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ELIJAH KNAAP

appointments

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| <i>University of California-Riverside</i> School of Public Policy & Center for Geospatial Sciences Postdoctoral Scholar | 2018 – |
| <i>University of Illinois at Chicago</i> Dept. of Urban Planning and Policy Visiting Assistant Professor & Postdoctoral Research Associate | 2017 – 2018 |
| <i>University of Maryland</i> Dept. of Urban Studies and Planning & School of Information Studies Adjunct Professor | 2016 – 2017 |
| <i>Enterprise Community Partners, Inc.</i> Knowledge, Impact, & Strategy Team Bart Harvey Postdoctoral Research Fellow | 2016 – 2017 |

education

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| <i>Ph.D. - Urban Studies and Planning</i> , University of Maryland | 2016 |
| <i>M.A. - Community Planning</i> , University of Maryland | 2013 |
| <i>B.A. - Sociology</i> , University of Maryland | 2011 |

publications

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| <i>Refereed Articles</i> | |
| Lung-Amam, Willow, Knaap, Elijah , Dawkins, Casey, and Knaap, Gerrit. 2018. Opportunity for Whom? The Diverse Definitions of Neighborhood Opportunity in Baltimore. <i>City & Community</i> (Forthcoming). | |
| Rey, Sergio, Knaap, Elijah , Han, Su, Wolf, Levi, and Kang, Wei. 2018. Spatio-temporal analysis of socioeconomic neighborhoods: The Open Source Longitudinal Neighborhood Analysis Package (OSLNAP). in: <i>Proceedings of the 17th Python in Science Conference</i> , pp.121–128. DOI: 10.25080/Majora-4af1f417-012 . | |
| Knaap, Elijah . Nov. 2017. The Cartography of Opportunity: Spatial Data Science for Equitable Urban Policy. <i>Housing Policy Debate</i> 27 (6), 913–940. DOI: 10.1080/10511482.2017.1331930 . | |
| Knaap, Elijah , Ding, Chengri, Niu, Yi, and Mishra, Sabyasachee. Jan. 2016. Polycentrism as a sustainable development strategy: empirical analysis from the state of Mary- | |

land. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability* 9(1), 73–92. DOI: [10.1080/17549175.2015.1029509](https://doi.org/10.1080/17549175.2015.1029509).

Pendall, Rolf, Hayes, Christopher, George, Arthur, Dawkins, Casey, Jeon, Jae Sik, **Knaap, Elijah**, Blumenberg, Evelyn, Pierce, Gregory, and Smart, Michael. 2015. Driving to Opportunities: Voucher Users, Cars, and Movement to Sustainable Neighborhoods. *Cityscape* 17(2), 57–87.

Mishra, Sabyasachee, Welch, Timothy F. Torrens, Paul M. Fu, Cheng, Zhu, Haojie, and **Knaap, Elijah**. Mar. 2015. A tool for measuring and visualizing connectivity of transit stop, route and transfer center in a multimodal transportation network. *Public Transport* 7(1), 77–99. DOI: [10.1007/s12469-014-0091-2](https://doi.org/10.1007/s12469-014-0091-2).

Mishra, Sabyasachee, Welch, Timothy, Torrens, Paul, Zhu, Haojie, and **Knaap, Elijah**. 2014. Locating the Most Connected Transit Stop, Route, and Transfer Center: Tool for Users and Decision Makers. In: *Transportation Research Board 93rd Annual Meeting*. 14-5367.

Technical Reports

Avin, Uri, Porter, Christopher, von Stroh, David, **Knaap, Elijah**, and Patnode, Paul. 2016. *NCHRP 08-36: Sketch Planning Tools for Regional Sustainability*. Tech. rep. Cambridge, MA: Cambridge Systematics, Inc. [http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36\(117\)%7B%5C_%7DFR.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP08-36(117)%7B%5C_%7DFR.pdf).

Pendall, Rolf, Hayes, Christopher, George, Arthur Taz, Mcdade, Zach, Dawkins, Casey, Jeon Sik, Jae, **Knaap, Elijah**, Blumenberg, Evelyn, Pierce, Gregory, and Smart, Michael. 2014. *Driving to Opportunity: Understanding the Links among Transportation Access, Residential Outcomes, and Economic Opportunity for Housing Voucher Recipients*. Tech. rep. March. Washington DC: Urban Institute, p. 68. <https://www.urban.org/research/publication/driving-opportunity-understanding-links-among-transportation-access-residential-outcomes-and-economic-opportunity-housing-voucher-recipients>.

