

Curriculum vitae

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Education

Year	Degree (Honors)	Field of Study (Thesis advisor for PhDs)	Institution
2017	PhD	Planning (Jane Law, PhD)	University of Waterloo
2011	MSc.	Cartography and Geographic Information System	Wuhan University
2009	BSc.	Geographic Information System	Wuhan University

Postdoctoral Training

Year(s)	Titles	Specialty/Discipline (Lab PI for postdoc research)	Institution
2017-2018	Postdoctoral Fellow	Spatial Epidemiology (Daniel Fuller, PhD)	Memorial University of Newfoundland

Honors and Awards

Year	Name of Honor/Award	Awarding Organization
2021-22	Vu Fellow	AIDSVu.org
2020	Faculty Research Award	University of Oregon
2018	New Junior Faculty Research Award	University of Oregon
2017	The Healthy Cities Research “Think Tank” Travel Award	Canadian Institutes of Health Research
2016	Doctoral Thesis Completion Award	School of Planning, Faculty of Environment, University of Waterloo
2011-2015	International Doctoral Award	University of Waterloo

Faculty Academic Appointments

Year(s)	Academic Title	Department	Academic Institution
2024-present	Assistant Professor	Peter O'Donnell Jr. School of Public Health	University of Texas Southwestern Medical Center
2018-2024	Assistant Professor (promoted to Associate Professor with tenure in May 2024)	Geography	University of Oregon

Committee Service (*Member, unless noted otherwise*)

Year(s)	Name of Committee	Institution/Organization
<u>University of Oregon</u>		
2018-2020, 2021-2023	Graduate Admissions Committee	University of Oregon
2023	Geography Curriculum Committee	University of Oregon
2023	Chair, Internal Hiring Planning Proposal (Spatial Data Science proposal)	University of Oregon
2023	Geography Faculty Mentorship Program	University of Oregon
2022	Group Mentoring Program for tenure-track and career faculty	University of Oregon
2022	Liaison, School of Planning, Public Policy, and Management	University of Oregon
2021	Internal Hiring Plan Proposal (Health Geography proposal)	University of Oregon
2021	Liaison, Data Science Initiative	University of Oregon
2020	Internal Hiring Plan Proposal (GeoAI proposal)	University of Oregon
2020	Diversity and Community Committee	University of Oregon
2019	New Faculty Search Committee (Remote Sensing)	University of Oregon
2019	Peer reviewer of teaching: Web Mapping (Joanna Merson)	University of Oregon
2019	Internal Hiring Plan Proposal (Smart Cities proposal)	University of Oregon

Professional Societies

Dates	Society Name, member
2011-2017	Canadian Association of Geographers
2012-2013	Ontario Professional Planners Institute
2014-	American Association of Geographers

2018-	Society for Epidemiologic Research
2022-	The International Association of Chinese Professionals in Geographic Information Sciences (CPGIS)

Grant Review Activities

Year(s)	Name of Review Committee	Organization
2024	Data Science Corps program panel	U.S. National Science Foundation
2024	Human-Environment and Geographical Sciences Program	U.S. National Science Foundation
2022	Incubating Interdisciplinary Initiatives (I3) Award	University of Oregon
2020	Graduate Research Fellowship Program	U.S. National Science Foundation

Editorial Activities

Year(s)	Journal Name
<u>Editor/Associate Editor</u>	
2021	Special issue “Urban Built Environment and Mental Health”, <i>International Journal of Environmental Research and Public Health</i>
2018	Special issue “Methodological and Applications of Geographic Information Science and Spatial Statistical Analysis in Public Health”, <i>International Journal of Environmental Research and Public Health</i>
<u>Editorial Board</u>	
2022-present	<i>Spatial and Spatio-temporal Epidemiology</i>
<u>Ad Hoc Reviewer</u>	
2015-	International Journal of Health Geographics (15)
2017-	International Journal of Environmental Research and Public Health (2) Journal of Community Psychology
2018-	Public Health Nutrition (3) Spatial and Spatio-temporal Epidemiology (13)
2019-	ISPRS International Journal of Geo-Information Geospatial Health (2) Environment and Planning B: Urban Analytics and City Science The Professional Geographer (4)
2020-	Transactions in GIS Urban Studies BMJ Open Photogrammetric Engineering and Remote Sensing (PE&RS) Mathematician American Journal of Public Health

