DANIEL BEENE, PH.D.

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Postdoctoral Fellow
Johns Hopkins University
Bloomberg School of Public Health
Department of Epidemiology

EDUCATION

PhD	University of New Mexico	July 2024
	Major: Geography	
	Dissertation: Critical Geospatial Data Science: Principles for Curating, Analyzing, and Sharing Geospatial Data	
	Advisor: Dr. Yan Lin	
MS	University of New Mexico	May 2019
	Major: Geography (concentration: GIScience)	
	Thesis: "Adjudication and the Adaptive Capacity of Pecan Farmers in the Lower Rio Grande"	
	Advisor: Dr. Yan Lin	
BA	University of New Mexico	May 2009
	Major: Psychology	
	Minor: Communications	
	Graduated Cum Laude	

GRANTS AND AWARDS

Navajo WaterGIS Usability and Needs Assessment: Environmental Data Justice and Data Bias.   2023
 Co-Investigator (authored grant application),
 Award amount: $26,303.
New Mexico Integrative Science Program Incorporating Research in Environmental Science (NM-INSPIRES) pilot project sub-award (NIEHS 1P30ES032755)

2023 I-GUIDE Summer School Team Project Award   2023
 Investigating Hydrological Responses and Shrinkage Patterns of the Great Salt Lake. Selected in juried competition.
University Consortium of Atmospheric Research, Boulder, CO.

2022 Sobel Duncan Science for Health of Indigenous Populations (SHIP) Award   2022
University of New Mexico College of Arts & Sciences

Reviewer

Journal of Exposure Science and Environmental Epidemiology	2023, 2024
Food Security, Springer Nature	2021
Cogent Social Sciences Journal, Taylor & Francis	2020

Master's Thesis Distinction   2019

Outstanding Graduate Student Award   2019
UNM Department of Geography & Environmental Studies

Conrad Snead Scholarship   2019
UNM Department of Geography & Environmental Studies

Austrian Marshall Plan Scholarship   2017
Visiting Fellow, Carinthia University of Applied Sciences, Villach, AT

Student Poster Competition Winner   2017
GIS Day 2017, University of New Mexico

PUBLICATIONS

Articles in Refereed Journals

McCormack, L. A., MacKenzie, D. A., Deutsch, A., **Beene, D**., Hockett, C. W., Ziegler, K., Knapp, E. A., Kress, A. M., Li, Z. R., Bakre, S., Habre, R., Jacobson, L., Karagas, M. R., LeWinn, K., Nozadi, S. S., Alshawabkeh, A., Aris, I. M., Bekelman, T. A., Bendixsen, C. G., Camargo, C., Cassidy-Bushrow, A. E., Croen, L., Assiamira, F., Fry, R., Gebretsadik, T., Hartert, T., Hirko, K. A., Karr, C. J., Kloog, I., Loftus, C., Magee, K. E., McEvoy, C., Neiderhiser, J. M., O'Connor, T. G., O'Shea, M., Straughen, J. K., Urquhart, A., Wright, R., Elliott, A. J. (2025). A descriptive examination of rurality in the Environmental influences on Child Health Outcomes Cohort: Implications, illustrations, and future directions. *The Journal of Rural Health*, 41(1), ee12908. https://doi.org/10.1111/jrh.12908

Beene, D., Miller, C., Gonzales, M., Kanda, D., Francis, I., Erdei, E. (2024). Spatial nonstationarity and the role of environmental metal exposures on COVID-19 mortality in New Mexico. *Applied Geography*, 121, 103400. https://doi.org/10.1016/j.apgeog.2024.103400.

Levin, R., Villanueva, C. M., **Beene, D.**, Cradock, A. L., Donat-Vargas, C., Lewis, J., Martinez-Morata, I., Minovi, D., Nigra, A. E., Olson, E. D., Schaider, L. A., Ward, M. H., & Deziel, N. C. (2023). US drinking water quality: Exposure risk profiles for seven legacy and emerging contaminants. *Journal of Exposure Science & Environmental Epidemiology*, 31(1), 3-22. https://doi.org/10.1038/s41370-023-00597-z.

