DEREK VAN BERKEL

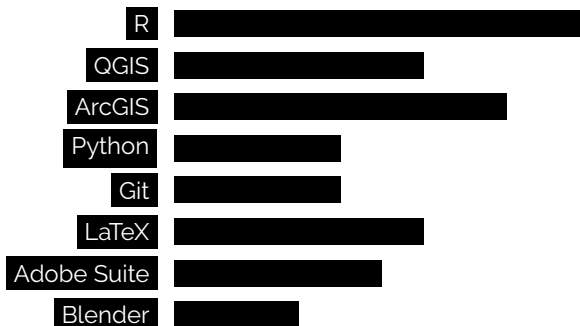## Assistant Professor, PhD

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PERSONAL STATEMENT

I am a geographer, land change researcher and data scientist. My research aims to describe, project, and explain how we use, value and change landscapes, testing how visualization of these data can add new place-based knowledge in science and community decision-making. My growing body of interdisciplinary work uses social science theory, community engagement, and advanced computational techniques in GIS, big data, machine learning, spatial statistics, and spatial-temporal computer modeling (e.g. agent-based and cellular automata).

R

QGIS

ArcGIS

Python

Git

LaTeX

Adobe Suite

Blender

Publications Grants Teaching Mentoring Service

PROFESSIONAL APPOINTMENTS

2019 – Present **Assistant Professor**
School for Environment and Sustainability, University
University of Michigan

2018 – 2020 **Adjunct Faculty Member**
Department of Environment and Society
Utah State University

2017 – 2019 **Postdoctoral Researcher**
Oak Ridge Institute for Science and Education
US Environmental Protection Agency

2014 – 2017 **Postdoctoral Researcher**
Center for Geospatial Analytics
North Carolina State University

2012 – 2014 **Postdoctoral Researcher**
Department of Geography
The Ohio State University

EDUCATION

2009 – 2012 **Ph.D.**
Spatial Analysis and Decision Support
Dissertation: "Mapping, modeling and discussing rural development options"
Committee: P.H. Verberg, T. Veldkamp, M. Pinto Correia, A. Bregt and F. Berkhout
Vrije Universiteit Amsterdam

2005 – 2007 **M.S.**
Human Geography and Urban Planning
Thesis: " Cambodian Youth, Changing Lives and Perspectives"
Committee: Beneker, T. & Woerden, F.
Utrecht University

1999 – 2004 **B.A.**
Human Geography
University of Calgary

Peer-Reviewed Journal Articles (Total: 39)

§ indicates Advisees

2024

39. Yang§, X., Fox§, N., **Van Berkel, Derek**, and Lindquist, M. (2024). Viewscape: An r package for the spatial analysis of landscape perception and configurations in viewsheds of landscapes. *SoftwareX*, 26:101662

2023

38. Guan§, J., Wang, R., **Van Berkel, Derek**, and Liang, Z. (2023). How spatial patterns affect urban green space equity at different equity levels: A bayesian quantile regression approach. *Landscape and Urban Planning*, 233:104709 **IF: 9.1; CS: 14.4**

37. Fox§, N., **Van Berkel, Derek**, Vergel, R. S., and Lindquist, M. (2023b). vgamereviews: An r package for harnessing video game reviews for scientific research. *SoftwareX*, 23:101423 **IF: 3.4; CS: 5.1**

36. Smart, L. S., Seekamp, E., **Van Berkel, Derek**, Vukomanovic, J., and Smith, J. W. (2023). Socio-spatial factors influence climate change adaptation decisions of rural coastal landowners. *Landscape Ecology*, pages 1–19 **IF: 5.2**

35. Schirpke, U., Ghermandi, A., Sinclair, M., **Van Berkel, Derek**, Fox§, N., Vargas, L., and Willemen, L. (2023). Emerging technologies for assessing ecosystem services: A synthesis of opportunities and challenges. *Ecosystem Services*, 63:101558 **IF: 7.6; CS: 12.4**

34. Fox§, N., Lidquist, M., **Van Berkel, Derek**, and Vergel, R. S. (2023a). A collaborative augmented reality decision support system for crowdsourcing urban designs. *Journal of Digital Landscape Architecture*, 8:195–202 **IF: 0.7**

33. **Van Berkel, Derek**, Estabrook§, T., Fox§, N., Bejarano§, R. A., Maillard, L., Gill§, D., Goto, E. A., and Lemos, M. C. (2023a). Ppgisr: An r package for public participatory gis. *SoftwareX*, page 101389 **IF: 3.4; CS: 5.1**

32. Langemeyer, J., Ghermandi, A., Keeler, B., and **Van Berkel, Derek** (2023). The future of crowd-sourced cultural ecosystem services assessments. *Ecosystem Services*, 60:101518 **IF: 7.6; CS: 12.4**

31. Ghermandi, A., Langemeyer, J., **Van Berkel, Derek**, Calcagni, F., Depietri, Y., Vigl, L. E., Fox§, N., Havinga, I., Jäger, H., Kaiser, N., et al. (2023). Social media data for environmental sustainability: A critical review of opportunities, threats, and ethical use. *One Earth*, 6(3):236–250 **IF: 16.2**

2022

30. Liu§, Y., Rao, P., Zhou, W., Singh, B., Srivastava, A. K., Poonia, S. P., **Van Berkel, Derek**, and Jain, M. (2022). Using sentinel-1, sentinel-2, and planet satellite data to map field-level tillage practices in smallholder systems. *Plos one*, 17(11):e0277425 **IF: 3.7**

29. **Van Berkel, Derek**, Kalafatis, S., Gibbons, B., Naud, M., and Lemos, M. C. (2022). Planning for climate migration in great lake legacy cities. *Earth's Future*, 10(10) **IF: 8.2**

28. Morrison, T. H., Adger, W. N., Agrawal, A., Brown, K., Hornsey, M. J., Hughes, T. P., Jain, M., Lemos, M. C., McHugh, L. H., O'Neill, S., et al. (2022). Radical interventions for climate-impacted systems. *Nature Climate Change*, pages 1–7 **IF: 16.2**

27. Fox§, N., Serrano-Vergel, R., **Van Berkel, Derek**, and Lindquist, M. (2022c). Towards gamified decision support systems: In-game 3d representation of real-word landscapes from gis datasets. *Journal of Digital Landscape Architecture*, pages 356–364 **IF: 0.7**

26. Fox§, N., Campbell-Arvai, V., Lindquist, M., **Van Berkel, Derek**, and Serrano-Vergel, R. (2022a). Gamifying decision support systems to promote inclusive and engaged urban resilience planning. *Urban Planning*, 7(2) **IF: 1.8**

25. Mei§, W., Wang, H., Fouhey, D., Zhou, W., Hinks, I., Gray, J. M., **Van Berkel, Derek**, and Jain, M. (2022). Using deep learning and very-high-resolution imagery to map smallholder field boundaries. *Remote Sensing*, 14(13):3046 **IF: 5.0; CS: 7.9**

24. Fox§, N., Chamberlain, B., Lindquist, M., and Van Berkel, D. (2022b). Understanding landscape aesthetics using a novel viewshed assessment of social media locations within the troodos unesco global geopark, cyprus. *Frontiers in Environmental Science*, page 1111 IF: 4.6; CS: 3.1

