September 9, 2023

Connor Donegan

Curriculum Vitae

connordonegan.github.io

Postdoctoral Scholar (2023–)
Peter O'Donnell, Jr. School of Public Health
University of Texas Southwestern Medical Center
Connor.Donegan@UTSouthwestern.edu

Education

PhD, Geospatial Information Sciences (2023)
The University of Texas at Dallas
Advisor: Yongwan Chun
Dissertation: Plausible Reasoning and Heuristic Methodology in Human Geography: An Investigation of Colorectal Cancer Incidence and Inequalities in Urban Texas, 1999–2019

MA, Geography (2013)
University of British Columbia
Advisors: Trevor Barnes and Jamie Peck
Thesis published as: The Making of Florida's 'Criminal Class': Race, Modernity, and the Convict Leasing Program, 1877-1919.

BA, Geography (2010)
University of Minnesota

Articles

[1] Connor Donegan. "geostan: An R package for Bayesian spatial analysis". In: *The Journal of Open Source Software* 7.79 (2022), p. 4716. DOI: 10.21105/joss.04716.

[2] Connor Donegan, Amy E. Hughes, and Simon J. Craddock Lee. "Colorectal Cancer Incidence, Inequalities, and Prevention Priorities in Urban Texas: Surveillance Study With the 'surveil' Software Package". In: *JMIR Public Health & Surveillance* 8.8 (2022), e34589. DOI: 10.2196/34589.

[3] Connor Donegan, Yongwan Chun, and Daniel A. Griffith. "Modeling community health with areal data: Bayesian inference with survey standard errors and spatial structure". In: *Int. J. Env. Res. Public Health* 18.13 (2021), p. 6856. DOI: 10.3390/ijerph18136856.

[4] Connor Donegan, Yongwan Chun, and Amy E. Hughes. "Bayesian estimation of spatial filters with Moran's eigenvectors and hierarchical shrinkage priors". In: *Spatial Statistics* 38 (2020), p. 100450. DOI: https://doi.org/10.1016/j.spasta.2020.100450.

[5] Connor Donegan. "The making of Florida's 'criminal class:' race, modernity and the convict leasing program, 1877-1919". In: *Florida Historical Quarterly* 97.4 (2019), 408-434. DOI (pre–print with additional materials): https://doi.org/10.31219/osf.io/2wj7s.

[6] Tammy Leonard, Amy E. Hughes, **Connor Donegan**, Alejandro Santillan, and Sandi L. Pruitt. "Overlapping geographic clusters of food security and health: Where do social determinants and health outcomes converge in the US?" In: *SSM-Population Health* 5 (2018), pp. 160–170. DOI: https://doi.org/10.1016/j.ssmph.2018.06.006.

Pre-prints

[1] Connor Donegan. "Building spatial conditional autoregressive models in the Stan programming language". OSF Preprint: https://osf.io/3ey65/.

Open-Source Software

[1] Connor Donegan. ***geostan**: Bayesian spatial analysis*. The Comprehensive R Archive Network: https://cran.r-project.org/package=geostan; https://connordonegan.github.io/geostan.
The geostan R package supports a complete spatial analysis workflow with Bayesian models for areal data including exploratory spatial data analysis tools, models for censored outcomes, and spatial measurement error models designed for working with American Community Survey (ACS) estimates. 2021.

[2] Connor Donegan. ***surveil**: Public health surveillance*. The Comprehensive R Archive Network: https://cran.r-project.org/package=surveil; https://connordonegan.github.io/surveil.
The surveil R package provides time series models for routine public health surveillance tasks: model time trends in mortality or disease incidence rates to make inferences about levels of risk, cumulative and period percent change, age-standardized rates, and health inequalities. 2021.

Conferences

[1] Connor Donegan. *Stress-testing epidemiological theory with plausible reasoning: An investigation of colorectal cancer inequalities in Texas, 1999–2019*. Annual Meeting of the American Association of Geographers, Denver, March 24. 2023.

[2] Connor Donegan. *The **geostan** R package for Bayesian spatial analysis: Strategies for modeling health inequalities*. Annual Meeting of the American Association of Geographers, Virtual. Feb. 2022.

[3] Connor Donegan, Amy E. Hughes, and Simon J. C. Lee. *Time Series Models for Public Health Surveillance: Colorectal Cancer Incidence, Inequalities, and Prevention Priorities in Urban Texas*. Poster presentation to the Interdisciplinary Association of Population Health Science (IAPHS), Minneapolis. Sept. 2022.

[4] Connor Donegan, Yongwan Chun, and Danial A. Griffith. *Modeling community health with areal data: Bayesian inference with survey standard errors and spatial structure*. Annual Meeting of the American Association of Geographers, Virtual, April 8. 2021.

[5] Connor Donegan, Amy E. Hughes, Sandi L. Pruitt, and Simon C. Lee. *Deploying mobile mammography units for more equitable access to care: Can spatial optimization improve deployment strategies?* 67th Annual North American Meetings of the Regional Science Association International, Virtual, November 13. 2020.

[6] Connor Donegan. *A Bayesian approach to eigenvector spatial filtering with the regularized horseshoe prior*. Special Session on Geocomputation at the 66th Annual North American Meetings of the Regional Science Association International, Pittsburgh, PA, November 16. 2019.