Sartori, Jason, Knaap, Gerrit, Liu, Chao, Niu, Yi, Ding, Chengri, **Knaap, Elijah**, and Sandborn, Avery. 2012. *Challenges and Opportunities for Economic Prosperity in the 21st Century: Sustainable and Equitable Economic Development in Maryland*. Tech. rep. College Park, MD: National Center for Smart Growth Research & Education. http://smartgrowth.umd.edu/assets/documents/seed/seed%7B%5C_%7Dd1.pdf.

Manuscripts in Progress

Elijah Knaap, Levi Wolf, Sergio Rey, Su Han & Wei Kang, “The Dynamics of Urban Neighborhoods: A Survey of Approaches for Modeling Socio-Spatial Structure.” *Progress in Human Geography*. Under Review.

Nicholas Finio, Gerrit Knaap, Willow Lung-Amam, Casey Dawkins, & **Elijah Knaap**, “Metropolitan Planning in a Vacuum.” *Journal of Urban Affairs*. Under Review.

Willow Lung-Amam, Rolf Pendall & **Elijah Knaap**, “Mi Casa no es Su Casa: Transit-Induced Gentrification and the Fight for Equitable Development in an Inner-Ring, Immigrant Suburb..” *Journal of Planning Education & Research*. Under Review.

Elijah Knaap & Nicholas Finio, “Machines Learn the Chicago School: A Spatiotemporal Markov Model of Gentrification & Neighborhood Change.” *In Progress*. .

Elijah Knaap, “Who Moves to Opportunity? Spatial Returns to Housing Assistance and the Effect of Specialized Mobility Programs.” *In Progress*. .

Elijah Knaap, “Housing Assistance in Black and White: A Discrete Choice Model of Residential Sorting in Housing Voucher Programs.” *In Progress*. .

awards Innovative Student Contribution to Planning Tools Award - Scenario Planning Applications Network (2015)

Outstanding Graduate Assistant Award - National Center for Smart Growth (2014)

Robert Janes Award for contribution to the field of Urban Studies - University of Maryland Dept. of Urban Studies and Planning (2012)

grants All S.T.A.R. fellowship, \$10,000 fellowship from the University of Maryland Graduate School

URSP Course Development, \$10,000 grant from UMD Department of Urban Studies and Planning. Course: Urban Planning Technology (with Chao Liu). 2012–2013.

URSP Course Development, \$10,000 grant from UMD Department of Urban Studies and Planning. Course: Intermediate Geographic Information Systems (with Chao Liu). 2013–2014.

invited talks “The Geography of Neighborhood Change: Poverty, Immigration and Gentrification.” Makeover Montgomery 3, Balancing Change in America’s Suburbs. May 4, 2016.

“Retail Location and Transit: An Econometric Examination of Retail Location in Prince George’s and Montgomery County.” Transit, Development, and Forme Urbaine: Washington et Paris, Paris, France. March 14, 2015.

conference
talks

“The Promise and Challenge of Equitable Transit-Oriented Development in Diverse Suburbs.” Transit, Development, and Forme Urbaine: Washington et Paris, Washington, DC. October 18, 2014.

“Spatio-temporal Analysis of Socioeconomic Neighborhoods.” Sergio Rey & Elijah Knaap, 17th Python in Science Conference, Austin, Texas. July, 2018.

“Machines Learn the Chicago School: Spatiotemporal Markov Models of Neighborhood Change.” Elijah Knaap & Nicholas Finio, Association of Collegiate Schools of Planning, Denver, Colorado. October, 2017.

“The Cartography of Opportunity: Spatial Data Science for Equitable Urban Policy.” Elijah Knaap, American Association of Geographers, Boston, Massachusetts. April, 2017.

“Who Moves to Opportunity? Residential Sorting Models from a Unique Housing Mobility Program in Baltimore.” Elijah Knaap, Association of Collegiate Schools of Planning, Portland, Oregon. November, 2016.

“Regional Planning, Access to Opportunity, & Freddie Gray: Lessons from Baltimore.” Gerrit Knaap, Elijah Knaap, Nick Finio, Casey Dawkins, Willow Lung-Amam, Association of Collegiate Schools of Planning, Portland, Oregon. November, 2016.

