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EDUCATION

Dec 1999 Ph.D. Natural Resource Sciences, University of Nebraska-Lincoln
Aug 1996 M.S. Agricultural Meteorology, University of Nebraska-Lincoln
May 1993 B.S. (Diplom) Geography, Lomonosov Moscow State University, 1993

PROFESSIONAL EXPERINECE

2019-present Project Scientist IV, Research Applications Laboratory, NSF NCAR
2001-present Head, Geographic Information Science Program, NSF NCAR
2008-present Associate Faculty, Environmental Studies Program, Univ. of Colorado-Boulder
2013-2019 Project Scientist III, Research Applications Laboratory, NCAR
2017 Deputy Director, Climate Science and Applications Program, RAL/NCAR
2009-2013 Project Scientist II, Research Applications Laboratory, NCAR
2006-2009 Project Scientist II, Institute for the Study of Society and Environment, NCAR
2002-2006 Project Scientist I, Environmental and Societal Impacts Group, NCAR
2001-2002 Visiting Scientist, Environmental and Societal Impacts Group, NCAR
2002-2003 Adjunct Assistant Professor, MEng-GIS Program, College of Engineering and Applied
 Sciences, University of Colorado at Denver
1999-2001 Postdoctoral Fellow, Advanced Study Program, NCAR
1993-1999 Research Assistant, School of Natural Resource Sciences, University of Nebraska
1991-1993 Research Assistant, Department of Geography of the World and Geoecology, Lomonosov
 Moscow State University, Moscow, Russia

PUBLICATIONS

Refereed Publications

Huang, K., O. **Wilhelmi**, and M. Staudenmaier, Rising Heat Risks in the US by Mid-21st Century, *npj Natural Hazards* in review.

Wilhelmi, O.V., Morss, R.E., Lazrus, H., Boehnert, J. and Gambill, J.M., 2024. Examining the roles of visualizations in people's understanding of uncertain storm surge forecasts, interpretation of risk, and decision-making. *International Journal of Disaster Risk Reduction*, 107, p.104424.

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- Crank, P.J., O’Lenick, C.R., Baniassadi, A., Sailor, D.J., **Wilhelmi**, O. and Hayden, M., 2024. Sociodemographic Determinants of Extreme Heat and Ozone Risk Among Older Adults in 3 Sun Belt Cities. *The Journals of Gerontology: Series A*, 79(8).
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- Wilhelmi**, O.V., Chamberlain, B.C., Morss, R.E., Demuth, J.L., Walpole, H.D., Boehnert, J., Gambill, J.M., Lazrus, H. and Dobson, J.G., 2023. Integrating place and sense of place into geovisualizations of hurricane storm surge risk. *Weather, climate, and society*, 15(4), pp.1029-1047.
- Shah, S.H., O’Lenick, C.R., Wan, J.S., Ramos-Valle, A., Ash, K.D., **Wilhelmi**, O.V., Edgeley, C.M., Molina, M.J., Moulite, J., Pizarro, C.A.C. and Emard, K., 2023. Connecting physical and social science datasets: challenges and pathways forward. *Environmental Research Communications*, 5(9), p.095007.
- Howe, P.D., **Wilhelmi**, O.V., Hayden, M.H. and O’Lenick, C., 2023. Geographic and demographic variation in worry about extreme heat and COVID-19 risk in summer 2020. *Applied Geography*, 152, p.102876.
- Dilling, L., Daly, M.E., Travis, W.R., Ray, A.J. and **Wilhelmi**, O.V., 2023. The role of adaptive capacity in incremental and transformative adaptation in three large US Urban water systems. *Global Environmental Change*, 79, p.102649.
- Balaican, D., Nichersu, I., Nichersu, I.I., Pierce, A., **Wilhelmi**, O., Laborgne, P. and Bratfanof, E., 2023. Creating knowledge about food-water-energy nexus at a local scale: A participatory approach in Tulcea, Romania. *Environmental Science & Policy*, 141, pp.23-32.
- Bukvic, A., Whittemore, A., Gonzales, J. and **Wilhelmi**, O., 2022. Understanding relocation in flood-prone coastal communities through the lens of place attachment. *Applied Geography*, 146, p.102758.
- Bukvic, A., K. Mandli, D. Finn, A. Merdjanoff, T. Mayo, G. Wong-Parodi, C. Davis, O. **Wilhelmi**, R. Morss, R. Haacker, C. O’Lenick, D. Lombardozzi, and J. Alland, 2022. Advancing Interdisciplinary and Convergent Science for Communities: Lessons Learned through the NCAR Early-Career Faculty Innovator Program. *Bulletin of the American Meteorological Society*, 103(11), pp.E2513-E2532.

- Morss, R. E., **Wilhelmi**, O. V., Demuth, J. L., & Lazrus, H. 2022. *Advancing interdisciplinary, actionable, and convergent research in the atmospheric and related sciences: Findings and recommendations from a project at the National Center for Atmospheric Research* (No. NCAR/TN-572+STR). doi:10.5065/rpt1-s628
- Finn, D., Mandli, K., Bukvic, A., Davis, C.A., Haacker, R., Morss, R.E., O'Lenick, C.R., **Wilhelmi**, O., Wong-Parodi, G., Merdjanoff, A.A. and Mayo, T.L., 2022. Moving from interdisciplinary to convergent research across geoscience and social sciences: challenges and strategies. *Environmental Research Letters*, 17.
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- Tye, M. R., O.V. **Wilhelmi**, A. L. Pierce, S. Sharma, I. Nichersu, M. Wróblewski, W. Goszczyński, J. Wendel, P. Laborgne, M. Heyder, I. Nichersu, The Food Water Energy Nexus in an urban context: connecting theory and practice for Nexus governance. *Earth System Governance*.
- Wilhelmi, O.V.**, P.D. Howe, M.H. Hayden, and C.R. O'Lenick. 2021. Compounding hazards and intersecting vulnerabilities: experiences and responses to extreme heat during COVID-19. *Environmental Research Letters*. doi: 10.1088/1748-9326/ac1760. <http://iopscience.iop.org/article/10.1088/1748-9326/ac1760>
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- Henderson, J., L. Dilling, R. Morss, **O. Wilhelmi**, U. Rick, "We got in the pilot program to learn from it:" Unintended Consequences and Social Learning in Drought Contexts Along the Arkansas River in Colorado." *Weather, Climate and Society*.
- O'Lenick, C.R., Baniassadi, A., Michael, R., Monaghan, A., Boehnert, J., Yu, X., Hayden, M.H., Wiedinmyer, C., Zhang, K., Crank, P.J. and Heusinger, J., P. Hoel, D.J. Sailor, and **O.V. Wilhelmi**. 2020. A Case-Crossover Analysis of Indoor Heat Exposure on Mortality and Hospitalizations among the Elderly in Houston, Texas. *Environmental health perspectives*, 128(12), p.127007.
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- Thomas, D.S.K., **O. V. Wilhelm**, T. Finnessey, and V. Deheza, 2013. A comprehensive framework for tourism and recreation drought vulnerability reduction, *Environmental Research Letters*, 8, 044004.
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Books and book chapters