Girlamo, C., Lin, Y., Hoover, J., **Beene, D.**, Woldeyohannes, T., Liu, Z., Campen, M.J., MacKenzie, D., Lewis, J. (2023). Meteorological data source comparison – a case study in geospatial modeling of potential environmental exposure to abandoned

uranium mine sites on Navajo Nation. *Environmental Monitoring and Assessment*, 195:834. https://doi.org/10.1007/s10661-023-11283-w.

Lardier Jr., D.T., Blackwell, M., **Beene, D.**, Lin, Y. (2023). Social vulnerabilities and spatial access to primary healthcare through car and bus systems: Assessing disparities through Geographic Information Systems (GIS) and Multi-Level Modeling (MLM). *Journal of Rural Health,* 100, 88-102. https://doi.org/10.1007/s11524-022-00701-y

Gong, X., Lu, Y., **Beene, D.**, Li, Z., Hu, T., Morgan, M., & Lin, Y. (2022). Understanding public perspectives on fracking in the United States using social media big data. *Annals of GIS*, 1-15. https://doi.org/10.1080/19475683.2022.2121856

Beene, D., Zhang, S., Lippitt, C., Bogus, S.M. (2022). Performance evaluation of multiple pan-sharpening techniques: a statistical perspective. *Geographies*, 2(3), 435-452. https://doi.org/10.3390/geographies2030027

Beene, D., Collender, P., Cardenas, A., Harvey, C., Huhmann, L., Lin, Y., Lewis, J., Loiacono, N., Navas-Acien, A., Nigra, A., Steinmaus, C., van Geen, A. (2022). A mass-balance approach to evaluate arsenic intake and excretion in different populations. *Environment International*, 166, 107371. https://doi.org/10.1016/j.envint.2022.107371

Liu, Z., Lin, Y., Hoover, J., **Beene, D.**, (2022). Individual exposure assessment for livestock based on spatial-temporal analysis of GPS data and behavior patterns classification in Cove Wash Watershed, Arizona. *Annals of GIS.* https://doi.org/10.1080/19475683.2022.2075935

Lin, Y., Hoover, J., **Beene, D.**, Lippitt, C. (2021). Impact of travel time uncertainties on modeling of spatial accessibility: a comparison of street data sources. *Cartography and Geographic Information Science* 48(6): 471-490. https://doi.org/10.1080/15230406.2021.1960609

Lin, Y., Hoover, J., **Beene, D.**, Erdei, E., & Liu, Z. (2020). Environmental risk mapping potential for abandoned uranium mine contamination on the Navajo Nation, USA, using a GIS-based multi-criteria decision analysis approach. *Environmental Science and Pollution Research* 27: 30542-30557 https://doi.org/10.1007/s11356-020-09257-3

Ketai, L., Melendres, L. D., DuBroff, J., Lin, Y., & **Beene, D.** (2019). High Geographic Prevalence of Pulmonary Arterial Hypertension: Associations with Ethnicity, Drug Use and Altitude. *Pulmonary Circulation* 10 (1): 2045894019894534. https://doi.org/10.1177%2F2045894019894534

Beene, D., Zhang, S. & Paulus, G. (2019). Workflow for hydrologic modelling with sUAS-acquired aerial imagery. *Geocarto International.* 36(2) 1346-1364. https://doi.org/10.1080/10106049.2019.1648562

Refereed Book Chapters

Hoover, Joseph, Lin, Y., **Beene, D.**, & Liu, Z. (2020). Partnering with Indigenous Communities to Address the Environmental Health Legacy of Abandoned Mines in the Western United States. In Keables, M. J. (Ed.) *The Rocky Mountain West: A Compendium of Geographic Perspectives*. American Association of Geographers: Washington, D.C. 2020 March; :109-117.