23. Maguire-Jack, K., Jespersen, B., Korbin, J. E., **Van Berkel, Derek**, and Spilsbury, J. C. (2022). Neighborhood effects on child maltreatment in rural areas. In *Neighborhoods, Communities and Child Maltreatment*, pages 117–129. Springer

22. Wilkins, E. J., **Van Berkel, Derek**, Zhang§, H., Dorning, M. A., Beck, S. M., and Smith, J. W. (2022). Promises and pitfalls of using computer vision to make inferences about landscape preferences: Evidence from an urban-proximate park system. *Landscape and Urban Planning*, 219:104315 IF: 9.1; CS: 14.4

2021

21. Zhang§, H., **Van Berkel, Derek**, Howe, P. D., Miller, Z. D., and Smith, J. W. (2021). Using social media to measure and map visitation to public lands in utah. *Applied Geography*, 128:102389 IF: 4.9; CS: 8.1

2019

20. **Van Berkel, Derek**, Shashidharan, A., Mordecai, R. S., Vatsavai, R., Petrasova, A., Petras, V., Mitasova, H., Vogler, J. B., and Meentemeyer, R. K. (2019). Projecting urbanization and landscape change at large scale using the futures model. *Land*, 8(10):144 IF: 3.9; CS: 3.7

19. Tabrizian, P., Baran, P. K., **Van Berkel, Derek**, Mitasova, H., and Meentemeyer, R. (2020). Modeling restorative potential of urban environments by coupling viewscape analysis of lidar data with experiments in immersive virtual environments. *Landscape and Urban Planning*, 195:103704 IF: 9.1; CS: 14.4

18. Koch, J., Dorning, M. A., **Van Berkel, Derek**, Beck, S. M., Sanchez, G. M., Shashidharan, A., Smart, L. S., Zhang, Q., Smith, J. W., and Meentemeyer, R. K. (2019). Modeling landowner interactions and development patterns at the urban fringe. *Landscape and Urban Planning*, 182:101–113 IF: 9.1; CS: 14.4

2018

17. Gallemore, C., Munroe, D., and **Van Berkel, Derek** (2018). Rural-to-urban migration and the geography of absentee non-industrial private forest ownership: A case from southeast ohio. *Applied Geography*, 96:141–152 IF: 4.9; CS: 8.1

16. Hermes, J., **Van Berkel, Derek**, Burkhard, B., Plieninger, T., Fagerholm, N., von Haaren, C., and Albert, C. (2018). Assessment and valuation of recreational ecosystem services of landscapes IF: 7.6; CS: 12.4

15. **Van Berkel, Derek**, Tabrizian, P., Dorning, M. A., Smart, L., Newcomb, D., Mehaffey, M., Neale, A., and Meentemeyer, R. K. (2018b). Quantifying the visual-sensory landscape qualities that contribute to cultural ecosystem services using social media and lidar. *Ecosystem Services* IF: 7.6; CS: 12.4

14. **Van Berkel, Derek**, Rayfield, B., Martinuzzi, S., Lechowicz, M. J., White, E., Bell, K. P., Colocousis, C. R., Kovacs, K. F., Morzillo, A. T., Munroe, D. K., et al. (2018a). Recognizing the "sparsely settled forest": Multi-decade socioecological change dynamics and community exemplars. *Landscape and Urban Planning*, 170:177–186 IF: 9.1; CS: 14.4

2017

13. Dorning, M. A., **Van Berkel, Derek**, and Semmens, D. J. (2017). Integrating spatially explicit representations of landscape perceptions into land change research. *Current Landscape Ecology Reports*, pages 1–16 IF: 1.6

12. Munroe, D. K., Gallemore, C., and **Van Berkel, Derek** (2017). Hot tub cabin rentals and forest tourism in hocking county, ohio. *Revue économique*, 68(3):491–510 IF: 0.4

11. Pickard, B. R., **Van Berkel, Derek**, Petrasova, A., and Meentemeyer, R. K. (2017). Forecasts of urbanization scenarios reveal trade-offs between landscape change and ecosystem services. *Landscape Ecology*, 32(3):617–634 IF: 5.2

2016

10. van Zanten, B. T., **Van Berkel, Derek**, Meentemeyer, R. K., Smith, J. W., Tieskens, K. F., and Verburg, P. H. (2016). Continental-scale quantification of landscape values using social media data. *Proceedings of the National Academy of Sciences*, page 201614158 IF: 11.1

2014 and older

9. Morzillo, A. T., Colocousis, C. R., Munroe, D. K., Bell, K. P., Martinuzzi, S., **Van Berkel, Derek**, Lechowicz, M. J., Rayfield, B., and McGill, B. (2015). "communities in the middle": Interactions between drivers of change and place-based characteristics in rural forest-based communities. *Journal of Rural Studies*, 42:79–90 IF: 5.1; CS: 8.1

8. **Van Berkel, Derek** and Verburg, P. H. (2014). Spatial quantification and valuation of cultural ecosystem services in an agricultural landscape. *Ecological indicators*, 37:163–174 IF: 6.9; CS: 10.3

7. **Van Berkel, Derek**, Munroe, D. K., and Gallemore, C. (2014). Spatial analysis of land suitability, hot-tub cabins and forest tourism in appalachian ohio. *Applied Geography*, 54:139–148 IF: 4.9; CS: 8.1

6. Munroe, D. K., **Van Berkel, Derek**, Verburg, P. H., and Olson, J. L. (2013). Alternative trajectories of land abandonment: causes, consequences and research challenges. *Current Opinion in Environmental Sustainability*, 5(5):471–476 IF: 7.2; CS: 14.1

5. **Van Berkel, Derek** and Verburg, P. H. (2012). Combining exploratory scenarios and participatory backcasting: using an agent-based model in participatory policy design for a multi-functional landscape. *Landscape ecology*, 27(5):641–658 IF: 5.2

4. **Van Berkel, Derek**, Carvalho-Ribeiro, S., Verburg, P. H., and Lovett, A. (2011). Identifying assets and constraints for rural development with qualitative scenarios: a case study of castro laboreiro, portugal. *Landscape and Urban Planning*, 102(2):127–141 IF: 9.1; CS: 14.4

3. **Van Berkel, Derek** and Verburg, P. H. (2011). Sensitising rural policy: Assessing spatial variation in rural development options for europe. *Land Use Policy*, 28(3):447–459 IF: 7.1; CS: 11.8

2. Lovett, A., Ribeiro, S. C., **Van Berkel, Derek**, Verburg, P., and Firmino, A. (2010). Representing and communicating rural futures through 3d landscape visualizations–experiences from the rufus project. *Peer reviewed proceedings of digital landscape architecture*, pages 261–268 IF: 9.1; CS: 14.4

1. Verburg, P. H., **Van Berkel, Derek**, van Doorn, A. M., van Eupen, M., and van den Heiligenberg, H. (2010). Trajectories of land use change in europe: a model-based exploration of rural futures. *Landscape ecology*, 25(2):217–232 IF: 5.2

Conference Papers and Book Chapters (Total: 7)