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Non-Referred Publications and Reports

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- Hart, H., Gower S., **Wilhelmi, O.** and Yagouti A. 2013. Integrated Models For Heat-Health Decision Making: Linking Complex Science to Policy for Heat-Health Decision Making. SIMMER Workshop Report, Toronto (Canada), 40 pp. online at: <http://ral.ucar.edu/csap/events/heat-health-decision-making/>
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- Wilhelmi, O.** 2012. Evaluating influence of water rights on drought vulnerability in Colorado: Spatio-temporal analysis of water use in a variable climate. Progress Report: February 2011-January 2012, NOAA COOP grant NA06OAR4310119
- Morss, R.E. and **Wilhelmi, O.V.** 2011, Extreme Weather and Society: An Integrated Perspective, *Weather and Society Watch*, 5(3), April 2011. A Publication of NCAR's Societal Impacts Program (SIP). On-line: <http://www.sip.ucar.edu/news/>
- Wilhelmi, O.** and H. Brenkert-Smith, 2010, Disaster Risk Assessment in Current and Future Climates, Understanding Risk: Innovation in Disaster Risk Assessment, *Proceedings from the 2010 UR Forum*, The World Bank, pp 10-13.
- Romero Lankao, P., **O. Wilhelmi**, M. Borbor Cordova, S. Sain, R. Nawrotzky, K. Sampson, E. Behrentz, D. Parra, A. León, P. Matus, P. Aldunce, K. Caneo, L. Dawidowski, R. Abrutsky. 2009. Adaptation to the Health Impacts of Air Pollution and Climate Extremes in Latin American Cities. Second year project report, prepared for: Inter-American Institute for Global Change Research.
- Wilhite, D.A., D. M. Diodato, K. Jacobs, R. Palmer, B. Raucher, K. Redmond, D. Sada, K. Helm Smith, J. Warwick, **O. Wilhelmi**. 2007. "*Managing Drought: A Roadmap for Change in the United States*".
- Wilhelmi, O.** 2006. Report from the 2nd NCAR Workshop on *GIS in Weather, Climate and Impacts*, NCAR, Boulder, CO.
- Wilhelmi, O.V.**, D.S.K. Thomas, and M. J. Hayes. 2005. Colorado *resort communities and the 2002-2003 drought: Impacts and lessons learned*. Quick Response Research Report 174. Boulder, CO: Natural Hazards Research and Applications Information Center, University of Colorado. On-line at: <http://www.colorado.edu/hazards/qr/qr174/qr174.html>
- Barlow, M., H. Cullen, B. Lyon, and **O. Wilhelmi**, 2003. Toward calculation of global drought hazard: a pilot study for Asia. Report for the World Bank - Columbia University project: Identification of Natural Disaster Risk Hotspots.

Theses

Wilhelmi, O.V. 1999. Methodology for Assessing Vulnerability to Agricultural Drought: A Nebraska Case Study. Ph.D. Dissertation. University of Nebraska, Lincoln, Nebraska. Advisor: Dr. Donald Wilhite

Vanyarkho (Wilhelmi), O.V. 1996. Changes in Vegetative Characteristics and Gas Exchange Properties of *Phragmites australis* and *Scirpus acutus* in a Mid-Latitude Prairie Wetland ecosystem. M.S. Thesis. University of Nebraska-Lincoln. Advisor: Dr. Timothy Arkebauer

Vanyarkho (Wilhelmi), O.V. 1993. Present status of landscapes and the process of desertification in the region of Egypt and Sudan. Diplom Thesis. Lomonosov Moscow State University, Russia. Advisor: Dr. Elena Milanova.

FUNDED RESEARCH GRANTS

External

2023-2025 NSF HEGS, “The geography of responses to heat risk: linking decision maker and public perceptions” PI, Award amount: \$481,187.

2022-2024 USGS Water Resources Mission Area, “Water Use Data Sharing Feasibility Study in the United States”, PI, Award Amount \$560,578

2020-2022 NSF HEGS RAPID “Responding to extreme heat in the time of COVID-19”, PI, Award amount: \$199,923

2020-2021 USGS, “Developing 21st Century Approaches for Land Cover Change Data Visualization and Dissemination”, Co-PI (J. Boehnert, NCAR – PI), Award amount: \$219,342

2020 Esri: “Consultancy Agreement with Esri”, PI, Award amount: \$50,000

2019-2022 NSF, Geography and Spatial Sciences: “Integrating Sense of Place into Geovisualization of Storm Surge”, PI. Award amount: \$399,583.

2019-2021 NASA ROSES, “Quantification and attribution of past (2005-2018) air quality trends over the Contiguous United States via assimilation of NASA atmospheric composition observations”, co-I (R. Kumar, NCAR – PI).