Beene, D. R. & Lane, K. M. D. (2020). Unmappable Variables: GIS and the Complicated Historical Geography of Water in the Rio Grande Project. In Travis, C., Ludlow, F. M., & Ferenc, G. (Eds.) Historical Geography, GIScience, and Textual Analysis: Mapping the Landscapes of Time and Place. Berlin: Springer.

Other Writing

Hoover, J., **Beene, D.**, Chief, K. (2022). It takes a team: Tackling water quality challenges and COVID-19 in the Navajo Nation. *Water Resources IMPACT - American Water Resources Association* 24 (1):5–8.

Refereed Conference Proceedings

Feric, Z., Agostini, N.B., **Beene, D.**, Signes-Pastor, A.J., Halchenko, Y., Watkins, D., MacKenzie, D., Karagas, M., Manjourides, J., Alshawabkeh, A., Kaeli, D. (2021). A Secure and Reusable Software Architecture for Supporting Online Data Harmonization. *2021 IEEE International Conference on Big Data Virtual Conference*.

Works in Progress

Beene, D., Lin, Y. (under review in the *International Journal of Geographical Information Science*, special issue: GeoHealth Data Science for Geographic Knowledge Discovery, Prediction and Transfer in Health Research, May 2024). Deconstructing rurality to better "place" health data.

Beene, D., Nozadi, S., MacKenzie, D., Churchill, M., Galai, N., McGrath, M., Brennan, P., Luo, L., Lewis, J., Dunlop, A., Ganiban, J. (in preparation). Individual and social vulnerability: Characterizing pandemic-related traumatic stress using the Social Vulnerability Index. Target journal: American Journal of Preventive Medicine.

Beene, D. (in preparation). Perceived stress and food security among Navajo mothers: A strengths-based approach.

Beene, D. (in preparation). Navajo WaterGIS: Environmental data poverty, visibility, and usefulness.

Lardier, D., **Beene, D.**, Lin, Y., Kincaid, T., Bonham, C. (in preparation). Accessibility to behavioral healthcare providers and reliable telecommunications in New Mexico. Target journal: Journal of Rural Mental Health.

Feric, Z., **Beene, D.**, Signes-Pastor, A., Watkins, D., Karagas, M., MacKenzie, D., Kaeli, D., Manjourides, J. (in preparation). Effects of maternal arsenic exposure on birth outcomes using harmonized data across three birth cohorts. Target journal: Toxicology & Applied Pharmacology.

Presentations at Professional Meetings

Beene, D., Woldeyohannes, T. (2024) Workshop: Introduction to Spatial Regression Methods in Environmental Health. *2024 Partnerships for Environmental Public Health (PEPH) Meeting*. National Institute of Environmental Health Sciences, Durham, NC. February 20-21, 2024.

Woldeyohannes, T., **Beene, D.**, Doyle, J., Martin, C., Eggers, M., Liu, Z., Lin, Y., MacKenzie, D., Erdei, E., Hoover, J., (2024). Poster: Evaluating cumulative environmental exposure to metals and non-metals and community-level health using geospatial modeling and personal exposure assessment. *2024 Partnerships for Environmental Public Health (PEPH) Meeting*. National Institute of Environmental Health Sciences, Durham, NC. February 20-21, 2024.

Beene, D. (2023). Navajo WaterGIS 2.0: Community needs and missing data. *2023 NIEHS SRP Annual Grant Recipient Meeting*, Albuquerque, NM. December 4, 2023.

Beene, D., Miller, C., Gonzalez, M., Erdei, E. (2023). Understanding the role of environmental metals on COVID-19 disease severity in New Mexico. *International Society of Exposure Science Annual Meeting*, Chicago, IL, August 27-31, 2023.