7. **Van Berkel, Derek**, Fox, N., Cousins, S., and Zhu, K. (2023b). Can social media help us understand the impact of climate change on forests in the us? *Forum 2023 - Harnessing the Geospatial Data Revolution for Sustainability Solutions*

6. Depietri, Y., Langemeyer, J., **Van Berkel, Derek**, and Ghermandi, A. (2023). Advancing sustainability research through geospatial technology and social media. In *The Routledge Handbook of Geospatial Technologies and Society*, pages 494–504. Taylor and Francis AS

5. Shashidharan, A., **Van Berkel, Derek**, Vatsavai, R. R., and Meentemeyer, R. K. (2018). Futures-amr: Towards an adaptive mesh refinement framework for geosimulations. In *GIScience 2018 International Conference on Geographic Information Science*, pages –. Springer

4. Supak, S., Brothers, G., Ghahramani, L., and **Van Berkel, Derek** (2017). Geospatial analytics for park & protected land visitor reservation data. In *Analytics in Smart Tourism Design*, pages 81–109. Springer

3. Zhang, Q., Vatsavai, R. R., Shashidharan, A., and **Van Berkel, Derek** (2016). Agent based urban growth modeling framework on apache spark. In *Proceedings of the 5th ACM SIGSPATIAL International Workshop on Analytics for Big Geospatial Data*, pages 50–59. ACM

2. Shashidharan, A., **Van Berkel, Derek,**, Vatsavai, R. R., and Meentemeyer, R. K. (2016). pfutures: A parallel framework for cellular automaton based urban growth models. In *International Conference on Geographic Information Science*, pages 163–177. Springer

1. Petrasova, A., Petras, V., **Van Berkel, Derek**, Harmon, B., Mitasova, H., and Meentemeyer, R. (2016). Open source approach to urban growth simulation. *Int Arch Photogramm Remote Sens Spat Inf Sci*, 41:B7

Papers Under Review or Revision

- Lemos, M.C., Herbert H., Jagannathan, K., Wong-Parodi, G., Domingue, S., Maillard, L., Kalafatis, S., **Van Berkel, D.**, Akemi Goto, E., Gill, D., Harrison, T., Jorns, J., & Basaraba, A., Scaling up actionable climate knowledge. *Proceedings of the National Academy of Sciences*

- Maillard, L., Akemi Goto, E., Yin, S., Gill, D., Blevins, Z., Holmes McHugh,L., Van Berkel, D. **Van Berkel, D.**, & Lemos, M.C. Sustainability Knowledge Transitions: evidence of change and impact *Global Environmental Change*

- Victoria Campbell-Arvai, V., Serrano Vergel, R., Lindquist, M. Fox, N., & **Van Berkel, D.**. Plant your park!: Intuitive and aided decision-making in a virtual tree-planting exercise. *Environmental Psychology*

- Yiluan Song, V., Adam Millard-Ball, Nathan Fox, **Derek Van Berkel**, Arun Agrawal, & Kai Zhu. Political ideology and scientific communication shape human perceptions of pollen seasons. *Proceedings of the National Academy of Sciences (PNAS).*

  Maguire-Jack, J., **Van Berkel, D.**, Varney-Chang, O. & Spilsbury, J. Testing the appropriateness of social disorganization theory in the study of neighborhood factors and rural child maltreatment. *Psychosocial Intervention*

Work in Progress

- Dorning, M. **Van Berkel, Derek**, Smith, J., Wilkins, E., Zhang, H., & Beck, S. Social Landscape Values and Iconic Views in Boulder Open Space and Mountain Parks Lands. Target *Ecosystem Services*

- **Van Berkel, Derek**, Koen Tieskens, Boris van Zanten, Jordan Smith, Megan Mehaffey, Anne Neale, & Peter Verburg. Social Media: A "Big Data" Lens for Mapping and Quantifying Human-Nature Interactions. Target *Nature Sustainability*

- Yang, X., Lindquist, M., **Van Berkel, Derek**, Grace, D., & Fox, N. Cross-national comparison of the emotional responses and restorative potential of audio-visual landscape in different seasons. Target: *Landscape and Urban Planning*

- Yang, X., Lindquist, M., **Van Berkel, Derek**, Grace, D., & Fox, N. the relationship between auditory perception and spatial green space in urban scale based on predicted soundscape emotion using machine learning. Target: *Landscape Ecology*

- **Van Berkel, Derek**, Amy Lesen, Brian Stone, & Angela Chalk. Improving community science through photovisualization surveys.

- **Van Berkel, Derek**, Jeremy Baynes, Sean Woznicki,Megan Mehaffey, & Anne Neale. What is the value of America's Nature: a travel cost social media method.

- Darla Munroe, Jeff Olson, **Van Berkel, Derek** Yuxi Zhao & Calleb Gallemore. Multifunctional forest transitions in exurban landscapes reflect heterogeneous land-use and ownership motivations of new arrivals and long-term residents. Major Revisions: *Land Use Policy*.

Other Publications

- Ghermandi, A., **Van Berkel, Derek**, and Langemeyer, J. (2022). Twitter's totter must prompt research rethink. *Nature*, 612(7939):211–211 IF: 64.8

- **Derek Van Berkel**, & Peter Verburg. (2011). De toekomst van het landschap in de Achterhoek: Sturende factoren en wensen voor de toekomst. *Institute for Environmental Studies, VU University*.

- Lael Gilbert, L., Jordan Smith, **Derek Van Berkel**, & Boris van Zanten. (2016). Tapping into social media data to identify the public's most valued landscapes. (IORT-PR-2016-07). *Logan, UT: Institute of Outdoor Recreation and Tourism, Utah State University*.

- Lael Gilbert, Jordan Smith, Brois van Zanten, & **Derek Van Berkel** (2016). Mapping landscape values using social media. (IORT-PR-2016-06). *Logan, UT: Institute of Outdoor Recreation and Tourism, Utah State University*.

GRANT ACTIVITY

Pending & Funded

2025 - 2027   **Biorepositories for Adaptive Resilience to Climate**   NSF - Belmont Forum
Speers, Kelly (PI), Thompson, Cody (Co-PI), Van Berkel, Derek (Co-PI), Roberts , Elizabeth(Co-PI), Cook, Joseph(Co-PI), Becker, Daniel(Co-PI) et al.; *Systems Thinking in Climate Resilience: Facilitating Co-production for Equity and Representation.* Pending: $549,885.

2024 - 2027   **Northeast Ohio Collaborative Climate Resilience Project**   NOAA
Van Berkel, Derek (Co-PI), Roberts et al. Pending: $88,264.

2024 - 2027   **Water Equity Stewardship Program (WESP)**   NOAA
Van Berkel, Derek (Co-PI), Roberts et al. Pending: $333,354.

2024 - 2027   **Great Lakes Climate Resilience Corps**   NOAA
Van Berkel, Derek (Co-PI), Roberts et al. Pending: $255,293.

2024 - 2027   **Future Leaders of Opportunities within the Water industry (FLOW) Detroit**   NOAA
Van Berkel, Derek (Co-PI), Roberts et al. Pending: $399,953.

2025 - 2027   **Systems Thinking in Climate Resilience: Facilitating Co-production for Equity and Representation**   NSF - DISES-EX
Young, Alford (PI), Van Berkel, Derek (Co-PI) Goodspeed, Robert(Co-PI), Corlew, Kati (Co-PI) et al. Pending: $750,000.