2021-	Geoscience Data Journal Journal of Urban Health (2) Journal of Studies on Alcohol and Drugs Drug and Alcohol Dependence JAMA Network Open The Canadian Geographer (2)
2022-	Transportation Research Part D: Transport and Environment Annals of Association of American Geographers (2)
2023-	Journal of Substance Use BMC Medical Research Methodology BMC Public Health (3) Applied Spatial Analysis and Policy (2) Journal of Transport Geography
2024	American Journal of Epidemiology Health & Place (2) Geographical Analysis AIDS Care Public Health Informatics for Health and Social Care JAIDS: Journal of Acquired Immune Deficiency Syndromes

Grant Support

<u>Present</u>		
1.	Grantor:	<i>NIH-National Institute of Mental Health</i>
	Title of Project:	Leveraging extensive social determinants data and spatial data science to reduce HIV incidence across the United States Ending the HIV Epidemic Counties [1R01MH135807-01A1]
	Role:	Multiple Principal Investigator
	Date:	08/26/2024 - 06/30/2028
	Total direct costs:	\$1,992,051
2.	Grantor:	<i>The John Templeton Foundation</i>
	Title of Project:	The decline of religious institutions in U.S. neighborhoods and the impacts on population health: New empirical and theoretical approaches [62646]
	Role:	Consultant
	Date:	01/16/2023 – 01/15/2025
	Total direct costs:	\$234,748

<u>Past</u>		
1.	Grantor:	<i>AIDSVu</i>
	Title of Project:	New HIV diagnosis hotspots and their associations with social determinants of health across race/ethnicity and geography: a Bayesian multivariate spatial analysis of publicly available, censored data
	Role:	Principal Investigator
	Date:	03/2021 - 03/2022
	Total direct costs:	\$10,000
2.	Grantor:	<i>Association of American Geographers</i>
	Title of Project:	Bayesian spatial and spatiotemporal analysis using R
	Role:	Principal Investigator
	Date:	2022
	Total direct costs:	\$1,750
3.	Grantor:	<i>University of Oregon</i>
	Title of Project:	How does socioeconomic inequality impact opioid overdose deaths in the U.S.?: A multi-scale Bayesian spatiotemporal modelling approach
	Role:	Principal Investigator
	Date:	2020
	Total direct costs:	\$7,000
4.	Grantor:	<i>Data Science Initiative Seed Funding program, University of Oregon</i>
	Title of Project:	Integrating Spatial Data Science and Epidemiology: Bayesian spatiotemporal modeling of HIV at small area-levels in Philadelphia, 2009-2016
	Role:	Principal Investigator
	Date:	2020
	Total direct costs:	\$50,000
5.	Grantor:	<i>National Institutes for Transportation and Communities</i>
	Title of Project:	Free Movement: Enhancing Open Data to Facilitate Independent Travel for Persons with Disabilities
	Role:	Co-investigator
	Date:	2020
	Total direct costs:	\$15,000
6.	Grantor:	<i>Incubating Interdisciplinary Initiatives (I3) Award, University of Oregon</i>
	Title of Project:	Interdisciplinary Science for Environmental and Society Security
	Role:	Co-investigator
	Date:	2019
	Total direct costs:	\$50,000
7.	Grantor:	<i>National Science Foundation China</i>
	Title of Project:	Spatio-temporal statistical modeling of zero-inflated count data at a small spatial scale

	Role:	Principal Investigator
	Date:	2018
	Total direct costs:	¥240,000 (~\$35,000)
8.	Grantor:	<i>Canadian Institutes of Health Research</i>
	Title of Project:	Building healthy cities
	Role:	Co-investigator
	Date:	2018
	Total direct costs:	\$10,000
9.	Grantor:	<i>China Postdoctoral Science Foundation</i>
	Title of Project:	Bayesian spatio-temporal modeling of crime count data at a small-area level
	Role:	Principal Investigator
	Date:	2018
	Total direct costs:	¥50,000 (~\$8,000)