2018-2022 Belmont Forum/National Science Foundation: “Building Capacity for Integrated Governance at the Food-Water-Nexus in Cities on the Water”, co-PI (J. Wendel, European Institute for Energy Research PI), Total award amount: \$2.2M, NCAR award amount from National Science Foundation: \$490,283

2018-2019 Esri: “Consultancy Agreement with Esri”, PI, Award amount: \$49,999

2017-2018 Esri: “Consultancy Agreement with Esri”, PI, Award amount: \$50,000

- 2015-2019 Western Water Assessment: “NCAR Contribution to Research on the Dynamics of Vulnerability”, NCAR PI, Award amount: \$40,000
- 2015-2019 Environmental Protection Agency / Indoor Air and Climate Change: “Determinants of Indoor and Outdoor Exposure to Ozone and Extreme Heat in a Warming Climate and Health Risks for and Aging Population”, co-PI (D. Sailor, ASU - PI), Award amount: \$999,635
- 2015-2018 NOAA: “Drought Prediction and Risk Analysis: NCAR Drought Center Contribution”, co-PI (M. Hayes, U. Nebraska-Lincoln – PI); NCAR award amount: \$86,311
- 2014 USDA: “Agriculture in a Changing Climate: Enhancing diversity in research, education, and decision-making across scales”, Co-PI (L. Buja, NCAR – PI), Award amount: \$10,000.
- 2013-2019 National Science Foundation Hazards SEES Type 2: Hazard Prediction and Communication Dynamics in the Modern Information Environment, National Science Foundation, co-PI (R. Morss, NCAR – PI), Award amount: \$3,067,993
- 2013-2014 Colorado Water Conservation Board: “Drought Assessment for Recreation & Tourism: Phase 2”, co-PI (D. Thomas, U. Colorado-Denver - PI), Award amount: \$12,432.
- 2012-2013 National Science Foundation Inter-American Institute for Global Change: “Joint IAI-NCAR Colloquium: Knowledge Innovation at the Science-Policy Interface”, Co-PI (PI: Lawrence Buja, NCAR), Award amount: \$250,000.
- 2011-2013 NOAA: “Evaluating Influence of Water Rights on Drought Vulnerability in Colorado: Spatio-Temporal Analysis of Water Use in a Variable Climate”, PI. Award Amount: \$95,037.
- 2011-2012 Colorado Water Conservation Board / University of Colorado at Denver: “Drought Assessment for Recreation and Tourism (DART): Southwestern Colorado. Co-PI (D. Thomas, U. Colorado-Denver – PI). Award amount: \$15, 881.
- 2010-2013 NASA ROSES-2009 Interdisciplinary Research in Earth Science: “System for Integrated Modeling of Metropolitan Extreme Heat Risk (SIMMER)” PI. Award amount: \$1,490,036.
- 2010-2013 NASA/Kiksapa Consulting: “Preparing Indian Country for Climate Change through Technology, Education and Research”, NCAR co-PI (PI: Bull Bennett). Award amount: \$58,152.
- 2010-2012 NOAA SARP: “Evaluating adaptive policies for urban water resource management: Interactions between short-term drought responses and long-term climate change adaptation strategies” co-PI (L. Dilling, U. Colorado - PI). Award Amount: \$37,313.
- 2010 Colorado Department of Natural Resources/AMEC: “Drought Vulnerability Assessment; Drought Mitigation and Response Plan Revision”, collaborator (Graeme Aggett, AMEC - PI). Award amount: \$7,630.

- 2010 National Science Foundation Inter-American Institute for Global Change: “Joint IAI-NCAR Colloquium. Knowledge Integration at the Science-Policy Interface”, co-PI (Peter Backlund, NCAR - PI). Award amount: \$105,000.
- 2009-2010 NOAA NIDIS: “Analysis of the UCRB water demand: characteristics, spatial patterns and assessment of potential vulnerabilities”, PI. Award amount: \$110,130.
- 2007-2009 National Science Foundation Inter-American Institute for Global Change: “Adaptation to the health impacts of air pollution and climate extremes in Latin American cities (ADAPTE)” co-PI (Alejandro Leon, U. Chile - PI), Award amount: \$160,000.
- 2008-2009 Norwegian Research Council: “The Potentials of and Limits to Adaptation in Norway”, Collaborator (K. O’Brien, U. Oslo – PI). Total award amount: \$4.3 M, NCAR award amount: \$43,654.
- 2006-2008 RGI (Space for Geo-Information, the Netherlands): “Atmospheric Data Access for the Geospatial User Community”, Collaborator (J. van de Vegte, KNMI – PI). Total award amount: \$944,000.
- 2003 Quick Response grant, Natural Hazards Center in cooperation with the NSF: “Assessing the Impacts of ‘The Worst Drought in the History of Colorado’ on the Ski Industry” PI. Award amount: \$2,700.
- 2002-2003 National Science Foundation: “Exploration and Demonstration of GIS Interoperability Technologies for the International H₂O Project”, co-PI (T. Betancourt, NCAR - PI). Award amount: \$219,138.

Internal RAL/NCAR/UCAR

- 2023-2026 NSF NCAR: Actionable Climate Science Co-PI (R. McCrary PI), Award amount: \$1.5M
- 2023-2024 NCAR Education, Engagement, And Early Career Development/ DEI: BRIGHT E Workshop Series 2024: Coastal Resilience in a Changing Climate, PI, Award amount: \$28,459
- 2022-2023 RAL Opportunity Fund Proposal: “Accelerating Convergence in Earth System Science through geospatial cyberinfrastructure and climate analytics (ACCESS)”, PI, Award amount: \$36,585
- 2021-2022 NCAR Directorate Diversity, Equity and Inclusion Fund: “NCAR GIS Program BRIGHT E Workshop Series 2021. Geospatial Storytelling”, PI. Award amounts: \$25,849/2021 & \$21,215/2022.
- 2020-2021 UCAR President’s Strategic Initiative Fund – “Development of Hydrologic Risk Assessment Tools for Energy Investment Decisions on United States Tribal Lands”, co-PI (L. Reed – PI) Award amount: \$116,209
- 2019-2020 NCAR Reinvestment Fund: “Convergence Science”, co-PI (R. Morss PI). Award amount: \$180,000

