Geoff Boeing

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EDUCATION

Ph.D. University of California, Berkeley
City and Regional Planning, 2017 (expected)
"Methods and Measures for Analyzing Complex Street Networks and Urban Form"
Committee: Paul Waddell, Robert Cervero, Elizabeth Macdonald, David O'Sullivan

M.S. Information Management, Arizona State University, 2006

B.S. *Summa Cum Laude* Computer Information Systems, Arizona State University, 2004

RESEARCH AND TEACHING INTERESTS

Urban planning and transportation-land use policy

Urban form, including history and theories of form/design and contemporary paradigms

Rental housing markets and affordability

Urban data science: computational statistics, data visualization, spatial analysis, Python, big data

Complex systems: complexity theories of cities, systems thinking, network analysis

PUBLICATIONS

Peer-Reviewed Journal Articles

2016 Boeing, G. and P. Waddell. "New Insights into Rental Housing Markets across the United States: Web Scraping and Analyzing Craigslist Rental Listings." *Journal of Planning Education and Research*, published online before print.

2016 Boeing, G. "Honolulu Rail Transit: International Lessons from Barcelona in Linking Urban Form, Design, and Transportation." *Planext* 2, 28–47.

2016 Boeing, G. "Visual Analysis of Nonlinear Dynamical Systems: Chaos, Fractals, Self-Similarity, and the Limits of Prediction." *Systems* 4(4), 37.

2014 Boeing, G., D. Church, H. Hubbard, J. Mickens, and L. Rudis. "LEED-ND and Livability Revisited." *Berkeley Planning Journal* 27(1), 31–55.

Journal Article Manuscripts Under Review

2017 Boeing, G. "OSMnx: New Methods for Acquiring, Constructing, Analyzing, and Visualizing Complex Street Networks." Revise and resubmit at *Computers,*

Environment and Urban Systems.

2017 Boeing, G. "The Effects of Inequality, Density, and Heterogeneous Residential Preferences on Urban Displacement and Metropolitan Structure: An Agent-Based Model." Revise and resubmit at *Journal of Artificial Societies and Social Simulation*.

Book Chapters and Other Articles

2017 Barajas, J. M., G. Boeing, and J. Wartell. "Neighborhood Change, One Pint at a Time: The Impact of Local Characteristics on Craft Breweries." In: *Untapped: Exploring the Cultural Dimensions of Craft Beer*, edited by N. G. Chapman, J. S. Lellock, and C. D. Lippard. Morgantown, WV: West Virginia University Press.

2017 Boeing, G. "Understanding Cities through Networks and Flows." *Berkeley Planning Journal* 28(1), 118–123.

2016 Boeing, G. "How Our Neighborhoods Lost Food, and How They Can Get It Back." *Progressive Planning* 206(Winter), 35–37.

Patents

2014 Beck, A. E., G. Boeing, and D. Shannon. *Systems and Methods for Analyzing Requirements*. United States patent US8650186B2, European patent EP2413256, Australian patent AU2011204935, Canadian patent CA2747481, Chinese patent CN102346763.

Manuscripts in Preparation

2017 Boeing, G. "Sociodemographic and Spatial Representativeness of Online Rental Listings: Evidence from Craigslist."

2017 Boeing, G. "New Methods for Collecting and Analyzing Historical Online Rental Listings."

2017 Boeing, G. "Comparative Visualization of Urban Form and Street Networks: Planning and Communication Tools for Urban Designers."

2017 Boeing, G. "A Multi-Scale Analysis of 27,000 Urban Street Networks."

2017 Boeing, G. "Methods for Measuring the Complexity of Urban Form and Design."

2017 Nguyen, D. and G. Boeing. "Economic Trends in Craigslist's Online Market for Used Cars."

INVITED TALKS

2017 "Scalable Methods for Acquiring, Analyzing, and Visualizing Urban Street Networks." The Santa Fe Institute. Santa Fe, New Mexico.