Teaching Activities

Year(s)	Activity
<u>Courses</u>	
<i>UT Southwestern Medical Center</i>	
2025	Instructor – Cartography and Data Visualization
2024	Invited guest instructor – <i>Bayesian spatial statistical modeling</i> in BME5096-01: Machine Learning
<i>University of Oregon</i>	
2018-2024	Instructor – GEOG281: The World & Big Data (Winter 2019; Winter 2020; Fall 2020; Fall 2021; Spring 2022; Winter 2023; Fall 2023)
	Instructor – GEOG4/590: GIS and Public Health (Spring 2020; Spring 2021; Spring 2022; Spring 2023)
	Instructor – GEOG4/594: Spatial Analysis (Spring 2019; Winter 2020; Fall 2020; Fall 2021; Winter 2023; Fall 2023)
	Instructor – GEOG607: GIScience seminar – Selected topics in Spatial and Spatiotemporal Analysis (Fall 2018; Spring 2021)
<i>Memorial University of Newfoundland</i>	
2017	Co-instructor – HKR6130: Computer Applications for Physical Activity Measurement and Intervention
<u>Dissertation committees</u>	
2019-2023	Chair – Insang Song, University of Oregon
2019-2022	Member – Bill Limpisathian, University of Oregon
2019-2021	Member – Shiloh L. Deitz, University of Oregon
2019-2022	Member – Mohammad Eshghi, University of Oregon
2021-2024	Member – Yuan Fang, University of Oregon

2020	Member – Habeom Kim, University of Oregon
<u>Qualifying examination committees</u>	
2023	Member – Andrew Dickinson, University of Oregon
2020	Member – Antoine Nzeyimana, University of Oregon
<u>Graduate Student Trainees</u>	
2024-present	Scholarly oversight committee – Alexandra Pottorff, UT Southwestern Medical Center
2023-2024	PhD Advisor – Shiyu Zhang, University of Oregon
2019-2023	PhD Advisor – Insang Song, University of Oregon
2023	Research Mentor – Emily Doerner, University of Oregon
<u>Undergraduate Trainees</u>	
2023	Research mentor – Malia Mulligan, University of Oregon
2022	Research mentor – Mason Leavitt, University of Oregon
2018	Research mentor – Melissa Tobin, Memorial University of Newfoundland

Invited Lectures

Year(s)	Title	Location
<u>International</u>		
2023	Bayesian spatiotemporal statistical modeling: with applications in zero-inflated and censored data analysis at small-area levels	CPGIS educational talk series (online)
2019	Bayesian spatial modeling and its applications in health and crime geography	School of Resource and Environmental Sciences, Wuhan University, Wuhan, China
2017	Advanced spatial analysis: Bayesian spatial statistical modeling	School of Geodesy and Geomatics, Wuhan University, Wuhan, China
2017	The Healthy City movement in Canada: What can Artificial Intelligence-enabled high-definition mapping do?	The company of Ecopia – AI Enabled Feature Extraction, Toronto, Canada
<u>National</u>		
2024	Harnessing the power of spatial data science to help end the HIV epidemic in the United States	Center for Interdisciplinary Research on AIDS, Yale (online)
2024	The impacts of social determinants of health on new HIV diagnosis vary over geography and race/ethnicity	Centers for Disease Control and Prevention TRIP webinar series (online)
2024	Bayesian statistical modeling of spatiotemporal datasets at small-area levels	School of Geographical Sciences and Urban Planning, Tempe, AZ, USA
2024	Harnessing the power of spatial data science to achieve health equity	O'Donnell School of Public Health, UT Southwestern Medical Center, Dallas, TX, USA