- 2019 RAL Diversity Fund: “BRIGHTHE Workshop Series 2019: Envisioning Risk of Hurricane Storm Surge and Sea Level Rise, PI. Award amount: \$25,000.
- 2018-2019 NCAR Research Applications Laboratory Opportunity fund: Wide Interoperability Nexus for Data Organized Workflows (WINDOW), co-PI (J. Boehnert, PI), Award amount: \$50,000.
- 2018 NCAR Directorate Education and Outreach Fund: “NCAR GIS Program BRIGHTHE Workshop Series 2018: Envisioning Risk of Hurricane Storm Surge and Sea Level Rise, PI. Award amount: \$40,000.
- 2017 Research Applications Laboratory Diversity Fund: “NCAR GIS Program BRIGHTHE Workshop Series 2017. Integrating GIS and atmospheric sciences”, PI. Award amount: \$10,000.
- 2017 NCAR Directorate Diversity Fund: “NCAR GIS Program BRIGHTHE Workshop Series 2017. Integrating GIS and atmospheric sciences”, PI. Award amount: \$21,000.
- 2016-2018 NCAR Weather and Climate Assessment Program: “Exploring Uncertainty in Vulnerability and its Usability in Decision-Making”, PI. Award amount: \$150,054
- 2015-2016 NCAR Directorate Diversity Fund: “NCAR GIS Program BRIGHTHE Workshop Series 2016. Incorporating weather and climate into GIS curricula”, PI. Award amount: \$45,998.
- 2015 United States Department of Agriculture: “Climate Change, Global Food Security, and the U.S. Food System”. Co-PI (L. Buja, NCAR – PI). Award amount: \$50,000.
- 2015 Research Applications Laboratory Diversity Fund: “NCAR GIS Program BRIGHTHE Workshop Series 2015. Incorporating GIS into the Atmospheric Science Curriculum, PI. Award amount: \$33,000.
- 2014-2015 NCAR’s Weather and Climate Impact Assessment Science Program: “Integration of Urban Modeling with GIS and Decision-Making”, PI. Award amount: \$90,494.
- 2012 NCAR NSF Diversity Funding: Workshop on “Enhancing diversity in climate change science and applications: from models to adaptation”, PI. Award amount: \$60,000.
- 2009-2013 NCAR Weather and Climate Impacts Assessment Program: “Urban modeling, land use and future heat waves”, co-PI (J. Feddema, U. Kansas - PI). Award amount: \$141,322.
- 2003-present NCAR: “NCAR GIS Program”, PI. *Annual* award amount: ~\$300,000.
- 2001-2002 NCAR Strategic Initiative Fund: “NCAR GIS Strategic Initiative”, PI. Award amount: \$20,000

COMMUNITY SERVICE, LEADERSHIP, and EDUCATION ACTIVITIES

Service and Leadership - External

- 2023-present Southwest Urban Corridor Integrated Field Laboratory (SW-IFL) Technical Advisory Board
- 2023-2024 AGU Climate Position Statement Panel

2021-2023 Fifth National Climate Assessment, Human Health Chapter
2021 NOAA’s National Severe Storms Laboratory (NSSL) Program Review Panel
2017-2020 Board Member, American Meteorological Society Board on Societal Impacts
2019 Expert reviewer of methodology for Health Impact Assessment (HIA) of the proposed North Houston Highway Improvement Project, Houston, TX
2018 Invited participant, NSF *Coastline and People* scoping session.
2016-2018 Co-Chair of American Meteorological Society Annual Meeting Symposium on Societal Applications
2016-2018 Editor, *Weather, Climate and Society*
215-2018 Science Partner, Washington DC Government’s Challenge on Mitigating Extreme Heat in the District of Columbia, American Geophysical Union Thriving Earth Exchange / ICLEI – Local Governments for Sustainability.
2015-2016 Guest Editor, *Sustainability*
2014-2015 NC CSC Adaptation Working Group
2013 Expert reviewer for IPCC AR5 WG II Chapter 11 “Human Health”
2011-2014 NASA Socioeconomic Data and Applications Center (SEDAC) User Working Group
2012-2014 NSF EPSCoR Track 2 Research Infrastructure Improvement program, “Cyberinfrastructure to Advance High Performance Water Resource Modeling”, External Advisory Committee.
2012 “Conference on Intelligent Data Understanding”, NCAR Program Committee
2011 Invited participant of the National Climate Assessment Societal Indicators Workshop, Washington DC.
2004-2006 NCAR/USA representative/member in COST 719, European Science Foundation Initiative on GIS in Meteorology and Climatology
2003-present Peer-review: Applied Geography; Bulletin of American Meteorological Society; Climate Risk Management; Computers, Environment and Urban Systems; Current Opinion in Environmental Sustainability; Development and Sustainability; Environment; Environmental Health Perspectives; Environmental Research; Environmental Research Letters; International Journal of Biometeorology; International Journal of Climatology; International Journal of Disaster Risk Reduction, International Journal of Geographic Information Science; International Journal of Wildland Fire; Journal of Applied Meteorology and Climatology; Journal of Environmental Management; Journal of Selected Topics in Earth Observations and Remote Sensing; Meteorological Applications; Natural Hazards; Natural Hazards Review; Population and Environment; Science of the Total Environment; Transactions in GIS; Urban Climate; Water Resources Research; Weather, Climate and Society.
2004-present Proposal review: National Science Foundation (NSF), National Institutes of Health (NIH), National Oceanic and Atmospheric Administration (NOAA); National Aeronautics and Space Administration (NASA), Inter-American Institute for Global Change Research (IAI); U.K. Medical Research Council, University of Kansas Research Rising, UK Natural Environment Research Council, UK Research And Innovation.