2025 - 2028   **DSFAS: Rural Tourism Development with Big Data and Artificial Intelligence**   USDA
Pan, Bing(PI), Van Berkel, Derek (Co-PI) Tomkins, Sabina (Co-PI) et al.; Pending: $186,483.

2025 - 2027   **Using AI and social media data to assess people's opinions on sustainability and conservation in Africa**   Schmidt AI - UMICH
Van Berkel, Derek (PI), Jurgens, David (PI), Tomkins, Sabina (Co-PI), Hardin, Rebecca (Co-PI); *Fellowship for Chai Allah Abdesslam.* Pending: $150,000

2025 - 2027   **Socioeconomic Vulnerabilities among Urban Migrants in the Lake Victoria Basin and Great Lakes Region**   NSF - CLARS
Krantzberg, Gail (PI), Nkiko, Cedric (Co-PI), Van Berkel, Derek(Co-PI) Lemos, Maria, et al. award has been recommended for funding and is awaiting formal approval NSF: $660,573.

2023 - 2027   **Building an Equity-oriented Engagement Framework for the Flood-Wise Communities Process in the Great Lakes and South Central Regions**   NOAA
Van Berkel, Derek (PI), Lemos, Maria (Co-PI), Jorns, Jenna (Co-PI); award has been recommended for funding and is awaiting formal approval from NOAA: $410,000

2024 - 2025   **Enhancing Equitable Outcomes Assessment for the Joe Louis Greenway Development in Detroit: A Community-Centered Digital Monitoring System**   SEAS Sustainability Clinic
Van Berkel, Derek(PI); Funded: **$100,000**.

2024 - 2025   **Integrating climate change and geospatial analytics into next generation surveillance of epidemic prone disease in Ghana**   Center for Global Health Equity Impact Accelerator Grants
Schroeder, Lee(PI), Zelner, Jon(Co Pi), Van Berkel, Derek(Co-PI) et al.; Funded: **$98,560**.

2023   **Wow 4D: Working on Workflows for Data-Driven Design and Decision Making at the University of Michigan**   SEAS Theme Funding
DuRussel, Lisa (PI), Lindquist, Mark (Co-PI), Van Berkel, Derek (Co-PI), Gilpin, Dawn (Co-PI) et al.,; Funded: **$29,985**.

2023	**Building an Equity-oriented Engagement Framework for the Flood-Wise Communities Process in the Great Lakes and South Central Regions** Van Berkel, Derek (PI), Domingue, Simone (Co-PI), Harrison, Teal (Co-PI), Lemos, Maria (Co-PI); Funded: **$500,000**.	**NOAA - CAP BIL Competition**
2023 - 2025	**Artificial intelligence and crowd-sourced big data for biodiversity monitoring** Van Berkel, Derek (PI), Tomkins, Sabina (Co-PI), Carter, Neil(Co-PI); *Fellowship for Nathan Fox,* Funded: **$150,000**.	**Schmidt AI - UMICH**
2022-2024	**Sustainable Innovations XR Collaboratory** Lindquist, Mark(PI), Van Berkel (PI) Fox, Nathan (I), Serrano Vergel, Ramiro(I), Nebeling, Michael(Co-PI), Baker, Wayne, & Uribe, Jose(Co-PI); Funded: **$80,000**	**SEAS Theme Funding**
2021-2026	**Integrated Sciences and Assessments (GLISA)** Lemos, Maria Carmen (PI), Van Berkel, Derek (Co-PI) Rood, Richard (Co-PI), Jorns, Jenna et al.; Subaward Funded: **$4,333,284**	**NOAA - CAP/RISA**
2021	**A tourism decision support system for Western gateway and natural amenity region communities** Smith, J (PI) Van Berkel, Derek (Co-PI) & Rumore, Danya(Co-PI); Subaward Funded: **$7,800**	**NSF: SCC-CIVIC-FA Track B**
2020-2023	**Co-creating high performing landscapes to tackle climate change with citizen science & crowdsourcing** Lindquist, M.(PI), Van Berkel, Derek (Co-PI) & Campbell-Arvai, Victoria (Co-PI); Funded: **$299,944**	**NSF2026: EAGER**
2020-2022	**Supporting Flood Planning in the Great Lakes and Intermountain West regions in the context of climate change impact, future growth and migration** Lemos, Maria Carmen (PI), Van Berkel, Derek (Co-PI), Hughes, Sara (Co-PI), Kalafatis, Scott (Co-PI), Dilling, Lisa(Co-PI), Payton, Liz(Co-PI), & Woelders, Lineke(Co-PI); Funded: **$856,944**	**NOAA**
2020-2023	**Co-producing a Data Coupled Video Game Decision Support System with Urban Forestry Practitioners** Lindquist, M.(PI), Van Berkel, Derek (Co-PI), Campbell-Arvai, Victoria (Co-PI); Funded: **$366,648**.	**USDA - McIntire-Stennis**
2019-2021	**Scaling the perceptual and physiological benefits of urban greenspace** Lindquist, M.(PI), Van Berkel, Derek (Co-PI), Weber, S.(Co-PI); *Translational Research Diamond Program*, Funded: **$15,000.**	**MICHR**
2019	**Community-Science for Measuring and Monitoring the Effects of Greening on the Urban Heat Island Effect, Water Uptake, and Social Challenges** Lesen, A.(PI), Van Berkel, Derek (Co-PI), Chalk, A. (PI), Stone, B.; *Community Engaged Research grant program*, Funded: **$3825.**	**Tulane University**
2018-2019	**Identifying the Benefits of Cultural Resources and Iconic Views Through Social Media** Smith, J (PI) Van Berkel, Derek (Co-PI) Dorning, M (Co-PI), & Beck, S (Co-PI); *Open Space & Mountain Parks Funded Research Program*, Funded: **$14,885**.	**City of Boulder**

Declined

2023	**WildTags: An AI Model for Categorization and Comprehension of Online Discourse on Wildlife** Van Berkel, Derek(PI), Tomkins, Sabina (Co-PI), Carter, Neil (Co-PI); Declined: $25,191.	**SEAS Theme Funding**

2023	**ZECURE: Zero-Carbon, Climate-Ready Urban-Rural Regions with Equity Consideration**	**NSF Global Centers Track 1**

Ramaswami, Anu (PI), Lemos, Maria(Co-PI), Van Berkel, Derek (Co-PI)et al.; . Declined: $677,041.

2023	**WildTags: A conservation-relevant categorization of human-wildlife interactions online.**	**MiDAS - PODS competition, University of Michigan**

Van Berkel, Derek (PI), Tomkins, Sabina (Co-PI), Carter, Neil(Co-PI); *Wild-Tags: A conservation-relevant categorization of human-wildlife interactions online.* Declined: $70,000.

2022-2024	**Maltreatment in Rural Michigan: clusters and spillovers**	**NIH R01**

Maguire-Jack, Katie(PI), Van Berkel, Derek (Co-PI) & Spilsbury, James(Co-PI); Declined: $684,384

2022	**Scaling-Up Transformative Adaptation Using a Crowdsourced Decision-Support Tool**	**NSF - DRMS**

Van Berkel, Derek (PI), Kalafatis, Scott (Co-PI), Lemos, Maria Carmen; . Declined: $371,890.

