

Jeremy Everett Diem

Department of Geosciences
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Education

- 2000: Ph.D. (Geography; minor in Remote Sensing and Spatial Analysis), The University of Arizona
1997: M.A. (Geography), The University of Arizona
1994: B.S. (Earth Sciences, minor in Geography), The Pennsylvania State University

Major Field

Applied Climatology

Employment

- 2018-present: Professor, Department of Geosciences, Georgia State University
2007-2018: Associate Professor, Department of Geosciences, Georgia State University
2006-2007: Assistant Professor; Department of Geosciences, Georgia State University
2001-2006: Assistant Professor; Department of Anthropology and Geography, Georgia State University
2000-2001: Research Associate; System for the Management, Observation, and GIS Modeling of Air Pollution (SMOGMAP) and NSF's Human-Environment Regional Observatory (HERO)

Refereed Journal Articles; * indicates advisees or students in a class

55. Olamiposi, F.* and **J.E. Diem**. 2025. Observed precipitation enhancement and suppression downwind of a major U.S. city. *Urban Climate*. 62. <https://doi.org/10.1016/j.uclim.2025.102562>.
54. **Diem, J.E.** and O. Oluwatosin*. 2024. Intra-annual variability of urban effects on streamwater quality: An examination of watersheds in the Atlanta, Georgia USA region. *Journal of Hydrology*. 641, 131762. <https://doi.org/10.1016/j.jhydrol.2024.131762>.
53. **Diem, J.E.** and P.O. Bonsu*. 2023. Recent variability and trends and projected changes in precipitation in the southeastern United States: A focus on the Apalachicola-Chattahoochee-Flint River Basin. *Theoretical and Applied Climatology*. 155, 3147–3162. <https://doi.org/10.1007/s00704-023-04811-8>.
52. **Diem, J.E.**, D.K Carlton*, L.A. Pangle. 2023. Evapotranspiration from developed land and urban watersheds in a humid subtropical climate. *Water Resources Research*, 59, e2023WR035276, <https://doi.org/10.1029/2023WR035276>.
51. **Diem, J.E.**, J. Salerno, K. Bailey, B. Konecky. 2023. Comparisons of reanalysis and measured lower-troposphere winds over a portion of equatorial Africa. *International Journal of Climatology*, 43, 7082-7098. <https://doi.org/10.1002/joc.8253>.

50. **Diem, J.E.**, L.A. Pangle, R.A. Milligan, E.A. Adams. 2022. How much water is stolen by sewers? Estimating watershed-level inflow and infiltration throughout a metropolitan area. *Journal of Hydrology*, 614:128629. <https://doi.org/10.1016/j.jhydrol.2022.128629>.
49. Salerno, J., K. Bailey, **J. Diem**, B. Konecky, R. Bridges, S. Namusis, R. Bitariho, M. Palace, J. Hartter. 2022. Smallholder knowledge of local climate conditions predicts positive on-farm outcomes. *Weather, Climate, and Society*, 14:671-680. <https://doi.org/10.1175/WCAS-D-21-0131.1>.
48. Pangle, L.A., **J.E. Diem**, R. Milligan, E. Adams, A. Murray. 2022. Contextualizing inflow and infiltration within the streamflow regime of urban watersheds. *Water Resources Research*, 58. <https://doi.org/10.1029/2021WR030406>.
47. Ageet, S., A.H. Fink, M. Maranan, **J.E. Diem**, J. Hartter, A.L. Ssalid, P. Ayabagaboe. 2022. Validation of satellite rainfall estimates over equatorial East Africa. *Journal of Hydrometeorology*. 23:129-151. <https://doi.org/10.1175/JHM-D-21-0145.1>.
46. **Diem, J.E.**, L.A. Pangle, R.A. Milligan, E.A. Adams. 2021. Intra-annual variability of urban effects on streamflow. *Hydrological Processes*, 35. <https://doi.org/10.1002/hyp.14371>.
45. **Diem, J.E.**, J. Salerno, M.W. Palace, K. Bailey, J. Hartter. 2021. Teleconnections between rainfall in equatorial Africa and tropical sea-surface temperatures: A focus on western Uganda. *Journal of Applied Meteorology and Climatology*, 60:967-979. <https://doi.org/10.1175/JAMC-D-21-0057.1>
44. **Diem, J.E.**, H.S. Sung*, B.L. Konecky, M.W. Palace, J. Salerno, J. Hartter. 2019. Rainfall characteristics and trends – and the role of Congo westerlies – in the western Uganda transition zone of equatorial Africa from 1983 to 2017. *Journal of Geophysical Research – Atmospheres* 124:10712-10729. <https://doi.org/10.1029/2019JD031243>
43. Dai, D., F.B. Neal, **J. Diem**, D.M. Deocampo, C.E. Stauber, T.A. Dignam. 2019. Confluent impact of housing and geology on indoor radon concentrations in Atlanta, Georgia, United States. *Science of the Total Environment* 668:500-511. <https://doi.org/10.1016/j.scitotenv.2019.02.257>
42. **Diem, J.E.**, B.L. Konecky, J. Salerno, J. Hartter. 2019. Is equatorial Africa getting wetter or drier? Insights from an evaluation of long-term, satellite-based rainfall estimates for western Uganda. *International Journal of Climatology* 39:3334-3347. <https://doi.org/10.1002/joc.6023>
41. Salerno, J., **J.E. Diem**, B.E Konecky, J. Hartter. 2019. Recent intensification of the seasonal rainfall cycle in equatorial Africa revealed by farmer perceptions, satellite-based estimates, and ground-based station measurements. *Climatic Change* 153:123-129. <https://doi.org/10.1007/s10584-019-02370-4>
40. Salerno, J., C.A. Chapman, **J.E. Diem**, N. Dowhaniuk, A. Goldman, C.A. MacKenzie, P.A. Omeja, M.W. Palace, R. Reyna-Hurtado, S.J. Ryan, J. Hartter. 2018. Park isolation in anthropogenic landscapes: Land change and livelihoods at park boundaries in the African Albertine Rift. *Regional Environmental Change* 18:913-928. <https://doi.org/10.1007/s10113-017-1250-1>
39. **Diem, J.E.**, T.C. Hill*, R.A. Milligan. 2018. Diverse multi-decadal changes in streamflow within a rapidly urbanizing region. *Journal of Hydrology* 556:61-71. <https://doi.org/10.1016/j.jhydrol.2017.10.026>

