

# **Xinyue Ye, Ph.D.**

(Updated on Jan 6, 2022)

Fellow, American Association of Geographers  
Tenured Associate Professor (*Provost Investment Hire of Urban Informatics*)  
Harold L. Adams Endowed Professorship in Urban Planning  
[Department of Landscape Architecture and Urban Planning](#), College of Architecture  
[Department of Geography](#), College of Geosciences  
Director, [Urban Data Science Lab](#)  
Associate Director, [Center for Housing and Urban Development](#)  
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Total Research Interest is higher than 98% of researchers on ResearchGate

## **Education**

Ph.D. in Geographic Information Science (2010)  
Joint Program between University of California at Santa Barbara and San Diego State University  
Dissertation: Comparative Space-Time Dynamics (NSF DDRI Award)

M.S. in Geographic Information Systems, Eastern Michigan University  
Project: Urban Modeling and Land Use Change Detection in Detroit

M.A. in Human Geography, University of Wisconsin at Milwaukee  
Thesis: Intra-provincial Inequality in China under Reform

M.S. in Urban Planning (College of Civil Engineering and Architecture), Zhejiang University  
Thesis: The Assessment of Urban Human Settlements

B.S. in Urban Planning (College of Civil Engineering and Architecture), Zhejiang University

## **Positions Held**

2021- Harold L. Adams Endowed Professorship, Department of Landscape Architecture and Urban Planning, Texas A&M University (TAMU)

2021- Kinder Scholar (Affiliate Faculty), The Kinder Institute for Urban Research, Rice University

2021- Faculty Fellow, Microclimatic Design Research Group, TAMU

2020- Associate Professor (*Provost Investment Hire*), Department of Landscape Architecture and Urban Planning (Tenured) and Department of Geography (Courtesy), TAMU

2020- Faculty Fellow, Center for Health Systems & Design; Center for Housing and Urban Development; Hazard Reduction and Recovery Center; Institute of Data Science; Energy Institute; Center for Population Health and Aging; TAMU

2020- Collaborating Faculty, TRIPODS Research Institute for Foundations of Interdisciplinary Data Science, TAMU

2020- Team Co-leader, ENDEAVR (Envisioning the Neo-traditional Development by Embracing the Autonomous Vehicles Realm) Institute, TAMU

2018-20 Associate Professor, Department of Informatics, College of Computing; Director, Urban Informatics & Spatial Computation Lab; Core Faculty, Center for Big Data, New Jersey Institute of Technology (NJIT)

2020 Faculty Affiliate, New Jersey Smart Cities Working Group (Princeton, Rutgers, NJIT, Stevens Institute of Technology, and New Jersey Office of Innovation)

2019-20 Faculty Affiliate, DIMACS (the Center for Discrete Mathematics and Theoretical Computer Science), NJIT-Rutgers University

2017-, Visiting Professor, Center for Geographical Analysis/Institute for Quantitative Social Science, Harvard University

2013-2018 Assistant/Associate Professor, Department of Geography and School of Digital Sciences, Director of Computational Social Science Lab, Kent State University (KSU)

2010-2013 Assistant Professor, Center for Regional Development (Department of Commerce's Economic Development Administration University Center) & School of Earth, Environment, and Society, Bowling Green State University (BGSU)

## **Journal Editorship**

2021- Co Editor, Journal of Planning Education and Research

2021- Editorial Board Member, Cities

2021- Associate Editor, Frontiers in Public Health

2021- Editorial Board Member, International Journal of Environmental Research and Public Health

2020- Editor-in-Chief, Computational Urban Science

2020- Associate Editor, International Journal of Applied Geospatial Research

2019- Editorial Board Member, Smart Cities

2018- Editorial Board Member, Journal of Geovisualization and Spatial Analysis

2017- Editorial Board Member, Big Earth Data

2016- Editorial Board Member, Data

2015-2018 Associate Editor, Papers in Applied Geography

2012- Secretary/Editorial Board Member, Book Series on Geospatial Technologies, Higher Education Press and Springer

2011- Associate Editor, Stochastic Environmental Research & Risk Assessment

2011- Co Editor, Annual Proceedings on International Conference on Geoinformatics

2011-2020 Editorial Board Member, International Journal of Applied Geospatial Research

## **Honors, Awards and Grant Funding**

2022- Fellow, American Association of Geographers

2021 W.K. Kellogg Award for Exemplary Community Engagement by Association of Public and Land-grant Universities (APLU) [Team award for The Texas Target Communities program and ENDEAVR Institute, <http://endeavr.city/about-us/team-leaders>]

2021 Smart 50 Awards, which is in partnership with Smart Cities Connect and Smart Cities Connect Foundation annually recognize global smart cities projects, honoring the most 50 innovative and influential work [Team award for ENDEAVR Institute, <http://endeavr.city/about-us/team-leaders>]

2021 Top 10 Young Scientists named by the World Geospatial Developers Conference (selected by a committee including members of National Academy of Germany and British Academy of Social Sciences)

2021 Rural and Environmental Research Award, the Aging in Public Health Section at the American Public Health Association (APHA) conference, “The associations between tree canopy and street falls among older adults aged 65 and older” (co-author)

2021 Top 10% most cited PLOS ONE papers published in 2016: Spatial and social media data analytics of housing prices in Shenzhen, China. PLoS one, 11(10), e0164553.

2021 One of three featured books by Springer at Annual Meeting of AAG (Book: Ye, X. and Liu, X. (eds.) (2019) Cities as Social and Spatial Networks, Springer)

2020 Editor's Choice Article: Zhang, D., Zhang, X., Zheng, Y., Ye, X\*, Li, S., & Dai, Q. (2020). Detecting Intra-Urban Housing Market Spillover through a Spatial Markov Chain Model. *ISPRS International Journal of Geo-Information*. doi: 10.3390/ijgi9010056 (corresponding author)

2020 Robert Raskin Student Paper Award (3rd place) for “Interactive Visual Analytics for Sparse Trajectory Data” (Jiaxin Du, Advisor: Xinyue Ye), AAG

2020 Love in the time of COVID-19 competition (Honorable Mention) for "Intelligent COVID-19 Research Paper Analysis System", (Jiaxin Du, Advisor: Xinyue Ye), NJIT

2019 Outstanding Achievement in Research Award (granted per year to only one faculty member at College of Computing, NJIT)

2019 A Top 25 most cited paper during 1981-2019 in *Jingji Dili (Economic Geography*, Chinese SSCI Journal)

2019 A Top 20 most read paper in *Tijdschrift voor Economische en Sociale Geografie (Journal of Economic & Social Geography*, published by Wiley-Blackwell on behalf of the Royal Dutch Geographical Society, SSCI Journal, 2017-2018) for big data urban analytics

2019 Best Service Award, The 8th International Conference on Computational Data and Social Networks (CSoNet 2019)

2017 David Olson Excellence Award (granted per year to only one faculty member who has stood as a leader, mentor, and advocate for graduate students of Department of Geography, KSU).

2016 Taylor & Francis and IJGIS Special Issue Award for the Most Popular Special Issue Published in International Journal of Geographical Information Science: “Human Dynamics in the Mobile and Big Data Era” (co-editor)

2016-17 Academic Year Research and Creative Activity Appointment Award, KSU

2016 Regional Development and Planning (RDPSG) Distinguished Service Award, American Association of Geographers (AAG)

2014 Geography Faculty Research Excellence Award, KSU

2014 Publication Service Award, CPGIS

2013 Individual Service Award, CPGIS

2012 Regional Development and Planning (RDPSG) Emerging Scholar Award, AAG

2011 National First-place Award of Research and Analysis, University Economic Development Association

2008 Doctoral Dissertation Research Improvement Award, National Science Foundation

2006 Paper Award, University Consortium for Geographic Information Science (UCGIS)

2004 ESRI/GIScience Scholarship, Third International Conference on Geographic Information Science (Among 23 Global Recipients)

**External Funding:**

[26] 2021-2023, Co-PI, Building Equitable Safe Streets for All: Data-Driven Approach and Computational Tools, USDOT National University Transportation Center (UTC), \$320,000  
*Roadway safety improvement in low-income and ethnically diverse communities in the United States has long been a major concern. This research is defined to addresses this issue by developing a data-driven approach and computational tools to quantify the equity issues in roadway safety. Particularly, we explore two important research questions: (1) What is the relationship between road infrastructure and communities' socioeconomic and demographic characteristics and how can it be associated with traffic safety in low-income, ethnically diverse communities? and (2) What type of driver behaviors and characteristics affect the crash risks in underserved communities?*

[25] 2021-2026, Senior Personnel, Category II: ACES - Accelerating Computing for Emerging Sciences, National Science Foundation, \$10,000,000 (\$5,000,000 facility+\$5,000,000 operation)  
*The ACES system will serve the NSF national research community as a Level 1 resource (90% resource will be allocated to NSF XSEDE or ACCESS), so this project has significant national presence. ACES represents a cross section of capabilities with novel aspects to support researchers: Intel HBM2e SPR CPUs for massive core count computing, Optane memory for processing, NVIDIA Mellanox NDR for fast interconnects, GPUs, FPGAs, Vector Engine, IPU for accelerating computing dynamically allocated using the Liquid composable infrastructure. The project offers several features to let researchers compose the hardware that best supports their workflows. ACES further ties into NSF investments in the national CI landscape, by incorporating unique features such as compute-bursting to Frontera, integrating with Open Science Grid, enabling workflow on cloud resources, and back-filling to Frontera and other NSF resources. ACES answers the urgent call for an agile, integrated, robust, balanced, trustworthy and sustainable CI ecosystem that drives new thinking and transformative discoveries in all areas of S&E research and education.*

[24] 2021-2022, Co-PI, Rapid damage prediction from social media using historical big data and deep learning, Microsoft AI for Humanitarian Action, \$150,000.

*This project will design and implement a novel analytical framework that leverages social media big data such as texts, images, and videos to enable rapid damage assessment for disasters. The end product includes community level economic loss estimation and recovery projection, which contributes to promoting an inclusive economic recovery after natural disaster. The winter storm that struck the State of Texas during February 13–17, 2021 will be used as a proving ground to demonstrate the workflow and accuracy.*

[23] 2021-2023, PI, EAGER: SAI-E: Synchronizing Decision-Support via Human- and Social-centered Digital Twin Infrastructures for Coastal Communities, National Science Foundation, \$298,982

*This project assists in the resilient design, planning, and development of sustainable infrastructure in coastal communities, by integrating physical, cyber, or social infrastructure data into an analytics platform for real-time, dynamic scenario testing for decision support. This digital twin-based decision support system will allow us to (1) collect, compile and share data on physical, cyber, or social infrastructure; (2) engage communities to disseminate information and facilitate citizen science; and (3) promote a human- and social-centered approach for infrastructure planning and integrated social-environment system dynamics modeling in the context of short-term disasters and long-term climate change.*

[22] 2021 Senior Personnel, CNH-L: People, Place, and Payments in Complex Human-Environment Systems, National Science Foundation, \$4,709

*Verify and debug an agent-based model, which simulates people's decisions and actions when facing environmental or health challenges or policy interventions.*

[21] 2020-23 Senior Personnel, ENDEAVRide, USDOT National University Transportation Center (UTC), \$494,855

*In fall 2020, a novel autonomous-vehicle (AV) service named ENDEAVRide will start pilot testing in Nolanville, a typical rural town in central Texas. The AV will serve as a taxicab and a mobile telemedicine portal. This project marks the first attempt to conduct a real-world assessment of AV's potential safety impacts as a disruptive technology to offer older adults a pathway to continued independent mobility in underserved communities. Collaborating with industry partners, we will explore how older adults (60+) can more safely transit and get access to health care with a "2-in-1" (taxi + telemedicine) service delivered via autonomous vehicles. The perceived and objective safety impacts of this novel service will be explored along with changed travel patterns and reduced healthcare trips.*

[20] 2020-22 Senior Personnel, Connected Vehicle Data Safety Applications, USDOT National University Transportation Center (UTC), \$269,550

*This proposal is an extension of an on-going Safe-D project (05-001 Connected Vehicle Data Safety Applications) which developed the computational and analytical foundation for this research. A cloud computing system of services and spatial algorithms were*