2016 "Urban Data Science for Studying Housing Affordability and Urban Form." NYU Center for Urban Science and Progress. Brooklyn, New York.

2016 "Smart Cities, Technology, and Representation: Prospects and Challenges." Adobe Systems. San Jose, California.

CONFERENCE PRESENTATIONS

2016 "Craigslist and U.S. Rental Housing Markets." American Planning Association Annual Conference. Phoenix, Arizona.

2016 "Understanding Informal Rental Housing Markets through Public Data." Association of American Geographers Annual Meeting. San Francisco, California.

2015 "Methods for Measuring the Aggregate Complexity Outcomes of Urban Design." International Conference on Complex Systems. Tempe, Arizona.

2015 "Pedagogy of Urban Informatics." College of Environmental Design Circus. Berkeley, California.

2014 "Web Scraping Urban Data: Lessons from the Lab and the Classroom." American Collegiate Schools of Planning Annual Conference. Philadelphia, Pennsylvania.

2014 "LEED-ND and Perceptions of Livability." College of Environmental Design Circus. Berkeley, California.

RESEARCH EXPERIENCE

2013–2016 Graduate Student Researcher
UC Berkeley Urban Analytics Lab
Principal Investigator: Paul Waddell

TEACHING EXPERIENCE

University of California, Berkeley

2015–2016 Co-Lead Instructor (Fall 2016, Fall 2015)
Urban Informatics and Visualization
Graduate course

2013–2014 Graduate Student Instructor (Fall 2014, Fall 2013)
Urban Informatics and Visualization
Graduate course

SERVICE POSITIONS

University of California, Berkeley

2015–2016 Ph.D. program faculty representative

2013–2014 Book review editor, *Berkeley Planning Journal*

FELLOWSHIPS, GRANTS, AND AWARDS

2016–2017 University of California Doctoral Completion Fellowship

2016 University of California Graduate Division Travel Grant

2012–2016 University of California Regents' Fellowship

2014 Kaye Bock Award for Best Journal Article

2010 Accenture Inventor Innovation Award

PROFESSIONAL AFFILIATIONS

Member, American Planning Association

Member, Association of American Geographers

Member, Complex Systems Society

Member, Association for Computing Machinery

Member, Project Management Institute

CONSULTING ENGAGEMENTS

2017– Calthorpe Associates

2016– UrbanSim, Inc.

2013– Avalon Health Economics

2013 Raimi & Associates

2009–2013 Accenture

PROFESSIONAL EXPERIENCE

2013–2016 University of California, Berkeley
Graduate Student Researcher and Instructor
Berkeley, California

2009–2013 Accenture
Project Manager and Consultant
London, England; New York, New York; San Diego, California

2007–2009 Permission Data
Front-End Systems Product Manager
New York, New York

2004–2007 Acumen, Inc.
Web Systems Developer
Mesa, Arizona

SKILLS AND METHODS

Statistical and Computational Methods

Multivariate statistics and various machine learning algorithms, systems analysis, data mining, data wrangling and ETL, Python (including numpy, scipy, pandas, matplotlib, statsmodels, networkx, and scikit-learn), web scraping, agent-based modeling and microsimulation (including UrbanSim, NetLogo, and Mesa), R, Java, .NET, PHP, HTML, MySQL, Postgres, and various other databases.

Geospatial Methods

GIS, spatial analysis, network analysis, QGIS, ArcGIS, PostGIS, geopandas, urban modeling and simulation, Leaflet, Mapbox.

Project Management

I am a credentialed Project Management Professional (PMP), and have managed projects and led various teams in academia, the public sector, and the private sector.

International Experience

I have previously worked professionally in the United States, the United Kingdom, Malawi, Mozambique, South Africa, Cambodia, and Thailand.

Security Clearance

U.S. Department of Defense: secret clearance. U.S. Department of Homeland Security: public trust.

Updated March 2017