[7] Connor Donegan. *A sparse Bayesian approach to eigenvector spatial filtering*. Southwest Division of the American Association of Geographers Annual Meeting, Fort Worth, TX, October 11. 2019.

[8] Connor Donegan. *Convict leasing and the geography of prison sentencing in Jim Crow Florida*. New Scholars Award panel at the Annual Meeting of the Labor Research and Action Network, Howard University, June 9. 2017.

[9] Tammy Leonard, Amy E. Hughes, **Connor Donegan**, Alejandro Santillan, and Pruitt Sandi L. *Food security and poor health: Predicting spatial cluster overlaps*. 64th Annual North American Meetings of the Regional Science Association International, Vancouver, BC, November 15. 2017.

[10] Connor Donegan. *Peonage, race and law in Florida's convict leasing program, 1877-1919*. Annual Meeting of the American Association of Geographers, Los Angeles, CA, April 1. 2013.

Invited Lectures and Talks

[1] *The geostan R package for Bayesian spatial analysis*. Invited talk. StanConnect 2022: Stan Through Space and Time (Stan modeling language user conference, virtual/international), Oct. 2022.

[2] *Bayesian analysis with Stan: an introduction*. Guest lecture. EPPS 7390: Bayesian Analysis for Social and Behavioral Sciences, The University of Texas at Dallas, Nov. 2021.

[3] *Public health surveillance with the* `surveil` *R package*. Invited talk. Population and Data Sciences, UT Southwestern Medical Center, Dec. 2021.

Ad-Hoc Peer Review

2023: Scientific Reports; BMJ Public Health
2022: Transactions in GIS
2021: Journal of Urban Health; International Journal of Geographical Information Science
2020: Health & Place

Teaching

UTD

Graduate Instructor, with original syllabus and labs
- Geog/Geos/Gisc 3304: Principles of Geospatial Information Sciences 2023

UBC

Teaching Assistant, with discussion sections
- Geog 121: Geography, Environment and Globalization 2012
- Geog 122: Geography, Modernity and Globalization 2013

Previous Positions

Research Assistant 2019–2022
Department of Population and Data Sciences
University of Texas Southwestern Medical Center

Support Statistician 2019
College Transition Collaborative
Stanford University/University of Waterloo

Data Analyst 2017-2018
Quest Analytics

Appleton, WI & San Francisco, CA

Research Assistant 2017-2018
Dr. Tammy Leonard
Community Assistance Research (CARE)
University of Dallas
and:
Dr. Amy Hughes
Department of Clinical Sciences
University of Texas Southwestern Medical Center

Teaching Assistant 2012-2013
Department of Geography
University of British Columbia

Research Assistant 2011
Dr. Jamie Peck
Department of Geography
University of British Columbia

Awards

Outstanding Graduate Student (PhD level): Outstanding academic achievement, service, and perseverance. School of Economic, Political and Policy Sciences, UT Dallas ($500) 2023

Pioneer Graduate Fellowship. GIS Program, UT Dallas. (Annual competition won 4 times: $4 \times \$2,500 = \$10,000$) 2019–2023

Poster Award ("Time Series Models for Public Health Surveillance" with A. Hughes and S. Lee). Interdisciplinary Association for Population Health Science (IAPHS). 2022

PhD Research Small Award. Office of Graduate Education, UT Dallas ($1,000) 2021

Esri Development Center Student of the Year Award—UT Dallas. Esri ($500) 2020

Student Travel Award. Spatial Analysis and Modeling Specialty Group, AAG ($200) 2020

New Scholars Research Grant. Labor Research and Action Network ($1,746.50) 2017

Faculty of Arts Graduate Award. University of British Columbia ($8,000) 2011

Outstanding Graduating Senior. Geography, University of Minnesota ($100) 2010

Undergraduate Internship Award (with *Poor People's Economic Human Rights Campaign*). College of Liberal Arts, UMN ($1,500) 2008

Funding

Unfunded
National Cancer Institute (NCI): F31 Predoctoral Fellowship
Measuring Multiple Dimensions of Cancer Inequality: A spatial analysis of the Texas Colorectal Cancer Burden, 2000–2017
Develop rigorous methodologies for measuring and monitoring social and geospatial cancer inequalities through an extended case study of colorectal cancer incidence in Texas (2000–2017).
Role: PI

Professional Associations (Current)

American Association of Geographers

- Health and Medical Geography Specialty Group
- Spatial Analysis and Modeling Specialty Group

Young Scholars Initiative, Institute for New Economic Thinking

International Society for Bayesian Analysis

Service

Vice President, Graduate Student Assembly, UT Dallas Governing Body. 2021-2022

Graduate Student Representative, Dean's Council—School of Economic, Political, and Policy Sciences. UT Dallas. 2022

Representative—School of Economic Political and Policy Sciences, Graduate Student Assembly, UT Dallas. 2020-2021

Executive Committee Member & Shop Steward. Canadian Union of Public Employees Local 2278. 2012-2013

Equity and Diversity Committee Member, Dept. of Geography, University of British Columbia. 2012

Human rights observer, Brigadas Civiles de Observación, Centro de Derechos Humanos Fray Bartolomé de Las Casas, Chiapas, Mexico (3 weeks). 2009