2023	Harnessing the power of spatial data science to achieve health equity	Global Health Studies program, University of Miami, Miami, FL, USA
2023	Harnessing the power of spatial data science to achieve health equity	CUNY Graduate School of Public Health & Health Policy, New York, NY, USA
2023	Bayesian probabilistic modeling in spatiotemporal data analysis at small-area levels	Department of Geography, Florida State University, Tallahassee, FL, USA
2018	Harnessing the power of probabilistic modeling in spatial data science: The application of Bayesian spatial and spatiotemporal analysis in addressing societal challenges	Department of Geography, University of Oregon, Eugene, USA
<u>Regional/Local</u>		
2023	Leveraging the power of Geographic Information Science to help End the HIV Epidemic in the U.S.	GIS Day talk @ University of Oregon

Bibliography

Peer-Reviewed Publications

Original Research Articles (*: joint first authors/equal contribution; †: graduate advisee)

1.	Luan H , Law J, and Quick M. Identifying food deserts and swamps based on relative healthy food access: a spatio-temporal Bayesian approach. <i>International Journal of Health Geographics</i> , 2015; 14:37. doi.org/10.1186/s12942-015-0030-8
2.	Du Q, Zhang M, Li Y, Luan H , Liang S, and Ren F. Spatial patterns of Ischemic Heart Disease in Shenzhen, China: A Bayesian multi-disease modeling approach to inform health planning policies. <i>International Journal of Environmental Research and Public Health</i> , 2016; 13(4): 436. doi.org/10.3390/ijerph13040436
3.	Luan H* , Quick M*, and Law J. Analyzing local spatio-temporal patterns of police calls-for-service using Bayesian Integrated Nested Laplace Approximation, <i>ISPRS International Journal of Geo-Information</i> , 2016; 5(9): 162. doi.org/10.3390/ijgi5090162
4.	Luan H , Minaker L, and Law J. Do marginalized neighborhoods have less healthy retail food environments? An analysis using Bayesian spatial latent factor and hurdle models. <i>International Journal of Health Geographics</i> , 2016; 15:29. doi.org/10.1186/s12942-016-0060-x
5.	Quick M, Law J, and Luan H . The influence of on-premise and off-premise alcohol outlets on reported violent crime in the Region of Waterloo, Ontario: Applying Bayesian spatial modeling to inform land use planning and policy. <i>Applied Spatial Analysis and Policy</i> , 2017; 10(3): 435-454. doi.org/10.1007/s12061-016-9191-5
6.	Perlman CM, Law J, Luan H , Rios S, Seitz D, Stolee P. Geographic Clustering of Admissions to Inpatient Psychiatry among Adults with Cognitive Disorders in Ontario, Canada: Does Distance to Hospital Matter?. <i>Canadian Journal of Psychiatry</i> , 2018; 63(6): 404-409. doi:10.1177/0706743717745870

