.-H., Sullivan, C. J., Gao, Y., and **Wang, S.** (2019) "Robust Abnormality Detection Methods for Spatial Search of Radioactive Materials". *Transactions in GIS*, https://doi.org/10.1111/tgis.12533

[33] Cai, Y., Guan, K., Lobell, D., Potgieter, A. B, **Wang, S.**, Peng, J., Xu, T., Asseng, S., Zhang, Y., You, L., and Peng, B. (2019) "Integrating Satellite and Climate Data to Predict Wheat Yield in Australia Using Machine Learning Approaches". *Agricultural and Forest Meteorology*, 274: 144-159

[34] Shook, E., Bowlick, F., Kemp, K., Ahlqvist, O., Carbajales, P., DiBiase, D., Kim, E., Lathrop, S., Ricker, B., Rickles, P., Rush, J., Swift, J., and **Wang, S.** (2019) "Cyber Literacy for GIScience: Toward Formalizing Geospatial Computing Education". *The Professional Geographer*, 71(2): 221-238

[35] Zhang, Z., Hu, H., Yin, D., Kashem, S., Li, R., Cai, H., Perkins, D., and **Wang, S.** (2019) "A CyberGIS-enabled Multi-criteria Spatial Decision Support System: A Case Study on Flood Emergency Management". *International Journal of Digital Earth*, 12(11): 1364-1381

[36] Yin, D., Liu, Y., Hu, H., Terstriep, J., Hong, X., Padmanabhan, A., and **Wang, S.** (2018) "CyberGIS-Jupyter for Reproducible and Scalable Geospatial Analytics". *Concurrency and Computation: Practice and Experience*, https://doi.org/10.1002/cpe.5040

[37] Hu, H., Yin, D., Liu, Y. Y., Terstriep, J., Hong, X., Wendel, J., and **Wang, S.** (2018) "TopoLens: Building a CyberGIS Community Data Service for Enhancing the Usability of High-resolution National Topographic Datasets". *Concurrency and Computation: Practice and Experience*, DOI: 10.1002/cpe.4682

[38] Liu, Y. Y., Maidment, D. R., Tarboton, D. G., Zheng, X., and **Wang, S.** (2018) "A CyberGIS Integration and Computation Framework for High-Resolution Continental-Scale Flood Inundation Mapping". *Journal of the American Water Resources Association*, 54 (4): 770-784

[39] Lu, B., Wang, L., Liu, J. Zhou, W., Guo, L., Jeong, M.-H., **Wang, S.**, and Han, G. (2018) "LaSa: Location Aware Wireless Security Access Control for IoT Systems". *Mobile Networks and Applications*, 24(3): 748-760

[40] Armstrong, M.P., **Wang, S.**, and Zhang, Z. (2018) "The Internet of Things and Fast Data Streams: Prospects for Geospatial Data Science in Emerging Information Ecosystems". *Cartography and Geographic Information Science*, 46(1): 39-56

[41] Davis, A. and **Wang, S.** (2018) "Geoexpression: A Petri Network Framework for Representing Geographic Process Concurrency". *Transactions in GIS*, 22: 1390-1405

[42] Xu, Z., Guan, K., Casler, N., Peng, B., and **Wang, S.** (2018) "A 3D Convolutional Neural Network Method for Land Cover Classification Using LiDAR and Multi-Temporal Landsat Imagery". *ISPRS Journal of Photogrammetry and Remote Sensing*, 144: 423-434

[43] Soliman, A., Mackay, A., Schmidt, Allan, B., and **Wang, S.** (2018) "Quantifying the Geographic Distribution of Building Coverage Across the US for Urban Sustainability Studies". *Computers, Environment and Urban Systems*, 71: 199-208

[44] Cai, Y., Guan, K., Peng, J., **Wang, S.**, Seifert, C., Wardlow, B., and Li, Z. (2018) "A High-Performance and In-Season Classification System of Field-Level Crop Types Using Time-Series Landsat Data and a Machine Learning Approach". *Remote Sensing of Environment*, 210: 35-47

[45] Zhang, C., Lei, D., Yuan, Q., Zhuang, H., Kaplan, L., **Wang, S.**, and Han, J. (2018) "GeoBurst+: Effective and Real-Time Local Event Detection in Geo-Tagged Tweet Streams". *ACM Transactions on Intelligent Systems and Technology*, 9(3), https://doi.org/10.1145/3066166

[46] Gao, Y., Li, T., **Wang, S.**, Jeong, M.-H., and Soltani, K. (2018) "A Multidimensional Spatial Scan Statistics Approach to Movement Pattern Comparison". *IJGIS*, 32(7): 1304-1325

[47] Gao, Y., **Wang, S.**, Padmanabhan, A., Yin, J., and Cao, G. (2018) "Mapping Spatiotemporal Patterns of Events Using Social Media: A Case Study of Influenza Trends". *IJGIS*, 32(3): 425-449

[48] Zhang, Z., Demšar, U., **Wang, S.**, and Virrantaus, K. (2018) "A Spatial Fuzzy Influence Diagram for Modelling Spatial Objects' Dependencies: A Case Study on Tree-related Electric Outages". *IJGIS*, 32(2): 349-366

[49] Xu, L., Kwan, M., McLafferty, S., and **Wang, S.** (2017) "Predicting Demand for 311 Non-emergency Municipal Services: An Adaptive Space-Time Kernel Approach". *Applied Geography*, 89: 133-141

[50] Soliman, A., Soltani, K., Yin, J., Padmanabhan, A., and **Wang, S.** (2017) "Social Sensing of Urban Land Use Based on Analysis of Twitter Users' Mobility Patterns". *PLOS ONE*, DOI: 10.1371/journal.pone.0181657

[51] Hu, H., Lin, T., **Wang, S.**, and Rodriguez, L. (2017) "A CyberGIS Approach to Uncertainty and Sensitivity Analysis in Biomass Supply Chain Optimization". *Applied Energy*, 203: 26-40

[52] Yin, J., Soliman, A., Yin, D., and **Wang, S.** (2017) "Depicting Urban Boundaries from a Mobility Network of Spatial Interactions: A Case Study of Great Britain with Geo-located Twitter Data". *IJGIS*, 31(7): 1293-1313

[53] **Wang, S.** (2016) "CyberGIS and Spatial Data Science". *GeoJournal*, 81(6): 965-968

[54] Liu, Y.Y., Cho, W. K. T., and **Wang, S.** (2016) "PEAR: A Massively Parallel Evolutionary Computational Approach for Political Redistricting Optimization and Analysis". *Journal of Swarm and Evolutionary Computation*, 30 (October): 78-92

[55] Shook, E., Hodgson, M. E., **Wang, S.**, Behzad, B., Soltani, K., Hiscox, A., and Ajayakumar, J. (2016) "Parallel Cartographic Modeling: A Methodology for Parallelizing Spatial Data Processing". *IJGIS*, 30(12): 2355-2376

[56] Zhi, Y., Li, H., Wang, D., Deng, M., **Wang, S.**, Gao, J., Duan, Z., and Liu, Y. (2016) "Latent Spatio-Temporal Activity Structures: A New Approach to Inferring Intra-Urban Functional Regions via Social Media Check-in Data". *Geo-spatial Information Science*, 19(2): 94-105

[57] **Wang, S.**, Liu, Y., and Padmanabhan, A. (2016) "Open CyberGIS Software for Geospatial Research and Education in the Big Data Era". *SoftwareX*, 5: 1-5

[58] Helwig, N. E., Gao, Y., **Wang, S.**, and Ma, P. (2015) "Analyzing Spatiotemporal Trends in Social Media Data via Smoothing Spline Analysis of Variance". *Spatial Statistics*, 14(Part C): 491-504

[59] Yin, D., Du, S., **Wang, S.**, and Guo, Z. (2015) "A Direction-Guided Ant Colony Optimization Method for Extraction of Urban Road Information from Very-High-Resolution Images". *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (J-STARS)*, 8(10): 4785-4794

[60] McGrath, J. M., Betzelberger, A. M., **Wang, S.**, Shook, E., Zhu, X., Long, S. P., and Ainsworth, E. (2015) "An Analysis of Ozone Damage to Historical Maize and Soybean Yields in the United States". *Proceedings of the National Academy of Sciences (PNAS)*, 112(46): 14390-14395

[61] Shook, E. and **Wang, S.** (2015) "Investigating the Influence of Spatial and Temporal Granularities on Agent-Based Modeling". *Geographical Analysis*, 47(4): 321-348

[62] Hu, H., Lin, T., Liu, Y.Y., **Wang, S.**, Rodriguez, L. (2015) "CyberGIS-BioScope: A Cyberinfrastructure-based Spatial Decision-Making Environment for Biomass-to-Biofuel Supply Chain Optimization". *Concurrency and Computation: Practice and Experience*, 27(16): 4437–4450

[63] Lin, T., **Wang, S.**, Rodríguez, L. F., Hu, H., and Liu, Y. Y. (2015) "CyberGIS-Enabled Decision Support Platform for Biomass Supply Chain Optimization". *Environmental Modelling and Software*, 70: 138-148

[64] Shi, X. and **Wang, S.** (2015) "Computational and Data Sciences for Health-GIS", *Annals of GIS*, 21(2): 111-118

[65] Cao, G., **Wang, S.**, Hwang, M., Padmanabhan, A., Zhang, Z., and Soltani, K. (2015) "A Scalable Framework for Spatiotemporal Analysis of Location-based Social Media Data". *Computers, Environment and Urban Systems*, 51: 70-82

[66] Liu, Y. Y., Padmanabhan, A., and **Wang, S.** (2015) "CyberGIS Gateway for Enabling Data-Rich Geospatial Research and Education". *Concurrency and Computation: Practice and Experience*, 27(2): 395-407.

[67] Liu, Y. Y. and **Wang, S.** (2015) "A Scalable Parallel Genetic Algorithm for the Generalized Assignment Problem". *Parallel Computing*, 46: 98-119

[68] Padmanabhan, A., **Wang, S.**, Cao, G., Hwang, M., Zhang, Z., Gao, Y., Soltani, K., and Liu, Y. Y. (2014) "FluMapper: A CyberGIS Application for Interactive Analysis of Massive Location-based Social Media". *Concurrency and Computation: Practice and Experience*, 26(13): 2253–2265

[69] Ye, S., Li, H., Huang, M., Alic, M., Leng, G., Leung, L. R., **Wang, S.**, and Sivapalan, M. (2014) "Regionalization of Subsurface Stormflow Parameters of Hydrologic Models: Derivation from Regional Analysis of Streamflow Recession Curves". *Journal of Hydrology*, 519(Part A): 670–682

[70] Cao, G., Yoo, E., and **Wang, S.** (2014) "A Statistical Framework of Data Fusion for Spatial Prediction of Categorical Variables". *Stochastic Environmental Research and Risk Assessment*, 28: 1785-1799

[71] **Wang, S.** (2013) "CyberGIS: Blueprint for Integrated and Scalable Geospatial Software Ecosystems". *IJGIS*, 27(11): 2119-2121

[72] Leetaru, K., **Wang, S.**, Cao, G., Padmanabhan, A., Shook, E. (2013) "Mapping the Global Twitter Heartbeat: The Geography of Twitter". *First Monday*, 18(5), DOI: 10.5210/fm.v18i5.4366

[73] **Wang, S.**, Anselin, L., Bhaduri, B., Crosby, C., Goodchild, M. F., Liu, Y., and Nyerges, T. L. (2013) "CyberGIS Software: A Synthetic Review and Integration Roadmap". *IJGIS*, 27(11): 2122-2145

[74] Shook, E., **Wang, S.**, and Tang, W. (2013) "A Communication-Aware Framework for Parallel Spatially Explicit Agent-Based Models". *IJGIS*, 27(11): 2160-2181

[75] Zhao, Y., Padmanabhan, A., **Wang, S.** (2013) "A Parallel Computing Approach to Viewshed Analysis of Large Terrain Data Using Graphics Processing Units". *IJGIS*, 27(2): 363-384

[76] Ye, S., Covino, T. P., Sivapalan, M., Basu, N. B., Li, H., and **Wang, S.** (2012). "Dissolved Nutrient Retention Dynamics in River Networks: A

Modeling Investigation of Transient Flows and Scale Effects". *Water Resources Research*, 48(6), DOI: 10.1029/2011WR010508

[77] **Wang, S.**, Wilkins-Diehr, N. R., and Nyerges, T. L. (2012) "CyberGIS – Toward Synergistic Advancement of Cyberinfrastructure and GIScience: A Workshop Summary". *Journal of Spatial Information Science*, 4: 125-148

[78] Cao, K., Huang, B., **Wang, S.**, and Lin, H. (2012) "Sustainable Land Use Optimization Using Boundary-based Fast Genetic Algorithm". *Computers, Environment and Urban Systems*, 36(3): 257-269

[79] Tang, W., **Wang, S.**, Bennett, D.A., and Liu, Y. (2011) "Agent-based Modeling within a Cyberinfrastructure Environment: A Service-Oriented Computing Approach". *IJGIS*, 25(9): 1323-1346

[80] Wright, D. J. and **Wang, S.** (2011) "The Emergence of Spatial Cyberinfrastructure". *PNAS*, 108(14): 5488-5491

[81] Tang, W., Bennett D. A., and **Wang, S.** (2011) "A Parallel Agent-based Model of Land Use Opinions". *Journal of Land Use Science*, 6(2): 121-135

[82] Bennett D. A., Tang, W., and **Wang, S.** (2011) "Toward an Understanding of Provenance in Complex Land Use Dynamics". *Journal of Land Use Science*, 6(2): 211-230

[83] **Wang, S.** (2010) "A CyberGIS Framework for the Synthesis of Cyberinfrastructure, GIS, and Spatial Analysis". *Annals of the Association of American Geographers*, 100(3): 535-557

[84] Padmanabhan, A., Ghosh, S., and **Wang, S.** (2010) "A Self-Organized Grouping (SOG) Method for Efficient Grid Resource Discovery". *Journal of Grid Computing*, 8(3): 365-389

[85] **Wang, S.**, Liu, Y., Wilkins-Diehr, N., and Martin, S. (2009) "SimpleGrid Toolkit: Enabling Geosciences Gateways to Cyberinfrastructure". *Computers and Geosciences*, 35: 2283-2294

[86] Riedel, M., Laure, E., Soddemann, T., Field, L., Navarro, J. P., Casey, J., Litmaath, M., Baud, J., Koblitz, B., Catlett, C., Skow, D., Zheng, C., Papadopoulos, P. M., Katz, M. J., Sharma, N., Smirnova, O., Kónya, B., Arzberger, P. W., Würthwein, F., Rana, A. S., Martin, T., Wan, M., Welch, V., Rimovsky, T., Newhouse, S., Vanni, A., Tanaka, Y., Tanimura, Y., Ikegami, T., Abramson, D., Enticott, C., Jenkins, G., Pordes, R., Sharma, N., Timm, S., Sharma, N., Moont, G., Aggarwal, M., Colling, D., Van der Aa, O., Sim, A., Natarajan, V., Shoshani, A., Gu, J., Chen, S., Galang, G., Zappi, R., Magnoni, L., Ciaschini, V., Pace, M., Venturi, V., Marzolla, M., Andreetto, P., Cowles, B., **Wang, S.**, Saeki, Y., Sato, H., Matsuoka, S., Uthayopas, P., Sriprayoonsakul, S., Koeroo, O., Viljoen, M., Pearlman, L., Pickles, S., Wallom, D., Moloney, G., Lauret, J., Marsteller, J., Sheldon, P., Pathak, S., De Witt, S., Mencák, J., Jensen, J., Hodges, M., Ross, D., Phatanapherom, S., Netzer, G., Gregersen, A. R., Jones, M., Chen, S., Kacsuk, P., Streit, A., Mallmann, D., Wolf, F., Lippert, T., Delaitre, T., Huedo, E.,

