

https://www.asla.org/2019awards/629092-Using\_Social\_Media\_Data\_To\_Understand\_Site.html

## SAT-DD3:

How Big Data Benefits You: Using Information for Good in Landscape Architecture Saturday November 20, 2021 2:00 PM – 5:00 PM Location: Music City Center, Room 208 3.00 PDH, LA CES/HSW, AIA/HSW, AICP, FL, NY/HSW

This session presents ways landscape architects can utilize big data as a tool to cultivate solutions for equitable and inclusive outdoor environments. This session will demystify big data through sharing workflows of various projects and learning ways the synthesis and visualization of open source and privileged data benefit landscape architecture.



# LEARNING OBJECTIVES

Understand ways big data mined from social media can provide important clues about ways a place functions and is used with greater richness and complexity.



Understand ways big data (proprietary, privileged and publicly available open source data) is utilized in data-informed planning and design processes including access and mobility, user preferences and community needs.



Learn ways technology & big data can be a significant and post-occupancy tool for evaluating sites with the goal to cultivate equitable and socially just environments.



Learn ways big data can empower citizens as part of the community participation and engagement process in the making and remaking, and the cultivation of equitable and inclusive environments.



Hands-on practice to learn ways to work with data mined from social media and other open source data publicly available on the internet.



Understand the big-picture shifts toward big data and technology from a survey of educators, practitioners, thought leaders, as well as from case studies.





Session Outline

## 2 pm – 2:15 pm I. Introduction

- Big Data overview
- Benefits for enhanced analysis of activity patterns, access & mobility and user needs & experiences
- Benefits of Big Data as a community engagement tool

2:15 - 3:30 pm II. Case Studies:

- Strategies and tools for decision-making: Data-informed campus planning & design
- Social media as a new tool for post-occupancy evaluation: Gauging insights on use and behavior
- Community parks & connectivity: Mobility, accessibility and social equity
- Perceptions of public space through big data analysis

## Break 3:30 - 3:40 pm

## 3:45 – 4:25 PM III. Big Data Workflow

Attendees will be given the opportunity to follow the instructors' perform tasks with the aid of various media and software.

- Graphic survey tools for data-informed planning and design processes
- Tools for gathering online data and methods for data assessment
- Introduction to qualitative coding of data sourced from social media
- Survey & data categorization: coding photographs and textual data

## Break – 5 minutes

- 4:30 5 PM IV. Panel Discussion & Q + A
  - Big picture overview present preliminary findings from survey of professional firms & researchers
  - Challenges and benefits that are being discovered
  - Speculation on the near term future of Big Data deployment
  - Audience Q + A



## Key Takeaways

Participants will learn ways to synthesize big data from various sources including social media, open source publicly available data from websites, as well as privileged data.

Participants will learn the benefits for utilizing data-informed planning and design processes for the making, remaking and cultivating of equitable public places, as well as ways to visualize data, and explore workflows among the different sources of big data and software.

Participants will evolve from big data consumers to becoming readers, interpreters, and insiders of these technologies, especially as a communication tool for working with clients, and engaging underserved individuals and communities, and local stakeholders.

Participants will understand the process of mindfully using big data from various sources to evaluate completed projects, consider adaptive strategies for significant human-centered design improvements, and help in the planning and programming of existing and proposed inclusive outdoor designed environments within the public realm.



### Sources

"Designing with data: Shaping our future cities, Royal Institute of British Architects and Arup" 2013 https://www.arup.com/perspectives/publications/research/section/designing-with-data-shapi ng-our-futurecities

"The Big Data Analysis Challenge for Landscape Architecture" by Don Royds in Journal of Digital Landscape Architecture, 3-2018 https://gispoint.de/gisopen-paper/4366-the-big-data-analysis-challenge-for-landscapearchitecture.html?lDjournalTitle=6

### http://strategies.sasaki.com/

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Song, Y., Wang, R., Fernandez, J., Li, D. (2020). Investigating sense of place of the Las Vegas strip using online reviews and machine learning approaches. Landscape and Urban Planning. DOI: 10.1016/j.landurbplan.2020.103956

Song, Y., Fernandez, J., & Wang, T. (2020). Understanding perceived site qualities and experiences of urban public spaces: A case study of social media reviews in Bryant Park, NewYork City. *Sustainability*. DOI: 10.3390/su12198036

Zhang, B., Song, Y., Zheng, Y (2020) Developing a Social Media Data Based POE Method https://cdn.ymaws.com/www.edra.org/resource/resmgr/core/2020\_core\_recipients/3\_core\_social\_media\_p oe\_zhan.pdf