*designed and developed to process the very large amounts of connected car (CC) data from Wejo to develop model variables, visualizations, and descriptive statistics. This research seeks to leverage those methods to explore the unanswered question of whether commercially available CC data derived from automotive OEMs can be used for roadway safety applications. The idea is that if leading crash risk indicators can be developed from CC data, then areas of safety concern can be detected before crashes occur, thereby saving lives, time, and resources. Some major automotive OEMs have developed tools to access and visualize the data generated by their CCs but are still lacking the ability to provide risk-based conclusions. This project will evaluate the effectiveness of commercially available CC data in roadway safety applications. We will comprehensively explore the relationships between driving behaviors and different severity crash events. An innovative big data analytic framework will be developed to analyze this emerging safety data.*

[19] 2020-2025 Co-PI, Studying Anti-Social Behavior in Social Media, SSHRC (Social Sciences and Humanities Research Council) Insight Grants, Canada, CA\$ 167,000

*The proposed initiative will inform theory building, develop new digital methods, and propose cost-effective solutions to identify, model, and mitigate anti-social behaviours in online communities. The objectives are as follows: 1) Systematically examine experiences of online Canadians and the factors (user-, group-, and platform-specific) that may influence the manifestation and propagation of anti-social behaviour on social media; 2) Assess the impact of anti-social behaviour on group dynamics and community health; 3) Identify effective intervention and prevention strategies to minimize the harm of anti-social behaviour while still allowing for the free flow of information and ideas; 4) Expand the theoretical foundation to explain factors that may encourage or deter anti-social behaviour on social media; 5) Facilitate public outreach that provides policy, technical, and educational solutions and resources for the Canadian public to combat the rise of anti-social behaviour and support community wellbeing.*

[18] 2019-2020 Institutional PI, Convergence Accelerator Pilot (RAISE): Open Knowledge Network for Spatial Decision Support, National Science Foundation, \$998,415

*This project will advance research critical to the development of open knowledge networks (OKN) through the combination and testing of participatory and automated ontology development processes. Three domain-specific case studies (wildland fire, water quality, and biodiversity conservation) will build on participatory Geographic Information System (GIS) and ontology development work through engagement of problem-focused stakeholder networks. At the same time, the utility of automated tools for resource discovery, ontology development, and social network analysis will be tested in these real-world problem environments. Through integration and comparison of these techniques, the project team will deliver insights into efficient and effective methods for OKN development.*

[17] 2019-2022 Institutional PI, Using Sentiment Analysis and Topic Modeling in Assessing the Impact of Police “Signaling” on Investigative and Prosecutorial Outcomes in Sexual Assault Reports, National Institute of Justice, \$714,199

*Examine police report narratives from sexual assaults using sentiment analysis and topic modeling to examine the presence and impact of a reporting officer's "signaling" for decision making, case flow, and attrition to better understand if and how reporting officers' description of the sexual assault impacts whether cases proceed or fail to proceed in the criminal justice process.*

[16] 2019-2020 co-PI, Apply Natural Language Processing and Deep Learning to EMR Management, Preprocessing and Decision Making, National Institute of Health through New Jersey Alliance for Clinical and Translational Science, \$30,000

*Develop medical artificial intelligence methods and apply Natural Language Processing (NLP) and Deep Learning (DL) to automate the data management and decision making on the Electrical Medical Record (EMR).*

[15] 2019-2020 PI, Transportation Data Analytical Tools - Phase II (Creation of Sidewalk Inventory of the NJTPA Region from Color Infrared Orthoimagery or Google Street View Data, USDOT/North Jersey Transportation Planning Authority, \$99,985.61

*As the NJTPA seeks to promote walking and biking as an essential part of the transportation system, it is vital to have a complete database of sidewalks. When promoting walking, pedestrian safety is critically important. A complete sidewalk inventory helps planners and engineers in study and project design. This project will harvest sidewalk information through integrating remote sensing and street view analytics in the NJTPA region.*

[14] 2017-2021 Co-I, Research Experience for Undergraduates on Computational Data Analytics for Advancing Human Services, National Science Foundation, \$327,808

*Serve as faculty research mentor for computational social science.*

<http://cda.njit.edu/>

[13] 2018-2023 Contributing Faculty, IUCRC: Center for Big (Data Deep) Learning, National Science Foundation, \$750,000

*Coordinate large-scale deep learning (DL), intelligent platforms, and DL-enabled big data applications in spatial social sciences and geo-humanities.*

[12] 2017-2020 Institutional PI, SI2-SSE: GeoVisuals Software: Capturing, Managing, and Utilizing GeoSpatial Multimedia Data for Collaborative Field Research, National Science Foundation, \$500,000

*Develop spatial social network analytics to integrate multimedia data in space, time and network. The software will:*

*(1) Capture and transfer geospatial multimedia data in a variety of different field settings ranging from developed countries with advanced IT infrastructures, to countries that still lack a reliable access to the internet;*

*(2) Manage and explore the collected data, when the data scale and dimensions impose technical challenges for non-IT professionals. It allows for the easy merging and query of GPS, video, audio, narratives, and so on – with flexibility for multiple input types;*

*(3) Apply qualitative, quantitative, and spatial data analysis with mining algorithms, visual representations, and interactions.*



[11] 2017 Science Committee Member, Agent-Based Modeling 2017: Agent-Based Models in the Social, Human-Environment, and Life Sciences, National Science Foundation, \$3,000

*As a Science Committee Member, help promote Agent-Based Modeling 2017 to advance complexity science and ABM through leveraging big collaboration, making use of big data, facilitating big computing, building a big ABM community, and producing big scientific advances. Three major review papers have been co-authored.*

[10] 2016-2018 Co-PI, S&CC: Support Community-Scale Study by Visual Analytics of Human Mobility and Opinion Data from Social Media Data, National Science Foundation, \$100,190

*Develop social media analytics in an interactive visual system to answer day-to-day questions by non-specialized users. In this way questions can be asked such as has this change actually done any good on this/my street? Or, Where can I tell my patient to exercise that is safe, culturally acceptable, and appropriate to who he/she is?*

<https://ocean.sagepub.com/research-tools-database/neighborvis>

<http://vis.cs.kent.edu/NeighborVis/>

[9] 2015-2018 Co-PI, SI2-SSE: Collaborative Research: TrajAnalytics: A Cloud-based Visual Analytics Software System to Advance Transportation Studies Using Emerging Urban Trajectory Data, National Science Foundation, \$300,000

*Develop trajectory analytics to (1) provide easy access and unprecedented capability with a cloud-based storage and computing infrastructure; and (2) support both real-time and historical data query and analysis tasks with intuitive interface and visualization which promote easy user understanding and engagement.*

[8] 2014-2019 Institutional PI, IBSS: Spatiotemporal Modeling of Human Dynamics across Social Media and Social Networks, National Science Foundation, \$999,887

*Conduct space-time analysis and modeling on the dynamics of information landscapes and meme diffusion. Analyze driving forces underlying memes flow over different network configurations.*

[7] 2012-2013 Institutional PI/CNS IRG2 Collaborator, Center for Nanotechnology in Society, National Science Foundation, \$5,000

*Conduct space-time analysis of innovation activities in China.*

[6] 2011-2013 Co-PI, University Center Program. Department of Commerce, Economic Development Administration, \$800,000.

*Develop spatial econometrics and GIS toolbox development on labor shed analysis.*

[5] 2011-2012 Co-PI, Coastal Ohio Wind, Department of Energy, \$1,290,071.

*Conduct economic analysis of alternative energy and simulation of economic gain and loss in the cases of wind turbine operation.*

[4] 2010-2011 Senior Personnel, Williams County Economic Adjustment Strategy. Williams County Board of Commissioners, \$87,500.

*Analyze the occupation distribution at the firm level.*

[3] 2010 Senior Personnel, NW Ohio Solar Energy Hub of Innovation, Ohio Department of Development, \$72,250.

*Conduct GIS analysis of firm location and supply chain identification.*

[2] 2009-2011 Co-PI, University Center Program. US Department of Commerce, Economic Development Administration, \$320,000.

*Develop open source tools to detect communities at risk under economic downturn.*

[1] 2008-2009 Co-PI with Advisor PI Serge Rey, Doctoral Dissertation Research Improvement Grant: Comparative Space-Time Dynamics, National Science Foundation

*Develop a framework of quantifying space-time dynamics to analyze patterns and trend of socioeconomic issues such as spatial inequality.*

### **Internal Funding:**

[16] 2022-2023 Senior Personnel, Empowering Smart and Resilient Communities, Pathways to the Doctorate Collaboration grant, TAMU, \$25,000

*The Department of Landscape Architecture and Urban Planning (LAUP) at TAMU proposes a program entitled, “Empowering Smart and Resilient Communities” to grow the number Hispanic or Black PhD students who join and matriculate from the department. The proposal builds on LAUP’s unique strengths as a department in the diverse array of scholarship related to community processes that affect the timely theme of “resilience”. Resilience describes the capacity of a community to withstand or bounce back from external changes, shocks, or events such as disasters, environmental change, economic disruption, public health crises, and even technological change like introduction of autonomous vehicles and big data processing that communities of the future will need. Taken together, LAUP produces professional planners, landscape architects, land developers, and PhD scholars who can address the numerous challenges that communities face.*

[15] 2021-2023 Senior Personnel, Understanding the Impact of Expansion of Health Insurance Coverage in Texas on Financial Well-being, TAMU X-Grant, \$324,769

*This project has four main objectives. First, the proposed work will evaluate the effect of the ACA (Affordable Care Act)’s health insurance expansion on the total use of hospital care and patient insurance status for hospital care. Second, we will evaluate the impact of the ACA on financial health of individuals (measured through consumer healthcare transaction data). Third, we will investigate how the ACA affected the financial performance and technology adoption of hospitals. Fourth, we will evaluate spatial inequality in the impact of the ACA on the aforementioned outcomes.*

[14] 2021 PI, Urban Data Science, Texas A&M Institute of Data Science Course Development Grant Program, \$15,000

*This project will focus on the creation of sharable education models specifically for urban big data and human dynamics applications. We will achieve the following goals for this course project: 1) Facilitate open access, sharing, and exchange of urban data*

science educational resources and curricula; 2) Integrate various educational activities and training resources under an easy-access web portal framework; 3) Nurture a sense of urban data science community among the Urban Science, Geographic Information Systems, and Computer Science schools at TAMU; and, 4) Minimize isolation and maximize cooperation in an active outreach network beyond TAMU.

Featured by TAMU Today: <https://today.tamu.edu/2021/06/25/18-texas-am-faculty-members-receive-data-science-grants/>

[13] 2021 Senior Personnel, Enhancing Airborne Particle Measurement Capabilities of Center for Atmospheric Chemistry and the Environment (CACE), \$939,608

*This proposal supports and strengthens the Center for Atmospheric Chemistry and the Environment (CACE) through 2 specific aims: 1. To ensure that CACE provides the best available technology, we propose to purchase, maintain, and provide training for state-of-the-art instruments for shared usage. 2. To reinvigorate CACE and expand of the CACE user base. TAMU is home to many world class experts in chemistry, engineering, and applied sciences whose research need atmospheric samples. However, the majority of these expert experimentalists focus exclusively on relatively simple samples which can be analyzed in their respective laboratories, while the real world atmospheric samples are complex and need advanced techniques to be fully characterized. We envision CACE serving as a bridge between superior technologies used in the TAMU laboratories and the most relevant real-world samples whose characterization will be used to address key questions in geosciences, chemistry, health sciences, and engineering. To do so, we propose to make available the necessary technology for size-resolved aerosol sampling and aerosol sample preservation to TAMU PIs, as part of the shared CACE resources.*

[12] 2021 Co-PI, Coastal Flood Visualization with Mobile Virtual and Augmented Realities for Risk Communication, T3: Texas A&M Triads for Transformation, \$30,000

*The proliferation of increasingly powerful and sensor-rich mobile devices is democratizing access to platforms for real-time, life-like, geolocated displays of flood hazards. This project will explore the potential that the convergence of these trends creates for innovative flood risk communication platforms. Such products are needed to increase awareness of and engagement with flood hazards, which is necessary to inform appropriate risk perceptions and concomitant adaptive actions. To meet this need, the project will develop a streamlined infrastructure to project flood scenarios and impacts through virtual and augmented realities to better visually quantify the effects of future disaster events and determine the best intervention strategies in a what-if scenario. By leveraging team members' expertise and local knowledge/connections, the flood risk applications will be developed and piloted for near-coastal areas adjacent to the Houston Ship Channel.*