Geddes, N. (2009) "Interoperation of World-Wide Production e-Science Infrastructures". *Concurrency and Computation: Practice and Experience*, 21(8): 961-990

[87] Tang, W. and **Wang, S.** (2009) "HPABM: A Hierarchical Parallel Simulation Framework for Spatially Explicit Agent-based Models". *Transactions in GIS*, 13(3): 315-333

[88] **Wang, S.** and Liu, Y. (2009) "TeraGrid GIScience Gateway: Bridging Cyberinfrastructure and GIScience". *IJGIS*, 23(5): 631-656

[89] **Wang, S.** and Armstrong, M. P. (2009) "A Theoretical Approach to the Use of Cyberinfrastructure in Geographical Analysis". *IJGIS*, 23(2): 169-193

Also in B. Lees (editor). 2011. *Classics from IJGIS: The 25th Anniversary of the International Journal of Geographical Information Science and Systems*

[90] **Wang, S.**, Cowles, M. K., and Armstrong, M. P. (2008) "Grid Computing of Spatial Statistics: Using the TeraGrid for *Gi*(d)* Analysis". *Concurrency and Computation: Practice and Experience*, 20: 1697-1720

[91] **Wang, S.** and Zhu, X-G. (2008) "Coupling Cyberinfrastructure and Geographic Information Systems to Empower Ecological and Environmental Research". *BioScience*, 58(2): 94-95

[92] Xiao, S., Ni, J., and **Wang, S.** (2008) "The Bridging Domain Multiscale Method and Its High-Performance Computing Implementation". *Journal of Computational and Theoretical Nanoscience*, 5: 1-10

[93] Yan, J., Cowles, M. K., **Wang, S.**, and Armstrong, M. P. (2007) "Parallelizing MCMC for Bayesian Spatiotemporal Geostatistical Models". *Statistics and Computing*, 17(4): 323-335

[94] Armstrong, M. P., Cowles, M. K., and **Wang**, **S.** (2005). "Using a Computational Grid for Geographic Information Analysis: A Reconnaissance". *The Professional Geographer*, 57(3): 365-375

[95] **Wang, S.**, and Armstrong, M. P. (2003) "A Quadtree Approach to Domain Decomposition for Spatial Interpolation in Grid Computing Environments". *Parallel Computing*, 29(10): 1481-1504

EDITED BOOKS, SPECIAL ISSUES, AND PROCEEDINGS

[96] Tang, W. and **Wang, S.** (2020) "High-Performance Computing for Geospatial Applications. Springer, Cham, https://doi.org/10.1007/978-3-030-47998-5

[97] **Wang, S.** and Goodchild, M. F. (2019) "*CyberGIS for Geospatial Innovation and Discovery*". Springer, Dordrecht, Netherlands, DOI: 10.1007/978-94-024-1531-5

[98] Raubal, M., **Wang, S.**, Guo, M., Jonietz, D., and Kiefer, P. (2018) "*Proceedings of the Workshop on Spatial Big Data and Machine Learning in GIScience*". GIScience 2018, Melbourne, Australia

[99] **Wang, S.** (2013) "Special Issue on CyberGIS: Blueprint for Integrated and Scalable Geospatial Software". *IJGIS*, 27 (11)

[100] Wright, D. J. and **Wang, S.** (2011) "Special Feature: Spatial Cyberinfrastructure". *PNAS*, 108(14), https://www.pnas.org/topic/67

[101] **Wang, S.**, Wilkins-Diehr, N., Padmanabhan, A., Shi, X., and Vatsavai, R. R. (2011) "*Proceedings of the 2nd Association for Computing Machinery (ACM) SIGSPATIAL International Workshop on High Performance and Distributed Geographic Information Systems (ACM SIGSPATIAL HPDGIS 2011)*". ACM Digital Library

[102] **Wang, S.**, Wilkins-Diehr, N., Shi, X., Vatsavai, R. R., Zhang, J., and Padmanabhan, A. (2010) "*Proceedings of the 1st ACM SIGSPATIAL International Workshop on High Performance and Distributed Geographic Information Systems (ACM SIGSPATIAL HPDGIS 2010)*". ACM Digital Library

BOOK CHAPTERS

[103] **Wang, S.** (2022). "Spatial Thinking of Computational Intensity in the Era of CyberGIS". In: *New Thinking in GIScience*, edited by B. Li, X. Shi, AX. Zhu, C. Wang, and H. Lin, Springer, Singapore. https://doi.org/10.1007/978-981-19-3816-0_16

[104] **Wang, S.**, Bishop, M. P., Zhang, Z., Young, B. W., Xu, Z. (2021) "CyberGIS and Geospatial Data Science for Advancing Geomorphology". In: *Treatise on Geomorphology, 2nd edition*, edited by J. F. Shroder, Elsevier, https://doi.org/10.1016/B978-0-12-818234-5.00122-X

[105] Lyu, F., Kang, J. Y., Wang, S. H., Han, S. Y., Li, Z., and **Wang, S.** (2021) "Multi-scale CyberGIS Analytics for Detecting Spatiotemporal Patterns of COVID-19". In: *Mapping COVID-19 in Space and Time: Understanding the Spatial and Temporal Dynamics of a Global Pandemic*, edited by S. L. Shaw and D. Z. Sui, Springer International Publishing, DOI: 10.1007/978-3-030-72808-3

[106] **Wang, S.**, Lyu, F., Wang, S. H., Catlett, C. E., Padmanabhan, A., and Soltani, K. (2021) "Integrating CyberGIS and Urban Sensing for Reproducible Streaming Analytics". In: *Urban Informatics*, edited by W. Shi, M. F. Goodchild, M. Batty, M.-P. Kwan, and A. Zhang. The Urban Book Series, Springer, Singapore, https://doi.org/10.1007/978-981-15-8983-6_36

[107] Tang, W. and **Wang, S.** (2020) "Navigating High Performance Computing for Geospatial Applications". In: *High-Performance Computing for Geospatial Applications*, edited by W, Tang and S. Wang, Springer, Cham, pages: 1-5

[108] Guo, M. and **Wang, S.** (2020) "Quantum Computing for Solving Spatial Optimization Problems". In: *High-Performance Computing for Geospatial Applications*, edited by W, Tang and S. Wang, Springer, Cham, pages: 97-113

[109] **Wang, S.** (2019) "Cyberinfrastructure". *The Geographic Information Science & Technology Body of Knowledge (2nd Quarter 2019 Edition)*, John P. Wilson (Ed.). DOI: 10.22224/gistbok/2019.2.2

[110] Finn, M.P., Liu, Y., Mattli, D. M., Behzad, B., Yamamoto, K. H., Shook, E., Padmanabhan, A., Stramel, M., and **Wang, S.** (2018) "High-Performance Small-Scale Raster Map Projection Empowered by Cyberinfrastructure". In: *CyberGIS for Geospatial Innovation and Discovery*, edited by S. Wang and M. F. Goodchild, Springer, Dordrecht, Netherlands, pages: 171-188

[111] **Wang, S.** (2017) "CyberGIS". In: *The International Encyclopedia of Geography: People, the Earth, Environment, and Technology*, edited by D. Richardson, N. Castree, M. F. Goodchild, A. L. Kobayashi, W. Liu, and R. Marston, Wiley-Blackwell and the Association of American Geographers, DOI: 10.1002/9781118786352.wbieg0931

[112] Yin, J., Gao, Y., and **Wang, S.** (2017) "CyberGIS-Enabled Urban Sensing from Volunteered Citizen Participation Using Mobile Devices". In: *Seeing Cities Through Big Data*: *Research, Methods and Applications in Urban Informatics*, edited by P. Thakuriah, N. Tilahun, and M. Zellner, Springer Geography, pages: 83-96

[113] **Wang, S.**, Hu, H., Lin, T., Liu, Y., Padmanabhan, A., and Soltani, K. (2014) "CyberGIS for Data-Intensive Knowledge Discovery". *ACM SIGSAPATIL Newsletter*, 6(2): 26-33

[114] **Wang, S.**, Cao, G., Zhang, Z., Zhao, Y., Padmanabhan, A., and Wu, K. (2013) "A CyberGIS Environment for Analysis of Location-Based Social Media Data". In: *Location-Based Computing and Services, 2nd Edition*, edited by A. K. Hassan and H. Amin, CRC Press, pages: 187-205

[115] Armstrong, M. P., Nyerges, T. L., **Wang, S.**, and Wright, D. (2011) "Connecting Geospatial Information to Society through Cyberinfrastructure", In: *The SAGE Handbook of GIS and Society*, edited by T. L. Nyerges, H. Couclelis, and R. B. McMaster, Los Angeles: SAGE Publications, Inc., pages: 109-122

[116] **Wang, S.** (2010) "Spatial Interpolation". In: *Encyclopedia of Geography*, edited by B. Warf, SAGE Publications, Inc.

[117] Padmanabhan, A., Shook, E., Liu, Y., and **Wang, S.** (2010) "An Interoperable Information Service Solution for Grids". In: *Cyberinfrastructure Technologies and Applications*, edited by J. Cao, Nova Science Publishers, Inc.

PEER-REVIEWED CONFERENCE PROCEEDINGS

[118] Stanislawski, L. V., Shavers, E. J., Duffy, A. J., Thiem, P., Jaroenchai, N., **Wang, S.**, Jiang, Z., Kronenfeld, B. J., Buttenfield, B. P. "Scaling-up Deep Learning Predictions of Hydrography from IFSAR Data in Alaska". In: *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences (FOSS4G 2022 Academic Track)*, Firenze, Italy, August 22 – 28, 2022

[119] Baig, F., Michels, A., Xiao, Z., Han, S. Y., Padmanabhan, A., Li, Z., and **Wang, S.** "CyberGIS-Cloud: A Unified Middleware Framework for Cloud-based Geospatial Research and Education". In: *Proceedings of Practice and Experience in Advanced Research Computing (PEARC'22)*, Boston, Massachusetts, USA, July 10 – 14, 2022

[120] Lyu, F., Yang, Z., Xiao, Z., Diao, C., Park, J., and **Wang, S.** "CyberGIS for Scalable Remote Sensing Data Fusion". In: *Proceedings of Practice and Experience in Advanced Research Computing (PEARC'22)*, Boston, Massachusetts, USA, July 10 – 14, 2022

[121] Padmanabhan, A., Xiao, Z., Vandewalle, R., Baig, F., Michels, A., Li, Z., and **Wang, S.** "CyberGIS-Compute for Enabling Computationally Intensive Geospatial Research". In: *Proceedings of the 3rd ACM SIGSPATIAL International Workshop on APIs and Libraries for Geospatial Data Science (SpatialAPI'21)*, November 2, 2021 (online)

[122] Michels, A., Padmanabhan, A., Li, Z., and **Wang, S.** "Towards Reproducible Research on CyberGISX with Lmod and Easybuild". In: *Proceedings of the Gateways 2021 Conference*, October 19 – 21, 2021 (online)

[123] Michels, A., Kang, J. Y., and **Wang, S.** "An Exploration of the Effect of Buyer Preference and Market Composition on the Rent Gradient Using the ALMA Framework". In: *Proceedings of the 3rd ACM SIGSPATIAL International Workshop on GeoSpatial Simulation* (pp. 48-51), November 3, 2020 (online)

[124] Kang, J. Y., Aldstadt, J., Michels, A., Vandewalle, R., and **Wang, S.** "CyberGIS-Jupyter for Spatially Explicit Agent-based Modeling: A Case Study on Influenza Transmission". In: *Proceedings of the 2nd ACM SIGSPATIAL International Workshop on GeoSpatial Simulation* (pp. 32-35), Chicago, Illinois, USA, November 5, 2019

[125] Vandewalle, R., Kang, J. Y., Yin, D., and **Wang, S.** "Integrating CyberGIS-Jupyter and Spatial Agent-based Modelling to Evaluate Emergency Evacuation Time". In: *Proceedings of the 2nd ACM SIGSPATIAL International Workshop on GeoSpatial Simulation* (pp. 32-35), Chicago, Illinois, USA, November 5, 2019

[126] Wilkins-Diehr, N., Miller, M., Brookes, E., Arora, R., Chourasia, A., Calyam, P., Jennewein, D., Nandigam, V., LaMar, M. D., Cleveland, S. B., Newman, G., **Wang, S.,** Zaslavsky, I., Cianfrocco, M., Ellett, K., and Tarboton, D. G. "Measuring Success: How Science Gateways Define Impact". In:

Proceedings of the Gateways 2019 Conference, San Diego, California, USA, September 23 – 25, 2019

[127] Lyu, F., Yin, D., Padmanabhan, A., Choi, Y., Goodall, J. L., Castronova, A., Tarboton, D. G., and **Wang, S.** "Bridging Reproducible Hydrological Modeling with CyberGIS-Jupyter: A Case Study on SUMMA". In: *Proceedings of Practice and Experience in Advanced Research Computing (PEARC'19)*, Chicago, Illinois, USA, July 28 – August 1, 2019

[128] Padmanabhan, A., Yin, D., Lyu, F., and **Wang, S.** "Bridging Local Cyberinfrastructure and XSEDE with CyberGIS-Jupyter". In: *Proceedings of Practice and Experience in Advanced Research Computing (PEARC'19)*, Chicago, Illinois, USA, July 28 – August 1, 2019

[129] Jeong, M.-H., Yin, J., and **Wang, S.** "Outliers Detection and Comparison of Origin-Destination Flows with Data Depth". In: *Proceedings of the 10th International Conference on Geographic Information Science (GIScience 2018)*, Melbourne, Australia, August 28 – 31, 2018

[130] Armstrong, M.P., **Wang, S.**, and Zhang, Z. "The Internet of Things and Fast Data Streams: Prospects for Geospatial Data Science in Emerging Information Ecosystems". In: *M. Freundschuh and D. Sinton (Eds.), Frontiers of Geospatial Data Science. Conference Proceedings, AutoCarto/UCGIS 2018, the 22nd International Research Symposium on Computer-based Cartography and GIScience* (pp. 11-17), Madison, Wisconsin, USA, May 22 – 24, 2018

[131] Yin, D., Liu, Y., Padmanabhan, A., Terstriep, J., Rush, J., and **Wang, S.** "A CyberGIS-Jupyter Framework for Geospatial Analytics at Scale". In: *Proceedings of the 2017 Practice and Experience in Advanced Research Computing (PEARC'17)*, New Orleans, Louisiana, USA, July 9 – 13, 2017