2022 –	**Mentorship in Environmental STEM Fields Through Problem-Based Curricular Innovation**	**NSF INCLUDES Alliance**

Rebecca Hardin (PI), Charles, Simone (Co-PI), Mondisa, Joi, Whyte, Kyle (Co-PI) Dinov, Ivo, Fabusuyi, Tayo Van Berkel, Derek (I) et al.; Declined $9,055,967

2021-2023	**Co-Producing Resilient Communities with Crowdsourcing and Geo-visualizations**	**NSF: SCC-CIVIC-FA Track B**

Lindquist, M (PI) & Van Berkel, Derek (Co-PI); . Declined: $149,826

2021-2022	**The GNAR Compass: A data-driven app to inform tourism development and hazard preparedness in Western gateway and natural amenity region communities**	**NSF: SCC-CIVIC-FA Track B**

Smith, J (PI), Van Berkel, Derek (Co-PI) Rumore, Danya(Co-PI), & Smith, Hollie(Co-PI); Declined: $167,357

2021-2023	**Co-producing Climate Knowledge and Sustained Engagement in the Great Lakes in Support of Urban Coastal Adaptation**	**NOAA**

Lemos, Maria Carmen (PI), Van Berkel, Derek (Co-PI) & Kalafatis, Scott(Co-PI); Declined: $298,642

2020-2022	**Co-Producing Resilient Communities with Crowdsourcing and Geo-visualizations**	**NSF Focused CoPe**

Lemos, Maria Carmen(PI), Van Berkel, Derek (Co-PI) Chen, Joyce (Co-PI), Kalafatis, Scott (Co-PI), Steinschneider, Scott(Co-PI), Gronewold, Andrew (Co-PI) et al.; . Declined: $4,998,391

2020-2022	**Global Ideas for U.S. Solutions Cities Taking Action to Address Health, Equity, and Climate Change New Orleans**	**Robert Wood Johnson**

Chalk, A.(PI), Van Berkel, Derek (Co-PI), Austin, C.(Co-PI), Prevost, K.(Co-PI), Van Berkel, D.(Co-PI), Reynolds, T.(Co-PI), Doley, K.(Co-PI), Supak, J.(Co-PI), Brown, D.(Co-PI), & Williams, G.(Co-PI); Declined: $699,988

2018	**Identifying Recreation Use Adjacent to Zion National Park through Social Media Data**	**Utah State University**

Smith, J (PI), Van Berkel, Derek (Co-PI) Byrne, B (Co-PI), Dorning, M (Co-PI), & Milnor, A (Co-PI); *Public Lands Initiative Grants*, Declined: $55,358

2017	**Big Data and Social Media: A New Lens for Quantifying Human-Nature Interactions**	**EPA**

Darling, J (PI), Van Berkel, Derek (Co-PI), Davis, A.(Co-PI), Neale, A.(Co-PI), & Mehaffey, M(Co-PI); Declined: **$10,000**

2017	**Environmental health justice: Engaging Raleigh youth in a multi-modal analysis of urban greening initiatives**	**NIEHS**

Cutts, B (PI), Stevenson K. (Co-PI) & Rivers III, L (Co-PI) & Van Berkel (I); Declined: $25,000

| 2016-2018 | **Investigating differential impacts of parks, greenways and neighborhood canopy on human health and well-being across multiple scales** | EPA-G2016-STAR-A1 |

Meentemeyer, R.(PI), Mordecai, R.(Co-PI), Albright, E.(Co-PI), Olander, L. (Co-PI), Van Berkel, Derek (I) & Jowers, K. (Co-PI); Declined $599,710

| 2015 | **Population growth and sea-level rise on a collision course in a low-lying coastal region: consequences for natural and human systems and potential solutions** | NSF - CNH |

Noss, R. (PI), Jacques, P.(Co-PI), Meentemeyer, R. , Reece, J.(Co-PI), Laitner, J.(Co-PI), Giri, C.(Co-PI), Donely, A.(Co-PI), Costanza, J.(Co-PI), Terando, A. (Co-PI), & Van Berkel, Derek (I); Declined $1,578,224

TEACHING

Courses taught

| 2023 – | **Social Media for Sustainability (EAS 677)** | University of Michigan - SEAS |

This graduate seminar delves into the strategic use of social media for sustainability, exploring its role in research, conservation, and climate action. Through interactive sessions, group discussions, live experiments, and case studies, students critically analyze social media's impact on real-world sustainability challenges. The course seeks to enhance comprehension of social media's role in sustainability research, covering effective messaging, platform biases, and ethical/legal considerations in sustainability communication through social media.

| 2023 – | **Communicating Sustainability in the Digital Age (ENVIRON 465)** | University of Michigan - PiTE |

This undergraduate course in the Program for the Environment(PiTE) explores sustainable communication through visuals and community-engaged methods. Students discover innovative ways to engage the public in environmental discussions using social media and decision support tools. The class enhances comprehension of how people interpret visual representations, teaches impactful data visualization in the digital era, and introduces methods for developing and applying decision-support tools. Lectures, discussions, and hands-on assignments with free and open-source software packages and decision support tools equip students with practical communication skills.

| 2020 – | **Introductory (EAS 548) & Advanced Geovisualization (EAS 648)** | University of Michigan - SEAS |

Students gain competency in cartographic principles, data visualization theory, and learn techniques for collecting, analyzing, and presenting geospatial data using open source software. Key to this instruction is learning advanced data science technique for cleaning and quickly mapping and visualizing data. It also provides instruction on how to obtain data from both traditional public repositories and new sources (e.g., social media), and strengthen students' competencies in making their findings open to the public, by developing HTML web-publishable and mobile phone applications.

| 2021 – | **Sustainable Development MOOC (coursera): Geovisualization** | University of Michigan - SEAS |

The course is an introduction to using GIS to create effective geovisualization in the context of the Sustainable Development Goals (SDGs). It provides students with the history of GIS, orients them on its value for understanding the SDGs, and instructs them on cartographic theory (e.g. legends, using color), and GIS fundamentals (e.g. projection, raster and vector datatypes). Students apply these theories by developing their own maps in GoogleSheets and R studio.

2021 – 2022	**Modeling for Landscape Planning (EAS 687)**	University of Michigan - SEAS

The course provides students with a foundational understanding of the theories, methods, and applications in stakeholder engaged landscape planning. The entire semester consists of student-led group projects. Each group is required to develop a 1) a community, and 2) stakeholder profile for their region of study, and tools and strategies to tackle a regional issue using 3) landscape models, and 4) a decision support tool. This is scaffolded by lab instruction in GIS, landscape modelling (e.g. The Invest model, spatial suitability analysis) and stakeholder engagement (e.g. scenario development, PGIS). Project deliverables have been rich, covering diverse regions from Cambodia to Detroit to New Orleans using traditional landscape architecture (e.g design visuals, scenarios) and novel digital techniques (e.g. 3D visualizations, webapplications).

2020	**Frontiers in Land change modeling and landscape planning**	University of Michigan - SEAS

Seminar on the theories, methods, and applications in modeling. This included instruction in land use/cover change detection, model calibration, backcasting, hindcasting, model validation, cullular automata, and agent based models.