Service and Leadership - Internal NSF NCAR/UCAR

2024-present RAL Strategic Planning Committee
2023-present NSF NCAR Convergence Science Leadership Team
2023-present NSF NCAR Scientist Assembly Executive Committee
2018-present NSF NCAR Early Career Faculty Innovator Program Core Science Team
2003-present Lead of NSF NCAR GIS Program
2024 NSF NCAR RAL Director Hiring Committee

2019-2022 Co-lead NCAR Reinvestment Project on Convergent Science
 2019-2022 NCAR Education Leadership Team
 2018-2021 NCAR Human Subjects Committee
 2007-2020 NCAR Library Advisory Board
 2017-2018 UCAR Diversity and Inclusion Strategic Planning Committee
 2015-2016 NCAR Data Stewardship Engineering Team (DSET)
 2012-2013 NCAR Strategic Planning Council
 2012-2017 Research Application Laboratory Visitor Committee
 2008-09 NCAR Workforce Management Plan Subcommittee on Staff and Visitor Balance
 2008 NCAR ISSE Strategic Plan Committee
 2008 ISSE Awards Committee
 2007-2008 ISSE Visitor Committee
 2006 SERE Associate Director Evaluation Committee
 2006-2007 NCAR ISSE Scientist II/III Search Committee
 2005-2006 NCAR Data Center Project Committee
 2003-2005 NCAR Institute for the Study of Society and Environment Student Internship Program coordinator
 2001-2003 NCAR GIS Seminar series coordinator
 2000-2003 Environmental and Societal Impacts Group Coffee Talks seminar series, coordinator

Workshops, Conferences, and Colloquia Organization

2024 Exploring Coastal Resilience and Flood Risk through Geospatial Storytelling, BRIGHTHE Workshop Series, August 12-13 2024, Boulder CO
 2023 Co-convener, AGU session, Empowering Resilience to Climatic and Environmental Hazards Through Geospatial Data Science, AFU Fall Meeting, San Francisco, CA
 2022 Exploring Coastal Flood Risk through Geospatial Storytelling, BRIGHTHE Workshop Series, August 1-3 2022, virtual
 2021 Exploring Risk of Coastal Flooding with Geospatial Storytelling, BRIGHTHE Workshop series, Aug 9-11, 2021 (virtual)
 2021 NCAR/USGS Workshop, Stakeholders Perspectives on the Usability of Land Cover and Land Surface Change Information, June 15, 2021, virtual
 2019-2020 Convener, Session, “The Food – Water – Energy Nexus in an Urban Context”, the American Association of Geographers (AAG) Annual Meetings (April 2019, April 2020)
 2019 Envisioning Risk of Hurricane Storm Surge and Sea Level Rise, BRIGHTHE Workshop series, July 31-August 2, 2019, Boulder, Colorado
 2018 Stakeholder workshop, “Extreme Heat and Ozone in Houston: Reducing Future Health Risks of Older Houstonians”, September 6, 2018, Houston, Texas
 2018 Envisioning Risk of Hurricane Storm Surge and Sea Level Rise (BRIGHTHE Workshop series), July 31-August 2, 2018, Boulder, Colorado
 2017 Convener/Chair, Session on GIS in Weather and Climate, the American Association of Geographers (AAG) Annual Meeting, April 2017
 2016 NCAR Diversity Program Workshop, Incorporating weather and climate into GIS curricula, Boulder, USA
 2016 USDA-NCAR Workshop, Climate Change, Global Food Security, and the US Food System Boulder, USA
 2016 Stakeholder workshop, “Extreme Heat and Ozone in Houston: Assessing Health Risks of Older Houstonians”, February 10, 2016 Houston, Texas
 2015 NCAR RAL Diversity Incorporating GIS into the atmospheric science curriculum, Boulder, USA

- 2014 USDA workshop on “Agriculture in a Changing Climate across Scales: Broadening Participation in Research and Decision-Making”, August 25-28 2014, NCAR, Boulder, CO
- 2013 Stakeholder Workshop: Integrated Models For Heat-Health Decision Making Linking Complex Science to Policy for Heat-Health Decision Making, October 24-25, Toronto, Canada
- 2013 Stakeholder workshop: Heat and Health in Houston, August 29, 2013
- 2012-2013 IAI-NCAR Colloquia “Knowledge Integration at the Science-Policy Interface” Santo Domingo, Dominican Republic (CO2012) and Quito, Ecuador (CO2013)
- 2012 NCAR Workshop “Enhancing diversity in climate change science and applications: from models to adaptation” Boulder, CO
- 2010-2013 “System for Integrated Modeling of Metropolitan Extreme heat Risk (SIMMER)” science team annual workshops, Boulder, CO
- 2010 IAI-NCAR Colloquium “Knowledge Innovation at the Science-Policy Interface”, San José, Costa Rica
- 2010 Session “Innovation in Disaster Risk Assessment in Current and Future Climates” at Understanding Risk Conference, World Bank, Washington DC
- 2009-2011 American Geophysical Union Fall Meeting, Session “GIScience”, San Francisco, CA
- 2006-2007 *Geological Society of America Conference: “Managing Drought in the 21st Century: Research, Policy, and Practice”*, Longmont, Colorado
- 2002, 2005 NCAR Community Workshops “GIS in Weather, Climate and Impacts”, Boulder, CO
- 2003-2008 European Geophysical Union Session “GIS in Meteorology and Climatology”, Nice, France and Vienna, Austria
- 2004-2008 Atmospheric Data Modeling Workshops (in conjunction with the AMS annual meetings)

Education, outreach, and teaching

- 2008-present Research Associate, Environmental Studies Program, University of Colorado, Boulder
- 2003- present Interviews with multiple media outlets (television, print, internet) on extreme heat risks
- 2024 SOARS Writing Mentor
- 2021 MPH Practicum for Colorado School of Public Health Preceptor for Elizabeth Gillespie.
- 2021 Guest lecture, University of North Carolina-Charlotte, Department of Geography and Earth Sciences
- 2021 Guest lecture, Colorado State University, Geospatial Centroid Seminar series
- 2021 Guest lecture, Stony Brook University, School of Marine and Atmospheric Sciences
- 2019 Community outreach event on Hurricane Storm Surge Risk, Prospect Baptist Church, Crescent, GA (with Jill Gambill)
- 2019 Colorado School of Mines Mechanical Engineering Distinguished Seminar series
- 2019 Invited speaker, Rotary Club of Boulder Valley, Boulder, CO
- 2018-2019 PhD Committee for Guillaume Rohat, “Integration of socioeconomic scenarios and adaptation options/pathways in assessments of future urban vulnerability to heat stress” Advisor: Johannes Flacke, University of Twente. Joint PhD program between University of Geneva, Switzerland and University of Twente, The Netherlands.
- 2018-2019 MS Thesis Committee for Gina Li, “Forecasting Heat-Related Death Risk in Virginia Climate Divisions”, Advisor: Colleen Reid, University of Colorado-Boulder.
- 2016-2019 American Meteorological Society annual meeting student presentations judge
- 2018 Co-developer and Co-instructor for “Creating Usable Science: Theory and Practice” class, University of Colorado Boulder (with Rebecca Morss and Lisa Dilling)
- 2017 Guest lecture, University of Colorado-Boulder, Geography Department,
- 2013, 2017 Guest lecture, University of Colorado-Boulder, Environmental Studies program,