[132] Prasad, S. K., Aghajarian, D., McDermott, M., Shah, D., Mokbel, M., Puri, S., Rey, S. J., Shekhar, S., Xe, Y., Vatsavai, R. R., Wang, F., Liang, Y., Vo, H., and **Wang, S.** "Parallel Processing over Spatial-Temporal Datasets from Geo, Bio, Climate and Social Science Communities: A Research Roadmap". In: *Proceedings of the 6th IEEE International Congress on Big Data*, Honolulu, Hawaii, USA, June 25 – 30, 2017

[133] Zhang, C., Zhang, K., Yuan, Q., Peng, H., Zheng, Y., Hanratty, T., **Wang, S.**, and Han, J. "Regions, Periods, Activities: Uncovering Urban Dynamics via Cross-Modal Representation Learning". In: *Proceedings of the 26th International World Web Conference (WWW)*, Perth, Australia, April 3 – 7, 2017

[134] Jeong, M.-H., Cai, Y., Sullivan, C. J., and **Wang. S.** "Data Depth Based Clustering Analysis". In: *Proceedings of the 24th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2016)*, San Francisco, California, USA, October 31 – November 3, 2016

[135] Zhang, C., Zhou, G., Yuan, Q., Zhuang, H., Zheng, Y., Kaplan, L., **Wang, S.**, and Han, J. "GeoBurst: Real-Time Local Event Detection in Geo-Tagged Tweet Streams". In: *Proceedings of the 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016)*, Pisa, Tuscany, Italy, July 18 – 20, 2016

[136] Hu, H., Hong, X., Terstriep, J., Liu, Y., Finn, M., Rush, J., Wendel, J., **Wang, S.** "TopoLens: Building A CyberGIS Community Data Service for Enhancing the Usability of High-resolution National Topographic Datasets". In: *Proceedings of the 2016 Annual Conference on Extreme Science and Engineering Discovery Environment (XSEDE'16)*, Miami, Florida, USA, July 17 – 21, 2016

[137] Soltani, K., Soliman, A., Padmanabhan, A., and **Wang, S.** "UrbanFlow: Large-scale Framework to Integrate Social Media and Authoritative Landuse Maps". In: *Proceedings of the 2016 Annual Conference on Extreme Science and Engineering Discovery Environment (XSEDE'16)*, Miami, Florida, USA, July 17 – 21, 2016

[138] Survila, K., Yildirim, A. A., Li, T., Liu, Y., Tarboton, D. G., and **Wang, S.** "A Scalable High-performance Topographic Flow Direction Algorithm for Hydrological Information Analysis". In: *Proceedings of the 2016 Annual Conference on Extreme Science and Engineering Discovery Environment (XSEDE'16)*, Miami, Florida, USA, July 17 – 21, 2016

[139] Yildirim, A. A., Tarboton, D. G., Liu, Y., Sazib, N. S., and **Wang, S.** "Accelerating TauDEM for Extracting Hydrology Information from National-Scale High Resolution Topographic Dataset". In: *Proceedings of the 2016 Annual Conference on Extreme Science and Engineering Discovery Environment (XSEDE'16)*, Miami, Florida, USA, July 17 – 21, 2016

[140] Soliman, A., Yin, J., Soltani, K., Padmanabhan, A., and **Wang, S.** "Where Chicagoans Tweet the Most: Semantic Analysis of Preferential Return Locations of Twitter Users". In: *Proceedings of the 1st ACM SIGSPATIAL International Workshop on Smart Cities and Urban Analytics (UrbanGIS'15)*, Seattle, Washington, USA, November 3, 2015

[141] Soltani, K., Padmanabhan, A., and **Wang, S.** "MovePattern: Interactive Framework to Provide Scalable Visualization of Movement Patterns". In: *Proceedings of the 8th ACM SIGSPATIAL International Workshop on Computational Transportation Science (IWCTS)*, Seattle, Washington, USA, November 3, 2015

[142] Liu, Y. Y., Cho, W. K. T., **Wang, S.** "A Scalable Computational Approach to Political Redistricting Optimization". In: *Proceedings of the 2015 Annual Conference on Extreme Science and Engineering Discovery Environment (XSEDE'15)*, St Louis, Missouri, USA, July 26 – 30, 2015

[143] Soltani, K., Parameswaran, A., and **Wang, S.** "GeoHashViz: Interactive Analytics for Mapping Spatiotemporal Diffusion of Twitter Hashtags". In: *Proceedings of the 2015 Annual Conference on Extreme Science and*

Engineering Discovery Environment (XSEDE'15), July 26 – 30. St Louis, Missouri, USA, July 26-30, 2015

[144] Jeong, M.-H., **Wang, S.**, and Sullivan, C. J. "Analysis of Dynamic Radiation Level Changes Using Surface Networks". In: *Proceedings of Advancing Geographic Information Science: The past and Next Twenty Years*, Bar Harbor, Maine, USA, June 29 – July 3, 2015

[145] Hu, H., Lin, T., Liu, Y., **Wang, S.**, Rodriguez, L. "CyberGIS-BioScope: A Cyberinfrastructure-based Spatial Decision-Making Environment for Biomass-to-Biofuel Supply Chain Optimization". In: *Proceedings of the 2014 ACM workshop on Gateway Computing Environments (GCE'14)*, New Orleans, Louisiana, USA, November 21, 2014

[146] Fan, Y., Liu, Y. Y., **Wang, S.**, Tarboton, D. G., Yildirim, A., and Wilkins-Diehr, N. "Accelerating TauDEM as a Scalable Hydrological Terrain Analysis Service on XSEDE". In: *Proceedings of NSF XSEDE 2014: Extreme Science and Engineering Discovery Environment (XSEDE)*, Atlanta, Georgia, USA, July 13 – 18, 2014

[147] Youn, C., Nandigam, V., Phan, M., Tarboton, D. G., Wilkins-Diehr, N., Baru, C., Crosby, C., Padmanabhan, A., and **Wang, S.** "Leveraging XSEDE HPC resources to Address Computational Challenges with High-Resolution Topography Data". In: *Proceedings of NSF XSEDE 2014*, Atlanta, Georgia, USA, July 13 – 18, 2014

[148] Zhang, Z., **Wang, S.**, Cao, G., Padmanabhan, A., and Wu, K. "A Scalable Approach to Extracting Mobility Patterns from Social Media Data". In: *Proceedings of the 22nd International Conference on GeoInformatics*, Kaohsiung, Taiwan, June 25 – 27, 2014

[149] Riteau, P., Hwang, M., Padmanabhan, A., Gao, Y., Liu, Y. Y., Keahey, K., and **Wang, S.** "A Cloud Computing Approach to On-Demand and Scalable CyberGIS Analytics". In: *Proceedings of ScienceCloud* 2014, Vancouver, BC, Canada, June 23, 2014

[150] Hwang, M., **Wang, S.**, Cao, G., Padmanabhan, A., and Zhang, Z. "Spatiotemporal Transformation of Social Media Geostreams: A Case Study of Twitter for Flu Risk Analysis". In: *Proceedings of the 4th ACM SIGSPATIAL International Workshop on GeoStreaming (IWGS)*, Orlando, Florida, USA, November 5, 2013

[151] Liu, Y., Padmanabhan, A., and **Wang S.** "CyberGIS Gateway for Enabling Data-Rich Geospatial Research and Education". In: *Proceedings of Science Gateway Institute Workshop (IEEE Cluster 2013)*, Indianapolis, Indiana, USA, September 27, 2013

[152] Padmanabhan, A., **Wang, S.**, Cao, G., Hwang, M., Zhao, Y., Zhang, Z., and Gao, Y. "FluMapper: An Interactive CyberGIS Environment for Massive Location-based Social Media Data Analysis". In: *Proceedings of NSF XSEDE 2013: Gateway to Discovery*, San Diego, CA, USA, Jul 22 – 25, 2013

[153] Padmanabhan, A., Youn, C., Hwang, M., Liu, Y., **Wang, S.**, Wilkins-Diehr, N., and Crosby, C. "Integration of Science Gateways: A Case Study with CyberGIS and OpenTopography". In: *Proceedings of NSF XSEDE 2013: Gateway to Discovery*, San Diego, CA, USA, July 22 – 25, 2013

[154] Liu, Y. Y., Guo M., and **Wang, S.** "Large-scale Land Use Optimization by Enhancing a Scalable Parallel Genetic Algorithm Library". In: *Proceedings of NSF XSEDE 2013: Gateway to Discovery*, San Diego, CA, USA, July 22 – 25, 2013

[155] Shook, E., Leetaru, K., Cao, G., Padmanabhan, A., and **Wang, S.** "Happy or Not: Generating Topic-based Emotional Heatmaps for Culturomics Using CyberGIS". In: *Proceedings of the 8th IEEE International Conference on eScience*, Chicago, Illinois, USA, October 8, 2012, pages: 1-6

[156] Shook, S. and **Wang, S.** "A Parallel Input-Output System for Resolving Spatial Data Challenges: An Agent-Based Model Case Study". In: *Proceedings of the 2nd ACM SIGSPATIAL International Workshop on High Performance and Distributed Geographic Information Systems (ACM HPDGIS 2011)*, Chicago, Illinois, USA, November 1, 2011, pages: 19-26

[157] Behzad, B., Padmanabhan, A., Liu, Y., and **Wang, S.** "Integrating CyberGIS Gateway with Windows Azure: A Case Study on MODFLOW Groundwater Simulation". In: *Proceedings of the 2nd ACM SIGSPATIAL International Workshop on High Performance and Distributed Geographic Information Systems (ACM HPDGIS 2011)*, Chicago, Illinois, USA, November 1, 2011, pages: 27-30

[158] Padmanabhan, A., **Wang, S.**, and Navarro, J.P. "A CyberGIS Gateway Approach to Interoperable Access to the National Science Foundation TeraGrid and the Open Science Grid". In: *Proceedings of the 5th NSF TeraGrid 2011 Annual Conference*, Salt Lake City, Utah, USA, July 18 – 21, 2011

[159] Liu, Y., Wu, K., **Wang, S.**, Zhao, Y., and Huang, Q. "A MapReduce Approach to *Gi*(d)* Spatial Statistic". In: *Proceedings of the 1st ACM SIGSPATIAL International Workshop on High Performance and Distributed Geographic Information Systems (ACM HPDGIS 2010)*, San Jose, California, USA, November 2, 2010, pages: 11-18

[160] Padmanabhan, A. and **Wang, S.** "A Distributed Resource Broker for Spatial Middleware Using Adaptive Space-Filling Curve". In: *Proceedings of the 1st ACM SIGSPATIAL International Workshop on High Performance and Distributed Geographic Information Systems (ACM HPDGIS 2010)*, San Jose, California, USA, November 2, 2010, pages: 27-30

[161] Liu, Y., **Wang, S.**, and Wilkins-Diehr, N. "SimpleGrid 2.0: A Learning and Development Toolkit for Building Highly Usable TeraGrid Science Gateways". In: *Proceedings of Grid Computing Environments 2009 Workshop*, Portland, Oregon, USA, November 20, 2009

[162] **Wang, S.** "GISolve Toolkit: Advancing GIS through Cyberinfrastructure". In: *Proceedings of the 16th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2008)*, Irvine, California, USA, November 5 – 7, 2008, pages: 83-84

[163] **Wang, S.**, Padmanabhan, A., Myers, J. D., Tang, W., and Liu, Y. "Towards Provenance-Aware Geographic Information Systems". In: *Proceedings of the 16th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2008)*, Irvine, California, USA, November 5 – 7, 2008, pages: 70-75

[164] **Wang, S.** "Formalizing Computational Intensity of Spatial Analysis". In: *Proceedings of the 5th International Conference on Geographic Information Science*, Park City, Utah, USA, September 23 – 26, 2008, pages: 184-187

[165] He, T., Ni, J., Segre, A. M., **Wang, S.**, Knosp, B. M. SkipMard: A Multi-Attribute Peer-to-Peer Resource Discovery Approach. In: *Proceeding of the 2nd International Multi-Symposium of Computer and Computational Sciences (IMSCCS 2007)*, Iowa City, Iowa, USA, August 13 – 15, 2007, pages: 266-273

[166] **Wang, S.,** Shook, E., Padmanabhan, A., Briggs, R., and Pearlman, L. "Developing a Modular Information Provider to Support Interoperable Grid Information Services". In: *Proceedings* of *Grid and Cooperative Computing - GCC 2006: The 5th International Conference*, Changsha, Hunan, China, October 21 – 23, 2006, pages: 448-453

[167] Liu, Y., Segre, A. M., **Wang, S**. "A High Throughput Approach to Combinatorial Search on Grids". In: *Proceedings of the 15th International Symposium on High Performance Distributed Computing (HPDC-15)*, Paris, France, June 19 – 23, 2006, pages: 351-352

[168] Padmanabhan, A., **Wang, S.**, Ghosh, S., and Briggs, R. "A Self-Organized Grouping (SOG) Method for Efficient Grid Resource Discovery". In: *Proceedings of the Grid 2005 Workshop*, Seattle, Washington, USA, November 13 – 14, 2005, pages: 312-317

[169] **Wang, S.**, and Armstrong, M. P. "A Theory of the Spatial Computational Domain". In: *Proceedings of GeoComputation 2005* (CDROM), Ann Arbor, Michigan, USA, August 1 – 3, 2005

[170] Ni, J., He, T., Demaria, J., **Wang, S.**, and Knosp, B. M. "Parallel Numerical Integration in a P2P/Grid Computing Environment". In: *Proceedings of the 2005 International Conference on Grid Computing and Applications (GCA'05)*, Las Vegas, Nevada, USA, June 20 – 23, 2005, pages: 203-209

[171] Ni, J., He, T., Wang, G., **Wang, S.**, and Knosp, B. M. "Scenario of Application Layers for Grid-enhanced International Digital Library in Medical Imaging". In: *Proceedings of the 2005 International Conference on Grid Computing and Applications (GCA'05)*, Las Vegas, Nevada, USA, June 20 – 23, 2005, pages: 196-202

[172] **Wang, S.**, Xiao, S., Ni, J. "A Grid-Based Bridging Domain Multiple-Scale Method for Computational Nanotechnology". *International Conference on Computational Science*, Atlanta, Georgia, USA, May 22 – 25, 2005, *Lecture Notes in Computer Science* (Springer), Volume 3516, pages: 326-333

[173] **Wang, S.,** Armstrong, M. P., Ni, J., Liu, Y. "GISolve: A Grid-based Problem-Solving Environment for Computationally Intensive Geographic Information Analysis". In: *Proceedings of the 14th International Symposium on High Performance Distributed Computing (HPDC-14)* – Challenges of Large Applications in Distributed Environments (CLADE) Workshop, Research Triangle Park, North Carolina, USA, July 24 – 27, 2005, pages: 3-12

[174] Ni, J., He, T., Li, X., **Wang**, **S.,** and Wang, G. "EM Medical Image Reconstruction in a Peer-to-Peer System". *Grid and Cooperative Computing - GCC 2004: The 3rd International Conference*, Wuhan, Hubei, China, October 21 – 24, 2004, *Lecture Notes in Computer Science* (Springer), Volume 3251, pages: 495-501