2014-2017	**GIS 610 – Landscape Dynamics Seminar**	North Carolina State University

Theories, methods, and applications in land change modelling including model calibration, backcasting, hindcasting, model validation, cullular automata, and agent based models.

2013-2014	**Geography 3751 – The Socioecological Geography of Appalachian Ohio (Undergraduate Field Course)**	The Ohio State University

Thematic focus on land use change, political ecology, conservation and restoration ecology, historical geography, and regional development of Appalachian Ohio

Supervision

- Fang, Xiaoqian (Visiting PhD Candidate - Department of Land Management, School of Public Affairs, Zhejiang University). Title: The function conflicts over agricultural land use in China: identification, driving mechanism, and management. Expected graduation 2025

- Grace, David (PhD Candidate). Title: Modelling Spiritual Values of the Environment. Expected graduation 2027

- Gill, Devin (PhD Candidate). Title: Scaling up the production of actionable climate knowledge in Great Lakes cities through participatory GIS. Co-advisor with Maria Carmen Lemos. Expected graduation 2027

- Hu, Wei (MSc degree 2021). Title: Validating computer vision technologies for social media interpretation of outdoor aesthetics.

- Yang, Xiaohao (MSc degree 2021). Title: Relationship between Perceived Emotional Response to Soundscape and Urban Green Space Based on A Deep Learning Approach. Co-advisor with Mark Lindquist

- Agrawal Bejarano, Rahul (MSc degree 2021). Title: Exploring how extreme weather events, natural disasters and climate change are reported in online news articles for countries with differing climate baselines. Co-advisor with Shelie Miller

- Yifan Luo (MSc degree 2021). Title: Gelman Site 1,4-Dioxane Groundwater Contamination Plume Modeling and Forecasting. Co-advisor with Drew Gronewold

- Mosiniak, Hannah (MSc degree 2020). Title: Redlining and Urban Heat Islands: An analysis of historic housing discrimination and heat exposure.

- Li, Zijun (MSc degree 2020). Title: Assessing heat vulnerability of New Orleans using multitemporal remote sensing and demographic data.

- Koth, Savannah, Power, Jordan, Zhang, Sipeng (MSc degree 2020) & (Masters Project). Title: Detroit's Joe Louis Greenway: Community-Based Methods for Mapping Equity, Connectivity, and Access to Green Public Space Improvements.

- Li, Yan; Xing, Chuhan; Jia, Meng; & Mo, Yanling (Masters Project, 2021). Title: Infrastructure as public space: Meditations on equitable access (Joe Louis Greenway)

PhD Committee

- Alexander Killion (PhD 2021). Title: Coexisting with wildlife in shared landscapes: an interdisciplinary assessment to inform conservation

- Jiayang Li (PhD 2022). Title: Integrating landscape perception into cultural ecosystem services: immediate response to human-dominated landscape and implication for design

- Calli Vander Wilde (PhD 2023). Title: Embeddedness and environmental governance of palm oil supply chains. Expected graduation 2023

- Tara Easter (PhD 2023). Title: Situating turtle harvest sustainability within the broader social-ecological system of the Lower Mississippi River Basin. Expected graduation 2023

- Jake Hawes (PhD Student). Title: Metabolism of urban agriculture. Expected graduation 2024

- Iris Saraeny Rivera Salinas (PhD Student). Title: The role of trait- mediated indirect interactions in the biological control of coffee pests. Expected graduation 2024

- Lisa Maillard (PhD Student). Title: Deconstructing 'Actionable Knowledge': An evaluation of climate knowledge-to-action processes and their scaling-up potential. Expected graduation 2025

- Xiaohao Yang (PhD Student). Title: Mapping Perceived Soundscape Perceptions in Audio-visual Social Media Data. Expected graduation 2027

- Chai Allah Abdesslam (PhD Student - Université Clermont Auvergne, Santé, Agronomie, Environnement). Title: Experiencing nature: A data science approach to quantify cultural ecosystem services using crowdsourced spatial data. Expected graduation 2025.

INVITED PRESENTATIONS AND COLLOQUIA

05/2024	**2024 World Environmental & Water Resources Congress** Guest speakers: *Planning for Climate Migration in Great Lake Legacy Cities*; Milwaukee, WI	**American Society of Civil Engineers**
03/2024	**GRoW Home at University at Buffalo** Panel Discussant: *Buffalo: A Climate Haven?*; Virtual	**University at Buffalo**
11/2023	**Honors Colloquium on Climate Change & Migration** Invited presentation: *Planning for Climate Migration in Great Lake Legacy Cities*; Detroit, MI	**Henry Ford College**
06/2023	**MEDA Annual Meeting - Session: Creating a Welcoming Climate Migration Haven** Invited presentation: *Planning for Climate Migration in Great Lake Legacy Cities* ;Marquette, MI	**Northern Michigan University**
04/2023	**Climate Migration Webinar – Is the Great Lakes Region a Climate Haven?** Invited presentation: *Planning for Climate Migration in Great Lake Legacy Cities*; LINK	**CGLR-MLive Webinar**
11/2022	**Fall Joint Environmental Conference, Environmental Law Section** Invited presentation: *Planning for Climate Migration in Great Lake Legacy Cities*; Lansing, MI	**State Bar of Michigan**
8/2022	**Twin Ports Climate Conversation (TPCC)** Invited presentation: *Considering climate migration in a Great Lakes city: Perceptions and Scenarios*; Virtual	**Minnesota DNR**
4/2022	**Sustainable Food Systems Initiative** Invited presentation, Food for Thought: *"Why Trees are so Important for Urban Agriculture in Frontline Communities"*; Virtual - LINK TO TALK	**University of Michigan**
12/2021	**Fall Meeting** Invited panelist: *The Anthropocene Comes Home: Innovation and Adaptation in Louisiana*; New Orleans, LA	**American Geophysical Union**

| 7/2021 | **Urban Big Data Centre** | **University of Glasgow** |

Invited presentation, Mobile phone and social media data for human-nature research: *"Scalable methods for mapping cultural ecosystem services and community engagement: Social Media, mobile phone data and online applications"*; Virtual

| 4/2017 | **Ecology, Evolution, and Behavior departmental seminar** | **Wake Forest University** |

Invited presentation: *"Leveraging Social media for understanding interactions with the environment"*; Winston-Salem, NC

| 10/2016 | **Academy of Disaster Reduction and Emergency Management** | **Beijing Normal University** |

Invited presentation: *"Leveraging social media for disaster monitoring and ecosystem services assessment"*; Beijing, China

| 9/2016 | **Workshop on Assessment and Economic Valuation of recreational Ecosystem Services of Landscapes in EU Member States** | **Leibniz Universität** |

Invited presentation: *"Leveraging Social Media for Mapping Ecosystem Services"*; Hanover, Germany

| 6/2016 | **Webinar series** | **South Atlantic Landscape Conservation Cooperative** |

Invited presentation: *"The FUTURES model: An open-source tool for understanding where cities will grow in the future and how this will impact conservation efforts"*; Virtual

| 4/2016 | **Department of Geography and Environmental Sustainability** | **Oklahoma University** |