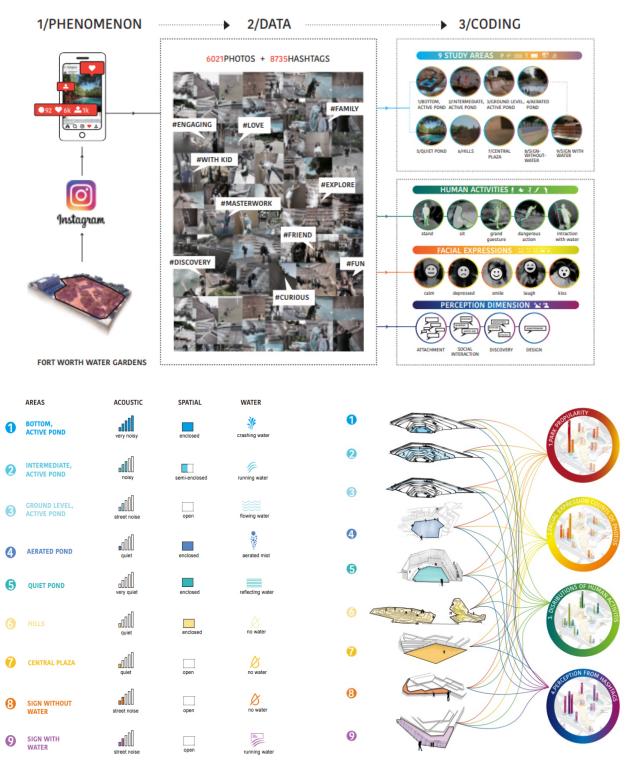
Big Data operational definitions:

- Data containing greater variety, arriving in increasing volumes and with more velocity. Big Data is essentially larger, more complex data sets, especially from new data sources. www.oracle.com
- The equivalent of a hosepipe delivering messy data in huge volumes. T. Kvan appropriates from engineers' interpretation
- An accumulation of data that is too large and complex for processing by traditional database management tools <u>www.merriam-webster.com</u>



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#### SPEAKER BIOS



### Mary G. Padua, PhD, ASLA, RLA

Mary is a licensed landscape architect with experience in the public & private sectors, and runs her own practice, MGP Studio: art design research. In parallel, she is a design educator and Professor of Landscape Architecture at Clemson University where she served four years as Chair of the Department of Landscape Architecture. Her practice & research activities focus on public health, outdoor restorative experiences, & cultivating the meaning of place. She is internationally recognized as a thought leader, award-winning visual artist, designer & writer with various authored works. Mary is a frequent contributing editor for *Landscape Architecture* magazine, writing on China's vast urban experiment, especially green experimental design approaches.



### Greg Havens, AIA, AICP

Greg is a planner and architect in the campus planning and design practice at Sasaki. Since joining the firm in 1991, Greg has focused on master planning, design and programming for institutional clients. Greg's multidisciplinary interests enables his collaborative approach to practice. His portfolio includes master plans for public universities across the United States including: Auburn University, Clemson University, Rutgers University, University of Kentucky, University of Maine, University of Minnesota, Virginia Tech, among others. He regularly engages as a speaker at conferences and programs for the Society for College and University Planning.



### Jessica E. Fernandez, PhD, ASLA, LEED AP ND

Jessica is Assistant Professor at the University of Georgia. Her teaching and research incorporate contemporary approaches such as data visualization, VR/AR applications, and the investigation of emerging technologies. As a licensed landscape architect, she has over a decade of experience working on a variety of nationwide award-winning projects. She owns ALPHA Design studio where she applies her teaching and research in the design and building industry.



### Yang Song, PhD

Yang is Assistant Professor of Landscape Architecture at Texas A & M and works at the intersection of landscape architecture, community planning, and urban design. His teaching and research activities have a strong focus on the interconnections between public placemaking, community health and resiliency. He has a long-standing interest in the application of digital technology in research and design, especially in the area of social media and the built environment. His research examines the usage of urban parks and streets through the analysis of engagement patterns depicted in Instagram, Tripadvisor, and Twitter.



#### Bo Zhang, PhD, LEED AP

Bo is Associate Professor of Landscape Architecture at Oklahoma State University. He is educated in architecture and landscape architecture with experience as an urban designer. He has a keen interest in promoting public space and related design methodologies through valid and rigorous scholarly research. His research has been funded by Winterhur Research Fellowship, Rockefeller Archive Center, Chiang Ching-kwo Foundation, Oklahoma Humanities Council, Oklahoma State University among others. He has received multiple awards including ASLA national and chapter awards, and EDRA research awards.



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