

Elijah Knaap

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EMPLOYMENT

- 2012-present **University of Maryland, College Park, MD**
Research Assistant—National Center for Smart Growth
- 2012-present **University of Maryland, College Park, MD**
Teaching Assistant—Department of Urban Studies and Planning
- 2015-present **Urban Institute, Washington D.C.**
External Consultant—Metropolitan Housing and Communities Policy Center
- 2011 **U.S. Department of Housing and Urban Development**
GIS Technician (internship)—Office of Policy Development and Research

EDUCATION

- 2016 (expected) **University of Maryland, College Park, MD**
Ph.D. Urban and Regional Planning and Design
- 2013 **University of Maryland, College Park, MD**
Master of Community Planning
- 2011 **University of Maryland, College Park, MD**
B.A. Sociology

FUNDING

Research Grants, Fellowships and Other Funding Awards

2015. *All-S.T.A.R. Fellowship*, University of Maryland Graduate School (\$10,000)
2014. *Course Development Grant*, Intermediate Geographic Information Systems, *UMD School of Architecture, Planning & Preservation* (Co-Recipient w Chao Liu) (\$10,000)
2013. *Course Development Grant*, Urban Planning Technology, *UMD School of Architecture, Planning & Preservation* (Co-Recipient w Chao Liu) (\$10,000)
2013. *Jacob K. Goldhaber Travel Award*, *University of Maryland Graduate School* (\$600)

RESEARCH INTERESTS

- Urban inequality, poverty, segregation, housing, neighborhoods
- Housing policy

- Quantitative Methods (modeling and simulation, econometrics, spatial analysis)
- Information Systems / Decision Support Systems

PAPERS

Publications in Peer Reviewed Journals

Knaap, E., Ding, C., Niu, Y., & Mishra, S., (2015). Polycentrism as a Sustainable Development Strategy: An Empirical Analysis from the State of Maryland. *Journal of Urbanism*

Pendall, R., Hayes, C., Dawkins, C., Jeon, J. S., **Knaap, E.**, Blumenberg, E., ... & Smart, M. (2015). Driving to Opportunities: Voucher Users, Cars, and Movement to Sustainable Neighborhoods. *Cityscape: A Journal of Policy Development and Research*, 17(2).

Mishra, S., Welch, T. F., Torrens, P. M., Fu, C., Zhu, H., & **Knaap, E.** (2014). A tool for measuring and visualizing connectivity of transit stop, route and transfer center in a multimodal transportation network. *Public Transport*, 1-23.

Research and Policy Reports

Pendall, R., Hayes, C., George, A., McDade, Z. Dawkins, C., **Knaap, E.**... Smart. (2014). Driving to Opportunity: Understanding the Links among Transportation Access, Residential Outcomes, and Economic Opportunity for Housing Voucher Recipients.

Liu, C. and **Knaap, E.** 2015. Transportation Place Type Technical Memo. MDOT – TPRG 2015 Annual report.

Liu, C. and **Knaap, E.** 2015. Transportation Accessibility Mapping Technical Memo. MDOT – TPRG 2015 Annual report.

Liu, C. and **Knaap, E.** 2014. Identifying Maryland Transportation Place Types. MDOT – TPRG 2014 Annual report.

Sartori, J, G. Knaap, C. Liu, and **E. Knaap.** 2012. Challenges and Opportunities for Economic Prosperity in the 21st Century.

(http://smartgrowth.umd.edu/assets/documents/seed/seed_d1.pdf)

Book Chapters

Ma, T., **Knaap, E.**, & Knaap, G. J. Retail Location and Transit: An Econometric Examination of Retail Location in Prince George's and Montgomery County, Maryland. (forthcoming)

(http://smartgrowth.umd.edu/assets/documents/research/retail_location_and_transit_100514_ek_gk.pdf)

Lung-Amam, W., Pendall, R., Scott, M, and **Knaap, E.**, The Promise and Challenge of Equitable Transit-Oriented Development in Diverse Suburbs (forthcoming)

Papers Under Review

Knaap, E., Knaap, G., & Liu, C., “Neighborhood Effects and Opportunity Mapping: Closing the Gap Between Research and Practice” Under review at *Housing Policy Debate*

Working Drafts

Knaap, E., & Dawkins, C. “How Can Housing Voucher Holders Find and Remain in Better Neighborhoods? Evidence from the Moving to Opportunity Experiment in Baltimore”.