7.	Luan H , Law J, and Lysy M. Diving into the consumer nutrition environment: a Bayesian spatial factor analysis of neighborhood restaurant environment. <i>Spatial and Spatio-temporal Epidemiology</i> , 2018; 24: 39-51. doi.org/10.1016/j.sste.2017.12.001
8.	Kestens Y, Winters M, Fuller D, ..., Luan H , ..., Thierry B, Thigpen C, and Wasfi R. INTERACT: A comprehensive approach to assess urban form interventions through natural experiments. <i>BMC Public Health</i> , 2019; 19:51. doi.org/10.1186/s12889-018-6339-z
9.	Luan H , Ramsay D, and Fuller D. Household income, active travel, and their interacting impact on body mass index in a sample of urban Canadians: A Bayesian spatial analysis. <i>International Journal of Health Geographics</i> , 2019; 18:4. doi.org/10.1186/s12942-019-0168-x
10.	Fuller D, Luan H , Buote R, and Auchincloss A. Impact of a Public Transit Strike on Public Bicycle Share Use: An interrupted time series natural experiment study. <i>Journal of Transport & Health</i> , 2019; 13: 137-142. doi.org/10.1016/j.jth.2019.03.018
11.	Hanning R, Luan H , Orava T, Valaitis R, Jung J, Ahmed R. Exploring Student Food Behaviour in Relation to Food Retail over the Time of Implementing Ontario's School Food and Beverage Policy. <i>International Journal of Environmental Research and Public Health</i> , 2019; 16(14): 2563. doi.org/10.3390/ijerph16142563
12.	Ransom Y*, Luan H* , Shi X, Duncan DT, and Subramanian S.V. Alcohol outlet density and area-level heavy drinking are independent risk factors for higher alcohol-related complaints. <i>Journal of Urban Health</i> , 2019; 96(6): 889-901. doi.org/10.1007/s11524-018-00327-z
13.	Quick M and Luan H . The spatial structure of socioeconomic advantage: a Bayesian multivariate spatial factor analysis. <i>International Journal of Geographical Information Science</i> , 2021; 35(1): 63-83. doi.org/10.1080/13658816.2020.1759807
14.	Fuller D, Anaraki JR, Simango Bo, Rayner M, Dorani F, Bozorgi A, Luan H , and Basset F. Predicting lying, sitting, walking, and running using Apple Watch and Fitbit data. <i>BMJ Open Sport & Exercise Medicine</i> , 2021; 7(1): e001004. doi.org/10.7910/DVN/ZS2Z2J
15.	Luan H , Song I [†] , Fiellin D, and Ransome Y. HIV infection prevalence significantly intersects with COVID-19 infection at the area-level: a USA county-level analysis. <i>Journal of Acquired Immune Deficiency Syndrome</i> , 2021; 88(2): 125-131. doi.org/10.1097/QAI.0000000000002758
16.	Ransome Y, Luan H , Song I [†] , Fiellin D, and Galea S. Poor mental health days are associated with COVID-19 infection rates in the USA, <i>American Journal of Preventive Medicine</i> , 2022; 62(3): 326-332. doi.org/10.1016/j.amepre.2021.08.032
17.	Tobin M, Hajna S, Orychock K, ..., Muhajarine N, Luan H , and Fuller D. Rethinking walkability and developing a conceptual definition of active living environments to guide research and practice. <i>BMC Public Health</i> , 2022; 22: 450. doi.org/10.1186/s12889-022-12747-3
18.	Luan H and Fuller D. Urban form in Canada at a small-area level: quantifying “compactness” and “sprawl” with Bayesian multivariate spatial factor analysis. <i>Environment and Planning B: Urban Analytics and City Science</i> , 2022; 49(4): 1300-1313. doi.org/10.1177/23998083211062901
19.	Song I [†] and Luan H . The spatially and temporally varying association between mental illness and substance use mortality and unemployment: a Bayesian analysis in the contiguous United States, 2001-2014. <i>Applied Geography</i> , 2022; 140: 102664. doi.org/10.1016/j.apgeog.2022.102664