Ingram, J., Hoover, J., **Beene, D.**, Rock, T., Credo, J., Jones, L. (2023). Collaborative water characterization of Navajo unregulated water sources and the Navajo safe water website. *American Chemical Society Fall 2023: Harnessing the Power of Data*, San Francisco, CA, and hybrid. August 13, 2023.

Beene, D. (2023). Deconstructing rurality to better "place" health data. *American Association of Geographers Annual Meeting*, Denver, CO. March 23-27, 2023.

Beene, D., Hoover, J., Matiukaite, S., Shuey, C. (2022). Poster: Navajo WaterGIS: Harmonization and Visualization of Water Quality at Unregulated Sources. *NIEHS Superfund Research Program 35th Annual Meeting*, Raleigh, NC, December 14-16, 2022.

Beene, D. (2022). Deconstructing rurality to better "place" health data. *Southwest Division, American Association of Geographers Annual Meeting*, Fayetteville, AR, October 27-29, 2022.

Beene, D., Hoover, J., Shuey, C. (2022). Poster: Water quality, research, and policy: Addressing household water insecurity on the Navajo Nation. *UNM College of Pharmacy Research Day*. Albuquerque, NM, April 28, 2022.

Beene, D., Gonzales, M., Miller, C., Erdei, E. (2022). Environmental metals exposures and COVID-19 severity: A case study in New Mexico, USA. *American Association of Geographers Annual Meeting*, New York City (virtual), February 25, 2022.

Woldeyohannes, T., Lin, Y., Hoover, J., **Beene, D.**, Liu, Z., Girlamo, C. (2022). Poster: Geospatial modeling of potential contamination exposure to abandoned or inactive mine sites and trash dumps on the Crow Nation. *American Association of Geographers Annual Meeting*, New York City (virtual). February 27, 2022.

Lin, Y., **Beene, D.**, Hoover, J. (2021). Moving Native American Environmental Health Disparities Research Forward Through a Geographic Lens. *The 28th International Conference on Geoinformatics CPGIS Annual Conference*, virtual conference, October 31, 2021.

MacKenzie, D., **Beene, D.** (2021). Arsenic and birth outcomes in 3 U.S. cohorts. *2021 Bi-Annual Navajo Research Conference*, virtual conference, October 20-21, 2021.

Beene, D., Zhang, S., Lippitt, C., Bogus, S.M. (2021). Performance evaluation of multiple pan-sharpening techniques on NDVI: A statistical framework. *Southwest Division, American Association of Geographers Annual Meeting*, Oklahoma City, OK, October 13-15, 2021.

Beene, D., Signes-Pastor, A., Kaeli, D., MacKenzie, D., Karagas, M., Feric, Z., Halchenko, Y., Powers, M., Manjourides, J., Lewis, J., Alshawabkeh, A., Bohm Agostini, N., Watkins, D. (2020). Data Harmonization across SRP Pregnancy and Birth Cohorts. *NIEHS External Use Case Committee*, virtual meeting, February 18, 2020.

Beene, D., van Geen, L., Navas-Acien, A., Nigra, A., LoIacono, N., Cardenas, A., Collender, P., Steinmaus, C., Lin, Y., Lewis, J. (2020). Arsenic Mass Balance: Integrating Environmental and Biomarker Data across Diverse Populations. *NIEHS External Use Case Committee*, virtual meeting, February 18, 2020.

Beene, D., Lin, Y., Hoover, J., Erdei, E., Liu, Z. (2020). Poster: Geospatial Modeling to Map Environmental Exposure to Abandoned Uranium Mine Waste on the Navajo Nation, USA. *2020 NIH/NIEHS Superfund Research Program Virtual Online Meeting, Hosted by Texas A&M University*. URL: https://bit.ly/3pRZZyi December 14-16, 2020.