[11] 2020 Co-PI, Social Vulnerability, Mobility, and COVID-19 Spatial Mortality Patterns, National Science Foundation-funded Social Science Extreme Events Research (SSEER) Network and the CONVERGE facility housed at the Natural Hazards Center at the University of Colorado Boulder, \$1,000 to initiate the national group

*We aim to observe the spatial variation of COVID-19 mortality rate with various sociodemographic and spatial variables such as social vulnerability, urbanization rate,*

*health care accessibility, and living habits. This science-driven project integrates advanced cyberinfrastructure, geospatial statistical models and novel AI algorithms to analyze the spatial COVID-19 mortality pattern. This interdisciplinary framework provides spatial decision support to allocate health care supplies and advance welfare programs for vulnerable communities regarding the COVID-19 outbreak.*

[10] 2020, Faculty Advisor, Analysis on Accessibility and Needs of Healthcare Facilities in the Tri-State Area by Integrating GeoSpatial and Social Media Data, Honors Summer Research, New Jersey Institute of Technology, \$1,000

*This proposal aims to investigate the gap between healthcare access and needs, and geography of healthcare facilities in the Tri-State area (New York, New Jersey, Connecticut). The objective is to (1) integrate healthcare facilities, geospatial, and social media data to conduct a data-synthesis driven approach, (2) utilize text-mining techniques on social media data to better understand the needs and accessibility of healthcare facilities, and (3) leverage geospatial analysis to better understand the physical accessibility of healthcare facilities. The results of this project will benefit a wide-range of stakeholders including healthcare workers, societal members, and policymakers.*

[9] 2019-2020, Co-PI, Interactive Q/A Framework and Knowledge Discovery across Dynamic and Heterogeneous Databases, New Jersey Institute of Technology/The Henry J. and Edna D. Leir Research Institute for Business, Technology, and Society, \$10,000

*In order to allow data users to easily define the relevant questions and refine the searching results from a vast amount of widely-distributed, heterogeneous, complex and dynamic data sources and to quickly access the relevant information regardless of their prior knowledge, we will develop a novel data discovery system, and evaluate its performance in the field of healthcare systems.*

[8] 2019-2020, Co-PI, Virtual and Diffusion Analysis of the Edicole Sacre (Street Shrines) of Rome, New Jersey Institute of Technology, \$9,500

*Transfer the geographic data of the Street Shrines of Rome into the GIS environment, and conduct cluster and diffusion analysis of shrines to examine the origins and spread of the devotional practice.*

[7] 2017-2018, Co-PI, Mapping to Support Health Interventions in the World's Most Challenging Environments, Healthy Communities Research Initiative, Kent State University, \$25,000

*Co-develop the technical infrastructure in maximizing the efficiency of collecting, storing and analyzing spatial video data.*

[6] 2017-2018, Co-PI, Developing a Digital Humanities Platform for Researching the History of Innovation, URC Research Seed competition, Kent State University, \$10,000

*Co-develop a low-barrier, effective platform for researching the history of innovation in data-intensive and collaborative environments. Will construct a platform that provides roadmaps and toolkits, aligning methodologies, theories, techniques, and open-source tools across multiple disciplines for use by digital humanities researchers and educators.*

[5] 2015-2017 Co-PI, Digital Humanities Research with Smart Big Data — A Network Framework of Innovation History, Post-Doctoral Proposal Competition (hire a postdoc for two years), Kent State University, \$100,000

*Co-advise a post-doctoral associate in an interdisciplinary team that is composed of professors from Library and Information Science, Geography, History, and Liquid Crystal Institute. The postdoctoral project will integrate big data and digital humanities on exploring innovation diffusion.*

[4] 2015-2016 Co-PI, Mapping and Modeling Public Attitude toward Fashion Sustainability in Online Social Media, College of the Arts Catalyst Interdisciplinary Project, Kent State University, \$4,500

*Explore the geo-special and temporal distribution of sustainable fashion movement through a grounded theory approach using data mining techniques. Analyze social media messages, particularly Twitter messages, to understand citizens' attitudes towards fashion sustainability in virtual spaces. Understand how public opinions and attitudes toward sustainable fashion is distributed over geographical spaces and time.*

[3] 2015-2016 Co-PI, GIS-LCCA Integrated Pavement Management, University Research Council, Kent State University, \$2,500

*Design a web-based tool to monitor the conditions of the road network and economic impacts of various constructions, maintenance and repair alternatives in near real time.*

[2] 2013 PI, Data Mining of Events: Pursuing Big data-based Spatiotemporally Integrated Social Sciences over Cyber-infrastructure, Building Strength Major Research Project Award, Bowling Green State University, \$10,000.

*Deploy the modern accelerator technology and hybrid computer architecture and systems to conduct high performance computing on the solution of large-scale space-time interaction.*

[1] 2011-2012 PI, Identifying Communities at Risk: Space-Time Data Analysis and Toolbox Implementation for Regional Economic Analysis, Faculty Research Committee Faculty Mentoring and Enrichment Award, Bowling Green State University, \$5,000.

*Design a series of indicators to measure economic inequality and development in an open source environment.*

## **Travel Awards**

2016 NSF Travel Award, Workshop on Measuring and Analyzing Interactions among Mobile Entities

2016 NSF Travel Award, Workshop on Innovative Cyberinfrastructure for Integrated Food, Energy, and Water Research

2015 U.S. National Committee (USNC) Award, 27th International Cartographic Conference

2013 NSF Junior Scholar Travel Award, The Second International Conference on Space, Time, and CyberGIS

2013 U.S. National Committee (USNC) Award, 25th International Cartographic Conference

2012 NSF Junior Scholar Travel Award, The First International Conference on Space, Time, and CyberGIS

## Selected Peer Reviewed Publications

### Referred Journal Papers

***My publication activities focus on developing and implementing new spatiotemporal and network methods in physical, virtual, and perceived spaces to better understand inequality, mobility, and diffusion.***

\* denotes that I serve as the corresponding author. Graduate/undergraduate students and post-docs are underlined.

**Ye, X.** & Niyogi, D. (2022). Resilience of human settlements to climate change needs the convergence of Urban Planning and Urban Climate Science. *Computational Urban Science* (in press)

Lee, C., Newman, G., Jourdan, D., **Ye, X.**, & Van Zandt, S. (2021). Natural Experiments in Planning Research, *Journal of Planning Education and Research*. doi: 10.1177/0739456X211061763  
SSCI (7.217)

An, L., Grimm, V., Sullivan, A., Turner II, B.L., Wang, Z., Malleson, N., Huang, R., Heppenstall, A., Vincenot, C., Robinson, D., **Ye, X.**, Liu, J., Lindkvist, E., & Tang, W. (2021) Agent-based complex systems science in the light of data science and artificial intelligence. *Ecological Modelling*. ISSN 0304-3800 (In Press)  
SSCI (2.974)

**Ye, X.** & Andris, C. (2021) Spatial social networks in geographic information science, *International Journal of Geographical Information Science*. doi: 10.1080/13658816.2021.2001722  
SSCI (4.186)

Zhang, X., Zheng, Y., **Ye, X\***, Peng, Q., Wang, W., & Li, S. (2021). Clustering with implicit constraints: A novel approach to housing market segmentation. *Transactions in GIS*. doi: 10.1111/tgis.12878  
SSCI (2.119)

Du, J., Wang, S., **Ye, X\***, Sinton, D., & Kemp, K. (2021). GIS-KG: building a large-scale hierarchical knowledge graph for geographic information science. *International Journal of Geographical Information Science*. doi: 10.1080/13658816.2021.2005795  
SSCI (4.186)

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### **Referred Conference Proceeding Papers**

Zhang, Z., Wang, Z., Li, A., **Ye, X.**, Usery, E. L., & Li, D. (2021, November). An AI-based Spatial Knowledge Graph for Enhancing Spatial Data and Knowledge Search and Discovery. In Proceedings of the 1st ACM SIGSPATIAL International Workshop on Searching and Mining Large Collections of Geospatial Data (pp. 13-17).

Chen, L., Hu, H., Ling, D., & **Ye, X.** (2020, September). Evaluation of High-tech Industry Innovation Performance Using a New Two-stage Network DEA Model, International Conference on Applied Social Science and Computational Science. (EI)

Al-Dohuki, S., Kamw, F., Zhao, Y., Ye, X., Yang, J., & Jamonnak, S. (2019, October). An Open Source TrajAnalytics Software for Modeling, Transformation and Visualization of Urban Trajectory Data. In 2019 IEEE Intelligent Transportation Systems Conference (ITSC) (pp. 150-155). IEEE.

**Ye, X.** (2019) Building Relatively Small Settlements' Capability for Disaster Response by a Human Dynamics based Crowd-sourced Real-time Information Sharing System. NSF SUS-RURI Proceedings. doi: 10.31274/3d9ea6a4.61d8b3ed

Chen, Y. & Ye, X\*. (2019) Online Community Conflict Decomposition with Pseudo Spatial Permutation, Proceedings of The 8th International Conference on Computational Data and Social Networks. A. Tagarelli and H. Tong (Eds.): CSoNet 2019, LNCS 11917, pp. 1–10, 2019. doi: 10.1007/978-3-030-34980-6\_28

Chen, Z. & Ye, X\*. (2019) Modelling Spatial Information Diffusion, In: Cherifi H., Gaito S., Mendes J., Moro E., Rocha L. (eds) Complex Networks and Their Applications VIII.

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Hu, H., Phan, H., **Ye, X.**, Jin, R., Dou, D., Ding K., & Vo, H. (2019) DrugTracker: A Community-focused Drug Abuse Monitoring and Supporting System using Social Media and Geospatial Data (Demo Paper), Proceedings of the 2019 ACM SIGSPATIAL. doi: 10.1145/3347146.3359076

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**Ye, X.** & Zhang, H. (2014) Ecosystem Services in the Context of Rapid Urbanization in China: Towards Sustainable Land Use Planning Mechanisms. In *Rebuilding Sustainable Communities after Disasters in China, Japan and Beyond*. Cambridge Scholars Publishing.

**Ye, X.** & Shi, X. (2013) Pursuing Spatiotemporally Integrated Social Science over Cyberinfrastructure. In Shi, X., Kindratenko, V., and Yang, C. (eds.) *Modern Accelerator Technologies for GIScience*. pp 215-226. Springer.

**Ye, X.** & Leipnik, M. (2013) Beyond Small Business and Private Enterprises in China: Global and Spatial Perspectives. In Zhang, T. and Stough, R. (eds.) *Entrepreneurship and Economic Growth in China*. pp 289-316. World Scientific: Singapore.

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## Referred Encyclopedia

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**Ye, X.** (2020) GIS and Computational Social Sciences. Oxford Bibliographies in Geography. Edited by Barney Warf. (forthcoming)

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Ye, X. and Lin, H. (eds.) (2020) Spatial Synthesis: Computational Social Science and Humanities, Springer.

Ye, X. and Liu, X. (eds.) (2019) Cities as Social and Spatial Networks, Springer.