[175] Li, X., He, T., **Wang**, **S.,** Wang, G., and Ni, J. "P2P-Enhanced Distributed Computing in Medical Image EM Reconstruction". In: *Proceedings of the 2004 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'04)*, Las Vegas, Nevada, USA, June 21 – 24, 2004, Volume 2, pages: 822-828

[176] Ni, J., Lin, C-L, Zhang, Y., He, T., **Wang, S.,** and Knosp, B. M. "Performance Evaluation of a Parallel Lattice Boltzmann Method for Cavity Flows Using Cluster Computing". In: *Proceedings of the 2004 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'04)*, Las Vegas, Nevada, USA, June 21 – 24, 2004, Volume 2, pages: 10-16

[177] Ni, J., He, T., Huang, L., **Wang**, **S.,** Knosp, B. M., and Lin, C-L. "Distributed Computation for Diffusion Problem in a P2P-Enhanced Computing System". In: *Proceedings of the 2nd International Workshop on Grid and Cooperative Computing* (*GCC 2003)*, Shanghai, China, December 7 – 10, 2003, *Lecture Notes in Computer Science* (Springer), Volume 3032, pages: 428-435

[178] **Wang, S.**, Padmanabhan, A., Liu, Y., Briggs, R., Ni, J., Knosp, B. M., and Onel, Y. "A Multi-Agent System Framework for End-user Level Grid Monitoring Using Geographical Information Systems (MAGGIS): Architecture and Implementation". In: *Proceedings of the 2nd International Workshop on Grid and Cooperative Computing (GCC 2003)*, Shanghai, China, December 7 – 10, 2003, *Lecture Notes in Computer Science* (Springer), Volume 3032, pages: 536-543

[179] **Wang, S.** "Grid-based Geo-Middleware". One of the Five Finalist Papers of Annual Paper Competition of the Geographic Information Systems and Science Specialty Group of the Association of American Geographers, New Orleans, Louisiana, USA, March 3 – 8, 2003

[180] **Wang, S.**, Armstrong, M. P., and Bennett, D. A. "Conceptual Basics of Middleware Design to Support Grid Computing of Geographic Information". In: *Proceedings of 2nd International Conference on Geographic Information Science*, Boulder, Colorado, USA, September 25 – 28, 2002, pages: 197-200

[181] **Wang, S.**, Bennett, D. A., and Armstrong, M. P. "Using Grid-enabled Teleimmersive Spatial Decision Support Systems (TIDSS) to Visualize Uncertainty for Water Quality Protection in Agroecosystems". In: *Proceedings of the 10th International Geoinformatics Conference for Global Change Studies and Sustainable Development*, Nanjing, Jiangsu, China, June 1 – 3, 2002

BOOK REVIEW

[182] **Wang, S.** (2011) "Web GIS", *Annals of GIS*, 17 (3): 197

SELECTED CONFERENCE ABSTRACTS (TOTAL: MORE THAN 100)

[1] Tarboton, D. G., Horsburgh, J. S., Ames, D. P., Goodall, J. L., Couch, A., **Wang, S.**, Yi, H., Castronova, A. M., Seul, C., Ramirez, M., Hooper, R. P., Calloway, C., Black, S., Bales, J., and Lenhardt, W. C. "Aspirations for, and Realities of, Publishing and Sharing Water Information in HydroShare". *The American Geophysical Union (AGU) Fall Meeting*, December 13 - 17, 2021, New Orleans, Louisiana, USA

[2] Bandaragoda, C., Wen, T., Habib, E. H., Castronova, A., Byrd, J., Gallagher, M., Williams, D., Tarboton, D. G., Padmanabhan, A., **Wang, S.**, Li, Z., Ames, D. P. "Intelligent Earth: Diffusion of Geoscience Research and Cyberinfrastructure Innovations with Authentic Data and Computational Tasks". *AGU Fall Meeting*, December 1 - 17, 2020 (online)

[3] Tarboton, D. G., Idaszak, R., Horsburgh, J. S., Ames, D. P., Goodall, J. L., Couch, A., Dash, P. K., Yi, H., Bandaragoda, C., Castronova, A. M., Hooper, R. P., **Wang, S.**, Ramirez, M., Sadler, J. M., Morsy, M. M., Black, S., Calloway, C., and Bales, J. "Advances in the HydroShare Community Platform Enabling the Integration of Water Data in Support of Hydrologic Research". *AGU Fall Meeting*, December 10, 2019, San Francisco, California, USA

[4] Sanyal, S., Wuebbles, D. J., Tilmes, S., Liang, X-Z., and **Wang, S.** "Changing Climate and Its Effect on Urban Life: Ozone and Particulate Matter Exceedance Events and a CyberGIS Toolkit for Urban Sustainability". *AGU Fall Meeting*, December 10, 2019, San Francisco, California, USA

[5] Lyu, F., Xu, Z., Yin, D., and **Wang, S.** "A Free-Flow Approach to Drainage Network Analysis Based on LiDAR Data". *The American Association of Geographers (AAG) Annual Meeting*, April 3 – 7, 2019, Washington, DC, USA

[6] Xu, Z., Jiang, Z., Shavers, E., Stanislawski, L., and **Wang. S.** "A 3D Convolutional Neural Network Method for Surface Water Mapping Using

Lidar and NAIP Imagery". *The American Society for Photogrammetry and Remote Sensing Annual Conference and International Lidar Mapping Forum*, January 27 – 31, 2019, Denver, Colorado, USA

[7] Tarboton, D. G., Idaszak, R., Horsburgh, J. S., Ames, D. P., Goodall, J. L., Couch, A., Hooper, R., **Wang, S.**, Clark, M., Dash, P., Yi, H., Bandaragoda, C., Castronova, A., Gan, T., Li, Z., Morsy, M., Ramirez, M., Sadler, J., Yin, D., and Liu. Y. "HydroShare: A Platform for Collaborative Data and Model Sharing in Hydrology". *European Geosciences Union (EGU) General Assembly,* April 8 – 13, 2018, Vienna, Austria

[8] Cai, Y., **Wang. S.**, Guan, K., and Peng, J. "High-Performance Crop Type Classification for Large Geographic Areas". *AAG Annual Meeting*, April 10 – 14, 2018, New Orleans, Louisiana, USA

[9] Hu, H., Lin, T., Li, B., and **Wang. S.** "Spatiotemporal Bayesian Hierarchical Modeling for Analysis of Crop Yield Response to Weather Variability". *AAG Annual Meeting,* April 5 – 9, 2017, Boston, Massachusetts, USA

[10] **Wang, S.** and Tarboton, D. G. "Interoperating CyberGIS and HydroShare for Data-Intensive Hydrological Modeling". *CUAHSI Conference on Hydroinformatics – Swimming in Data without Drowning in the Deluge*, July 25 – 27, 2017, Tuscaloosa, Alabama, USA

[11] Gao, Y. and **Wang, S.** "Detecting Events from Flow Data: A High-Dimensional Spatial Point Process Approach". *AAG Annual Meeting*, March 29 – April 2, 2016, San Francisco, California, USA

[12] Yin, D. and **Wang, S.** "Sensing Spatial Structures through Large-scale Social Media". *AAG Annual Meeting*, March 29 – April 2, 2016, San Francisco, California, USA

[13] Soliman, A., Padmanabhan, A., Keahey, K., Liu, Y., Pineda, L., Riteau, P., Soltani, K., Subramaniam, B., Yin, J., and **Wang, S.** "A Cloud Computing Workflow for Scalable Integration of Remote Sensing and Social Media Data in Urban Studies". *AGU Fall Meeting*, December 14-18, 2015, San Francisco, California, USA

[14] **Wang, S.**, Cho, W. K. T., and Liu, Y. "Scalable CyberGIS Analytics for Solving a Complex Spatial Optimization Problem". *NSF Blue Waters Symposium for Petascale Science and Beyond,* May 10-13, 2015, Sunriver, Oregon, USA

[15] Soltani, K., **Wang, S.**, and Padmanabhan, A. "Mapping Spatiotemporal Diffusion of Ideas Using Hashtags". *AAG Annual Meeting,* April 21-25, 2015, Chicago, Illinois, USA

[16] **Wang, S.** "Geospatial Data Science in the Big Data Era". *AAG Annual Meeting,* April 21-25, 2015, Chicago, Illinois, USA

[17] Yin, J., Gao, Y., and **Wang, S.** "CyberGIS-enabled Urban Sensing from Volunteered Citizen Participation Using Mobile Devices". *NSF Workshop on*

Big Data and Urban Informatics, August 11-12, 2014, Chicago, Illinois, USA

[18] **Wang, S.**, Cho, W. K. T., Liu, Y. "An Extreme-Scale Computational Approach to Redistricting Optimization". *NSF Blue Waters Symposium for Petascale Science and Beyond, May 12-15, 2014, Champaign, Illinois, USA*

[19] Gao, Y., **Wang, S.**, and Padmanabhan, A. "Spatiotemporal Event Detection Using Social Media Data". *AAG Annual Meeting*, April 8-12, 2014, Tampa, Florida, USA

[20] **Wang, S.** "A CyberGIS Framework for Scalable Spatiotemporal Data Analytics". *AAG Annual Meeting*, April 8-12, 2014, Tampa, Florida, USA

[21] Hu, H., **Wang, S.**, Lin, T., Liu, Y., and Rodriguez, L. F. "Assessing Uncertainties in CyberGIS-Based Spatial Decision Making: A Spatial Optimization Case Study". *AAG Annual Meeting*, April 9-13, 2013, Los Angeles, California, USA

[22] **Wang, S.** "An Integration Vision and Roadmap for CyberGIS". *AAG Annual Meeting*, April 9-13, 2013, Los Angeles, California, USA

[23] Cao, G., **Wang, S.**, and Guan, Q. "A State-Space Model for Understanding Spatial Dynamics Represented by Areal Data". *The 7th International Conference on Geographic Information Science*, September 19-21, 2012, Columbus, Ohio, USA

[24] **Wang, S.** "CyberGIS for Synergistically Advancing Cyberinfrastructure and GIScience". *AAG Annual Meeting*, February 24-28, 2012, New York City, New York, USA

[25] Zhao, Y., Padmanabhan, A., **Wang, S.**, and Liu, Y. "GPGPU-Based Parallel Viewshed Analysis on CyberGIS Gateway". *The 5th NSF TeraGrid 2011 Annual Conference*, July 18-21, 2011, Salt Lake City, Utah, USA

[26] **Wang, S.** "CyberGIS Software Integration for Sustained Geospatial Innovation". Presentation on the Panel of Spatial Cloud Computing (SCC): How Could Geographers Use and Help to Shape Cloud Computing? *AAG Annual Meeting*, April 12-16, 2011, Seattle, Washington, USA

[27] **Wang, S.** and Liu, Y. 2010. "GISolve 2.0: Geospatial Problem Solving Environment Based on Synthesizing Cyberinfrastructure and Web 2.0". *The 4th NSF TeraGrid 2010 Annual Conference*, August 1-5, 2010, Pittsburgh, Pennsylvania, USA

[28] **Wang, S.**, and Liu, Y. "Simplifying Access to Cyberinfrastructure: A SimpleGrid Approach". *AAG Annual Meeting*, April 14-18, 2010, Washington, DC, USA

[29] Shook, E., Tang, W., and **Wang, S.** "A Parallel Computing Approach for Spatially Explicit Agent-Based Models". *AAG Annual Meeting*, March 22-27, 2009, Las Vegas, Nevada, USA

[30] **Wang, S.**, Tang, W., Bennett, D. A., and Padmanabhan, A. "An Open Science Grid Approach to Understanding the Complexity of Coupled Human and Natural Systems". *The 2009 Open Science Grid All Hands Meeting*, March 2-5, 2009, Baton Rouge, Louisiana, USA

[31] **Wang S.** "Bridging Cyberinfrastructure and GIScience – A Holistic Approach". *Cyberinfrastructure for GIScience: A Workshop in Conjunction with GIScience 2008*, September 23, 2008, Park City, Utah, USA

[32] **Wang, S.** "GISolve – Next Generation of Geographic Information Systems: A Cyberinfrastructure Approach". *The 3rd NSF TeraGrid Annual Conference*. June 9-13, 2008, Las Vegas, Nevada, USA

[33] **Wang, S.** "Cyberinfrastructure-Based Geographic Information Systems". *AAG Annual Meeting,* April 15-19, 2008, Boston, Massachusetts, USA

[34] **Wang, S.**, Liu, Y., Wilkins-Diehr, N., and Martin, S. "SimpleGrid Toolkit: Enabling Efficient Learning and Development of TeraGrid Science Gateway". *The 3rd International Workshop on Grid Computing Environments*, November 11-12, 2007, Reno, Nevada, USA

[35] Shook, E. (The Best Doctoral Student Presentation), **Wang, S.**, Zhu, X-G., and Liu, Y. "Synthesizing Spatial-Temporal Data to Enable Geospatial Analysis of Biomass-Based Bioenergy". *AAG Westlake Annual Meeting*, November 8-10, 2007, Urbana, Illinois, USA

[36] **Wang, S.** 2007. "Developing GISolve as a TeraGrid GIScience Gateway for Geographic Information Analysis". *AAG Annual Meeting,* April 17-21, 2007, San Francisco, California, USA

[37] **Wang, S.** 2006. "GISolve – TeraGrid GIScience Gateway". *The 2006 ACM/IEEE Conference on Supercomputing (SC|06),* November 11-17, 2006, Tampa, Florida, USA

[38] **Wang, S.,** Briggs, R., Armstrong, M. P., Ni, J. 2006. "A Fast Two-Dimensional Inverse Distance Weighted Interpolation Algorithm Based on a Dynamic Assessment of Nearest-Neighbor Information". *AAG Annual Meeting,* March 7-11, 2006, Chicago, Illinois, USA

[39] **Wang, S.,** Armstrong, M. P., Ni, J., Liu, Y. 2005. "GISolve: A Grid-based Problem-Solving Environment for Computationally Intensive Geographic Information Analysis". *AAG Annual Meeting,* April 5-9, 2005, Denver, Colorado, USA

[40] **Wang, S.,** Cowles, M. K., and Armstrong, M. P. 2004. "Grid-based Spatial Statistics Middleware: The Case of the $G_i^*(d)$ Statistic". *AAG Annual Meeting,* March 14-19, 2004, Philadelphia, Pennsylvania, USA

[41] **Wang, S.** 2003. "Grid-based Geo-middleware". *AAG Annual Meeting,* March 3-8, 2003, New Orleans, Louisiana, USA

[42] Knosp, B. M., **Wang, S.,** and Ni, J. 2002. "Grid-based Volume Rendering". *The 2002 ACM/IEEE Conference on Supercomputing (SC|02)*, November 16-22, 2002, Baltimore, Maryland, USA

[43] **Wang, S.,** Huang, L, and Bennett, D. A. 2002. "Portrayal of Water Quality in Agroecosystems". *The American Water Resource Association (AWRA) 2002 Annual Conference*, November 3-7, 2002, Philadelphia, Pennsylvania, USA