Beene, D., Bohm Agostini, N., Halchenko, Y., Kaeli, D., Karagas, MR., Lewis, J., MacKenzie, D., Manjourides, J., Powers, M., Signes-Pastor, AJ., Watkins, D. (2020). Poster: Distributed Harmonization and Analysis Across Three SRP Cohorts. *2020 NIH/NIEHS Superfund Research Program Virtual Online Meeting, Hosted by Texas A&M University*. URL: https://bit.ly/3pRZZyi December 14-16, 2020.

Roman, C., Shuey, C., Begay, D., Hoover, J., **Beene, D.**, Quetawki, M., Rahman, R., Lewis, J., Campen, M., MacKenzie, D., Gonzales, M., (2020). Poster: University of New Mexico SRP Responds to COVID-19 in Tribal Communities. *2020 NIH/NIEHS Superfund Research Program Virtual Online Meeting, Hosted by Texas A&M University*. URL: https://bit.ly/3pRZZyi December 14-16, 2020.

Hoover, JH, Lin, Y., **Beene, D.**, Liu, Z., & Lewis JL. (2020). GPS Tracking Livestock to inform potential human exposure to abandoned uranium mine waste in an indigenous community in the southwestern United States. *2020 Geological Society of American Annual Meeting* (Virtual Conference), Montreal, October 26, 2020

Beene, D., Fuchs, E., Rinehart, A., Lin, Y. (2020). Feedbacks of irrigator decisions, hydrologic change and long-term water planning, Mesilla Valley, NM. *NGWA Water, Energy, and Policy in a Changing Climate*. Albuquerque, NM, February 24, 2020.

Beene, D., Lin, Y., Hoover, J., Liu, Z. (2019). Abandoned uranium mines in the Navajo Nation: How do we responsibly and ethically model risk? *Association of Pacific Coast Geographers Annual Meeting*. Flagstaff, AZ. October 16-19, 2019.

Lin, Y., **Beene, D.**, Liu, Z. (2019). Uncertainties in Spatial Accessibility: A comparison of Street Network Data. *The 82nd Annual Meeting of Association of Pacific Coast Geographers.* Flagstaff, AZ. October 16-19, 2019.

Liu, Z., Lin, Y., Hoover, J., **Beene, D.** (2019). Poster: Classifying livestock grazing behavior and GIS-modeling potential for exposure to Abandoned Uranium Mine Waste in the Cove Wash Watershed, Arizona, USA. *Southwest Division, American Association of Geographers Annual Meeting*, Fort Worth, TX, October 10-12, 2019.

Beene, D. (2019). Modeling irrigation and agrarian change in the Lower Rio Grande: Lessons Learned from Mixed Methods Research. *New Mexico Geographic Information Council (NMGIC) Annual Meeting*, Albuquerque, NM, April 26, 2019. *American Association of Geographers Annual Meeting*, Washington, D.C., April 3-7 2019.

Beene, D. (2019). Adjudication and the Adaptive Capacity of Farmers in the Lower Rio Grande. *Second Biennial Population and Public Policy Conference*, Albuquerque, NM, February 8-9 2019.

Lin, Y., Hoover, J., Erdei, E., **Beene, D.** (2018). Poster: Novel Geospatial Modeling to Inform Risk Assessment for Metal Contamination Research on Tribal Lands, NIH P50 (Native Environmental Health Equity Research Center 2018 Pilot Project). *The 10ᵗʰ Conference on Metal Toxicity & Carcinogenesis*, Albuquerque, NM, October 28-31, 2018.

Beene, D. (2018). Complicating Water Management Binaries in the Rincon and Mesilla Valleys by Coupling Grounded Theory and Geospatial Modeling**.** *Southwest Division, American Association of Geographers Annual Meeting*, Baton Rouge, LA, October 4-6, 2018.

Beene, D. (2017). Water Use, Delivery and the River: Modeling the Effect of Irrigation on the Rio Grande's Efficiency. *UNM GIS Day*, Albuquerque, NM, November 14, 2017.

Invited Talks

Beene, D. (2024). Underserved or misunderstood? Exploring rurality through critical geospatial data science. University of New Mexico Department of Geography & Environmental Studies Colloquium. Albuquerque, NM, October 18, 2024.