## Journal Special Issues

2021 Sanchez, T. and **Ye, X.** (eds.) The Implications of Human Mobility and Accessibility for Transportation and Livable Cities, *Urban Science*

- 2021 **Ye, X.** and Andris, C. (eds.) Spatial-Social Networks in GIScience, *International Journal of Geographical Information Science*
- 2020 Bandana, K., **Ye, X.**, Li, Z., and Huang, Q. (eds.) Scaling, Spatio-Temporal Modeling, and Crisis Informatics, *ISPRS International Journal of Geo-Information*
- 2020 Zhen, F and **Ye, X.** (eds.) Data-Driven Smart Planning: Theory and Practice, *Chinese Geographical Science*
- 2019 **Ye, X.**, Wu, C., Cervone, G., and Bandana, K. (eds.) Integrating Remote Sensing and Social Sensing, *Remote Sensing*
- 2019 Ye, G., Li, Q., Batty, M., **Ye, X\***, and Williams, S. (eds.) Big Data and Urban Planning, *Cities*
- 2018 Qin, K., Jia, T., Lu, B., **Ye, X.**, and Yin, J. (eds.) Spatiotemporal Big Data, Computational Social Science, and Sustainable Development, *Chinese Sociological Dialogue*
- 2018 **Ye, X.** and Liu, X. (eds.) Integrating social network and spatial analyses of the built environment, *Environment and Planning B*
- 2018 Sui, D., **Ye, X.**, and Arsanjani, J. (eds.) Open Data and Robust & Reliable GIScience, *Data*
- 2017 Xie, Y. and **Ye, X\***. (eds.) Spatiotemporal Computing for Sustainable Ecosystem, *ISPRS International Journal of Geo-Information*
- 2016 **Ye, X.**, Huang, Q., and Li, W. (eds.) Integrating Big Social Data, Computing, and Modeling for Spatial Social Science, *Cartography and Geographic Information Science*
- 2016 Shaw, S., Tsou, M., and **Ye, X.** (eds.) Human Dynamics in the Mobile and Big Data Era, *International Journal of Geographical Information Science*
- 2016 **Ye, X.** and He, C. (eds.) The New Data Landscape for Regional and Urban Analysis, *GeoJournal*
- 2016 **Ye, X.** and Y. Mansury (eds.) Behavior-Driven Agent-Based Models of Spatial Systems, *Annals of Regional Science*
- 2014 Wei, Y. H. D. and **Ye, X\***. (eds.) Urbanization, Land Use, and Sustainable Development in China, *Stochastic Environmental Research & Risk Assessment*
- 2014 **Ye, X.**, Bao, S., and Li, B. (eds.) Spatial Intelligence for Urban and Regional Analysis, *International Journal of Applied Geospatial Research*
- 2013 **Ye, X.** and A. Dang (eds.) Spatial Analysis and Modeling on Urban and Regional Development, *Annals of GIS*

2012 **Ye, X.** and L. Liu (eds.) Spatial Crime Analysis and Modeling, *Annals of GIS*

2012 Reid, N., Carroll, M. and **Ye, X.** (eds.) Recession, Resilience, and Recovery, *Economic Development Quarterly*

2012 **Ye, X.** and Y.H.D. Wei (eds.) Globalization, Regional Development, and Public Policy in Asia, *Regional Science Policy & Practice*

### **Co-Edited EI-INDEXED Conference Proceedings**

2011- Annual Proceedings on International Conference on Geoinformatics (EI-indexed)

### **Book Reviews**

**Ye, X.** (2012) Education and Inequality across Europe. By Dolton, P., Asplund, R., and Barth, E. *Review of Social Economy*, 70(4):527-531. Cheltenham.

**Ye, X.** (2011) Portfolios of the Poor: How the World's Poor Live on \$2 a Day. By Collins, D., Morduch, J., Rutherford, S., and Ruthven, O. *Review of Social Economy*, 69(3): 409-411.

**Ye, X.** (2011) Knowledge Discovery in Spatial Data. By Leung, Y. *Regional Studies*, 45(6): 872-873.

**Ye, X.** (2011) New Directions in Regional Economic Development, Edited by Karlsson, C., Andersson, A. E., Cheshire, P.C., and Stough, R. R. *Regional Studies*, 45(4):560-561.

**Ye, X.** (2008) Human Geography. Edited by de Blij *et al.* *Regional Studies*, 1: 156-157.

**Ye, X.** (2008) Learning from Clusters: an Economic-Geographic Perspective. Edited by Boschma and Kloosterman. *Regional Studies*, 1: 149-150.

**Ye, X.** (2007) Geography in America at the Dawn of the 21st Century. Edited by Gaile, G. L. and Willmott, C. J. *Regional Studies*, 3: 416-417.

**Ye, X.** (2006) The Urban Geography Reader. Edited by Fyfe, N. R. and Kenny, J. T. *Regional Studies*, 3: 425-426.

**Ye, X.** (2005) China and the WTO: Accession, Policy Reform, and Poverty Reduction Strategies. By World Bank. *Regional Studies*, 5: 676-677.

### **Research Reports**

**Ye, X.** (2018) Real-Time Urban Surveillance System and Smart City, Urban Infill, Cleveland Urban Design Collaborative.

Curtis, A., Baker, S., **Ye, X.**, Curtis, J.W., and Floyd, G. A. (2013) Fine-Scale Spatial Analysis of Spatial Video Collected Damage Data for the Newcastle-Moore Tornado of May 21, 2013, Quick Response Research Report, University of Colorado Natural Hazards Center, Boulder, CO.

**Ye, X.**, Stephens, P., Pattaniak, S., Li, X., Elias, M. and Janikas, M. (2006) Subject and Author Indexes To 2005 Regional Science and Related Journal Literature. *International Regional Science Review*, 29(4)

## Invited Talks

2021 **Ye, X.** GIS-KG: building a large-scale hierarchical knowledge graph for geographic information science, International Conference of Social Computing, December.

2021 **Ye, X.**, Spatial Decision Support for Open Knowledge Networking, Water, Climate & Environment Seminar, University of Texas at Austin, December.

2021 **Ye, X.**, AI-driven Framework for Urban Flood Resilience Geodesign (Keynote), Urban China Forum, Columbia University Graduate School of Architecture, Preservation and Planning, November.

2021 **Ye, X.** Sidewalk Extraction Using Aerial and Street View Images. Texas A&M Institute of Data Science Seminar. February.

2020 **Ye, X.** Network, Flow, and Human Dynamics, International Conference of Social Computing, December.

2020 **Ye, X.** Human-centered Urban Informatics for Disaster Response, Second Workshop on AI for Humanitarian Assistance and Disaster Response, NeurIPS 2020, December.

2020 **Ye, X.** Human Dynamics in Smart Cities, Great Problems Great Minds Seminar Series, Illinois Institute of Technology, November.

2020 **Ye, X.** Understanding Public Health in Physical, Virtual, and Perceived Worlds, School of Public Health, Texas A&M University. October.

2020 **Ye, X.** Automating Sidewalk Inventory Creation, Kinder Research Seminar, Rice University, October.

2020 **Ye, X.** Human Dynamics and Computational Urban Science, Department of Computer Science & Engineering Seminar, Texas A&M University. September.

2020 **Ye, X.** GIS Analysis of Communication and Mobility during COVID-19, School of Public Health, The University of Texas Health Science Center at Houston, September.

2020 **Ye, X.** Towards Human Dynamics based Urban Informatics, Department of Geography Seminar, Texas A&M University. September.

2020 **Ye, X.** Interactive Intelligent Data Finder, Dataverse Annual Meeting, Harvard University, June.

2019 **Ye, X.** Urban Visual Analytics, International Geoinformatics Week, Guangzhou, China, November.

2019 **Ye, X.** Human Mobility Visual Analytics, GIS Day, East Stroudsburg University, November.

2019 **Ye, X.** Visually Exploring Massive Urban Trajectories to Enhance Urban Sustainability and Resilience, Department of Civil and Urban Engineering, New York University, October.

2019 **Ye, X.** GIS Modelling of Urban Public Health: Fine-scale Space-time Hotspots Identification and Simulation, School of Public Health, Rutgers, the State University of New Jersey, May.

2019 **Ye, X.** Web-based Social Media Analytics, IEEE SMC Chapter seminar, New Jersey Institute of Technology, March.

2018 **Ye, X.** Human Dynamics in Spatial-Social Network, Bloustein School of Planning and Public Policy, Rutgers, the State University of New Jersey, December.

2018 **Ye, X.** Network, Flow, and Urban Informatics, Data Science Summit, Pitney Bowes Incorporated, December.

2018 **Ye, X.** Analyzing Flow and Network, Keynote, National Forum in Geoinformatics, Lanzhou Jiaotong University, July.

2018 **Ye, X.** Big Flow Data Visual Analytics through TrajAnalytics, Illuminating Space and Time in Data Science Conference, Harvard University, April.

2018 **Ye, X.** Spatiotemporal Analysis of Housing Prices in China, Center for Geographic Analysis, Harvard University, March.

2018 **Ye, X.** Human Dynamics in the Urban Environments, Dept. of Electrical Engineering, University of North Texas, March.

2018 **Ye, X.** Inferring Urban Air Quality Based on Social Media, Dept. of Computer Science, Kent State University, February.

2017 **Ye, X.** Modelling Network and Flow Using Big Data in an Interdisciplinary Context. University of Toronto, November.

2017 **Ye, X.** A Framework of Social Media Analytics for Wildfire Hazards, Center for Geographic Analysis, Harvard University, February.

2016 **Ye, X.** Visualizing and Modeling Big Social Data in China, Center on Religion and Chinese Society, Purdue University, September.

2015 **Ye, X.** Open GIS, Keynote, Columbia University, November.

2015 **Ye, X.** Space, Time, and Human Dynamics, Keynote, GIS Open House Day, Binghamton University, November.

2015 **Ye, X.** Urban Computing, Research Seminar Series of Electrical & Computer Engineering, Binghamton University, November.

2015 **Ye, X.** Space, Time, and Network, Cornell University, September.

2015 **Ye, X.** Open source comparative space-time dynamics, Keynote, R conference, Beijing, June.

2013 **Ye, X.** Comparative Space-Time Dynamics. Sol Price School of Public Policy, University of Southern California, March.

2012 **Ye, X.** Urban Modeling. National Institute for Environmental Studies (NIES), Japan, June.

2012 **Ye, X.** Open Source Space-Time Analysis. Center for Global Change and Earth Observations, Michigan State University, May.

2011 **Ye, X.** Comparative Space-Time Dynamics and Spatial Intelligence for Regional Analysis. The First All-hands Meeting of the NSF CyberGIS Project, Oak Ridge National Laboratory, September.

2011 **Ye, X.** Comparative Space Time Dynamics of Idea Diffusion. NSF Funded Specialist Meeting ("Mapping Ideas: Discovering and Information Landscapes"), among 12 experts. San Diego, June.

2011 **Ye, X.** Comparative Space Time Dynamics: Toolbox Development. NSF Setgo Summer Research Meeting. Bowling Green State University, June.

2011 **Ye, X.** ESDA and Spatial Panel Approaches. NIH Center for Family & Demographic Research, Bowling Green State University, January.

2010 **Ye, X.** An Open Source Toolbox for Cluster-Based Economic Development. Space-Time Modeling and Analysis Workshop, Redlands, February.

## Conference Presentations

2021 **Ye, X.** “Towards an AI-driven Framework for Multi-scale Urban Flood Resilience Planning and Design”, Disaster PRIMR 2021. Virtual, February.

2020 **Ye, X.** “Open Knowledge Network for Spatial Decision Support towards Urban Sustainability”, ACSP. Virtual, November.

2020 **Ye, X.** “Human Dynamics and Urban Sustainability”, Superfund Research Center monthly meeting. Texas A&M University. Virtual, September.

2020 Ning, H., **Ye, X.**, Chen, Z., & Cao, T. “Sidewalk Extraction Integrating Aerial Imagery and Street View Imagery”, AAG. Virtual, April.

2020 Du, J. & **Ye, X.** “Interactive Visual Analytics for Sparse Trajectory Data”, AAG. Virtual, April.

2019 Chen, Z. & **Ye, X.\*.** “Modelling Spatial Information Diffusion”, The 8th International Conference on Complex Networks and their Applications. Lisbon, Portugal, December.

2019 Chen, Y. & **Ye, X.\*.** “Online Community Conflict Decomposition with Pseudo Spatial Permutation”, The 8th International Conference on Computational Data and Social Networks. Ho Chi Minh City, Vietnam, November.

2019 Liu, W., **Ye, X.\*.**, Phan, H., & Hu, H. “Scalable Self-Taught Deep-embedded Learning Framework for Drug Abuse Behaviors Detection with Spatial Effects”, The 8th International Conference on Computational Data and Social Networks. Ho Chi Minh City, Vietnam, November.

2019 **Ye, X.**, Turner, K., She, B. “Automating Parcel Classification for Land Management”, AAG, Washington DC, April.

2019 **Ye, X.** Panelist, “Data Science in Geography?”, AAG, Washington DC, April.

2018 **Ye, X.** “Human Dynamics in the Data Challenged Environments”, The 26th International Conference on Geoinformatics, Kunming, June.

2018 **Ye, X.** Panelist, “Setting the Research Agenda for the Geospatial Analysis and Modeling (GAM) Commission of the ICA”, AAG, New Orleans, April.