20.	Luan H and Zhang S. Jointly modeling bus and taxi ridership: A Bayesian multivariate spatial analysis accounting for cross-ridership correlation. <i>Transactions in GIS</i> , 2022; 26(4): 2099-2119. doi.org/10.1111/tgis.12937
21.	Ransome Y*, Luan H* , Dean LT, Quick H, Nassau T, and Brady KA. Is race-specific neighborhood social cohesion key to reducing racial disparities in late HIV diagnosis: A multiyear ecological study. <i>Spatial and Spatio-temporal Epidemiology</i> , 2022; 42: 100508. doi.org/10.1016/j.sste.2022.100508
22.	Zhou Y, Zhu L, Matyas CJ, Luan H , and J Tang. Assessing environmental conditions associated with spatially varying rainfall structure of North Atlantic tropical cyclones: An object-based climatological analysis. <i>International Journal of Climatology</i> , 2023; 43: 5464-5484. doi.org/10.1002/joc.8156
23.	Luan H and Ransome Y. County-level spatiotemporal patterns of new HIV diagnosis and pre-exposure prophylaxis (PrEP) use in Mississippi, 2014-2018: a Bayesian analysis of publicly accessible censored data. <i>Annals of Association of American Geographers</i> , 2023; 113(1): 129-148. doi.org/10.1080/24694452.2022.2080040
24.	Zhang S*, Luan H* , Kong Y, Xi G, and Zhen F. Does online food delivery improve equity of food accessibility? A case study of Nanjing, China. <i>Journal of Transport Geography</i> , 2023; 107: 103516. doi.org/10.1016/j.jtrangeo.2022.103516
25.	Luan H , Li G, Duncan DT, Sullivan P, and Ransome Y. Spatial accessibility of pre-exposure prophylaxis (PrEP): different measure choices and the implications for examining its association with social determinants of health, <i>Annals of Epidemiology</i> , 2023; 86: 72-79. doi.org/10.1016/j.annepidem.2023.07.004
26.	Ransome Y, Luan H , Song I [†] , and Duncan DT. Church closings were associated with higher COVID-19 infection rates: implications for community health equity. <i>Journal of Urban Health</i> , 2023; 100: 1258-1263. doi.org/10.1007/s11524-023-00791-2
27.	Song I [†] , Luan H . Localized effects of neighborhood park exposure on mental illness mortality in the Pacific Northwest, United States. <i>Applied Geography</i> , 2024; 162: 103127. doi.org/10.1016/j.apgeog.2023.103127
28.	Luan H , Ransome Y, Dean LT, Nassau T, and Brady K. Spatiotemporal patterns of late HIV diagnosis in Philadelphia at a small-area level: a Bayesian modeling approach accounting for excess zeros. <i>Geographical Analysis</i> , 2024; 56, 494-513. doi.org/10.1111/gean.12391

Reviews, Chapters, Monographs and Editorials

1.	Luan H and Law J. Web GIS-based Public Health Surveillance Systems: A systematic review. <i>ISPRS International Journal of Geo-information</i> , 2014; 3(2):481-506. doi.org/10.3390/ijgi3020481
2.	Fuller D, Colwell E, Low Johnathan, Orychock K, Tobin MA, Simango B, Buote R, Van Heerden D, Luan H , Cullen K, Slade L, and Taylor NGA. Reliability and validity of commercially available wearable devices for measuring steps, energy expenditure, and heart rate: systematic review. <i>JMIR mHealth and uHealth</i> , 2020; 8(9): e18694. doi:10.2196/18694
3.	Luan H . “Bayesian spatial hierarchical modeling and its applications” in Shi X and Wang F (eds.) <i>Geographical Information Science applications in Public Health</i> , 2 nd edition (in Chinese)

Non-peer reviewed scientific or medical publications/materials in print or other media

1.	Podcast interview: <i>EPItalk</i> with Dr. Patrick S. Sullivan, Professor at Emory Rollins School of Public Health, and Editor-in-Chief of <i>Annals of Epidemiology</i> (official journal of the American College of Epidemiology) on my article “ <i>Spatial accessibility of pre-exposure prophylaxis (PrEP): different measure choices and the implications for examining its association with social determinants of health</i> ”, Oct 17, 2023 (Link: https://epitalk.buzzsprout.com/2195469/14587787-spatial-patterns-in-prep-accessibility-and-the-link-between-prep-access-sdoh)
2.	GIS expert consultant to PROPUBLICA: <i>One Trump Tax Cut Was Meant to Help the Poor. A Billionaire Ended Up Winning Big</i> . 2019. Available at: https://www.propublica.org/article/trump-inc-podcast-one-trump-tax-cut-meant-to-help-the-poor-a-billionaire-ended-up-winning-big
3.	Webinar: <i>Measuring walkability and urban sprawl – Opportunities and Challenges</i> . Feb 28, 2018. Available at: http://canue.ca/measuring-walkability-urban-sprawl-opportunities-challenges/
4.	Blog: <i>Menu labeling: would it have an impact on your eating choices in a restaurant?</i> 2017. Available at: http://walkabilly.ca/home/hui-henry-luan/menu-labeling-would-it-have-an-impact-on-your-eating-choices-in-a-restaurant/