

Morgan E. Gorris

History of Employment

Jun 2022 - Current Los Alamos National Laboratory - Staff Scientist

Information Systems and Modeling Group

Feb 2020 - May 2022 Los Alamos National Laboratory - Director's Postdoc Fellow

Information Systems and Modeling Group and Center for Nonlinear Studies

Advisors: Dr. Carrie Manore and Dr. Sara Del Valle

Apr 2019 - Sep 2019 Subcontractor to Industrial Economics, Incorporated

Environmental Protection Agency Contract EP-D-14-031

Degrees

Ph.D. Earth System Science, University of California, Irvine

2019

Thesis: Environmental infectious disease dynamics in relation to climate and climate change Thesis advisors: Dr. James Randerson, Dr. Charles Zender, Dr. Kathleen Treseder

M.S. Earth System Science, University of California, Irvine

2016

B.S.E. Earth System Science and Engineering, University of Michigan

2014

Concentration in Meteorology, Minor in Mathematics

Narrative of Research Experience

I am an Earth system scientist focusing on GeoHealth: the nexus of the Earth, humans, and health. I have a particular interest in how weather and climate influence environmental infectious disease dynamics, such as the geographical distribution of diseases, seasonal dynamics, and interannual variation in cases. An overarching question of my research is: how will the risk of environmental infectious diseases shift in response to climate change? I use a variety of modeling techniques like machine learning and ecological niche modeling. Check out this recent article in the LA Times highlighting some of my work on Valley fever.

Key Publications

Gorris, M. E., Randerson, J. T., Coffield, S. R., Treseder, K. K., Zender, C. S, Xu, C., & Manore, C. A. (In Review, 2022), Climate controls on the spatial pattern of West Nile virus incidence in the United States, *Environmental Health Perspectives*.

Gorris, M. E., Bartlow, A. W., Temple, S. D., Romero-Alvarez, D., Shutt, D. P., Fair, J. M., Kaufeld, K. A., Del Valle, S. Y., Manore, C. A. (2021). Species distribution maps across the Americas of *Culex* mosquitoes, disease vectors for human pathogens. *Parasites & Vectors*, 14, 547. https://doi.org/10.1186/s13071-021-05051-3

- **Gorris, M. E.,** Anenberg, S. C., Goldberg, D. L., Kerr, G. H., Stowell, J. D., Tong, D., Zaitchik, B. F. (2021). Shaping the future of science: COVID-19 highlighting the importance of GeoHealth. *GeoHealth*, 5(5). e2021GH000412. https://doi.org/10.1029/2021GH000412
- **Gorris, M. E.,** Caballero Van Dyke, M. C., Carey, A., Hamm, P. S., Mead, H. L., Uehling, J. K. (2021). A Review of Coccidioides Research, Outstanding Questions in the Field, and Contributions by Women Scientists. *Current Clinical Microbiology Reports*, 8, 114-128. https://doi.org/10.1007/s40588-021-00173-9
- **Gorris, M. E.**, Neumann, J. E., Kinney, P. L., Sheahan, M., Sarofim, M. C. (2021), Economic valuation of coccidioidomycosis (Valley fever) projections in the United States in response to climate change. *Weather, Climate, and Society, 13*(1), 107-123. https://doi.org/10.1175/WCAS-D-20-0036.1
- **Gorris, M. E.,** Treseder, K. K., Zender, C. S., & Randerson, J. T. (2019), Expansion of coccidioidomycosis endemic regions in response to climate change in the United States, *GeoHealth*, *3*, 308-327. https://doi.org/10.1029/2019GH000209

- Honors

Steering Committee Member for the Dust Alliance for North America May 2022 – Current

Author on 5th National Climate Assessment Chapter on Human Health Sep 2021 – Current

R&D 100 Special Recognition: Battling COVID-19 Gold Award (FY21) Oct 2021 EpiCast: Simulating Disease Epidemics with Extreme Detail

Los Alamos National Laboratory Distinguished Performance Award (FY21) Jul 2021 *COVID-19 Modeling & Analysis Team*

Los Alamos National Laboratory Distinguished Postdoc Performance Award (FY21) Apr 2021 Significant contributions towards LANL's COVID-19 response in support of state, local, and federal partners, including the CDC, FEMA, DOE, DoD, and the White House COVID-19 Task Force

Los Alamos National Laboratory Director's Postdoc Fellowship Jan 2020 – May 2022

Los Alamos National Laboratory Center for Nonlinear Studies Postdoc FellowshipJun 2019 – May 2022

National Defense Science and Engineering Graduate Fellowship Sep 2016 – Sept 2019

Professional Society Memberships

American Geophysical Union

Jul 2017 - Current

Secretary of GeoHealth Section (Jan 2022 – Current)
Early Career Scientist Co-chair for GeoHealth Meetings Committee (Jan 2019 – Dec 2021)

American Meteorological Society

Dec 2011 - Current