2018 **Ye, X.** Panelist, “Spatiotemporal Symposium: Social Sensing and Big Data Computing for Disaster Management”, AAG, New Orleans, April.

2018 Chen, H., Cheng, T., **Ye, X.** “A Police Districting Problem on Street Network”, AAG, New Orleans, April.



2018 **Ye, X.**, Wei, X. “How Geopolitical Environment Impacts People’s Perception of El Nino”, AAG, New Orleans, April.

2018 **Ye, X.**, Duan, L., Hu, T., Zhu, X. “Data sparsity, spatiotemporal semantics, and suspect mobility prediction”, AAG, New Orleans, April.

2018 Liu, Q., **Ye, X.**, Lee, J. “Evaluation of the Attractiveness of Point-of-Interests to Tourists”, AAG, New Orleans, April.

2018 Wang, Z., **Ye, X.**, Lee, J. “A Spatial Econometric Modeling of Online Social Interactions Using Microblogs”, AAG, New Orleans, April.

2018 Dong, W., **Ye, X.** “Spatial Indicators of Topics in Social Media”, AAG, New Orleans, April.

2018 Sharag-Eldin, A., **Ye, X.**, Sharag-Eldin, A. “Analyzing the Death Penalty as an indicator of the Moral Policy Debate on Twitter”, AAG, New Orleans, April.

2017 **Ye, X.**, Wei, X. “How People Perceived El Nino on Twitter”, Applied Geography Conference, Kent, November.

2017 **Ye, X.**, She, B., Bao, S. “A Framework of Social Media Data and Census Data Fusion”, Applied Geography Conference, Kent, November.

2017 **Ye, X.** “A Visual Analytics Framework for Comparative Urban Trajectory Analysis”, The 25th International Conference on Geoinformatics, Buffalo, August.

2017 Wu, L., **Ye, X.**, “Comparative Analysis of Urban Crimes in China and USA”, International Symposium of Spatially Integrated Social Science and Humanities, Nanjing. June.

2017 Wu, L., **Ye, X.**, “Spatial Social Network Crime Analysis”, International Symposium of Spatial Data Science, Beijing. June.

2017 Wu, L., **Ye, X.**, “Spatiotemporal Crime Analytics”, International Symposium of Crime Analysis, Hangzhou. July.

2017 Liu, Q., Wang, Z., **Ye, X.**, “Delineating the human movement pattern: A geo-big data perspective”. Graduate Research Symposium, Kent State University, April.

2017 Lin, H., **Ye, X.**, “Socioeconomic and Spatial Pattern of Local Communities with Their Responses to Wildfire Using Twitter Data”. Graduate Research Symposium, Kent State University, April.

2017 Dong, W., **Ye, X.**, “Who Win the Online Debate? Exploring People behind Social Media”. Graduate Research Symposium, Kent State University, April.

2017 **Ye, X.**, Dang, L., Lee, J. “A Framework of Spatial Social Network Analytics”, AAG, Boston, April.

2017 **Ye, X.** “Spatiotemporal analytics on Smart Cities”, AAG Spatiotemporal Panel session, AAG, Boston, April.

2017 Li, S., **Ye, X.** “Urban Shrinking in China: a review”, AAG, Boston, April.

2017 Wang, Z., **Ye, X.**, Chang, X., “Geography and Cyberspace: Understanding Online Human Interactions from Big Geosocial Data”, AAG, Boston, April.

2017 Liu, Q., Wang, Z., **Ye, X.**, “An Exploratory Study of Urban Human Mobility: a Big Data Perspective”, AAG, Boston, April.

2017 Dong, W., **Ye, X.**, “Who Win the Online Debate? Exploring People behind Social Media”, AAG, Boston, April.

2017 Lin, H., **Ye, X.**, “Using Twitter to Examine the Relationship between the Socioeconomic, Land-use and Demographics of Local Communities, and Their Responses to Wildfire Disasters”, AAG, Boston, April.

2017 Sharag-Eldin, A., **Ye, X.**, Spitzberg, B., “Analyzing the Role of Actors”, AAG, Boston, April.

2017 Dang, L., Chen, Z., Lee, J., **Ye, X.** “An Agent-Based Simulator for Information Diffusion Over Social Network”, AAG, Boston, April.

2016 **Ye, X.** “Comparative Space-time Research Questions for Open Source Toolkit Development”, International Geographical Congress, Beijing, August.

2016 **Ye, X.** “Spatiotemporal Modelling and Simulation of Meme Diffusion Processes”, the 10<sup>th</sup> International Association for China Planning Conference, Beijing, July.

2016 Adiyana Sharag-Eldin, A. **Ye, X.**, Spitzberg, B. “Analyzing Public Opinions on Fracking using Twitter”, AAG, San Francisco, April.

2016 **Ye, X.** “Regions aren't just Regional: Global Roundtable”, AAG, San Francisco, April.

2016 Wang, S., **Ye, X.**, and et al. “Virtual Geographic Scene based Surveillance Video Synopsis”, AAG, San Francisco, April.

2015 Lai, C.-H., **Ye, X.**, She, B. “A mixed-mode view of the evolutionary dynamics of humanitarian organizing networks: Integration of bona fide networks, media multiplexity, and affordances”. the 65th annual conference of International Communication Association, San Juan, Puerto Rico.

2015 Lai, C.-H, **Ye, X.**, She, B., & Tao, C.-C. “A longitudinal investigation of technological affordances for humanitarian organizing”. the 65th annual conference of International Communication Association, San Juan, Puerto Rico.

2015 Fu, C., Rowan, C., **Ye, X.** “Measuring Similarity between Calculated Paleomagnetic APWPs and the Fixed Hotspot Model Predicted”, AGU, San Francisco, December.

2015 Li, E. Wang, W., **Ye, X.**, Xu, Y. “The Formation and Evolution of China's Agricultural Knowledge Network for Science and Technology (CAKNST)”, Regional Studies Association China Conference, Hangzhou, November.

2015 **Ye, X.** Wu, L., “Accounting for Spatiotemporal Inhomogeneity of Urban Crime in China”, Applied Geography Conference, San Antonio. November.

2015 Li, Q., **Ye, X.**, “Measuring and Analyzing the Mixed Land Use of Shenzhen: 2009-2012”, AAG East Lake. Kent. October.

2015 Liu, Q., Wu, L., **Ye, X.**, Tsou, M., “Detecting spatial patterns of controversial topics online: a case study of death penalty topic on Twitter”, AAG East Lake. Kent. October.

2015 **Ye, X.** “Urban Transportation Visual Analytics”, Wuhan University, October.

2015 **Ye, X.** “Advances in Spatiotemporally Integrated Social Sciences”, Huazhong University of Science and Technology, October.

2015 **Ye, X.** “Space, Time, and Urban Analytics”, Tongji University, October

2015 **Ye, X.** Science Showcase of Spatiotemporal Network (invitation to the groundbreaking for the new Integrated Science Building), Kent State University, October.

2015 **Ye, X.**, Li, S., Lee, J. “Analyzing Ebola Fear in China”, 23rd International Conference on Geoinformatics, 2015. Wuhan. June.

2015 **Ye, X.** “Space-Time and Content Analysis of Dengue Fever”, International Symposium of Spatially Integrated Social Science and Humanities, Wuhan. June.

2015 **Ye, X.** “Analyzing Shooting on the Tweets”, AAG. Chicago. April.

2014 **Ye, X.**, Lai, C., and She, B. “A Framework of Mapping Social Connections in Space and Time”, Regional Science Association International, Washington DC, November.

2014 **Ye, X.** “A Tale of Two Provinces: Comparative Space-Time Analysis and Modeling of Economic Disparity between Coastal and Inland China”, Regional Science Association International, Washington DC, November.

2014 Bao, S., She, B., and **Ye, X.** “Spatial Intelligence Analysis with Geo-Explorers and PySAL”, Regional Science Association International, Washington DC, November.

2014 **Ye, X.** Comparative Space-Time Analysis and Implementation: Towards Spatiotemporally Integrated Policy-relevant Research, School of Library and Information Science, Kent State University, November.

2014 **Ye, X.** Space-Time Crime Analysis. Department of Criminal Justice, University of Toledo, October.

2014 **Ye, X.** “Comparative Space-Time Analysis of Crime in Wuhan, China”, The Race, Ethnicity and Place Conference, Fort Worth, October.

2014 **Ye, X.** “Space-Time Interaction of Residential Burglaries in a Large Chinese City”, Applied Geography Conference, Atlanta, October.

2014 **Ye, X.** “Open Source Point Process Modeling of Earthquake”, 2nd Annual International Conference on Geo-Informatics in Resource Management & Sustainable Ecosystem, Ypsilanti, October.

2014 **Ye, X.** Space-Time Modeling of Urban Crime. International Crime Geography Conference, Guangzhou, June.

2014 **Ye, X.** Spatial Social Science. International Symposium of Spatially Integrated Social Science and Humanities, Beijing, June.

2014 **Ye, X.** Big Social Data. Zhejiang University, June.

2014 **Ye, X.** “Comparative Space Time Dynamics”, AAG Spatiotemporal Panel session, AAG, Tampa, April.

2014 **Ye, X.** “Comparative Space-Time Path of Regional Economic Development”, The Third International Workshop on Regional, Urban, and Spatial Economics, Shanghai, June.

2014 **Ye, X.** “What Are We 'Tweeting' about Black Friday?”, AAG, Tampa, April.

2014 Zhou, X., **Ye, X.**, Kaplan, D. “Understanding Urban Issues in China and the USA through A Comparison of Urban Geography Textbooks”, AAG, Tampa, April.

2014 **Ye, X.** “Open Source Space-Time Analysis”, pre-AAG workshop on open GIS, Tampa, April.

2013 **Ye, X.** “Weighted Network Voronoi and Urban Streets”, Western Regional Science Association, San Diego, February.

- 2013 **Ye, X.** “Zipf’s Law and Urban Dynamic in China: 1960-2010”, Regional Science Association International, Atlanta, November.
- 2013 **Ye, X.** “Comparative Space-Time Analysis”, The First International Conference on Environment, Legacy, and Urban Planning, Hangzhou, November.
- 2013 **Ye, X.** “Spatial Rank and Spatial Markov for Urban Size Distribution in China”, Joint Annual Meeting ELDAAG/CAGONT, Toledo, October.
- 2013 Zhou, X., **Ye, X.**, Liu, H., and Han, L. “Analysis on Urban Land Use Efficiency in China”, Joint Annual Meeting ELDAAG/CAGONT, Toledo, October.
- 2013 **Ye, X.** and Li, W. “Mapping the Pulse of Shopping Behavior: Black Friday, Economic Geography, and Cyberspace”, The All Hands Meeting of the NSF CyberGIS project, Seattle, September.
- 2013 **Ye, X.** “Comparative Space-Time Analysis of Regional Development across Scales: Case of Zhejiang and China”, The Second International Workshop on Regional, Urban, and Spatial Economics, Beijing, June.
- 2013 **Ye, X.** “Frontiers and Roadmaps: Academic Viewpoints”, CyberGIS Symposium, AAG, Los Angeles, April.
- 2012 **Ye, X.**, Carroll, M., and Wu, L. “Visualizing and Detecting Space-Time Chain”, Regional Science Association International, Ottawa, Canada, November.
- 2012 Carroll, M. and **Ye, X.** “Comparative Space-Time Analysis of Warn Notices”, Regional Science Association International, Ottawa, Canada, November.
- 2012 Qian, H. and **Ye, X.** “Spatiotemporal Dynamics of High Technology Entrepreneurship: A Comparison of California and New England (1999-2006)”, Regional Science Association International, Ottawa, Canada, November.
- 2012 Burek, M. W., Stinson, P. M., and **Ye, X.** “Spatial Significance and Welfare Reforms: How Changes from AFDC to TANF Affected Occurrences of Part Two Crimes”, Annual Meeting of Midwestern Criminal Justice Association, Chicago, September.
- 2012 **Ye, X.**, Carroll, M., and Wu, L. “Measuring Scales of Space-Time Interaction among Crime Events”, GeoInformatics, Hong Kong, June.
- 2012 Burek, M. W., Stinson, P. M., and **Ye, X.** “Before and After Welfare Reform: Geospatial Analysis of Its Impact on Crime 1980-2010”, Annual Meeting of Academy of Criminal Justice Sciences, New York, March.
- 2012 Yue, Y., Zhao, J., Wang, J., Yin, Y., **Ye, X.**, and Huang, X. “Vulnerability Assessment of Cotton to Hail in China Based on Historical Records, Field Investigation and Ground

Experiments”, 4th International Disaster and Risk Conference IDRC, Davos, Switzerland, August.