[44] **Wang, S.**, and Armstrong, M. P. 2002. "Exploring Ecosystem Dynamics Using Teleimmersive Collaborative Spatial Decision Making (CSDM) Systems and Remote Sensing". *AAG Annual Meeting*, March 19-23, 2002, Los Angeles, California, USA

[45] **Wang, S.**, and Armstrong, M. P. 2001. "Development and Evaluation of a Teleimmersion Framework for Collaborative Spatial Decision Making". *AAG Annual Meeting* March 1-5, 2001, New York City, New York, USA

[46] **Wang, S.**, and Armstrong, M. P. 2000. "Evaluation of Metapopulation Dynamics Using Virtual Reality Based Evolutionary Computational Methods". *AAG Annual Meeting*, April 4-8, 2000, Pittsburgh, Pennsylvania, USA

TEACHING EXPERIENCE

2022 (Spring) Online Course: Foundations of CyberGIS and Geospatial Data Science
Department of Geography and Geographic Information Science, UIUC

2021-present Coursera Course: Getting Started with CyberGIS (Co-Instructor)
https://www.coursera.org/learn/cybergis

2020 (Fall) GIS Professional Seminar (Co-Instructor)
Department of Geography and Geographic Information Science, UIUC

2020 (Spring) Advanced Geographic Information Systems – CyberGIS (Co-Instructor)
Department of Geography and Geographic Information Science, UIUC

2019-2020 Online Course: Foundations of CyberGIS and Geospatial Data Science (Co-Developer)
Department of Geography and Geographic Information Science, UIUC

2019 (Fall) Spatial Computing, Modeling, and Simulation (Co-Instructor)
Department of Geography and Geographic Information Science, UIUC

2019 (Spring) Principles of Geographic Information Systems
Department of Geography and Geographic Information Science and Illinois Informatics Institute, UIUC

2016 (Fall) Principles of Geographic Information Systems
Department of Geography and Geographic Information Science and Illinois Informatics Institute, UIUC

2015 (Spring) Advanced Digital and Spatial Studies
Department of Geography and Geographic Information Science, UIUC

2013 (Fall) Principles of Geographic Information Systems
Department of Geography and Geographic Information Science and Illinois Informatics Institute, UIUC

2013 (June) eSilk Road GIScience Summer School (Invited Lecturer)
Chinese Academy of Sciences, Suzhou, Jiangsu, China

2012 (Fall) Geographic Information Science – Advanced Topics
Department of Geography and Geographic Information Science, UIUC

2011-12 Online Course: Introduction to Geographic Information Systems
Department of Geography and Geographic Information Science, UIUC

2011 (Fall) Introduction to Geographic Information Systems
Department of Geography and School of Earth, Society, and Environment, UIUC

2011 (Spring) Principles of Geographic Information Systems
Department of Geography and Illinois Informatics Institute, UIUC

Introduction to Geographic Information Systems
Department of Geography and School of Earth, Society, and Environment, UIUC

2010 (Spring) Principles of Geographic Information Systems
Department of Geography and Illinois Informatics Institute, UIUC

Introduction to Geographic Information Systems
Department of Geography and School of Earth, Society, and Environment, UIUC

2009 (Fall) Geographic Information Science – Advanced Topics
Department of Geography, UIUC

2009 (Spring) Principles of Geographic Information Systems
Department of Geography and Illinois Informatics Institute, UIUC

Introduction to Geographic Information Systems
Department of Geography and School of Earth, Society, and Environment, UIUC

2008 (Spring) Introduction to Geographic Information Systems
Department of Geography and School of Earth, Society, and Environment, UIUC

2007 (Fall) Advanced Geographic Information Systems
Department of Geography, UIUC

2007 (Spring) Principles of Geographic Information Systems
Department of Geography, the University of Iowa

2006 (Spring) Foundations of Geographic Information Systems
Department of Geography, the University of Iowa

2005 (Spring) Principles of Geographic Information Systems
Department of Geography, the University of Iowa

2002 (Fall) World Cities (Invited Lecturer)
Department of Geography, the University of Iowa

Object-Oriented Programming Languages – C++ (Invited Lecturer)
Department of Computer Science, the University of Iowa

Short Course: Grid Computing – Theories and Practices
Information Technology Services, the University of Iowa

2000 (Spring) Computational Grids and Their Applications
Programming Languages and Advanced Topics of C Language
Information Technology Services, the University of Iowa

INVITED TALKS

DISTINGUISHED/NAMED LECTURES

[1] "CyberGIS and Geospatial Artificial Intelligence". *AI Distinguished Lecture Series*, Argonne National Laboratory, April 28, 2022

[2] "Extreme Digital Transformation in Spatial Analysis and Modeling". *Getis-Ord Lecture in Spatial Analysis*, the 60th Anniversary Meeting of the Western Regional Science Association (WRSA), February 23, 2021

[3] "CyberGIS – Retrospect and Prospect". *Harold & Florence Mayer Lecture, Department of Geography, the University of Wisconsin – Milwaukee*, Milwaukee, Wisconsin, USA, March 6, 2020

[4] "Geospatial Discovery and Innovation in the Era of Artificial Intelligence and CyberGIS". *Borchert Lecture, the University of Minnesota*, Minneapolis, Minnesota, USA, November 13, 2019

[5] "Geospatial Discovery and Innovation in the Era of CyberGIS and Machine Intelligence". *Gerard Rushton Fellowship Lecture, Department of Geographical and Sustainability Sciences, the University of Iowa*, Iowa City, Iowa, USA, March 29, 2019

[6] "Exploring the Frontiers of CyberGIS and Geospatial Data Science". *Distinguished Lecture in Geospatial Data Science, the University of Delaware*, Newark, Delaware, USA, March 15, 2019

[7] "From CyberGIS to Spatial Data Science". *Department of Land Surveying and Geo-Informatics Distinguished Lecture, the Hong Kong Polytechnic University*, Hong Kong, China, May 31, 2017

[8] "Big Data Science and CyberGIS for Transforming Geospatial Discovery and Innovation". *Department of Geography Distinguished Lecture, the University of Tennessee*, Knoxville, Tennessee, USA, November 15, 2016

[9] "CyberGIS for Empowering Geospatial Discovery and Innovation in the Era of Big Compute and Data". *Shi Jian Lecture, Institute of Geographic*

Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China, February 9, 2015

KEYNOTE ADDRESSES

[10] "Future Directions for CyberGIS and Geospatial AI & Data Science". *USGS Center of Excellence for Geospatial Information Science (CEGIS) Annual Meeting*, Rolla, Missouri, USA, August 3, 2022

[11] "Accelerating Computing for Transforming Convergence and Geospatial Sciences". *The 5th Annual Texas A&M Research Computing Symposium*, College Station, Texas, USA, May 23, 2022

[12] "CyberGIS and Machine Intelligence for Transforming Geospatial Discovery and Innovation". *EarthCube 2019 Annual Meeting*, Denver, Colorado, USA, June 13, 2019

[13] "Geospatial Discovery and Innovation in the Era of CyberGIS and Machine Intelligence". *The United Nations World Geospatial Information Congress*, Deqing, Zhejiang, China, November 19, 2018

[14] "CyberGIS and Geospatial Data Science for Transforming Digital Discovery and Innovation". *The 3rd International Conference on CyberGIS and Geospatial Data Science (CyberGIS'16)*, Urbana, Illinois, USA, July 27, 2016

[15] "Big Data, CyberGIS, and Geospatial Data Science". *The 19th AGILE International Conference on Geographic Information Science*, Helsinki, Finland, June 16, 2016

[16] "Open CyberGIS Software for Geospatial Research and Education in the Big Data Era". *2016 NSF Software Infrastructure for Sustained Innovation (SI2) Principal Investigator Workshop*, Washington, DC, USA, February 17, 2016

[17] "Synergistically Advancing CyberGIS and HydroInformatics in the Era of Big Compute and Data". *The 3rd CUAHSI Conference on Hydroinformatics*, Tuscaloosa, Alabama, USA, July 15, 2015

[18] "From CyberGIS to Geospatial Data Science". *The 23rd International Conference on GeoInformatics*, Wuhan, Hubei, China, June 19, 2015

[19] "CyberGIS-Health". *The International Geospatial Health Workshop on "Strengthening the International Geo-eco Global Health Research Collaborations: Challenges and Opportunities*, Wuhan, Hubei, China, June 17, 2015

[20] "CyberGIS-Enabled Geospatial Revolution in the Big Data Era". *Geospatial Sciences, Applications and Technology Center (GeoSAT), Texas A&M University*, College Station, Texas, USA, February 3, 2015

[21] "CyberGIS for Data-Intensive Health Research". *The 1st International Workshop on Fostering International Geospatial Health Research Collaborations: Challenges and Opportunities*, Hong Kong, China, June 17, 2014

[22] "CyberGIS and High-Performance Computing: Getting Married". *The 9th International Workshop on Geographical Information Science*, Beijing, China, June 22, 2014

[23] "CyberGIS for Fostering Geospatial Discovery and Innovation". *iGIScience Symposium*, Urbana, IL, October 4, 2013

[24] "CyberGIS for Enabling Data-Intensive Geospatial Research and Education". *The 2013 CUAHSI Conference on Hydroinformatics and Modeling*, Logan, Utah, USA, July 18, 2013

[25] "CyberGIS for Data-Intensive Research and Education". *The 2nd Open Forum on Research Opportunities and Challenges of Geographic Information Science*, Shanghai, China, June 24, 2013

[26] "Scalable Geocomputation Science". *The 12th International Conference on GeoComputation*, Wuhan, Hubei, China, May 24, 2013

[27] "CyberGIS for Advancing On-demand Geospatial Visual Analytics". *The 2nd American-Chinese CyberInfrastructure and E-Science workShop (ACCESS)*, Xi'an, Shaanxi, China, August 15, 2011

SELECTED OTHER TALKS (TOTAL: MORE THAN 100)

[28] "Data-Intensive Geospatial Understanding in the Era of AI and CyberGIS". *School of Environmental and Forest Sciences & eScience Institute, University of Washington*, December 9, 2021 (online)

[29] "NSF HDR Institute: Geospatial Understanding through an Integrative Discovery Environment (I-GUIDE)". *Meeting of the Advisory Committee to the NSF's Directorate for Social, Behavioral, and Economic Sciences*, December 3, 2021 (online)

[30] "CyberGIS Capabilities – A Holistic Perspective". *USGS Center of Excellence for Geospatial Information Science (CEGIS) Annual Meeting*, July 14, 2021 (online)

[31] "NSF SI2-S2I2 Conceptualization: Geospatial Software Institute (GSI) – Toward a Sustainable Social and Technical Ecosystem for Geospatial-inspired Discovery and Innovation". *NSF Workshop on Geospatial Software: Strategic Plan and Governance of GSI*, Annapolis, Maryland, USA, July 15, 2019

[32] "Frontiers in CyberGIS and Geospatial Data Science". *AAG-UCGIS Summer School on Reproducible Problem Solving with CyberGIS and Geospatial Data Science*, Urbana, Illinois, USA, July 8, 2019

[33] "Geospatial Discovery and Innovation in the Era of Big Data, CyberGIS, and Machine Intelligence". *Geographic and Atmospheric Sciences Colloquium, Northern Illinois University*, DeKalb, Illinois, USA, November 30, 2018

[34] "Next Generation GIS – A CyberGIS Perspective". *Center for Geographic Analysis, Harvard University*, Boston, Massachusetts, USA, October 11, 2018

[35] "CyberGIS for Geospatial Discovery and Innovation". *School of Civil and Environmental Engineering, the University of New South Wales*, Sydney, Australia, August 31, 2018

[36] "CyberGIS for Urban Discovery and Innovation". *Illinois Center for Urban Resilience and Environmental Sustainability – Planning Workshop*, Champaign, Illinois, USA, August 20, 2018

[37] "CyberGIS for Geospatial Discovery and Innovation". *ESALQ-LOG, University of São Paulo*, Piracicaba, Brazil, August 15, 2018

[38] "CyberGIS for Advancing Cyberinfrastructure Education and Workforce Development". *The 2018 Practice and Experience in Advanced Research Computing (PEARC'18)*, Pittsburgh, Pennsylvania, USA, July 24, 2018

[39] "NSF SI2-S2I2 Conceptualization: Geospatial Software Institute (GSI)". *The 2018 Practice and Experience in Advanced Research Computing (PEARC'18)*, Pittsburgh, Pennsylvania, USA, July 24, 2018

[40] "NSF SI2-S2I2 Conceptualization: Geospatial Software Institute (GSI) – Fostering a High-Performance and Sustainable Geospatial Software Ecosystem". *NSF Workshop on Geospatial Software: Geospatial Use Cases and Core Technical Capabilities*, Chicago, Illinois, USA, July 16, 2018

[41] "CyberGIS for Geospatial Discovery and Innovation". *USGS Center of Excellence for Geospatial Information Science (CEGIS) Annual Meeting*, Rolla, Missouri, USA, June 27, 2018

[42] "Conceptualizing a Geospatial Software Institute: Towards a Geospatial Software Ecosystem". *The 21st AGILE International Conference on Geographic Information Science*, Lund, Sweden, June 13, 2018

[43] "NSF SI2-S2I2 Conceptualization: Geospatial Software Institute: Towards a National Geospatial Software Ecosystem". *2018 NSF Software Infrastructure for Sustained Innovation (SI2) Principal Investigator Workshop*, Washington, DC, USA, May 1, 2018

[44] "Conceptualizing a National Geospatial Software Institute". *NSF Workshop on Geospatial Software: Connecting Big Data with Geospatial Discovery and Innovation*, Los Angeles, California, USA, January 29, 2018

[45] "Data Science – Capture and Analysis – Frontiers in CyberGIS and Geospatial Data Science". *Fall Meeting of the Board on Earth Sciences and Resources, the National Academies of Sciences, Engineering, and Medicine*, Washington, DC, USA, November 13, 2017

[46] "CyberGIS and Geospatial Data Science for Enabling Data-Intensive Sciences". *School of Earth Sciences, Zhejiang University*, Hangzhou, Zhejiang, China, November 8, 2017

[47] "CyberGIS and Spatial Data Science for Transforming Geospatial Discovery and Innovation". *Department of Earth Sciences, University of Southern California*, Los Angeles, California, USA, September 26, 2017

[48] "Frontiers in CyberGIS and Geospatial Data Science". *College of Geosciences, Texas A&M University*, College Station, Texas, USA, June 20, 2017

[49] "Open CyberGIS for Computation- and Data-Intensive Geospatial Discovery and Innovation". *USGS Center of Excellence for Geospatial Information Science (CEGIS) Annual Meeting*, Rolla, Missouri, USA, June 14, 2017

[50] "Urban and Regional Planning with CyberGIS". *Department of Urban and Regional Planning Faculty Seminar Series, UIUC*, Champaign, Illinois, USA, March 9, 2017

[51] "Synergistically Advancing CyberGIS and Geospatial Data Science". *Geospatial Forum, Center for Geospatial Analytics, North Carolina State University*, Raleigh, North Carolina, USA, March 2, 2017