- 2016-2017 PhD Committee for Martina Cavoli, “Healthcare and Disaster Management: a Geographical Approach”, Sant’Anna School of Advanced Studies in Pisa, Italy, Advisor: Guido Cervone, Penn State University
- 2010- 2015 Guest lecture, University of Colorado-Denver, Department of Geography & Environmental Sciences
- 2014-2015 MS Thesis Committee for Anthony Michelon, “Measuring the effects of drought and associated risks on Colorado’s Recreational activities through Park’s visitation”, Hydro Hazards, University of Grenoble, France, Advisor: Isabelle Ruin, CRNS, France.
- 2014-2015 PhD Committee for Galatea Terti, “Forecasting of flash flood impacts: Integrating the space-time, distribution of social vulnerability”, PhD program at the University of Grenoble, France; Advisors: Isabelle Ruin, CNRS, France and Jonathan Gourley, NOAA, Norman, Oklahoma.
- 2011-2014 Instructor, *NASA Summer Research Experience for Tribal College Undergraduates and Faculty*, Haskell Indian Nations University, Lawrence, KS
- 2013-2014 MPH Practicum for Colorado School of Public Health Preceptor for Ursula Lauper, “Risk Factors for Heat-Related Health Symptoms among Older Adults in Houston”
- 2014 Research mentor for Annie Davis, Science research seminar at Boulder High School, “Neighborhood vulnerability to extreme heat in Denver”
- 2012-2013 Lecturer/Instructor. IAI/NCAR Colloquium, Knowledge Integration at Science – Policy Interface (Santo Domingo, Dominican Republic and Quito, Ecuador)
- 2011-2012 Research Experience for Teachers Institute (*RETI*), NCAR
- 2010 Lecturer/Instructor. IAI/NCAR Colloquium, Knowledge Integration at Science – Policy Interface, San Jose, Costa Rica
- 2009 Science Mentor, Significant Opportunities in Atmospheric Research and Science (SOARS) Program, Boulder, CO (with I. Ruin)
- 2008 Guest lecture, University of Wyoming
- 2007 Guest lecture, University of Oslo, Norway
- 2005-2007 Lecturer/Instructor. WAS*IS, Boulder, CO.
- 2005-2006 SOARS Science Mentor
- 2002 Developed and taught online course “Introduction to Geographic Information Systems.” MEng-GIS Program, College of Engineering and Applied Sciences, University of Colorado at Denver.
- 2001 Co-Instructor, *Global Physical Climatology*, Program in Atmospheric & Ocean Sciences, University of Colorado, Boulder.
- 2001 SOARS Science Mentor

Mentoring and Advising Postdoctoral Researchers

- 2010-2024 Cyndi Castro (SocioHydrology), Shima Shams (Atmospheric Science), Kahning Huang (Geography), Cassandra O’Lenick (Epidemiology), Kevin Ash (Geography), Jennifer Henderson (Studies of Science and Technology), Ryan Michael (Environmental Engineering and Public Health), Theresa Jedd (Political Science), Leiqiu Hu (Geography), Katie Conlon (Epidemiology), Matthew Heaton (Statistics), Tamara Greasby (Biostatistics), Christopher Uejio (Geography)

HONORS and AWARDS

- 2024 Invited panelist, National Academies of Science, Engineering, and Medicine (NASEM) Workshop on Risk Communication for Tropical Cyclones - Session on Applying Risk Communication Lessons from other Hazards to the Tropical Cyclone Context.

- 2023 Nominated for UCAR Outstanding Accomplishment Award for Leadership (for Early Career Faculty Innovator Program)
- 2023 Invited panelist, National Academies of Science, Engineering, and Medicine (NASEM), Board on Environmental Change and Society (BECS) - Discussion of priorities and needs in addressing the social and behavioral dimensions of heat health in the face of climate change in the United States.
- 2023 Keynote speaker - Climate Specialty Group of the American Association of Geographers, AAG Annual Meeting
- 2020 Invited panelist, Purpose-Driven Practical Predictability at the National Academies of Sciences, Engineering, and Medicine Workshop on Earth System Predictability R&D
- 2019 Keynote speaker - Science Symposium, Esri International User Conference
- 2017 UCAR Outstanding Accomplishment Award for Diversity.
- 2017 UCAR Outstanding Accomplishment Award for Publication (Monaghan et al. 2016, On the seasonal occurrence and abundance of the Zika virus vector mosquito *Aedes aegypti* in the contiguous United States. *PLoS currents*.)
- 2016 Invited participant, Meeting of the *Committee on Advancing Social and Behavioral Science Research and Application within the Weather Enterprise*, National Academies of Sciences, Engineering, and Medicine, Boulder, CO.
- 2015 UCAR Outstanding Accomplishment Award for Education and Outreach.
- 2014 Invited Participant, *Developing Sustainable Networks of Women Scientists for Addressing Issues of Disasters Related to Weather and Changing Climate*, Montego Bay, Jamaica.
- 2013 Member of NCAR Strategic Planning Council
- 2011 Invited participant, Workshop on Urban Meteorology, *Board on Atmospheric Sciences and Climate*, National Academies of Sciences, Engineering, and Medicine, Woods Hole, Massachusetts.
- 2006, 2007 Nominated for UCAR Education and Outreach Outstanding Accomplishment Award (for Weather and Society * Integrated Studies program)
- 2005 Selected participant, NCAR/UCAR Leadership Academy
- 2005 Special Achievement in GIS Award. ESRI International User Conference
- 2001 Selected participant, American Meteorological Society Summer Policy Colloquium
- 1999-2001 Advanced Study Program Post-Doctoral Fellowship, NCAR, Boulder, CO
- 1997 Student Travel Award, Summer Colloquium on: A Systems Approach to ENSO. NCAR, Boulder, CO.
- 1994 Student Travel Award, NASA-NOAA Summer school for Earth sciences. Processes of Global Change. CALTECH, Pasadena, CA.
- 1991 Student Travel Award, International Congress of Scientists and Engineers "Challenges", Science and Peace in a Rapidly Changing Environment, Berlin, Germany.