2012 **Ye, X.**, He, C., and Pan, F. “Modeling Industrial Air Pollution in Transitional China: Exploratory Space-Time Analytical Perspective and Toolbox Implementation”, AAG, New York, February.

2012 **Ye, X.** “Comparative Analysis of Regional Economic Development”, Western Regional Science Association, Hawaii, February.

2011 **Ye, X.**, Bao, S., and She, B. “The Spatial Intelligence for Regional Analysis”, Regional Science Association International, Miami, November.

2011 Carroll, M. and **Ye, X.** “Publication Patterns and Trends in Economic Development Research: Information Visualization Approach”, Regional Science Association International, Miami, November.

2011 **Ye, X.** and Carroll, M. “Visualizing Worker Flow in an Interactive and Exploratory Framework”, Annual Meeting of AAG Eastlake Division, Youngstown, October.

2011 **Ye, X.** and Carroll, M. “Visualizing Local Economic Development: A Comparative Space-Time Data Analysis”, Annual Meeting of Ohio Association of Economists and Political Scientists, Bowling Green, October.

2011 Reid, N., Carroll, M., and **Ye, X.** “Spatial and Temporal Patterns of Unemployment During the Recent Recession: An Analysis of its Impact on the United States”, Regional Geographic Conference UGI, Santiago, Chile, November.

2011 **Ye, X.** “Research on Regional Development in China: Patterns, Trends, and Progress”, International Conference on Urbanization and Development in China, Salt Lake City, August.

2011 Carroll, M., Reid, N., and **Ye, X.** “Spatial and Temporal Patterns of the Recent Recession,” European Regional Science Association, Barcelona, August.

2011 Carroll, M., Reid, N., and **Ye, X.** “Spatial Patterns of Recession in the United States”, Third Global Conference on Economic Geography, COEX, Seoul, Korea, June.

2011 Reid, N., Carroll, M., and **Ye, X.** “Impact of the Recent Recession on Rural Areas in the United States”, International Geographical Union (IGU) Commission on the Dynamics of Economic Spaces, Vechta Mini conference, May.

2011 **Ye, X.** and Carroll, M. “CARE: Communities At Risk under Economic Downturn”, AAG, Seattle, April.

2011 Carroll, M. and **Ye, X.** “Examination of Communities At Risk Using Time Series and Panel Regression Modeling: Case Study of Ohio”, Western Regional Science Association, Monterey, February.

2010 **Ye, X.** and Carroll, M. “Warn Notice Toolbox”, Regional Science Association International, Denver, November.

2010 **Ye, X.** CARE: Communities at Risk under Economic downturn. Department of Geography and Planning, University of Toledo, November.

2010 Carroll, M. and **Ye, X.** “Unemployment Rate Clock”, Regional Science Association International, Denver, November.

2010 **Ye, X.**, Miller, J., and Mabrey, D. “Exploratory Space-Time Analysis of Terrorism Attacks”. AAG, Washington, DC, April.

2010 **Ye, X.** Crime Mapping, Department of Criminal Justice. University of Toledo, March.

2010 **Ye, X.** Ohio Communities at Risk. Geography Club, Bowling Green State University, March.

2010 **Ye, X.** An Open Source Web-based Decision Support System for Comparative Cluster-Based Economic Development Strategies. NSF Cyber-GIS Workshop, Washington DC, February.

2010 Wu, L., Wells, W., and **Ye, X.** “Patterns of Near-Repeat Gun Assaults in Houston”, The Academy of Criminal Justice Sciences, San Diego, February.

2010 Carroll, M. and **Ye, X.** “Exploratory Space-Time Analysis of Communities at Risk”, Western Regional Science Association, Sedona, February.

2010 **Ye, X.** and Rey, S. J. “Space-Time Empirics for Economic Growth”, Western Regional Science Association, Sedona, February.

2010 **Ye, X.** Space-Time Analysis of Regional Development in China. Department of Economics, Bowling Green State University, January.

2009 Carroll, M. and **Ye, X.** “Industry Cluster Time Path”, Regional Science Association International, San Francisco, November.

2009 **Ye, X.** Comparative Space-Time Dynamics: Open Source and Implementation. Department of Geography and Geology & Institute for Geospatial Research and Education, Eastern Michigan University, October.

2009 **Ye, X.** and S.J. Rey. “A Framework for Comparative Space Time Analysis”, AAG, Las Vegas, March.

- 2009 Li, Y., Wei, Y. D., and **Ye, X.** “Beyond Convergence: Geographies of Regional Inequality of China”, AAG, Las Vegas, March.
- 2008 Rey, S. J. and **Ye, X.** “Distributional Properties of LISA Time Path”, Regional Science Association International, New York.
- 2008 Rey, S. J. and **Ye, X.** “Dynamic Pseudo Weighted Voronoi: Integrating Cartogram and Voronoi Diagrams”, AAG, Boston, April.
- 2007 Rey, S. J. and **Ye, X.** “Comparative Spatial Dynamics of Regional Systems”, Regional Science Association International, Savannah.
- 2007 Rey, S. J. and **Ye, X.** “Spatial Dynamics in City Size Distribution”, ICA Workshop (peer-reviewed), UGA, July.
- 2007 Xie, Y. and **Ye, X.** “Multi-category Tempo-Spatial Pattern Analysis (McTSPA)”, Geocomputation.
- 2007 Rey, S. J. and **Ye, X.** “Exploratory Comparative Spatial Dynamics: Integrating Computational Geometry with ESTDA”, AAG, San Francisco, April.
- 2007 **Ye, X.** “Spatial Analysis of Urban System”, Graduate Open House, Department of Geography, University of California, Santa Barbara, March.
- 2006 Rey, S. J. and **Ye, X.** “Exploring Spatial Dynamics in City Size Distributions”, Regional Science Association International, Toronto, November.
- 2006 Duque, J. and **Ye, X.**, “Identifying Temporal Lag in Analytical Regionalisation Procedures”, Regional Science Association International, Toronto, November.
- 2006 **Ye, X.** “Spatializing Zipf’s Law in the Dynamic Context: US Cities 1960-2000”, UCGIS, Vancouver, June.
- 2006 Rey, S. J. and **Ye, X.** “Comparative Space-Time Dynamics”, AAG, Chicago, March.
- 2006 Rey, S. and **Ye, X.** “Comparative Regional Inequality between the US and China”, Open House, San Diego State University, March.
- 2005 **Ye, X.**, Xie, Y., and Batty, M. “Modeling Transition Rules in Urban Cellular Automata”, Geocomputation, Ann Arbor, August.
- 2005 **Ye, X.** “Urban Dynamics in China”, AAG, Denver, March.
- 2004 Xie, Y. and **Ye, X.** “Comparative Analysis of Spatial Pattern Changes: CASP”, GIScience, Maryland, October.



2004 **Ye, X.** and Xie, Y. “Simulating Residential Land Use and Housing Market Change in a GIS based CA-MAS environment”, AAG, Philadelphia, March.

2003 Xie, Y., Batty, M., and **Ye, X.** “Examining Policy Impacts on Urban Growth from GIS-based Cellular Automata Models”, International Seminar on Geo-Cellular Automata and Its Applications, Beijing, December.

2003 Xie, Y. and **Ye, X.** “Regional Patterns of Urban System Evolution in China.” CPGIS Global Day Workshop, Ann Arbor, October.

2003 **Ye, X.** “Understanding Urban Sprawl in A GIS Based CA Environment”, Joint Meeting of the East Lakes and West Lakes Divisions of AAG, Kalamazoo, October.

2003 Nystuen, J., Batty, M., Xie, Y., **Ye, X.**, and Wagner, T. “The Dynamics of Zipf”, University of Michigan, May.

2003 **Ye, X.** and Xie, Y. “Modeling Suburbanization in Metropolitan Detroit”, AAG, New Orleans, March.

2002 **Ye, X.** and Wei, Y. D. “Intra-provincial Inequality in China”, AAG, Los Angeles, March.

## **Teaching**

### **Lecture Courses at TAMU**

URSC 689 Network Science of Cities (Graduate, Fall 2021)

### **Independent Study Courses at TAMU**

URSC 691 Independent Study on Urban Analytics (Graduate, Spring, Summer, Fall 2021)

### **Lecture Courses at NJIT**

IS 465 Advanced Information Systems (Undergraduate, Spring 2020)

IS 665 Data Analytics for Info System (Graduate, Fall 2019)

IS 601 Web Systems Development (Graduate, Fall 2018, Spring 2019)

IS 488 Independent Study in Info Systems (Spring 2019; Spring 2020)

### **Lecture Courses at KSU**

Internship Advisor for Science Experience (Fall 2015/Spring 2016/Summer 2016/Fall 2016)

GEOG 4/5/79195 Spatial Social Network Analysis (Undergraduate/Graduate, Spring 2016)

GEOG 49195/69083 Geodatabase (Undergraduate/Graduate, Fall 2015, 2016)

DSCI 40910 Capstone in Digital Sciences (Undergraduate, Fall 2015/Spring 2016/Fall 2017)

GEOG 49195/59195/79195 Spatiotemporal Analytics (Undergraduate/Graduate, Spring 2015)

GEOG 49195/59195/79195 GIS Principles (Undergraduate/Graduate, Fall 2017)

GEOG 49076/59076/79076 Spatial Programming (Undergraduate/Graduate, Fall 2013, 2014, 2016, Spring 2018)

GEOG 69082 CyberGIS (Spring 2018)

### **Lecture Courses at Bowling Green State University (BGSU)**

GEOG 4000/ GEOL 6810 Advanced GIS (Undergraduate/Graduate, Spring 2013)

GEOG 4250/5250 Applied GIS (Undergraduate/Graduate, Fall 2012)

GEOG 4240/5240 Geographic Information Systems (Undergraduate/Graduate, Spring 2012)

GEOG 2250 Global Economic Geography (Undergraduate, Fall 2010, 2011)

GEOG 4020/5020 Regional Economic Geography (Undergraduate/Graduate, Spring 2011)

### **Independent Study Courses at BGSU**

GEOG 4900 Geovisualization (Undergraduate, Spring 2013)

GEOG 4900 Economic Geography of the Music Industry (Undergraduate, Spring 2013)

GEOL 6990 Thesis Research (Graduate, Spring 2012)

GEOG 4900 Urban Modeling (Undergraduate, Spring 2012)

GEOG 4900 Economic Globalization (Undergraduate, Spring 2012)

SEES 6800 Seminar in Space Time Analysis (Graduate, Spring 2011)

SEES 6840 Directed Readings in Geology (Graduate, Spring 2011)

GEOG 4900 Tracking Terrorism (Undergraduate, Spring 2011)

SEES 6800 Seminar in Spatial Disease Mapping (Graduate, Fall 2010)

GEOG 4900 Public Health Data Analysis (Undergraduate, Fall 2010)

### **Lecture Courses at SDSU**

GEOG 385 Spatial Data Analysis (Undergraduate, Spring 2008, Fall 2008)

## **Advising**

### **Current Doctoral Students (\* chair)**

[8] Dan Zhou (Business Data Science, NJIT) Multi-dimensional business data fusion, completion, and prediction with deep neural networks

[7] Schuyler Carter (Urban and Regional Science, TAMU) Exploring the Special Needs Experience of Museums Through Grassroots Archival Repositories (Gar) Through Multi-Sensory Exhibit Curation

[6] Bahareh Alizadeh Kharazi (Urban and Regional Science, TAMU) TBD

[5] \*Zhiheng Hu (Urban and Regional Science, TAMU) TBD

[4] \*Chunwu Zhu (Urban and Regional Science, TAMU) TBD

[3] Jingqiu Ren (Sociology, TAMU) TBD

[2] \*Jiaxin Du (Urban and Regional Science, TAMU) Artificial Intelligence Enabled Participatory Planning

[1] Jiahe Bian (Urban and Regional Science, TAMU) Riding Transit in New Technological Environment: Smartphone Transit Apps and Transit Trip Making

### **Former Doctoral Students (\* chair)**

[20] Weichuan Dong (Geography, KSU) Geospatial approaches to exploring social determinants of cancer outcomes

[19] Phung Lai (Informatics, NJIT) Ontology-based Interpretable Machine Learning for Textual Data

[18] Han Hu (Informatics, NJIT) A Large-Scale Deep Learning-based Drug Abuse Detection and Analysis on Online Social Media

[17] Ruiqi Shen (Informatics, NJIT) Learner Autonomy for Computer Science Learners.