[52] "CyberGIS: What It Is, and What It Can Do for Data-Intensive Farm Management". *USDA Data-Intensive Farm Management Annual Project Meeting*, Cedar Rapids, Iowa, USA, February 4, 2017

[53] "Advancement in Geospatial Science and Technology". *Symposium on National Geospatial Science and Technology Development*, Kolkata, India, January 27, 2017

[54] "CyberGIS Frontiers – A U.S. Perspective". *The First Indo-US CyberGIS Workshop*, Hyderabad, India, January 25, 2017

[55] "Digital Cartography in the Era of Big Data and CyberGIS". *Digital Cartography Summit, Geospatial World Forum 2017*, Hyderabad, India, January 24, 2017

[56] "CyberGIS and Geospatial Data Science". *Central South University*, Changsha, Hunan, China, November 22, 2016

[57] "Frontiers in CyberGIS and Geospatial Big Data". *Symposium on Frontiers in Big Data*, Urbana, Illinois, USA, September 23, 2016

[58] "CyberGIS and Geospatial Data Science for Enabling Data-Intensive Farm Management". *The Climate Cooperation*, St. Louis, Missouri, USA, July 14, 2016

[59] "Open CyberGIS Capabilities for Geospatial Discovery and Innovation in the Era of Big Compute and Data". *USGS Center of Excellence for Geospatial Information Science (CEGIS) Annual Meeting*, Rolla, Missouri, USA, June 29, 2016

[60] "Open CyberGIS for Integrated Food, Energy, and Water Research". *NSF Workshop on Innovative Cyberinfrastructure for Integrated Food, Energy, and Water Research*, Scottsdale, Arizona, USA, May 22, 2016

[61] "CyberGIS for Empowering the National Water Model". *Conversation about the National Water Model, Water Science and Technology Board and Board on Earth Sciences and Resources, the National Academies of Sciences, Engineering, and Medicine*, Washington, DC, USA, March 23, 2016

[62] "CyberGIS and Geospatial Data Science". *Department of Computer Science Yahoo-DAIS Seminar, UIUC*, Urbana, Illinois, USA, March 15, 2016

[63] "CyberGIS for Fostering Digital Geospatial Ecosystems". *NSF HydroShare All Hands Meeting*, Chapel Hill, North Carolina, USA, March 7, 2016

[64] "CyberGIS and Big Data Science for Geospatial Discovery and Innovation". *Department of Civil and Environmental Engineering Distinguished Seminar Series, Northeastern University*, Boston, Massachusetts, USA, March 1, 2016

[65] "Big Data, CyberGIS, and Geospatial Discovery". *TTU Center for Geospatial Technology and the Department of Geosciences, Texas Tech University*, Lubbock, Texas, USA, February 2, 2016

[66] "State of CyberGIS". *The 2015 NSF CyberGIS Project All Hands Meeting*, Reston, Virginia, USA, September 15, 2015

[67] "CyberGIS Capabilities for the National Map". *USGS Center of Excellence for Geospatial Information Science (CEGIS) Annual Meeting*, Rolla, Missouri, June 10, 2015

[68] "Geospatial Discovery and Innovation in the Era of Big Data and Compute". *NRC's Board on Earth Sciences and Resources (BESR) Spring Meeting*, Washington, DC, USA, April 29, 2015

[69] "CyberGIS for Data-Rich Geographic Research and Education". *Department of Geography Colloquium, San Diego State University*, San Diego, California, USA, March 27, 2015

[70] "CyberGIS Transformation of Geospatial Discovery and Innovation in the Era of Big Compute and Data". *Lyles School of Civil Engineering Colloquium, Purdue University*, West Lafayette, Indiana, USA, March 4, 2015

[71] "CyberGIS for Empowering Geospatial Discovery and Innovation in the Big Data Era". *Prairie Research Institute Seminar, UIUC*, Champaign, Illinois, USA, January 30, 2015

[72] "CyberGIS Workflow for Collaborative, Interactive, and Scalable Knowledge Discovery". *NSF XSEDE Workflow Community Webinar Series*, January 30, 2015

[73] "CyberGIS for Data-Rich Geospatial Discovery and Innovation". *Xiangshan Science Conference on Scientific Big Data*, Beijing, China, October 23, 2014

[74] "Next-Generation Geospatial Discovery and Innovation". *Center for Earth System Science, Tsinghua University*, Beijing, China, September 25, 2014

[75] "State of CyberGIS". *The 2nd International Conference on CyberGIS and Geodesign (CyberGIS'14)*, Redlands, California, USA, August 19, 2014

[76] "CyberGIS for Empowering Data-Rich Geographical Sciences". *National Research Council Workshop on Identifying Transformative Research in the Geographical Sciences*, Irvine, California, USA, August 5-6, 2014

[77] "CyberGIS @ Scale". *The 11th Workshop of the INRIA-Illinois-ANL Joint Laboratory on Petascale Computing, Sophia Antipolis, France, June 10, 2014*

[78] "Research Frontiers of GIScience – CyberGIS". *Summer Symposium of the University Consortium for Geographic Information Science*, Pasadena, California, USA, May 19, 2014

[79] "Geospatial Analytics @ Scale". *Workshop on High Performance Computing and Geospatial Analytics*, Argonne National Laboratory, Illinois, USA, April 28-29, 2014

[80] "Synergistically Advancing CyberGIS and Data-Intensive Sciences". *Department of Agricultural and Biological Engineering Seminar, UIUC*, Champaign, Illinois, USA, February 28, 2014

[81] "Advances in the Mapping Sciences: Towards a Spatially Enabled Society (joint talk with Dr. Michael Goodchild)". *National Academy of Sciences Board on Earth Sciences and Resources 25th Anniversary Meeting: Examining Current and Future Earth Science Issues for the Nation*, Washington DC, USA, November 18, 2013

[82] "CyberGIS Center for Advanced Digital and Spatial Studies". *The 2nd NSF Workshop on Sustainable Funding and Business Models for Academic Cyberinfrastructure Facilities*, Washington DC, USA, October 2, 2013

[83] "State of CyberGIS". *The 2013 NSF CyberGIS Project All Hands Meeting*, Seattle, Washington, USA, September 16, 2013

[84] "Data-Intensive Geospatial Analytics". *The 2nd Chinese-American-German E-Science and Cyberinfrastructure Workshop (CHANGES)*, Chicago, Illinois, USA, September 11, 2013

[85] "A CyberGIS Environment for Near-Real-Time Spatial Analysis of Social Media Data". *NSF-CDI Specialist Meeting: Knowledge Discovery in Cyberspace and Big Data*, San Diego, California, August 7, 2013

[86] "CyberGIS for Fostering Geospatial Discovery and Innovation". *Environmental Science Seminar Series, Argonne National Laboratory*, Argonne, Illinois, USA, June 12, 2013

[87] "A CyberGIS Research Agenda". *Clyde Kohn Colloquium, Department of Geography, the University of Iowa*, Iowa City, Iowa, USA, April 26, 2013

[88] "CyberGIS and the Future of Geographic Information Technologies". *Graduate School of Library and Information Science, UIUC*, Urbana, Illinois, USA, April 19, 2013

[89] "Exploring the Frontiers of CyberGIS". *Jack and Laura Dangermond Endowed Chair Colloquium, Department of Geography, University of California, Santa Barbara*, Santa Barbara, California, USA, February 26, 2013

[90] "Synergistically Advancing CyberGIS and Data-Intensive Computational Geography". *Department of Geography and Institute for CyberScience, the Pennsylvania State University*, University Park, Pennsylvania, USA, February 18, 2013

[91] "From Computational Geography to CyberGIS: The Geospatial Dimensions of Extreme Digital Transformation". *Department of Geography, the Ohio State University*, Columbus, Ohio, USA, February 1, 2013

[92] "Defining the Field of CyberGIS". *Department of Geography, The University of Kansas*, Lawrence, Kansas, USA, November 30, 2012

[93] "An Integration Vision and Roadmap for CyberGIS". *Department of Geography, the University of Utah*, Salt Lake City, Utah, USA, November 15, 2012

[94] "Toward Synergistic Advancement of Cyberinfrastructure and GIScience". *Center for Research Computing, The University of Notre Dame*, Notre Dame, Indiana, USA, October 24, 2012

[95] "A CyberGIS Roadmap for Tackling Big Data Challenges". *Illinois Informatics Institute, UIUC*, Urbana, Illinois, USA, September 27, 2012

[96] "State of CyberGIS". *The 1st International Conference on Space, Time, and CyberGIS (CyberGIS'12)*, Urbana, Illinois, USA, August 8, 2012

[97] "CyberGIS Vision for Empowering Computational and Spatial Thinking in the Age of Big Data". *Department of Urban and Regional Planning, UIUC*, Champaign, Illinois, USA, April 5, 2012

[98] "A CyberGIS Framework for Fostering a New Wave of Geospatial Discovery and Innovation". *Illinois State Geological Survey*, Champaign, Illinois, USA, April 2, 2012

[99] "State of CyberGIS". *Oak Ridge National Laboratory*, Oak Ridge, Tennessee, USA, September 29, 2011

[100] "NSF SI2: CyberGIS Software Integration for Sustained Geospatial Innovation". *Summer Assembly of the University Consortium for Geographic Information Science*, Boulder, Colorado, USA, June 22, 2011

[101] "A CyberGIS Approach to Transforming Access and Analysis of Geospatial Information". *The Workshop on Sustainable Human Settlements with Instant and Ubiquitous Access Technologies*, Urbana, Illinois, USA, March 11, 2011

[102] "A CyberGIS Framework for Synergistic Advancement of Cyberinfrastructure, GIS, and Geospatial Sciences". *Hydro-Systems Colloquium Series, Department of Civil and Environmental Engineering, UIUC*, Urbana, Illinois, USA, January 21, 2011

[103] "GIS Future – A Cyberinfrastructure Perspective". *Wuhan University*, Wuhan, Hubei, China, December 23, 2010

[104] "CyberGIS and Public Health". *Chinese Center for Disease Control and Prevention (CDC)*, Beijing, China, October 21, 2010

[105] "TeraGrid Broader Impacts – A Perspective from Science Gateways". *NSF Broader Impacts for Research and Discovery Summit*, Washington, DC, USA, June 21-23, 2010

[106] "GISolve 2.0: Geospatial Problem-Solving Environment 2.0 Based on Synthesizing Cyberinfrastructure and Web 2.0". *UK e-Science Institute*, Edinburgh, UK, May 11, 2010

[107] "GIS and Spatial Studies in the Cyberinfrastructure Age". *The Institute for Computing in Humanities, Arts, and Social Science (I-CHASS)*, Urbana, Illinois, USA, November 11, 2009

[108] "Bridging Digital Divides to Enable Global Geospatial Sciences – A Cyberinfrastructure Approach". *The National Academy of Sciences 3rd China-U.S. Roundtable on Scientific Data Cooperation*, Qingdao, Shandong, China, March 23, 2009

[109] "GIS: From Desktop and Internet to Cyberinfrastructure". *The High-Performance Computing in the Humanities, Arts, and Social Science Workshop*, Urbana, Illinois, USA, July 31, 2008

[110] "Next Generation of Geographic Information Systems – A Cyberinfrastructure Perspective". *Peking University*, Beijing, China, January 7, 2009

[111] "Bridging Cyberinfrastructure and GIScience – A Holistic Approach". *University Consortium for Geographic Information Science (UCGIS) Federal Agency and Department Briefing*, Washington, DC, USA, February 7, 2008

[112] "GISolve: An Integrated e-Science Workbench for Geospatial Data Management and Problem Solving". *The Computer Network Information Center, Chinese Academy of Sciences*, Beijing, China, December 20, 2007

[113] "Cyberinfrastructure-based Geographic Information Systems". *Tsinghua University*, Beijing, China, December 19, 2007

[114] "GISolve – TeraGrid GIScience Gateway". *NSF Briefing*, Washington, DC, USA, May 24, 2007

[115] "TeraGrid GIScience Gateway". *The 1st NSF TeraGrid Annual Conference*, Indianapolis, Indiana, USA, June 12, 2006

[116] "Information Services Interoperability". *The Open Science Grid Blueprint Meeting*, Buffalo, New York, USA, August 29, 2005

[117] "Grid Computing – An Enabler for Computational Science Research and Education: Experience at the University of Iowa". *Texas Advanced*

Computing Center Lecture Series, the University of Texas at Austin, Austin, Texas, USA, May 23, 2005

[118] "Building Shared Cyberinfrastructure through a Data Grid Approach". *IIHR – Hydro-science and Engineering Seminar Series*, the University of Iowa, Iowa City, Iowa, USA, October 23, 2004

[119] "Building Collaborative Environments for Grid-Based Large Hadron Collider Data Analysis – Efforts at the University of Iowa". *Workshop on Large Hadron Collider (LHC) Global Science – Developing Plans for Building the Environment for a Global Collaborative Science Community*, Lawrence Berkeley National Laboratory, Berkeley, California, USA, November 12, 2002

SERVICES TO COMMUNITY AND PROFESSION

ADVISORY

2022-25 **Member**, International Scientific Advisory Board, Open Geospatial Information Infrastructure for Research in Finland

2022-23 **Member**, Research Council of the Taylor Geospatial Institute

2022 **Member**, Design Committee of the Taylor Geospatial Institute

2021-22 **Member**, A Consensus Panel Study for the National Academies of Sciences, Engineering, and Medicine's Committee on National Statistics (CNSTAT): Developing a Vision for a 21st Century National Data Infrastructure for Federal Statistics and Social and Economic Research

2021 **Member**, Panel on Visioning and Leading for an Inclusive Future, AAG Early Career and Leadership Workshops

2020-22 **Member**, International Advisory Committee of the Smart Cities Research Institute (SCRI), The Hong Kong Polytechnic University

2019-20 **Member**, Steering Committee of the NSF Workshop on Future Directions for Cyberinfrastructure for Sustained Scientific Innovation (CSSI)

2019 **Member**, Advisory Board of the Location Powers: Data Science Summit at Google

2018-23 **Member**, Advisory Board of the NSF Project: Extensible Geospatial Data Framework towards FAIR (Findable, Accessible, Interoperable, Reusable) Science

2018-22 **Member**, Advisory Committee of the NSF Project: A Robust and Reliable Resource for Accessing, Sharing, and Analyzing Confidential Geospatial Research Data

2016-20 **Member**, External Advisory Board of the NSF ORIGIN (Origin Inference from Geospatial Isotope Networks) Project

2015-20 **Member**, Board on Earth Sciences and Resources, the U.S. National Academies of Sciences, Engineering, and Medicine

2014-19 **Member**, Steering Committee of the NSF Global Initiative to Enhance Collaborative Computing and Analysis Tools

2016-18 **Member**, NSF XSEDE Advisory Board

2016-17 **Member**, External Advisory Board of the Center for Robust Decision Making on Climate and Energy Policy, the University of Chicago

2015-16 **Member**, Committee on Models of the World, the U.S. National Academies