SELECTED CONFERENCE PRESENTATIONS (last 10 years)

* denotes invited presentation

- 2024 Wilhelm, O., P. Howe, M. Hayden. Extreme Heat Experiences, Risk Perceptions, and Responses among the US Public and Local Policy Makers, AMS Annual Meeting, 15th Conference on Environment and Health, January 28-30, 2024 Baltimore, MD

*Wilhelmi, O. Early Warning Systems Panel, AMS Annual Meeting, January 28-30, 2024 Baltimore, MD

- *Wilhelmi, O. Early Career Faculty Innovator Program: Getting Started in Convergence Research, July 31, 2023.
- 2023 *Wilhelmi, O. The Geography of Extreme Heat Risk, AAG Annual Meeting, Denver, CO, March 26 2023
- *Wilhelmi, O. Reducing Extreme Heat Risks, Climate Transitions Dialog, Denver, Colorado Sept 25-26, 2023
- 2022 *Wilhelmi, O. Climate impacts, vulnerability, and response options, Colorado State University, Fort Collins Colorado, April 28 2022
- *Wilhelmi, O. (2022) Understanding and reducing weather and climate risks, Old Dominion University, Center for Coastal Oceanography, Spring 2022 Seminar Series, March 28, 2022.
- *Wilhelmi, O. (2022) Compounding Hazards and Health, Presidential session on Health Security AMS Annual Meeting January 24, 2022.
- 2021 Wilhelmi, O., J. Demuth, R. Morss, B. Chamberlain, People's Understanding of and Responses to Visual Messages of Storm Surge Risks through Sense of Place Constructs, Society for Risk Analysis Annual Meeting December 9, 2021
- *Wilhelmi, O. Extreme heat. *TAMEST Natural Hazards Summit: Responding to and Mitigating the Impacts, October 19 2021 (invited)*
- Wilhelmi, O. Food-Water-Energy Nexus & Resilience Research, Creating Interfaces Workshop, October 11 2021
- Wilhelmi, O., P. Howe, M. Hayden, and C. O'Lenick Compounding hazards and intersecting vulnerabilities: Experiences and responses to extreme heat during COVID-19." NCAR Research Applications Laboratory Climate, Weather, and Health Seminar Series. September 2021.
- Wilhelmi, O., R. Morss, B. Chamberlain, J. Boehnert, J. Demuth, H. Lazrus, J. Gambill, G. Dobson, D. Mezzanatto, *Integrating Sense of Place into Geovisualizations of Hurricane Storm Surge*. AAG Annual Meeting, April 9, 2021.
- Wilhelmi, O., P. Howe, M. Hayden, C. Olenick, *Responding to extreme heat in the time of COVID-19*. COVID Information Commons Webinar, April 14, 2021
- 2020 Wilhelmi, O., P. Howe, M. Hayden, C. O'Lenick. *Responding to extreme heat in the time of COVID-19: Results from a three-wave U.S. national survey*. AGU Fall Meeting 2020 (virtual)
- Wilhelmi, O. Food-Water-Energy Nexus: Connecting Theory to Practice, AAG annual meeting, April 6, 2020, Denver, CO (virtual).
- Wilhelmi, O., C. O'Lenick, M. Hayden, D. Sailor, A. Baniassadi, Assessing Indoor Health Risks and Vulnerability of Older Adults to Heat and Ozone, AMS Annual Meeting, January 14, 2020, Boston, MA

- 2019 Vulnerability to Heat and Ozone among Older Adults: Results from a Household Survey in Houston, TX, AGU Fall Meeting, December 11, 2019 San Francisco, CA
- *Data behind the Maps: Connecting People and Place, AGU Union Session: Earth Science Data Access and Integration at the Nexus of Science, Policy, and Society, AGU Fall Meeting, December 12, 2019 San Francisco, CA
- Envisioning Hurricane Storm, Surge Risk. Esri Ocean and Atmospheric GIS Forum, Redlands, CA, November 5 2019.
- *Assessing and Reducing Heat Health Risks, Seminar 14 - Modeling And Mitigating Effects Of Heat Waves At Different Scales, ASHRAE Building Performance Analysis Conference, September 27 2019, Denver, CO
- *Understanding and Reducing Climate Risks, Presentation to the members of the House Select Committee on the Climate Crisis, July 31, 2019, Boulder, CO
- *Science in Service to Society (with J. Boehnert), Science Symposium, Esri International User Conference, Keynote presentation, July 9 2019
- *Extreme Heat and Ozone: Assessing Indoor and Outdoor Risks, Climate Change (with G. Rohat and C. O'Lenick), *Human Migration and Health: Integrating social and environmental data to accelerate innovative science*, U. Colorado-Boulder, May 21, 2019
- Food-Water-Energy Nexus. *Creating Interfaces* Stakeholder workshop, Wilmington DE, April 6, 2019
- Building Capacity for Integrated Governance at the Food-Water-Energy Nexus (with A. Sarzynski, W. Goszczyński, M. Wróblewski, I. Nichersu, D. Balaican, M. Tye, P. Hoel, P. Laborgne, J. Wendel), *Association of American Geographers Annual Meeting*, Washington DC, April 4, 2019
- Exploring Uncertainty in Vulnerability and its Usability in Decision-Making, *American Meteorological Society Annual Meeting* (with P. Romero Lankao and I. Puchardo), Phoenix, AZ, January 7, 2019.
- 2018 Extreme Heat and Ozone in Houston: Assessing and Reducing Health Risks, *AGU Fall Meeting*, (with D. Sailor, C. O'Lenick, R. Michael, M. Hayden, A. Baniassadi, A. Monaghan, C. Wiedinmyer, P. Crank), Washington DC December 11, 2018
- Vulnerability to Extreme Heat and Ozone: Results from Houston Household Survey, *Heat and Ozone in Metropolitan Environments: Assessing Indoor Risks (HOME AIR)* Stakeholder workshop, Houston, TX, September 6, 2018.
- Urban Vulnerability to Extreme Heat in a Changing Climate, *International Geographical Union thematic conference: Practical Geography and XXI Century Challenges*, (with M. Hayden, A. Monaghan, M. Heaton, K. Oleson and J. Boehnert), Moscow, Russia, June 6, 2018.
- Visualizing Hurricane Storm Surge Forecast: Results from Focus Groups Research. *American Association of Geographers Annual Meeting* (with J. Boehnert, H. Lazrus, R. Morss, J. Gambill), New Orleans, LA, April 13, 2018.