Beene, D. (2024). Navajo WaterGIS: Environmental data poverty, visibility, and usefulness. Conference on PFAS and emerging contaminants in drinking water serving California Tribes: Opportunities for academic and community research collaborations. Santa Clara University, Santa Clara, CA. May 30, 2024

Beene, D. (2024). Navajo WaterGIS 2.0: Critical Geospatial Data Science & Data Sharing. *UC Berkeley Water Equity Science Shop (WESS)*, Berkeley, CA. January 12, 2024.

Beene, D., Fowler, K., de Orla-Barile, M., Wu, Y., Jordan, M., Orok, H., Garousi-Nejad, I. (2023) Investigating Hydrological Responses and Shrinkage Patterns of the Great Salt Lake. I-GUIDE Forum 2023. Columbia University, New York City, NY. October 4, 2023.

Beene, D. (2022) GIScience as an Interdisciplinary Bridge in Indigenous Health Equity. University of Missouri Geospatial Workshop – Collaborative Funding Opportunities. Columbia, MO, May 20, 2022.

Beene, D. (2022) Advancing Indigenous Health Equity: GIScience & geographies of Indigenous health. UNM Team Research Symposium, Public Impact Research panel, University of New Mexico, Albuquerque, NM. April 19, 2022.

Beene, D. (2022) Advancing Indigenous Health Equity: GIScience & geographies of Indigenous health. Science for Health of Indigenous Populations (SHIP)Symposium. University of New Mexico, Albuquerque, NM. April 8, 2022.

Beene, D. (2021) Data science for Native American environmental health research. 2021 TickBase Semi-Annual Meeting (Virtual), University of Idaho, December 8, 2021.

Lewis, J., Begay, D., Shuey, C., Luo, L., **Beene, D.** (2020). Report from UNM regarding data on COVID-19 data collection. Requested report to Health, Education, and Human Services Committee of the 24th Navajo Nation Council, teleconference, May 13, 2020.

Lin, Y., **Beene, D.**, Lewis, J. (2020). Integrating Environmental and Biomonitoring Datasets from the UNM METALS Superfund Center. Columbia University Mailman School of Public Health Mini – Symposium, Columbia University Mailman School of Public Health, New York City, NY, February 21, 2020.

Hoover, J., Lin, Y., **Beene, D**. (2020). Cove Livestock Project Progress Report. Navajo Nation Cove Chapter meeting, Cove Chapter, Navajo Nation, February 11, 2020.

Lin, Y., Lewis, J., **Beene, D.**, Ong, J. (2020). Home Dust Uranium, Environmental Exposure Risk Factors, and Biomonitoring Uranium Concentration among NBCS Participants. Navajo EPA Meeting (Virtual), University of New Mexico, Albuquerque, NM, March 19, 2020.

Lin, Y., **Beene, D**., Hoover, J., Erdei, E. (2020). Geospatial Modeling to Inform Environmental Exposure Assessment for Metal Contamination Research on Tribal Lands. University of New Mexico Superfund Research Center Monthly Meeting (Virtual), University of New Mexico, Albuquerque, NM, April 16, 2020.

EMPLOYMENT AND RESEARCH EXPERIENCE

Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health
Postdoctoral Fellow, Faculty mentor: Dr. Amii Kress (JHU)   2024 – present

- Member of geospatial team in the Environmental influences on Child Health Outcomes Data Analysis Center (ECHO-DAC), a program of the NIH
- Conducting original research
- Developing strategies for managing and incorporating protected spatial data from Navajo Birth Cohort Study
- Data analysis and writing on ECHO research projects
- Researching and curating PFAS data for spatial analyses

Community Environmental Health Program, University of New Mexico College of Pharmacy
Data Manager, Supervisor: Dr. Johnnye Lewis (UNM-HSC)   2019 – 2024