Invited lecture: *"Leveraging Agent Based Models for environmental and resource management"*; Virtual

| 3/2016 | **Nicholas Institute for Environmental Policy Solutions** | **Duke University** |

Invited lecture: *"Understanding Urbanization Threats to Conservation using the FUTURES model"*; Durham, NC

| 3/2014 | **Center for Geospatial Analytics** | **North Carolina State University** |

Invited Presentation: *"Methods for integrating people in Maps: Web scraping, Agent-based models and social-spatial collaborative decision making"*; Raleigh, NC

| 10/2013 | **Department of Geography** | **The Ohio State University** |

Invited Presentation: *"Assessing the spatial variation in the use, management and plans for the forests in Appalachian Ohio"*; Columbus, OH

CONFERENCE PRESENTATIONS

- CHI 2024 | Honolulu, Hawaii. May 11-16: *"Mobilizing online for wildlife conservation – Surfacing appreciation, concern and calls to action on social media."*

- IALE-North America 2024 Annual Meeting | Oklahoma City. April 1-5: *"Exploring Human-Wildlife Interactions on YouTube: Analysis of Global Wildlife Content Using AI and Social Media Data."*

- IALE-North America 2023 Annual Meeting | Riverside, California. March 19-23: *"PPGISr: An R package for Public Participatory GIS."*

- IALE-North America 2022 Annual Meeting | Riverside, California. May 27-31: *"Crowdsourcing social media data can boost understanding of landscape benefits."*

- 2021 IASNR Conference - Virtual Conference | Remote Virtual Conference. June 20-24: *"A Method for Mapping Cultural Ecosystem services for the continental US using Social Media."*

- EDRA52 DETROIT: JUST ENVIRONMENTS 2021 Annual Meeting | Remote Virtual Conference. May 19-22: *"Detroit's Joe Louis Greenway."*

- IALE-North America 2020 Annual Meeting | Remote Virtual Conference. May 11-14: *"Estimating the value of urban cultural ecosystem services for the United States."*

- Ecosystem Services Partnership. 10 years advancing ecosystem services science, policy and practice for a sustainable future. Hannover, Germany October 21 -25, 2019: *"Estimating the value of cultural ecosystem services for the United States."*

- National Outdoor Recreation Conference: Storytelling in Outdoor Recreation People, Places, Landscapes, Cultures, Rapid City, South Dakota May 6-9, 2019: *"Leveraging social media to map America's recreational areas."*

- ACES (A Community on Ecosystem Service) 2018, Washington, D.C., Dec 3-6, 2018: *"EnviroAtlas's national assessment of cultural ecosystem services: Leveraging social media to understand America's most valued landscapes."*

- US-IALE 2018 Annual Meeting, Chicago, Illinois, April 8-12, 2018: *"EnviroAtlas's national assessment of cultural ecosystem services: Leveraging social media to understand America's most valued landscapes."*

- Ecosystem Services Partnership (ESP) world conference, Shenzhen, China, Dec. 11-13, 2017: *"Mapping Cultural Ecosystem services for the continental US using Social Media."*

- US-IALE 2017 Annual Meeting, Baltimore, Maryland, April 9-13, 2017: *"Leveraging social media to analyse and map landscape values and perceptions."*

- NC GIS Conference "30 Rocks GIS", Raleigh, North Carolina, February 22-24, 2017: *"The FUTURES model: A open-source tool for understanding where cities will grow and how it will impact economic development and conservation".*

- 3rd Open Science Meeting – Global land project, Beijing, China October 24–27, 2016: *"The future of Ecosystem Service provisioning at the urban fringe: What have we learned from simulating urban growth strategies using the FUTURES model? ".*

- US-IALE 2016 Annual Meeting, Asheville, North Carolina, April 3-7, 2016: *"Scaling future urban change: Simulation of urbanization scenarios across the southern Atlantic States, U.S."*

- 9th IALE World Congress, Portland, Oregon, July 5–10, 2015: *"Mapping and quantifying cultural ecosystem services at continental and global scales using spatial scraping of web content".*

- 2nd Open Science Meeting – Global land project, Berlin, Germany, March 19–21, 2014: *"Using Agent Based Models and backcasting exercises for understanding social and environmental tradeoffs".*

- AAG Annual Meeting, Los Angeles, April 9–13, 2013: *"A comparison of methods to define agent typologies in land-change research".*

- 4th Ecosystem Service Partnership Conference. Wageningen, Netherlands, October 4–7, 2011:*"Spatial quantification and valuation of cultural ecosystem services in a Dutch case study area".*

- 1st Open Science Meeting – Global land project, Arizona, USA. October 17–19, 2010: *"The use of scenarios and photo realistic images for understanding landscape change possibilities".*

- 2nd Eurogeo meeting, Bratislava, Slovakia, August 13–16, 2009:*"Assessing rural development options using spatially explicit methods".*

- 1st International conference on geographies of children, youth & families, Reading, UK, September 9–13, 2008: *"Rural Cambodian Youth: Changing lives, changing perspectives".*

Organized Conference Sessions & Workshops

4/2024	**IALE-North American Annual Meeting** Special Symposium: *"Leveraging AI Advances in Landscape Ecology"*	**Oklahoma City, Oklahoma**
3/2023	**IALE-North American Annual Meeting** Special Symposium: *"Citizen Science and PPGIS Approaches for the Study of Landscapes"*	**Riverside, California**
11/2022	**1st annual SEAS Hackathon** Special Symposium: *"Social media and visualization for hacking sustainability"*, School for the Environment and Sustainability	**Ann Arbor, Michigan**
4/2022	**IALE-North American Annual Meeting** Special Symposium: *"Novel digital approaches for the study of landscapes: gamification, immersive technologies and big data"*, Virtual	**Riverside, California**
4/2022	**IALE-North American Annual Meeting** Workshop Organizer: *"Accessible Coding Methods for Gathering Social Media Dataset to Assess Landscapes"*, Virtual	**Riverside, California**
4/2020	**IALE-North American Annual Meeting** Special Symposium: *"Novel digital technologies, big data and geovisualization approaches for understanding landscapes"*, Virtual	**Toronto, Canada**
4/2018	**IALE-North American Annual Meeting** Special Symposium: *"Taking a look under the hood of EPA's EnviroAtlas: Ecosystem services, data and tools"*	**Chicago, Illinois**

4/2017	**IALE-North American Annual Meeting**	**Baltimore, Maryland**

Special Symposium: *"Integrated Modeling for the Analysis of Socio-Ecological Systems"*

10/2016	**3rd Open Science Meeting – Global land project**	**Beijing, China**

Special Symposium: *"Coupling Dynamic Land-Change Models with Ecosystem Service Evaluation*

4/2016	**IALE-North American Annual Meeting**	**Asheville, North Carolina**

Special Symposium: *"Modeling with Stakeholders"*

4/2016	**IALE-North American Annual Meeting**	**Asheville, North Carolina**

Workshop organizer: *"Spatio-temporal Modeling with Open Source GIS"*

SERVICE

Editorial & Review Boards

2019 – 2023	**Guest Editor**	**Ecosystem Services**

Assessing cultural ecosystem services through crowdsourced data from social media. Volume 60, April 2023, 101518

2016 -2018	**Guest Editor**	**Ecosystem Services**

Special Issue on Assessment and Valuation of Recreational Ecosystem Services of Landscapes. Volume 31, Part C, June 2018, Pages 289-295.