- Envisioning flood risk: Communicating storm surge forecast through maps and 3D visualizations, *American Meteorological Society Annual Meeting*, (with J. Boehnert, H. Lazrus, J. Gambill, J. Demuth, R. Morss, K. Dickinson, C. Langemeier), Austin, TX, January 9 2018.
- 2017 New approaches for visualizing hurricane and storm surge risk, *Association of American Geographers Annual Meeting*, Boston MA April 9, 2017 (with J. Boehnert, H. Lazrus, J. Demuth and R. Morss).
- *Reducing Vulnerability to Extreme Heat through Interdisciplinary Research and Stakeholder Engagement, *12th Symposium on Societal Applications: Policy, Research and Practice*, 97th American Meteorological Society Annual Meeting, 22-26 January 2017 (with M. Hayden).
- *Geographic Information Systems , *16th Annual AMS Student Conference*, 97th American Meteorological Society Annual Meeting, 22-26 January 2017.
- *Observations of Communities *Special Symposium on Individual, Social, and Cultural Observations in Weather and Climate Contexts*, 97th American Meteorological Society Annual Meeting, 22-26 January 2017.
- Hazards and Storm Surge Risk. *ESRI International User Conference*, San Diego, CA, July 2017 (with J. Boehnert, H. Lazrus, J. Gambill, J. Demuth, R. Morss, K. Dickinson)
- Communicating storm surge risk through 2D and 3D visualizations, *Esri Ocean GIS Forum*, Redlands, CA November 2, 2017 (with J. Boehnert, H. Lazrus, J. Gambill, R. Morss)
- *GIS and Spatially Enabled Web Applications. NCAR/CDC Workshop on Weather, Climate and Health, Boulder, CO. July 19, 2017.
- Representing climate in spatial vulnerability assessments. *BRIGHTE Workshop Series: Integration GIS with Atmospheric Sciences*, June 7 2017.
- 2016 Extreme Heat and Human Health in North American Cities, *Association of American Geographers Annual Meeting*, March 30 2016, San Francisco, CA (with M. Hayden and A. Monaghan)
- Convergence Research Opportunities, RAL Advisory Panel, Boulder Colorado, November 8, 2018.
- NCAR GIS Program, *Incorporating Weather and Climate into GIS Curriculum* (BRIGHTE workshop), July 6, 2016, Boulder, CO
- Representing Climate in Spatial Vulnerability Assessments, *Esri International User Conference*, San Diego, CA.
- *Best Practices in Representing Climate Exposure, *SESYNC Pursuit on Climate Vulnerability Mapping Workshop* 17-19 February 2016, Annapolis, MD.
- Extreme Heat and Human Health: Integrated Modeling of Metropolitan Extreme heat Risk (SIMMER), *Extreme Heat and Ozone in Houston: Assessing Health Risks of Older Houstonians Workshop*, February 10, 2016 Houston, Texas

- 2015 *Putting Climate on a Map, *Climate and Human Security Symposium*, 3 - 4 June 2015 University of Colorado at Boulder, Boulder, CO (with J. Boehnert and K. Sampson)
- *Interdisciplinary science, spatial data interoperability, and knowledge sharing using GIS, *Open Geospatial Consortium Technical Committee/Policy Committee Meetings*, 1 - 4 June 2015 NCAR, Boulder CO (keynote)
- *Understanding Population Risk to Weather Disasters in a Changing Climate. *Understanding Risk Boulder*, October 23, 2015, Boulder, CO (keynote)
- Extreme heat and human health: using GIS in an interdisciplinary project. *Incorporating GIS into the Atmospheric Science Curriculum NCAR GIS Program BRIGHTE Workshop Series*, June 24-26, 2015, NCAR, Boulder, CO
- 2014 Extreme Heat Risk and Human Health. Society of Risk Analysis Annual Meeting, December 8, Denver, CO (with M. Hayden, J. Boehnert, S. Gower, and D. Banerjee).
- *NCAR Climate Science and Application Program, Homeland Infrastructure Foundation-Level Data (HIFLD) Working Group, *Climate Data and Mapping for Infrastructure Resilience Conference*, November 13-14, 2013, USGS, Reston, VA and Virtual Meeting (with L. Buja).
- Building Local Capacity for Heat Hazard Mitigation and Climate Change. *Esri International User Conference*, San Diego, CA.
- *NCAR GIS Program: Interdisciplinary Effort to Foster Collaborative Science, Spatial Data Interoperability, and Knowledge Sharing, The National Research Council of Thailand / NCAR Meeting, 20 April, 2014, Boulder CO.
- Extreme Heat and Human Health: Science-Policy Interface, *Stanley A. Changnon Symposium, the AMS 94th Annual Meeting*, 4 February 2014, Atlanta, GA (with M. Hayden, J. Boehnert, and U. Lauper).