2015-16 **Member**, Advisory Board of the UCGIS Research Challenge Initiative

2015 **Member**, NSF Site Visit Team of Advanced Cyberinfrastructure Division and Directorate for Engineering

2015 **Member**, Advisory Board of the Center for Geospatial Sciences, Applications and Technology at Texas A&M University

2014 **Member**, External Advisory Committee of the Oak Ridge National Laboratory's Computing and Computational Sciences Directorate

2013 **Member**, Advisory Committee of the NSF CI-Water Project

CONFERENCES AND WORKSHOPS

2022 **Co-Chair**, Symposium on Data-Intensive Geospatial Understanding in the Era of AI and CyberGIS, the American Association of Geographers Annual Meeting, February 25 – March 1, 2022 (online)

2021 **Chair**, Geospatial Fellows Webinar Series, March 15 – August 23, 2011 (online)

2019 **Chair**, NSF Workshop on Conceptualizing a Geospatial Software Institute: Strategic Plan and Governance, July 14 – 16, 2019, Annapolis, Maryland, USA

2019 **Co-Organizer**, AAG-UCGIS Summer School on Reproducible Problem Solving with CyberGIS and Geospatial Data Science, July 8 – 13, 2019, Urbana, Illinois, USA

2019 **Co-Chair**, Symposium on Frontiers in Geospatial Data Science, the American Association of Geographers Annual Meeting, April 3 – 7, 2019, Washington, DC, USA

2018 **Co-Organizer**, GIS Day, November 14, 2018, Urbana, Illinois, USA

2018 **Program Committee Member**, the 10th International Conference on Geographic Information Science, August 28 – 31, 2018, Montreal, Canada

2018 **Co-Chair**, Workshop on Spatial Big Data and Machine Learning in GIScience at the 10th International Conference on Geographic Information Science, August 28, 2018, Melbourne, Australia

2018 **Chair**, NSF Workshop on Conceptualizing a Geospatial Software Institute: Geospatial Use Cases and Core Technical Capabilities, July 15 – 17, 2018, Chicago, Illinois, USA

2018 **Co-Organizer**, Symposium on CyberGIS and Spatial Data Science, the American Association of Geographers Annual Meeting, April 10 – 11, 2018, New Orleans, Louisiana, USA

2018 **Co-Organizer**, Symposium on New Horizons in Human Dynamics Research: Smart Cities and Urban Computing, the American Association of Geographers Annual Meeting, April 10, 2018, New Orleans, Louisiana, USA

2018 **Chair**, NSF Workshop on Conceptualizing a Geospatial Software Institute: Connecting Big Data with Geospatial Discovery and Innovation, January 28 – 30, 2018, Los Angeles, California, USA

2017 **Chair**, UCGIS Summer School on Collaborative Problem Solving with CyberGIS and Geospatial Data Science, May 15 – 20, 2017, Urbana, Illinois, USA

2017 **Co-Chair**, NSF Symposium on Agent-Based Models in the Social, Human-Environment, and Life Sciences (ABM 2017), April 20 – 22, 2017, San Diego, California, USA

2017 **Co-Organizer**, Symposium on Human Dynamics in Smart and Connected Communities: Smart Cities and Urban Computing, the American Association of Geographers Annual Meeting, April 5 – 6, 2017, Boston, Massachusetts, USA

2017 **Co-Organizer and Discussant**, Panel Session: CyberGIS Reflections from the Past and Projections for the Future, the American Association of Geographers Annual Meeting, April 5, 2017, Boston, Massachusetts, USA

2016 **Program Committee Member**, the 9th International Conference on Geographic Information Science, September 27 – 30, 2016, Montreal, Canada

2016 **Program Committee Member**, Workshop on Rethinking the *ABCs*: *A*gent-*B*ased Models and *C*omplexity Science in the Age of Big Data, CyberGIS, and Sensor Networks, September 27, 2016, Montreal, Canada

2016 **Chair**, the 3rd International Conference on CyberGIS and Geospatial Data Science (CyberGIS'16), July 26 – 28, 2016, Urbana, Illinois, USA

2016 **Chair**, NSF Workshop on Geospatial Data Science in the Era of Big Data and CyberGIS, July 25 – 26, 2016, Urbana, Illinois, USA

2016 **Co-Chair**, NSF Workshop on Innovative Cyberinfrastructure for Integrated Food, Energy, and Water Research, May 22 – 23, 2016, Scottsdale, Arizona, USA

2016 **Chair**, NSF CyberGIS Curriculum Workshop for Synthesizing Education Materials, April 2 – 3, 2016, San Francisco, California, USA

2016 **Organizer**, Paper Session: Smart City and Urban Research Frontiers of the Symposium on Human Dynamics Research, the Association of American Geographers 112nd Annual Meeting, March 29 – April 2, 2016, San Francisco, California, USA

2016 **Organizer**, Paper Session: Fusion of Geospatial Big Data, *the Association of American Geographers 112nd Annual Meeting*, March 29 – April 2, 2016, San Francisco, California, USA

2015 **Chair**, the 2015 NSF CyberGIS Project All Hands Meeting, September 14 – 16, 2015, Reston, Virginia, USA

2015 **Chair**, CyberGIS Day, August 27, 2015, Urbana, Illinois, USA

2015 **International Steering Committee Member**, the 23rd International Conference on GeoInformatics, June 19 – 21, 2015, Wuhan, Hubei, China

2015 **Scientific Advisory Committee Member**, the 13th International Conference on GeoComputation (GeoComputation 2015), May 20 – 23, 2015, Dallas, Texas, USA

2015 **Chair**, Symposium on CyberGIS for Fostering New Frontiers of Geographic Research and Education, the Association of American Geographers 111st Annual Meeting, April 21 – 25, 2015, Chicago, Illinois, USA

2014 **Co-Organizer**, Session on Computational Intelligence in Earth and Space Science, 2014 American Geophysical Union (AGU) Fall Meeting, December 15 – 19, San Francisco, California, USA

2014 **Program Committee Member**, the 7th ACM SIGSPATIAL International Workshop on Location-Based Social Networks (LBSN) 2014, November 4, 2014, Dallas, Texas, USA

2014 **Program Committee Member**, the 8th International Conference on Geographic Information Science, September 23 – 26, 2014, Vienna, Austria

2014 **Program Committee Member**, the 3rd Chinese-American-German E-Science and Cyberinfrastructure Workshop (CHANGES), September 10 – 12, 2014, Beijing, China

2014 **Chair**, the 2nd International Conference on CyberGIS and Geodesign (CyberGIS'14), August 19 – 21, 2014, Redlands, California, USA

2014 **Program Committee Member**, NSF Workshop on Big Data and Urban Informatics, August 11 – 12, 2014, Chicago, Illinois, USA

2014 **Program Chair**, the 22nd International Conference on GeoInformatics, June 25 – 27, 2014, Kaohsiung, Taiwan

2014 **Chair**, Data @ Scale Theme, NSF Blue Waters Symposium on Petascale Science and Beyond, May 12 – 15, 2014, Champaign, Illinois, USA

2014 **Co-Organizer**, Workshop on High Performance Computing and Geospatial Analytics, April 28 – 29, 2014, Argonne National Laboratory, Illinois, USA

2014 **Chair**, Symposium on Synergistic Advances of CyberGIS and Geography, the Association of American Geographers 110th Annual Meeting, April 8 – 12, 2014, Tampa, Florida, USA

2013 **Program Committee Member**, the IEEE 9th International Conference on E-Science (e-Science), October 22 – 25, 2013, Beijing, China

2013 **Program Committee Member**, the IEEE International Conference on Big Data 2013 (IEEE BigData 2013), October 6 – 9, 2013, Silicon Valley, California, USA

2013 **Program Committee Member**, the 2nd Chinese-American-German E-Science and Cyberinfrastructure Workshop (CHANGES), September 10 – 12, 2013, Chicago, Illinois, USA

2013 **Co-Chair**, the 2013 NSF CyberGIS Project All Hands Meeting, September 15 – 17, 2013, Seattle, Washington, USA

2013 **Program Committee Member**, the 21st International Conference on GeoInformatics, June 20 – 22, 2013, Kaifeng, Henan, China

2013 **Program Committee Member**, the 12th International Conference on GeoComputation (GeoComputation 2013), May 23 – 25, 2013, Wuhan, Hubei, China

2013 **Chair and Organizer**, CyberGIS Symposium, the Association of American Geographers 109th Annual Meeting, April 9 – 13, 2013, Los Angeles, California, USA

2012 **Program Committee Member**, the 7th International Conference on Geographic Information Science, September 19 – 21, 2012, Columbus, Ohio, USA

2012 **Program Committee Member**, the 1st Chinese-American-German E-Science and Cyberinfrastructure Workshop (CHANGES), September 3 – 5, 2012, Jülich, Germany

2012 **Chair**, the 1st International Conference on Space, Time, and CyberGIS (CyberGIS'12), August 6 – 9, 2012, Urbana, Illinois, USA

2012 **Chair**, the Student Paper Competition of the 20th International Conference on GeoInformatics, June 15 – 17, 2012, Hong Kong, China

2012 **Program Committee Member**, the 8th IEEE International Conference on E-Science, October 8 – 12, 2012, Chicago, Illinois, USA

2011 **General Chair**, the 2nd ACM SIGSPATIAL International Workshop on High Performance and Distributed Geographic Information Systems (HPDGIS 2011), November 1, 2011, Chicago, Illinois, USA

2011 **Program Committee Member**, the 19th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2011), November 1 – 4, 2011, Chicago, Illinois, USA

2011 **Program Co-Chair**, the 3rd American-Chinese CyberInfrastructure and E-Science workShop (ACCESS), August 15 – 17, 2011, Xi'an, Shaanxi, China

2011 **Chair**, the Student Paper Competition of the 19th International Conference on GeoInformatics, June 24 – 26, 2011, Shanghai, China

2011 **Chair and Organizer**, the Panel Session on Agency Perspectives on CyberGIS, the Association of American Geographers 107th Annual Meeting, April 12 – 16, 2011, Seattle, Washington, USA

2011 **Chair and Organizer**, the Panel Session on CyberGIS Research Agenda, the Association of American Geographers 107th Annual Meeting, April 12 – 16, 2011, Seattle, Washington, USA

2011 **Chair and Organizer**, the Panel Session on CyberGIS Trends, the Association of American Geographers 107th Annual Meeting, April 12 – 16, 2011, Seattle, Washington, USA

2011 **Co-Organizer**, the Workshop on Sustainable Human Settlements with Instant and Ubiquitous Access Technologies, March 11, 2011, Urbana, Illinois, USA

2011 **Co-Chair**, the NSF CyberGIS Requirements Workshop on Emergency Management, February 1 – 2, 2011, Washington, DC, USA

2010 **General Chair**, the 1st ACM SIGSPATIAL International Workshop on High Performance and Distributed Geographic Information Systems (HPDGIS 2010), November 2, 2010, San Jose, California, USA

2010 **Program Committee Member**, the 18th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2010), November 2 – 5, 2010, San Jose, California, USA

2010 **Program Co-Chair**, the 2nd American-Chinese CyberInfrastructure and E-Science workShop (ACCESS), August 10 – 12, 2010, Urbana, Illinois, USA

2010 **Chair**, the Session on High Performance Computing for Geographic Sciences, the Association of American Geographers 106th Annual Meeting, April 14 – 18, 2010, Washington, DC, USA

2010 **Chair**, NSF Workshop on Cyber-GIS, February 1 – 3, 2010, Washington, DC, USA

2009 **Program Committee Member**, the 17th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2009), November 4 – 6, 2009, Seattle, Washington, USA

2009 **Program Co-Chair**, the 1st American-Chinese CyberInfrastructure and E-Science workShop (ACCESS), September 7 – 9, 2009, Beijing, China

2009 **Funding Agency Liaison**, the 4th NSF TeraGrid Annual Conference, June 22 – 25, 2009, Arlington, Virginia, USA

2009 **Co-Chair**, the Session on High Performance Computing for Geospatial Science, the Association of American Geographers 105th Annual Meeting, March 22 – 27, 2009, Las Vegas, Nevada, USA

2008 **Program Committee Member**, the 4th International Workshop on Grid Computing Environments, November 16, 2008, Austin, Texas, USA

2008 **Chair**, Cyberinfrastructure-Computational Session, the Association of American Geographers 104th Annual Meeting, April 15 – 19, 2008, Boston, Massachusetts, USA

2008 **Program Committee Member**, the 6th ACM/IEEE International Workshop on Challenges of Large Applications in Distributed Environments (CLADE 2008), June 23, 2008, Boston, Massachusetts, USA

2007 **Program Committee Member**, the 3rd International Workshop on Grid Computing Environments, November 11 – 12, 2007, Reno, Nevada, USA

2007 **Program Committee Member**, the Open Science Grid Consortium All Hands Meeting, March 5 – 7, 2007, San Diego, California, USA

2006 **Program Committee Member**, the 2nd International Workshop on Grid Computing Environments, November 12 – 13, 2006, Tampa, Florida, USA

2006 **Chair**, the 1st Open Science Grid Information Services Workshop, August 23, 2006, Seattle, Washington, USA

2006 **Planning Committee Member**, Pathway to SC|07 – the 1st Workshop on Computational Science Education Program within Supercomputing Conferences, July 27 – 31, 2006, Argonne National Laboratory, Chicago, Illinois, USA

2005 **Program Committee Member**, the 4th International Workshop on Grid and Cooperative Computing, November 30 – December 3, 2005, Beijing, China

2005 **Moderator**, Paper Session on Representing Knowledge and Reasoning, Geocomputation 2005, August 1 – 3, 2005, Ann Arbor, Michigan, USA

2003 **Program Committee Member**, the 2nd International Workshop on Grid and Cooperative Computing, December 7 – 10, 2003, Shanghai, China

EXTERNAL REVIEWER FOR PROMOTION AND TENURE

- Arizona State University
- Boston University
- Brigham Young University
- Florida Atlantic University
- George Mason University
- Kent State University
- National University of Singapore
- New Jersey Institute of Technology
- North Carolina State University
- Purdue University
- Stony Brook University
- Texas A&M University
- The City University of New York
- The Hong Kong Polytechnic University

- University at Buffalo, the State University of New York
- University of California, Merced
- University of California, Santa Barbara
- University of Connecticut
- University of Denver
- University of Kansas
- University of Michigan
- University of Minnesota
- University of New Mexico
- University of South Carolina
- University of Texas at Austin
- University of Wisconsin – Madison
- University of Wisconsin – Milwaukee

JOURNAL EDITORIAL SERVICES

2021-present	**Editorial Board Member**, Urban Informatics (Springer)
2012-present	**Editorial Board Member**, International Journal of Geographical Information Science (Taylor & Francis)
2012-present	**Editorial Board Member**, Transactions in GIS (Wiley)
2011-present	**Action Editor**, GeoInformatica (Springer)
2015-17	**Associate Editor**, SoftwareX (Elsevier)
2014-17	**Editorial Board Member**, Annals of the Association of American Geographers (Routledge)
2011-13	**Guest Editor**, International Journal of Geographical Information Science (Taylor & Francis)
2011	**Guest Editor**, Conservation Biology (Wiley)
2009-11	**Co-Organizer** (with Dawn J. Wright), Special Feature on Spatial Cyberinfrastructure, Proceedings of the National Academy of Sciences