2019	**Reviewer**	**Ecosystem Services**

4th Open Science Meeting of the Global Land Programme April 24-26| Bern, Switzerland

Reviewer

- *Ambio*, *Nature Sustainability*, *Global Environmental Change*, *Applied Geography*, *Conservation Letters*, *Ecosystem Services*, *Environmental Modelling and Software*, *Landscape Research*, *Landscape and Urban Planning*, *Agriculture, Ecosystems and Environment*, *Frontiers in Ecology and the Environment*, *Land*, *Land Use Policy*, *Ecosystems*, *Integrative Journal of Environmental Sciences*, *International Journal of Biodiversity, Ecosystem Services & Management*, *International Journal of Biodiversity, Ecosystem Services & Management*, *Ecological Indicators*, *Star Protocol*.

Service to Department, School and University

2022 –	**MiDAS Member**	**The Michigan Institute for Data Science**

I am member of MiDAS and my responsibilities include fellow mentorship, and admissions. The Michigan Institute for Data Science strengthens the University of Michigan's preeminence in Data Science and Artificial Intelligence and enables their transformative use in a wide range of research disciplines to achieve lasting societal impact.

2021 –	**SEAS co-representative to GLISA**	**University of Michigan, SEAS**

I am Co-PI of the NOAA funded GLISA project. My duties encompass leadership and organization of the program, peer-review of our small grant program, monthly participation in project meetings, and representing GLISA at various state and federal departments and outreach activities. GLISA works at the boundary between climate science and decision making, striving to enhance Great Lakes communities' capacity to understand, plan for, and respond to climate impacts now and in the future.

2019 –	**Specialization Member**	**University of Michigan, SEAS**

I was part of the rebranding effort for our specialization, a successful change from Environmental Informatics to Geospatial Data Sciences. Our rebranding efforts have increased the profile of our specialization's unique data science approach to spatial and sustainability questions, and we have seen larger enrollment as a result.

| 2019 – 2022 | **Senate Faculty Representative** | University of Michigan |

As an elected faculty senate member, I have represented SEAS in Faculty Senate meetings, providing input on issues of university concern, and communicating issues to the Faculty Senate Chair, and Faculty Senate Office.

| 2014 – 2017 | **Website developer** | Center for Geospatial Analytics, NCSU |

Conceptualization and content creator for the Land dynamics website

| 2013–2014 | **Website manager** | The Ohio State University, Dept. of Geography |

Conceptualization and content creator for the Appalachian Ohio research group

| 2011 | **Organizing Committee** | VU University |

Organizing Committee: graduate field course: *Quantifying and Mapping Ecosystem services*

| 2009 | **Organizing Committee (Treasurer)** | Wageningen University |

Graduate course: *Getting to the bottom of Mount: Kenya Analysis of land dynamics and sustainability*

Memberships

- International Association for Landscape Ecology

- Ecosystem Service Partnership

- Global Land Project

Experience on Funded Grants and Projects

| 2021 – 2026 | **GLISA Phase III** | NOAA |

Lead and Participant: Project 4A: Simulating Multiple and Emerging Stressors for Adaptation Planning Project 5A: Understanding the Role of Stakeholder Diversity on Fit, Legitimacy, and Equity of Co-Produced, Climate-Driven Knowledge (Maria C.L); and Project 6A: Assessing the Role of Co-produced Knowledge in Building Adaptive Capacity (Scott K.)

| 2018 – 2019 | **PI: Thriving Earth Exchange project** | American Geophysical Union |

"New Orlean's 7th Ward Healthy Community Services initiative: Community engagement for understanding the benefits of neighborhood greenspace"

| 2014 – 2015 | **NCSU** | Investigator: South Atlantic Landscape Conservation Cooperative |

"SMART-SLEUTH: Augmenting the SLEUTH Urban Growth Model with New Smart-Growth Scenario-Building Capabilities"

| 2012 – 2014 | **National Science Foundation (BCS-1010314)** | The Ohio State University |

Investigator: "Explaining Socioecological Resilience Following Collapse: Forest Recovery in Appalachian Ohio"

| 2013 – 2015 | **Research Project** | National Socio-Environmental Synthesis Center (SESYNC) |

Investigator: "Rural forest communities at a tipping point? Trends and actionable research opportunities"

| 2008 – 2011 | **7th framework project in the EU** | Wageningen University |

Investigator: "Rural future networks"(Social Science and Humanities, Contract no. 217381)

PRESS AND OTHER MEDIA

- Great Lakes Echo. March 18, 2024. Are Great Lakes cities ready for climate migrants? Kayla Nelsen. LINK

- Stewards Magazine. Fall 2023 issue. Meet the Future: Big Data and Sustainability Solutions. Nayiri Mullinix. LINK

- Stewards Magazine. Summer 2023 issue. Using AI to Accelerate Wildlife Conservation Efforts. Lori Atherton. LINK

- Council of the Great Lakes Region and MLive Webinar. May 18, 2023. Climate Migration Webinar – Is the Great Lakes Region a Climate Haven?. Keynote speaker. LINK

- The University Record. October 11, 2022. Tool helps Great Lakes region plan for climate-change migrants. Jim Erickson, Michigan News. LINK

- Fox 2, Detroit. October 13, 2022. Map shows why more people could move to Michigan, Great Lakes in future. Jack Nissen. LINK

- Michigan Radio, NPR. October 7, 2022. Researchers developing tools to help region plan for potential climate change-related population growth. Emily Blumberg. LINK

- WEMU News, 89.1. October 10, 2022. Climate migrants could come to Great Lakes region as extreme weather grows in coming years. Josh Hakala. LINK

- NBC LX News. April 20, 2022. Is the Great Lakes Region Ready for an Influx of Climate Migrants? Jalyn Henderson. LINK

- Steward Magazine, SEAS. Game ON: Designing high-performing novel landscapes to tackle climate change. Denise Spranger. LINK

- Downtown Newsmagazine, Birmingham Bloomfield. Mar 29, 2022. Climate haven: Will Michigan be a future refuge? Stacy Gittleman. LINK

- UM Sustainable Food Systems Initiative,Fast Food for Thought and Food Literacy for All. April 13, 2022. Why Trees are so Important for Urban Agriculture in Frontline Communities. Derek Van Berkel. LINK

- Popular Science. October 27, 2019. Your 'basic' fall leaf photos could serve as evidence of climate change, Vacation albums are a surprising way to track shifts in the seasonal calendar. Stephanie Spera. LINK

- Science Daily. November 1, 2016. Social media photos priceless for natural resources research: Instagram, Flickr, Panoramio reveal most valued features of European landscapes. LINK

- Eureka, AAAS. October 31, 2016. Your vacay photo social media posts help science says Utah State University researcher Scientists use popular photo-sharing platforms to identify landscape 'hotspots'. LINK

LANGUAGES

English - Native
Dutch - Proficient

HOBBIES

I am an avid hiker and love running. Most of my free time is spent with my kids these days

NON PROFIT

I partner with Healthy Community Services, a New Orleans nonprofit, in fundraising and scientific consultation