CURRENT RESEARCH PROGRAM

- Visualizing spatial opportunity, an analysis of methods used to quantify and display the “geography of opportunity”
- The role of accessibility in economic mobility, quantitative study of socioeconomic outcomes from the Moving to Opportunity experiment
- Examining residential mobility, neighborhood change for families participating in the Baltimore *Thompson* housing mobility program
- Examining the location choices of voucher holders, discrete choice analysis of neighborhood and housing using data from Moving to Opportunity experiment and the Housing Choice Voucher Program in Baltimore
- Sketch Tools for Scenario Planning, study of contemporary software platforms used for urban analysis, modeling and scenario planning

AWARDS AND HONORS (LAST TEN YEARS)

- *Robert Janes Award for contribution to the field of Urban Studies* (2012)
- *Outstanding Graduate Assistant Award for National Center for Smart Growth* (2014)
- *Innovative Student Contribution to Planning Tools Award* (2015)

SELECTED CONFERENCE PRESENTATIONS

Knaap, E. “Opportunity, Transportation, and Neighborhood Choice: A Quantitative Examination of Housing Voucher Use in Baltimore” Paper presented at ACSP 2015, Houston.

Knaap, E., & Dawkins, C. “Networks and Neighborhood Effects: The Role of Accessibility in Economic Mobility. Poster presented at the Federal Reserve System Community Development Research Conference

C. Liu, **Knaap, E.** and G. Knaap. 2015. Improving Social and Economic Equity in Maryland. Presented at the 14th Annual New Partners for Smart Growth Conference Tech Fair. Baltimore, MD.

Knaap, E. & Dawkins, C. “Trajectories of Neighborhood Attainment: Evidence from MTO in Baltimore” Paper presented at ACSP 2014, Philadelphia.

Knaap, E., Knaap, G., & Liu, C. “The Use and Misuse of Opportunity Maps” Paper presented at ACSP 2014, Philadelphia

Liu, C., Ma, T., **Knaap, E.**, & Knaap, G., “Identifying Maryland Transportation Place Types” Paper presented at ACSP 2014, Philadelphia

Knaap, E., C. Liu, and G. Knaap. 2014. Opportunity Mapping Tools to Improve Social and Economic Equity in Maryland. Presented at the Makeover Montgomery II conference. Silver Spring, MD.

Mishra, S., Welch, T. F., Torrens, P. M., Zhu, H., & **Knaap, E.** (2014). Locating the Most Connected Transit Stop, Route, and Transfer Center: Tool for Users and Decision Makers. In *Transportation Research Board 93rd Annual Meeting* (No. 14-5367).

Liu, C, **Knaap, E.**, & Knaap, G. “Opportunity Mapping: A Conceptual Analysis and Application to the Baltimore Metropolitan Area” Presented at the Annual Conference of Association for Public Policy Analysis & Management (APPAM). Washington, D.C. 2013. (Selected as a 2013 exemplary paper)

Knaap, E., Liu, C., & Knaap, G. “Opportunity Mapping: Concepts and Techniques” Paper Presented at the AESOP-ACSP Joint Congress, Dublin, 2013.

C. Liu, **E. Knaap**, and G. Knaap. Reclassification of Sustainable Neighborhoods: An Opportunity Indicator Analysis in Baltimore Metropolitan Area. Presented at the AESOP-ACSP Joint Congress, Dublin, 2013.

C. Liu, G. Knaap, J. Sartori, and **E. Knaap**. Improving Opportunity Accessibility for Underserved Populations: A Sustainable and Equitable Economic Development (SEED) Initiative for the State of Maryland. Presented at the 53rd Association of Collegiate Schools of Planning (ACSP) Conference, Cincinnati, OH. 2012.

Knaap, E., Ding, C., Mishra, S. and Welch, T. Economic Clusters and Transit Oriented Development: Two for the Price of One. Presented at the 53rd Association of Collegiate Schools of Planning (ACSP) Conference, Cincinnati, OH. 2012.

TEACHING AND UNIVERSITY SERVICE

Co-Instructor

URSP688M Intermediate GIS applications in Urban Planning (Spring 2014, 2015) ---- New course preparation and teaching

Course description: Spatial Statistics & Modeling; Network Analysis; Basics of programming in Python; 3D urban models; CommunityViz; advanced Geoprocessing techniques and Model Builder

URSP688L Recent Developments in Urban Studies: Planning Technology (2013, 2014) ---- New course preparation and teaching

Course description: Data Visualization; GIS Basics; Internet Mapping; Planning Support Systems; Social Media & Crowd Sourcing; Blogs and Twitter; Public Data Sources on the Internet; Survey Monkey; Photos and Video Sharing;

Teaching Assistant

URSP612 GIS application in Urban Planning (Fall 2012)

TECHNICAL SKILLS

Statistical software: R, STATA, SPSS,

GIS software: ArcGIS, QGIS, GRASS, PostGIS,

Planning Support Systems: UrbanSim, SILO, CommunityViz, EnvisionTomorrow+

Programming: Python, HTML, JavaScript

Visualization: D3, Matplotlib, Bokeh, Plotly, GeoCanvas