- [16] Zi Chen (Civil & Environmental Engineering, University of New South Wales) A Unified Framework for Filtering and Analysis of Social Media Data to Improve Situational Awareness in Typhoon Impact
- [15] Qingsong Liu (Geography, KSU) The Role of Mobility in the Socio-Spatial Segregation Assessment with Social Media Data.
- [14] Yu Xu (Informatics, NJIT) Supporting User Interaction and Socialization in a Collaborative Online Shopping Context
- [13] Chao Ma (Computer Science, KSU) Visual Analytic Technique and System of Spatiotemporal-semantic Events
- [12] Haitao Yuan (Electrical and Computer Engineering, NJIT) Energy and Performance-optimized Scheduling of Tasks in Distributed Cloud and Edge Computing Systems.
- [11] Adiyana Sharag-Eldin (Geography, KSU) The Role of Geography in Social Media Communication.
- [10] Yan Chen (Urban Planning, University of North Carolina-Chapel Hill). Analyzing Determinants and Outcome of Urban Vibrancy: Big Data Approach on Connecting Built Environment, Activity, Image, and Retail Performance of Places.
- [9] Farah Kamw (Computer Science, KSU) Utilizing Big Trajectory Data for Urban Visual Analytics and Accessibility Studies.
- [8] Shamal Dohuki (Computer Science, KSU) Interactive Visual Querying and Analysis for Urban Trajectory Data.
- [7] \*Zheye Wang (Geography, KSU) Analyzing social media data to enrich human-centric information for natural disaster management. KSU.
- [6] Wei Kang (Geography, Arizona State University) Spatially Explicit Exploratory and Confirmatory Approaches to the Analysis of Regional Economic Growth and Convergence.
- [5] Salem Othman (Computer Science, KSU) Autonomous Priority Based Routing for Online Social Networks.
- [4] Brian Bartman (Computer Science, KSU) Supporting Software Exploration with a Syntactic Aware Source Code Query Language.
- [3] Mohammad Alnasrallah (Geography, KSU) Geographic Disparities of Obesity Prevalence as a Public Health Issue in Summit County, Ohio.
- [2] Xiaoke Huang (Computer Science, KSU) Using Graph Modeling in Several Visual Analytics Tasks.

[1] Yelong Shen (Computer Science, KSU) Social Network Mining for Recommendation System.

**Current Master Students (\* chair)**

[1] \*Ida Huang (Urban Planning, TAMU) TBD

[2] \*Marisa Brewer (Urban Planning, TAMU) TBD

[3] Katelyn Finn (Architecture, TAMU) TBD

[4] \*Adolfo Gonzalez (Urban Planning, TAMU) TBD

**Former Master Students (\* chair)**

[14] \*Zhiheng Hu (Urban Planning, TAMU) Synthesizing Population for Medical Travel Demand in Rural Areas

[13] Gregory Fruits (Geography, KSU) Crime and Obesity: A Case Study Using Akron, Summit County, Ohio.

[12] \*Kok Chhay Ly (Geography, KSU) A Network Analysis of Confessions and Arrests under Khmer Rouge.

[11] Rob Squires (Geography, KSU) A Longitudinal Comparison of Fine Scale Environmental Risk Factors and Waterborne Bacterial Presence in Haiti.

[10] John Woodard (Digital Sciences, KSU) Building an Enterprise GIS from an Enterprise Architecture Foundation.

[9] Hui Tang (Digital Sciences, KSU) Urban Transportation Analysis Using Taxi Trajectory and Weather Data.

[8] Nikolai Kolba (GIS, East Stroudsburg University of Pennsylvania) Application of Geographic Information Science in Long-Term Population Monitoring of the Timber Rattlesnake (*Crotalus Horridus*) in Pennsylvania.

[7] Zhuo Chen (Geography, KSU) Efficient Information Diffusion on Online Social Networks: An Experiment of Agent-Based Modeling.

[6] Megan Hornyak (Geography, KSU) Education Quality and Community Development.

[5] Huanyang Zhao (Geography, KSU) Spatiotemporal Analyses of Religious Establishments in China: A Case Study of Zhejiang Province.

[4] Rebecca Alcorn (Geology, BGSU) Volcanic Risk Assessment with the Use of a GIS-Based Model: Case Studies in Central Oregon and North-Central New Mexico.

[3] Kenny Brown (Geology, BGSU) Landslide Detection within Glacially Dominated Cuyahoga River Valley Using LIDAR, Classification tree analysis, Artificial Neural Network Analysis Modeling.

[2] Steven C. Cathcart (Geology, BGSU) Collaborative Spatial Decision Making for Wind Energy Development in Northwest Ohio.

[1] \*Jiefan Yu (Geology, BGSU) Space-Time Analysis of Earthquake: The Case of Yellowstone National Park.

### **Former High School Students**

Adam Meier, Summer 2016 (KSU)

Ethan Jones, Fall 2015, Spring 2016, Summer 2017, Spring 2018 (KSU)

Ryan Li, Fall 2016/Spring 2017 (KSU)

### **Current Postdoctoral Scholar**

Yu Han (University of Florida), 2021-23

### **Former Postdoctoral Scholars**

Tao Hu (KSU), 2016-18 (Now Assistant Professor, Department of Geography, Oklahoma State university)

Lanxue Dang (KSU), 2016-17 (Now Associate Professor, Department of Computer Science, Henan University)

Serhiy Polyakov (KSU), 2015-16 (Now Data Management Librarian, Weill Cornell Medicine – Qatar)

## **Service to the Profession**

2021- Leader, Initiative on Convergence Research of GIScience, Humanities, and Social Sciences, UCGIS

2021- Vice President, Spatial Decision Support Consortium

2021- Standing Review Board Member, Humanities and Social Sciences Panel of the Research Grants Council (RGC) under the University Grants Committee, Hong Kong (UGC)

2021 Program Committee Member, GIScience 2021

2021 Technical Co-Chair and Program Committee Member, The first IEEE International Conference on Intelligent Reality

2020- Research Committee Member, North American Alliance of Hazards and Disasters Research Institutes (NAAHDRI)

2020 Mt. Olive High School (virtual) Hackathon Computer Science Faculty Tutor

2018-2022 Secretary/Treasurer/Vice Chair/Chair, Cartography Specialty Group, AAG

2017- Board of Directors, Spatial Decision Support Consortium

2017-2019 Vice Chair, Research Committee, UCGIS

2017- Committee Member, Geospatial Analysis and Modeling (GAM) Research Agenda Committee, International Cartographic Association

2010-19 Webmaster/Secretary/Vice Chair/Chair, China Specialty Group, AAG

2016- International Association for China Planning Technical Review Committee Member

2015-2018 Board of Directors, Applied Geography Conference

2010-18 Deputy General Secretary/Board of Directors/Elected President/President/BOD Chair, The International Association of Chinese Professionals in Geographic Information Science (CPGIS)

2015-2017 International Research and Scholarly Exchange Committee, AAG

2015-2017 Co-Chair, Asian Geography Specialty Group, AAG

2014- Student Paper Competition Committee Member, Annual CPGIS Student Paper Competition

2014-2016 Secretary, Geographic Information Science and Systems Specialty Group, AAG

2014 Member, Committee for ICA-OSGeo-ISPRS Award for Open Geospatial Science

2013 Invited to the University Consortium for Geographic Information Science's Geographic Information Science & Technology Body of Knowledge Task Force Steering Committee, along with other 24 members across the nation

2012-2015 Member at Large/Vice Chair/Chair, Regional Development and Planning Specialty Group, AAG

2012 One of the two US representatives to the Youth commission, International Society for Digital Earth

## **Conference/Workshop/Session Organization**

2021 **Ye, X.** (Program Committee Member), The 1st International Workshop on Methods, Models, and Resources for Geospatial Knowledge Graphs and GeoAI

2021 **Ye, X.** (Program Committee Member), GeoComputation 2021

2020 **Ye, X.** (co-organizer), The 2nd “AI with GIS for Social Good” Session, The 19th IEEE International Conference on Machine Learning and Applications (IEEE ICMLA'20), Miami, December.

2020 **Ye, X.** (Program Committee member), the 11th International Conference on Geographic Information Science (GIScience 2020), Poznań, Poland, September.

2020 **Ye, X.** (Program Committee member), Symposium on Frontiers in CyberGIS and Geospatial Data Science, AAG, Denver, Colorado, April.

2015- **Ye, X.** (co-organizer), Symposium on Human Dynamics Research, AAG.

2019- **Ye, X.** (co-organizer), Annual International Conference on Geospatial Artificial Intelligence for Urban Computing, Guangzhou, November.

2019 **Ye, X.** (co-organizer), The 1st “AI with GIS for Social Good” Session, The 8th International Conference on Computational Data and Social Networks (CSoNet 2019). Ho Chi Minh City, Vietnam, November.

2019 **Ye, X.** (co-organizer), International Conference on Urban Computing and Smart Planning, Nanjing, September.

2019 **Ye, X.**, Bandana, K., Wang, S., Li, Z. Session on Smart Cities and Urban Computing, AAG, Washington DC, April.

2019 **Ye, X.** Andris, C., Xu, Y. Session on Spatial-Social Networks in GIS, AAG, Washington DC, April.

2019 **Ye, X.** (Program Committee member), Symposium on Location-Based Big Data, immediately prior to the International Cartographic Conference 2019 in Tokyo, Japan

2018- **Ye, X.** (Program Co-Chair), ACM SIGSPATIAL Annual International Workshop on Advances in Resilience and Intelligent Cities, November.

2018 **Ye, X.** (Program Committee Member), International Workshop on GVIZ2018 (New Directions in Geovisual Analytics: Visualization, Computation, and Evaluation), GIScience 2018, Melbourne, Australia



2018 **Ye, X.** (Program Committee Member), International Workshop on Rethinking the ABCs: Agent-Based Models and Complexity Science in the age of Big Data, GIScience 2018, Melbourne, Australia

2018 **Ye, X.**, Wang, S., Mesev, V., Li, Z. Session on Smart Cities and Urban Computing, AAG, New Orleans, April.

2018 **Ye, X.** Liu, X., Andris, C., Xu, Y. Session on Spatial-Social Networks in GIS, AAG, New Orleans, April.

2018 **Ye, X.**, Woodworth, M., Sessions on Urban and Regional Development in China, AAG, New Orleans, April.

2018 **Ye, X.** (co-organizer), Plenary Session on Area Development and Policy, AAG, New Orleans, April.

2018 **Ye, X.** (co-organizer), Artificial Intelligence and Deep Learning Symposium: Big Data and Mining for Natural Hazards, AAG, New Orleans, April.

2018 **Ye, X.** (co-organizer), Spatiotemporal Symposium: Big Data Computing for Geospatial Applications, AAG, New Orleans, April.

2017 **Ye, X.** (co-organizer), Spatiotemporal Symposium, AAG, Boston, April.

2017 **Ye, X.**, Wang, S. Session on Smart Cities and Urban Computing, AAG, Boston, April.

2017 Liu, W., **Ye, X.**, Dunford, M., Hardy, S., Aoyama, Y., Plenary Session on Area Development and Policy, AAG, Boston, April.

2017 **Ye, X.**, Liu, X., Andris, C. Session on Spatial-Social Networks in GIS, AAG, Boston, April.

2017 **Ye, X.** (International Scientific Committee Member), International Workshop on Open Geographic Modeling and Simulation, August 17-19, 2017, Nanjing

2017 **Ye, X.** (Organizing Committee Member), The 2nd International Symposium on Spatiotemporal Computing in August 7-9, 2017 at Harvard University

2017 **Ye, X.** (Program Committee Member), ICC2017 Pre-Conference Symposium on Location-Based Social Media and Tracking Data

2017 **Ye, X.** (Program Committee Member), ICSDM2017 (Third ISPRS & IEEE International Conference on Spatial Data Mining and Geographical Knowledge Services)

2017 **Ye, X.** (Program Committee Co-Chair), 25rd International Conference on Geoinformatics

2016 **Ye, X.** (Program Committee Member), the Third International Conference on CyberGIS and Geospatial Data Science

2016 **Ye, X.** (International Steering Committee Member), International Conference on Cartographic Visualization of Big Data for Early Warning and Disaster/Crisis Management (EW&CM): Methodology, Techniques and Applications

2016 **Ye, X.** Liu, L. Spatially Integrated Humanities and Social Sciences, International Geographical Congress, Beijing, August.