“Opportunity, Transportation, and Neighborhood Choice: A Quantitative Examination of Housing Voucher Use in Baltimore.” Elijah Knaap, Association of Collegiate Schools of Planning, Houston, Texas. October, 2015.

“Networks and Neighborhood Effects: The Role of Accessibility in Economic Mobility.” Elijah Knaap & Casey Dawkins, Federal Reserve System Community Development Research Conference, Washington D.C.. April 3, 2015.

“Improving Social and Economic Equity in Maryland.” Chao Liu, Elijah Knaap & Gerrit Knaap, 14th Annual New Partners for Smart Growth Conference Tech Fair, Baltimore, Maryland. January 3, 2015.

“Trajectories of Neighborhood Attainment: Evidence from MTO in Baltimore.” Elijah Knaap, Association of Collegiate Schools of Planning, Philadelphia, Pennsylvania. October, 2014.

“The Use and Misuse of Opportunity Maps.” Elijah Knaap & Chao Liu, Association of Collegiate Schools of Planning, Philadelphia, Pennsylvania. October, 2014.

“Identifying Maryland Transportation Place Types.” Chao Liu, Ting Ma, Elijah Knaap, & Gerrit Knaap, Association of Collegiate Schools of Planning, Philadelphia, Pennsylvania. October, 2014.

“Opportunity Mapping Tools to Improve Social and Economic Equity in Maryland.” Elijah Knaap, Chao Liu, & Gerrit Knaap, Makeover Montgomery II, Silver Spring, Maryland. October, 2014.

“Locating the Most Connected Transit Stop, Route, and Transfer Center: Tool for Users and Decision Makers.” Mishra, S., Welch, T. F., Torrens, P. M., Zhu, H., & Knaap, E., Transportation Research Board 93rd Annual Meeting, Washington D.C.. October, 2014.

“Opportunity Mapping: A Conceptual Analysis and Application to the Baltimore Metropolitan Area.” Chao Liu, Elijah Knaap & Gerrit Knaap, Annual Conference of the Association for Public Policy Analysis & Management, Washington D.C.. 2013.

“Opportunity Mapping: Concepts and Techniques.” Elijah Knaap, Chao Liu, & Gerrit Knaap, Joint Meeting of the Association of Collegiate Schools of Planning & Association of European Schools of Planning, Dublin, Ireland. 2013.

“Reclassification of Sustainable Neighborhoods: An Opportunity Indicator Analysis in Baltimore Metropolitan Area.” Chao Liu, Elijah Knaap, & Gerrit Knaap, Joint Meeting of the Association of Collegiate Schools of Planning & Association of European Schools of Planning, Dublin, Ireland. 2013.

“Economic Clusters and Transit Oriented Development: Two for the Price of One.” Elijah Knaap, Yi Niu, Chengri Ding, Sabyasachee Mishra, Tim Welch, Annual Meeting of the Association of Collegiate Schools of Planning & Association, Cincinnati, Ohio. 2012.

“Improving Opportunity Accessibility for Underserved Populations: A Sustainable and Equitable Economic Development (SEED) Initiative for the State of Maryland.” Chao Liu, Gerrit Knaap, Jason Sartori & Elijah Knaap, Annual Meeting of the Association of Collegiate Schools of Planning & Association, Cincinnati, Ohio. 2012.

courses taught

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| UPP 461: GIS for Urban Planners | Fall 2017 |
| URSP 688Y: Smart Cities and Urban Data Science | Spring 2017 |
| URSP 688Q: Intermediate GIS (Co-Taught with Chao Liu) | Spring 2014 |
| URSP 688G: Urban Planning Technology; (Co-Taught with Chao Liu) | Fall 2014 |
| URSP 688G: Urban Planning Technology; (Co-Taught with Chao Liu) | Spring 2013 |

public history

Selected media coverage

Baltimore’s Housing Voucher Program Almost Gets It Right - *CityLab*, January 5, 2016

Defining ‘opportunity’ in Baltimore - *The Baltimore Sun*, August 3, 2015

service *Service to the Profession*

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| Member: American Association of Geographers | 2013 - |
| Member: Association of Collegiate Schools of Planning | 2013 - |
| Member: American Sociological Association | 2015 - |
| Member: Regional Science Association International | 2018 - |

computing *Programming*

Python, R, Git, HTML5/CSS, LaTeX, Postgresql/PostGIS, STATA, Javascript, Shell scripting

Geographic Information Systems

ArcGIS, QGIS, GeoDa, STARS, PySAL, Geopandas, sf, spdep