- Development of data management protocol for all publication-ready datasets generated under Superfund Research Project and Navajo Birth Cohort Study/ECHO Project to navigate the requirements of FAIR data management and sensitive Tribal information
- Authored intellectual property statement with project and Tribal leaders for sensitive data
- Member of statistics working group

Agnese Nelms Haury Program in Environment and Social Justice, University of Arizona
Co-Investigator, PI: Dr. Karletta Chief (UofA)   2020 – 2021

- Project Aim: Transdisciplinary research group with participants from University of Arizona, Northern Arizona University, University of Montana – Billings, University of California – Los Angeles, and Southwest Research and Information Center, with specific aim of addressing urgent need of clean water access for the Navajo Nation during the COVID-19 pandemic
- Developed fuzzy inference model of COVID-19 correlates at the chapter and agency level
- Developed interactive web mapping and analysis tool of water quality at unregulated sources across the Navajo Nation

NIH P50 Center for Native American Environmental Health Equity Research
Co-Investigator, PIs: Dr. Johnnye Lewis, Joseph Hoover, and Debra MacKenzie
                                                                                     2020 – 2025
- Project Title: Evaluating Cumulative Environmental Exposure to Metals and Non-metals and Community-level Health Using Geospatial Modeling and Personal Exposure Assessment (PI: Dr. Yan Lin & Dr. Joe Hoover)
- Awarding agency: National Institutes on Minority Health and Health Disparities (NIMHD)
- Project Aim: Leverage geospatial tools and modeling with community engagement to address cumulative exposures of diverse environmental toxicants from mine waste and trash disposal, and their impact on human health among Indigenous populations in the Navajo Nation, Crow Nation, and Cheyenne River Sioux Tribe

Admin Supplement to Superfund Research Program (SRP) Center, NIH/NIEHS
Co-Investigator, PI: Dr.Johnnye Lewis   2019 – 2020
- Project Title: Arsenic Mass Balance: Integrating Environmental Biomarker Data across Diverse Populations
- Project Aim: SRP External Use Case (EUC) between UNM, Columbia University, and UC Berkeley that leverages arsenic mass balance modeling to estimate additional sources of arsenic contamination beyond drinking water
- Provided data management, establish common analytical code repository, identified and utilized defined data ontologies

Admin Supplement to Superfund Research Program (SRP) Center, NIH/NIEHS
Co-Investigator, PI: Dr. David Kaeli (Northeastern University)   2019 – present
- Project Title: Data Harmonization Across SRP Pregnancy & Birth Cohorts
- Coordinated data transfer and use agreements between three universities in a way that acknowledges Indigenous data sovereignty and enhanced security protocols
- Established secure Linux server to host website for analysis of secure harmonized datasets

University of New Mexico, Department of Geography & Environmental Studies
Research Assistant, PIs: Dr. Joe Hoover (MSUB) and Dr. Yan Lin (UNM)

2019 – 2022

- Project Title: GPS Tracking Livestock Movement and Exposure to Abandoned Uranium Mine Waste in Cove Watershed United States Environmental Protection Agency (USEPA)
- Project Aim: Community-driven research project to understand the effect of abandoned uranium mine waste on livestock and potential human health risks from consuming meat from livestock that graze in mining-impacted watersheds
- Coordinated big data management of geospatial, environmental sampling, and laboratory analysis datasets in a PostgreSQL relational database

Carinthia University of Applied Sciences (CUAS/FH-Kärnten), Villach, AT
Visiting Fellow, Co-PI: Dr. Gernot Paulus (CUAS)   2018

- Developed a methodology for conducting complex hydrological modeling using small unmanned aerial systems (sUAS)
- Statistical sensitivity analysis of multiple model inputs to baseline model
- Authored project report for Austrian Marshall Plan Foundation

TEACHING EXPERIENCE

Courses Taught

University of New Mexico, Department of Geography & Environmental Studies:
- UNM-Diné College Summer Internship 2022, National Science Foundation EPSCoR TickBase – Geospatial Data Interpretation. Lecturer/teaching assistant.
- GEOG 195 – Introduction to Environmental Studies, University of New Mexico. Fall 2018. Teaching assistant.
- GEOG 364 – Law & Geography: Law, Control, Human Environment, University of New Mexico. Fall 2018. Teaching assistant.

