

# Geoff Boeing

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## EDUCATION

Ph.D. City and Regional Planning, University of California, Berkeley, 2017 (expected)  
M.S. Information Management, Arizona State University, 2006  
B.S. 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, and Chinese patent CN102346763.

### **Manuscripts in Preparation**

- 2017 Boeing, G. “Socio-demographic and Spatial Representation 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.

## TEACHING EXPERIENCE

### University of California, Berkeley

- 2013–2016 Urban Informatics and Visualization, co-lead instructor (Fall 2013, Fall 2014, Fall 2015, Fall 2016)

## 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.

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