2016 Mitra, C. **Ye, X.** Asia Symposium, AAG, San Francisco, April.

2015- **Ye, X.** (co-chair), Annual International Conference on Geoinformatics in Sustainable Ecosystem and Society

2015 **Ye, X.** Three-day Workshop on Advanced Spatial Econometrics, Guangzhou, June.

2015 **Ye, X.**, Tsou, M., Shaw, S., and Chow, E. Human Dynamics in the Mobile Age. I, II, III, AAG, Chicago, April

2015 **Ye, X.** Space-Time Dynamics of Transitional China, AAG, Chicago, April.

2015 Tsou, M., **Ye, X.**, Social media Pre-conference Workshop at International Conference on Location-based Social Media Data, Athens, March

2015 **Ye, X.** (Program Committee Member), The First international workshop on spatiotemporal computing

2015 **Ye, X.** (Program Committee Member), The Fourth International Workshop on Regional, Urban, and Spatial Economics, Beijing, June

2014- **Ye, X.** (Program Committee Member), SciPy International Conference

2014 **Ye, X.** (Organizing Committee Member), International Geospatial Health Research Symposium

2014 **Ye, X.** (Program Committee Member), OGC Academic Summit

2014 **Ye, X.** Three-day Workshop on Intermediate Spatial Econometrics, Guangzhou, December.

2014 **Ye, X.** Social Media Mapping and Analysis, GIS Day demo, Kent, November.

2014 **Ye, X.** Applications of New Sources of (Big) Data in Regional Science III, Regional Science Association International, Washington DC, November.

2014 **Ye, X.** Geospatial Analysis II, Applied Geography Conference, Atlanta, October.

2014 Bao, S., **Ye, X.**, Zhao, E., and Wu, Y. Three-day Workshop on spatial economic analysis, Shanghai, July.

2014 Bao, S. and **Ye, X.** One-day Workshop on Spatial Social Science, Shanghai, July.

2014 **Ye, X.** Three-day Workshop on Introduction to Spatial Econometrics, Guangzhou, June.

2014 **Ye, X.**, Tsou, M., and Shaw, S. Human Dynamics in the Mobile Age. I, II, III, AAG, Tampa, April.

2013- **Ye, X.** (Program Committee Co-Chair), Annual International Symposium of Spatially Integrated Social Science and Humanities.

2013 Bao, S., **Ye, X.**, Zhao, E., and Wu, Y. Three-day Workshop on Space-time Analysis, Beijing, June.

2013 **Ye, X.**, and Ye, T. Comparing China and the U.S.: Geographic Perspectives in an Era of Globalization and Emerging Asia. I, II, III, AAG, Los Angeles, April.

2013 **Ye, X.** and Shi, P. Integrated Natural Disaster Reduction and Sustainable Development in China. I, II, III, AAG, Los Angeles, April.

2012 Bao, S., **Ye, X.**, Zhao, E., and Wu, Y. Three-day Workshop on Internet-based Space-Time Analysis, Shanghai, June.

2012 **Ye, X.** and Liu, L. Spatial Crime Analysis and Modeling, GeoInformatics, Hong Kong, June.

2012 **Ye, X.** and Shi, P. Integrated Natural Disaster Reduction and Sustainable Development in China. I, II, III, AAG, New York, February.

2012 Wei, Y. and **Ye, X.** Urbanization, Land Use, and Regional Development in China. I, II, III, AAG, New York, February.

2011- **Ye, X.** (Program Committee Member), Annual International Conference on Geoinformatics

2011 **Ye, X.**, Hwang, M., and Bao, S. Workshop on Spatial Data Analysis in Cyberspace: Data, Methodology and Tools (co-sponsored by GeoDa Center for Geospatial Analysis and Computation, Arizona State University, and China Data Center, University of Michigan), Miami, November.

**Peer Reviewer: Grants, Journals, and Books**

Grants: Agriculture and Agrifood Canada, USA National Science Foundation, UK Royal Society, Marsden Fund (Royal Society of New Zealand), Dutch Research Council, Research Grants Council of Hong Kong

Journals: Annals of the American Association of Geographers, Applied Economics, Applied Geography, Area Development and Policy, Asian Geographer, Australian Journal of Agricultural and Resource Economics, Biosystems Engineering, Cartography and Geographic Information Science, Cities, Demographic Research, Discrete Dynamics in Nature and Society, Ecological Indicators, Ecological Informatics, Ecological Modeling, Economic Development Quarterly, Energy Strategy Reviews, Environmental Management, Environmental Pollution, Energy Strategy Reviews, Environmental Science and Policy, Finance Research Letters, Future Internet, Future Generation Computer Systems, Geocarto International, Geographical Analysis, GeoJournal, Habitat International, Human Ecology Review, IEEE Transactions on Intelligent Transportation Systems, IEEE VR 2022, Information & Management, Information Systems Frontiers, International Development Planning Review, International Journal of Applied Earth Observations and Geoinformation, International Journal of Digital Earth, International Journal of Disaster Risk Science, International Journal of Geographical Information Science, International Regional Science Review, ISPRS International Journal of Geo-Information, Journal of Cleaner Production, Journal of Economic Geography, Journal of Geographical Systems, Journal of Hazardous Materials, Journal of Information Science, Journal of Parallel and Distributed Computing, Journal of Planning Education and Research, Journal of Traffic and Transportation Engineering, Journal of Transport Geography, Journal of Urban Management, Journal of Urban Planning and Development, Knowledge-Based Systems, Land Degradation & Development, Land Use Policy, Landscape and Urban Planning, National Science Review, Nature Communications, Networks and Spatial Economics, Photogrammetric Engineering and Remote Sensing, PLoS ONE, Population and Environment, Professional Geographer, Regional Studies, Remote Sensing Applications: Society and Environment, Science of the Total Environment, Social Network Analysis and Mining, Structural Change and Economic Dynamics, Sustainability, Sustainable Cities and Society, Technology | Architecture + Design, Technology Analysis & Strategic Management, Telematics and Informatics, Tijdschriftvoor economische en sociale geografie, Transactions in GIS, Transactions on Intelligent Transportation Systems, Transactions of the Institute of British Geographers, Urban Geography, Urban Studies

Books: Human Dynamics in the Changing World (Springer), A Diagrammatic Approach to GIS Project Management (Springer), Lecture Notes in Computer Science (Springer), Analyzing Social Media Networks with NodeXL (Elsevier), Business Analytics (McGraw-Hill Education), Urban Remote Sensing (Wiley)

Tenure Review: Indiana University - Purdue University Indianapolis, University of Idaho

## **Service to Department, College, and University**

2021- University Grievance Committee, TAMU

2021 Organizing Committee, “Water for a Livable Texas”, Texas Water Resources Institute (TWRI) and TAMU VPR’s office

2021 University Award Committee for SEC Travel Grant, TAMU

2021 Promotion and Tenure Committee, College of Architecture, TAMU

2021 Organizing Committee Member, Water for a Livable Texas, Texas Water Resources Institute (TWRI) and TAMU VPR’s office

2021 Search Committee for Assistant Professor in robotics, fabrication, and simulation, Department of Architecture, TAMU

2021 Reviewer, ARCC King Medal, College of Architecture, TAMU

2021 Reviewer, Bill Anderson Fund Workshop, TAMU

2020 Search Committee for Information Science/Information Technology Assistant/Associate Professor, Department of Informatics, NJIT

2020 Capstone Project Co-Coordinator, College of Computing, NJIT

2020 Faculty Mentor, Albert Dorman Honors College, NJIT

2019- Strategic Planning Faculty Committee for NJIT 2025, NJIT

2019- Data Science and Management Research Cluster Committee, NJIT

2019- Diversity Committee, College of Computing, NJIT

2019- Data Visualization Certificate Committee, Department of Informatics, NJIT

2018- PhD Program Committee, Department of Informatics, NJIT

2019 Capstone Judge, NJIT

2019 Capstone Project Co-Coordinator, College of Computing, NJIT

2019 Faculty Mentor, Albert Dorman Honors College, NJIT

2018 Faculty Judge, HackNJIT, ACM Student Chapter, NJIT

2018 Faculty Mentor, UBS Machine Learning Competition

2018 Colloquium Coordinator, Department of Geography, KSU

2018 Graduate Faculty Representative, College of Arts & Sciences, KSU

2017-2018 Faculty Advisory Committee, Department of Geography, KSU

2017 University Commencement Committee, KSU

2017 Undergraduate Award Committee, Department of Geography, KSU

2016-18 Academic Hearing Panel, KSU

2016 Lillian Friedman Award and David B. Smith Award Committee, KSU

2015-18 Paper judge, Annual Graduate Symposium on Research, KSU

2015 Master of GIS Planning Committee, Department of Geography, KSU

2014-18 Serve as the lead delegate to UCGIS by getting KSU into this important national GIS organization

2014-15 East Lakes AAG Organization Committee for 2015, KSU

2014 University Fellowship Review Committee, KSU

2014-18 Paper judge, Annual Undergraduate Symposium on Research, KSU

2014-18 Annual Beck Research Award Committee, Department of Geography, KSU

2013-18 GIS Curriculum Committee, Department of Geography, KSU

2012-2013 Geospatial Advisory Committee, School of Earth, Environment, and Society, BGSU

2012-2013 Search Committee for Remote Sensing Assistant/Associate Professor, School of Earth, Environment, and Society, BGSU

2011 Co-advise Website Development for Department of Geography, BGSU

2009-2013 Geospatial Curriculum Committee, School of Earth, Environment, and Society, BGSU

## **Selected Media Coverage**

Computational Urban Science and UN Sustainable Development Goals (SDG) 11 (sustainable cities and communities)

<https://www.springernature.com/gp/researchers/sdg-programme/sdg11/comp-urbanscience>

Planning prof, research team developing digital models to evaluate coastal resiliency plans

<https://coanews.arch.tamu.edu/untitled-8/>

<https://today.tamu.edu/2021/10/08/digital-twins-of-texas-coastal-communities-could-shed-light-on-resiliency/>

TAMIDS & College of Architecture receive Microsoft grant on AI for humanitarian action

<https://tamids.tamu.edu/2021/08/19/ms-ai-humanitarian/>

Early concept shows how AI could help give urban planners, designers ground-level insight into flood resiliency

<https://kinder.rice.edu/urbanedge/2021/07/145/geospatial-ai-flood-resiliency>

AI Software Will Help Regional Planners Build Sidewalks Database

<https://news.njit.edu/ai-software-will-help-regional-planners-build-sidewalks-database>

\$1 million NSF Grant Awarded to Develop Open Knowledge Network:

<https://informatics.njit.edu/news/njit-professors-awarded-nsf-grant-develop-open-knowledge-network>

Three Kent Researchers Land Grant to Develop City Planning Software:

<https://www.kent.edu/research/ye-zhao-xinyue-ye-andrew-curtis>

Avoiding the Crush | News | Communications of the ACM: <http://m.cacm.acm.org/news/201876-avoiding-the-crush/fulltext?from=singlemessage&isappinstalled=0>

Kent State Researchers Receive National Science Foundation Grant to Discover Why Some Messages Go Viral: <https://www.kent.edu/kent/news/kent-state-researchers-receive-national-science-foundation-grant-discover-why-some>

Kent State Researchers to Study Social Media Use During Crises and Disasters

<http://www.sciencenewsline.com/news/2014121122120023.html>

[Best of 2012, Bowling Green State University](#)

[BGSU economic center receives national award, Sentinel-Tribune](#)

## **Professional Memberships**

American Association for the Advancement of Science

American Association of Geographers

Association of Collegiate Schools of Planning

Computational Social Science Society of the Americas

International Association for China Planning

International Association of Chinese Professionals in Geographic Information Science

Urban Affairs Association

Urban Economics Association

Regional Science Association International  
Western Regional Science Association