Invited Lectures

- GEOG 580 – Spatial Statistics, University of New Mexico Department of Geography & Environmental Studies. Lecture title: *Introduction to Spatial Regression Methods in Environmental Health*. March 5, 2014
- GEOG 150 – World Regional Geography, University of New Mexico Department of Geography & Environmental Studies. Lecture title: *Data bias in regional development*. August 30, 2019.

PROFESSIONAL TRAINING

Seminar or Workshop
UNM Libraries & Data Carpentries
Data Carpentry for Ecological Data   2019

UNM Organization, Information and Learning Sciences (OILS)
Project Data Management Workshop with Dr. Karl Benedict   2018

UNM Health Sciences Center
- Collaborative Institutional Training Initiative (CITI),
  Group I Biomedical Research Investigator   2021
- Ethics: A Framework for Ethical Decision Making   2021
- Financial Conflicts of Interest Training   2021

Python Scripting for Map Automation, ESRI   2018
Python for Everyone, ESRI   2018
3D Analysis of Surfaces and Features Using ArcGIS, ESRI   2017
Regression Analysis Using ArcGIS, ESRI   2017
Go Deeper with Data Analytics Using ArcGIS Pro and R, ESRI   2017
Building Models for GIS Analysis Using ArcGIS, ESRI   2017
Address Geocoding with ArcGIS, ESRI   2016
Using Raster Data for Site Selection, ESRI   2015
Learning ArcGIS Desktop, ESRI   2015
Creating, Editing and Managing Geodatabases, ESRI   2015

PROFESSIONAL AFFILIATIONS

American Association of Geographers, 2018-Present
Southwest Division, American Association of Geographers, 2018-2024
Gamma Theta Upsilon, 2021-2024
New Mexico Geographic Information Council, 2015-2023
Association of Pacific Coast Geographers, 2019-2020

PROFESSIONAL SERVICE

Co-Organizer/Moderator
Conference on PFAS and Emerging Contaminants in Drinking Water serving California
Tribes: Opportunities for academic and community research collaborations. Santa Clara
University, Santa Clara, CA, May 30, 2024.

ASPIRE Open House Coordinator
UNM Center for Advancement of Spatial Informatics Research & Education (ASPIRE),
November 2023

Session Chair
Health Geographies. Association of Pacific Coast Geographers Annual Meeting, Flagstaff,
AZ, October 2019.

Lightning Talk Organizer
GIS Day, University of New Mexico, 2019

Symposium Co-Organizer
GIS Day, University of New Mexico, 2018

Student Association of Geography & Environmental Studies
President, 2017-2018

Central New Mexico Community College GIS Student Organization
Authored official charter grant, 2016

COMPUTER SKILLS

Programming: R, Python, JavaScript, HTML, CSS, SQL

Applications/Frameworks: ESRI ArcGIS Suite, Adobe Creative Suite, Microsoft Office, SPSS, R Studio, Erdas Imagine, TerrSet, ENVI, QGIS, PostgreSQL, PostGIS, Matlab

PRESS INTERVIEWS

"UNM Department of Geography and Environmental Studies grants its first Ph.D." Carly Bowling, UNM Newsroom Front Page, September 10, 2024.
"UNM researchers: No sign Navajo has reached plateau," Rima Krisst, Navajo Times, May 21, 2020.
"Daniel Beene – University of New Mexico," G[Insight], FH-Kärnten, issue 2018/2019.
"Water use, delivery and the river," UNM Newsroom Front Page, January 29, 2018.