JOURNAL REVIEWER

- Annals of the Association of American Geographers, Routledge
- Computers, Environment, and Urban Systems, Elsevier
- Computers and Geosciences, Elsevier
- Concurrency and Computation: Practice and Experience, Wiley
- Environmental Modeling and Software, Elsevier
- Future Generation Computer Systems, Elsevier

- Geographical Analysis, Wiley-Blackwell
- GeoInformatica, Springer
- Harvard Data Science Review
- IEEE Transactions on Geoscience and Remote Sensing, IEEE Geoscience and Remote Sensing Society
- International Journal of Digital Earth, Taylor & Francis
- International Journal of Disaster Risk Reduction, Elsevier
- International Journal of Geographical Information Science, Taylor & Francis
- Internet Computing, IEEE Computer Society
- ISPRS Journal of Photogrammetry and Remote Sensing, Elsevier
- Journal of Urban and Regional Information Systems Association, URISA
- Nature
- Proceedings of the National Academy of Sciences
- Progress in Physical Geography, SAGE
- Remote Sensing of Environment, Elsevier
- SoftwareX, Elsevier
- The Geographical Journal (Royal Geographical Society), Wiley
- The Journal of Supercomputing, Springer
- Transactions in GIS, Wiley

PROPOSAL PANELIST / REVIEWER

2020-21	Department of Education
2008-present	DOE
2007-present	NSF
2007-09	NSF Supercomputing Allocation Board Member

SERVICE TO PROFESSIONAL ORGANIZATIONS

2015-17	UCGIS President-Elect (2015-16) and President (2016-17)
2014-15	Board Chair of the International Association of Chinese Professionals in Geographic Information Science (CPGIS)
2012-14	CPGIS President-Elect (2012-13) and President (2013-14)
2009-11	Member of the Open Science Grid Council
2009-12	UCGIS Board of Directors
2008-11	AAG CyberInfrastructure Specialty Group (CISG) Chair-Elect (2009-10) and Chair (2010-11), AAG CISG Board of Directors (2008-09)
2006-07	Member of the Open Science Grid Council

UNIVERSITY-LEVEL SERVICES

2022-23	**Ex Officio Member**, Campus Research Administrators Working Group, UIUC

2021-23 **Member**, Campus Awards and Honors Committee, UIUC

2007-present **Lead Delegate**, University Consortium for Geographic Information Science, UIUC

2008-20 **Lead**, Spatial Informatics Track, Illinois Informatics Institute, UIUC

2016 **Member**, Review committee for campus proposals responding to the NSF Partnerships for International Research and Education (PIRE) Program, UIUC

2015-16 **Member**, Promotion and Tenure Mentoring Committee for Tenure-Track Assistant Professor Rebecca Smith, Department of Pathobiology, College of Veterinary Medicine, UIUC

2015 **Member**, Review committee for campus proposals responding to the NSF Major Research Instrumentation Program, UIUC

2014-17 **Member**, Committee for Research and Education at NCSA (CREN), UIUC

2014 **Member**, Campus Task Force for Agricultural Big Data, UIUC

2012-17 **Member**, Allocation Committee of the NSF Blue Waters Supercomputer, UIUC

2012-15 **Member**, Information Technology Governance – Research Computing Committee, UIUC

2012-13 **Member**, Search Committee for the Director of the National Center for Supercomputing Applications, UIUC

2011 **Invited Participant**, Chancellor's Visioning Illinois' Retreat**,** December 14, 2011, UIUC

2010-12 **Advisor**, Campus GIS Student Group, Illinois Informatics Institute, UIUC

2008-16 **Member,** Advisory Committee of the Institute for Computing in Humanities, Arts, and Social Science (I-CHASS), UIUC

2008-13 **Member**, Advisory Committee of ESRI-GIS Development Center, UIUC

2005-07 **Delegate**, The University of Iowa, the Coalition for Academic Scientific Computation

COLLEGE- AND SCHOOL-LEVEL SERVICES

2020-21 **Member**, Task Force on Tuition Revenue Sharing Programs, College of Liberal Arts and Sciences, UIUC

2017-present **Member**, Executive Committee of the School of Earth, Society, and Environment, UIUC

2014-present **Member**, Advisory Committee for the Cline Center for Democracy, College of Liberal Arts and Sciences, UIUC

2013-14 **Chair**, Committee for Evaluating the 5-year Performance of Head of the Department of Plant Biology, UIUC

2013-14 **Member**, Search Committee for an Assistant Professor Position, Department of Atmospheric Sciences, UIUC

2012-14 **Member**, Courses and Curricula Committee, College of Liberal Arts and Sciences, UIUC

DEPARTMENT-LEVEL SERVICES

2016-17 **Chair**, Search Committee for an Assistant/Associate Professor Position in Remote Sensing, Department of Geography and Geographic Information Science, UIUC

2012-16 **Chair**, Promotion and Tenure Mentoring Committee for Tenure-Track Assistant Professor Jonathan Greenberg, Department of Geography and Geographic Information Science, UIUC

2012-14 **Member**, Department Head Advisory Committee, Department of Geography and Geographic Information Science, UIUC

2011 **Chair**, Search Committee for a Lecturer Position in GIScience, Department of Geography, UIUC

2010-11 **Member**, Search Committee for an Assistant Professor Position in GIScience, Department of Geography, UIUC

2008-15 **Member**, Graduate Program Committee, Department of Geography, UIUC

2008-15 **Chair**, GIScience Program Committee, Department of Geography, UIUC

2008 **Member**, Search Committee for a Tenure-Track Assistant Professor Position in GIScience, Department of Geography, UIUC

COMMUNITY ENGAGEMENT (HIGHLIGHTS)

2022 A Grand New Experiment: Advancing CyberGIS, ArcNews – From the Meridian Column, Vol. 44, No. 1 (https://www.esri.com/about/newsroom/arcnews/a-grand-new-experiment-advancing-cybergis/)

2020-present Director, WhereCOVID-19 Project (http://wherecovid19.cigi.illinois.edu/)

2010-present Director, Resource Management Mapping Service (RMMS, http://www.rmms.illinois.edu), Illinois EPA

2017-present Advisor of Organizing Committee, GIS Day (http://gisday.illinois.edu)

2020 Unpaid Consultant, Illinois Department of Public Heath (IDPH)

2020 Invited Speaker, Rapid Response to COVID-19, IDPH

2018 Invited Speaker, Illinois Center for Urban Resilience and Environmental Sustainability (CURES) Planning Workshop

2014-16 Organizer, Supercomputing Tours for K-12 Students

GRADUATE STUDENTS AND POSTDOCTORAL SCHOLARS ADVISED

POSTDOC

2022-present	Dr. Jinwoo Park (UIUC)
2021-present	Dr. Furqan Baig (UIUC)
2019-21	Dr. Shaohua Wang (UIUC), currently Research Professor, Aerospace Information Research Institute, Chinese Academy of Sciences
2020	Dr. Su Yeon Han (UIUC), currently Assistant Professor of Geography and Environmental Studies at Texas State University
2018-20	Dr. Jeon-Young Kang (UIUC), currently Assistant Professor of Geography at Gongju National University
2018	Dr. Haozhi Pan (UIUC), co-advised with Dr. Brian Deal, currently Assistant Professor in the School of Design at Shanghai Jiao Tong University
2017-18	Dr. Mengyu Guo (UIUC), currently Research Scientist at Tsinghua University
2017-18	Dr. Zhe Zhang (UIUC), currently Assistant Professor of Geography at the Texas A&M University
2016-17	Dr. Bin Peng (UIUC), co-advised with Dr. Kaiyu Guan, currently Research Scientist at iSEE
2015-17	Dr. Aiman Soliman (UIUC), co-advised with Dr. Brian F. Allan, currently Research Scientist at NCSA
2014-16	Dr. Myeonghun Jeong (UIUC), currently Associate Professor of Civil Engineering at Chosun University
2015-16	Dr. Ahmet A. Yildirim (UIUC), currently Principal Member of Technical Staff at Oracle
2014-16	Dr. Junjun Yin (UIUC), currently Assistant Research Professor at the Pennsylvania State University
2013-16	Dr. Tao Lin (UIUC), co-advised with Dr. Luis F. Rodríguez, currently Assistant Professor in the College of Biosystems Engineering and Food Science at Zhejiang University
2015-16	Dr. Liujun Li (UIUC), co-advised with Dr. Lei Tian, currently Research Associate Professor of Civil, Architectural and Environmental Engineering at the Missouri University of Science and Technology
2014-15	Dr. Jing Gao (UIUC), currently Assistant Professor of Geospatial Data Science at the University of Delaware
2013-14	Dr. Myunghwa Hwang (UIUC), Associate Research Fellow, Korea Research Institute for Human Settlements

2011-13 Dr. Guofeng Cao (UIUC), currently Assistant Professor of Geography at the University of Colorado Boulder

2011-12 Dr. Kai Cao (UIUC), currently Professor of Geography at the East China Normal University

2011-12 Dr. Liang Yu (UIUC), co-advised with Dr. Yong Liu, currently Senior Algorithm Advisor at Alibaba

2008-09 Dr. Wenwu Tang (UIUC), currently Associate Professor of Geography and Earth Sciences at the University of North Carolina at Charlotte

2006-07 Dr. Anand Padmanabhan (the University of Iowa), currently Research Associate Professor at UIUC

GRADUATE COMMITTEE CHAIR OR CO-CHAIR

2022-present Wei Hu, Ph.D. student in geography and geographic information science (GIS), UIUC

2021-present Chang Liu, M.S. student in geography and GIS, UIUC

2021-present Lixuanwu Zhou, M.S. student in geography and GIS, UIUC

2019-present Nattapon Jaroenchai, Ph.D. student in geography and GIS, UIUC

2019-present Alexander Michels (First Prize in Robert Raskin Student Competition at AAG 2020 Annual Meeting), Ph.D. student in informatics, UIUC

2018-present Fangzheng Lu, Ph.D. student in geography and GIS, UIUC

2017-present Rebecca Vandewalle, Ph.D. student in geography and GIS, UIUC

2015-present Austin Davis, Ph.D. candidate in geography and GIS, UIUC

2019-21 Benjamin T. Liebersohn, M.S. in geography and GIS, UIUC

2019-21 Weiye Chen (currently Ph.D. student at the University of Maryland, College Park), M.S. in geography and GIS, UIUC

2019-21 Bin Su (currently Software Engineer at Kuaishou), M.S. in geography and GIS, UIUC

2016-20 Zewei Xu (currently Senior Data Scientist at Microsoft), Ph.D. in geography and GIS, UIUC

2014-19 Yaping Cai (currently Geospatial Data Scientist at the Climate Corporation), Ph.D. in geography and GIS, UIUC

2014-19 Dandong Yin (currently Software Engineer at Google, First Prize in Robert Raskin Student Competition at AAG 2018 Annual Meeting), Ph.D. in geography and GIS, UIUC

2012-18 Kiumars Soltani (currently Software Engineer at Verkada), Ph.D. in informatics, UIUC

2012-18 Yizhao Gao (currently Software Engineer at Google), Ph.D. in geography and GIS, UIUC

2012-18 Hao Hu (currently Software Engineer at Facebook), Ph.D. in geography and GIS, UIUC

2015-18 Ting Li (currently GIS Engineer at One Concern), M.S. in geography and GIS, UIUC

2013-17 Yan Liu (currently Computational Scientist at the Oak Ridge National Laboratory), Ph.D. in informatics, UIUC

2009-15 Zhenhua Zhang (currently Manager of Business Intelligence with Ctrip Inc.), Ph.D. in computer science, Chinese Academy of Sciences

2010-13 Babak Behzad (currently Software Engineer at Intellipse), M.S. in computer science, co-chaired with Dr. Marc Snir, UIUC

2010-13 Dan Dong (currently GIS Data Engineer at Apple), M.S. in geography and GIS, UIUC

2009-13 Heejun Kim (currently Assistant Professor of Information Science at the University of North Texas), M.S. in geography and GIS, UIUC

2010-13 Eric Shook (William L. Garrison Award for Best Dissertation in Computational Geography (2014); currently Associate Professor of Geography, Environment and Society at the University of Minnesota, Twin Cities), Ph.D. in geography and GIS, UIUC

2009-13 Yanli Zhao (currently Senior Software Engineer at Facebook), M.S. in geography and GIS, UIUC

2010-12 Su Yeon Han (currently Assistant Professor of Geography and Environmental Studies at Texas State University), M.S. in geography and GIS, UIUC

2008-10 Chris Korose (currently GIS Specialist at the Illinois State Geological Survey), M.S. in geography, UIUC

2003-06 Anand Padmanabhan (currently Research Associate Professor at UIUC), Ph.D. in computer science, co-chaired with Dr. Sukumar Ghosh, the University of Iowa

GRADUATE COMMITTEE MEMBER

2022-present Yilun Zhao, Ph.D. student in geography and GIS, UIUC

2021-present Zijun Yang, Ph.D. student in geography and GIS, UIUC

2021-present Wataru Morioka, Ph.D. candidate in geography and GIS, UIUC

2020-21 Xueqing Deng, Ph.D. in Electrical Engineering and Computer Science, University of California, Merced

2019-21 Si Chen, Ph.D. in informatics, UIUC

2018-19 Jue Wang, Ph.D. in geography and GIS, UIUC

2017-19 Kangjae Lee, Ph.D. in informatics, UIUC

2012-17	Jin Xing, Ph.D. in geography, McGill University
2015-17	Haozhi Pan, Ph.D. in urban and regional planning, UIUC
2015-16	Courtney Reents, M.S. in geography and GIS, UIUC
2014-16	Tong Liu, Ph.D. in agricultural and biological engineering, UIUC
2013-16	Debsunder Dutta, Ph.D. in civil and environmental engineering, UIUC
2013-16	Phong Le, Ph.D. in civil and environmental engineering, UIUC
2014-16	Hao Yu, Ph.D. in civil and environmental engineering, UIUC
2013-15	Jay Laura, Ph.D. in geography, Arizona State University
2010-13	Tao Lin, Ph.D. in agricultural and biological engineering, UIUC
2010-12	Jihua Wang, Ph.D. in civil and environmental engineering, UIUC
2008-13	Sheng Ye, Ph.D. in geography and GIS, UIUC
2008-12	Imelda Moise, Ph.D. in geography, UIUC
2007-11	Lan Luo, Ph.D. in geography, UIUC
2015	Yi Zou, M.S. in geography, UIUC
2010-11	Greg Burton, M.S. in geography, UIUC
2010	William Meyer, M.S. in geography, UIUC

PROFESSIONAL MEMBERSHIPS

- Fellow, American Association for the Advancement of Science (AAAS)
- Fellow, American Association of Geographers (AAG)
- Member, American Geophysical Union (AGU)
- Lifetime Member, Association for Computing Machinery (ACM)
- Lifetime Member, International Association of Chinese Professionals in Geographic Information Science (CPGIS)