38. Berens, A.S.^{*}, **J.E. Diem**, C.E. Stauber, D. Dai, S. Foster, and R. Rothenberg. 2017. The use of gamma-survey measurements to better understand radon potential in urban areas. *Science of the Total Environment* 607-608:888-899. <https://doi.org/10.1016/j.scitotenv.2017.07.022>
37. **Diem, J.E.**, C.E. Stauber, and R. Rothenberg. 2017. Heat in the southeastern United States: characteristics, trends, and potential health impact. *PLOS ONE* 12(5):e0177937. <https://doi.org/10.1371/journal.pone.0177937>
36. **Diem, J.E.**, J. Hartter, J.D. Salerno, E. McIntyre^{*}, and A.S. Grandy. 2017. Comparison of measured multi-decadal rainfall variability with farmers' perceptions of and responses to seasonal changes in western Uganda. *Regional Environmental Change* 17:1127–1140. <https://doi.org/10.1007/s10113-016-0943-1>
35. Stauber, C., D. Dai, S. Chan, **J. Diem**, S. Weaver, and R. Rothenberg. 2017. A pilot study to examine exposure to residential radon in under sampled census tracts of DeKalb County, Georgia in 2015. *International Journal of Environmental Research and Public Health* 14, 332. <https://doi.org/10.3390/ijerph14030332>.
34. Ryan, S.J., M. Palace, J. Hartter, **J.E. Diem**, C.A. Chapman, and J. Southworth. 2017. Population pressure and global markets drive a decade of forest cover change in Africa's Albertine Rift. *Applied Geography* 81:52–59. <https://doi.org/10.1016/j.apgeog.2017.02.009>
33. Hartter, J., N. Dowhaniuk, C.A. MacKenzie, S.J. Ryan, **J.E. Diem**, M.W. Palace, and C.A. Chapman. 2016. Perceptions of risk in communities near parks in an African biodiversity hotspot. *Ambio* 45:692-705. <https://doi.org/10.1007/s13280-016-0775-8>
32. Ryan, S.J., J. Southworth, J. Hartter, N. Dowhaniuk, R. Fuda, and **J.E. Diem**. 2015. Household level influences on fragmentation in an African park landscape. *Applied Geography* 58:18–31. <https://doi.org/10.1016/j.apgeog.2015.01.005>
31. Hartter, J., S.J. Ryan, C.A. MacKenzie, A. Goldman, N. Dowhaniuk, M. Palace, **J.E. Diem**, and C.A. Chapman. 2015. Now there is no land: A story of ethnic migration in a protected area landscape in western Uganda. *Population and Environment* 36:452–479. <https://doi.org/10.1007/s11111-014-0227-y>
30. **Diem, J.E.**, S.J. Ryan, J. Hartter, and M.W. Palace. 2014. Satellite-based rainfall data reveal a recent drying trend in central equatorial Africa. *Climatic Change* 126:263–272. <https://doi.org/10.1007/s10584-014-1217-x>
29. **Diem, J.E.**, J. Hartter, S.J. Ryan, and M.W. Palace. 2014. Validation of satellite rainfall products for western Uganda. *Journal of Hydrometeorology* 15:2030–2038. <https://doi.org/10.1175/JHM-D-13-0193.1>
28. **Diem, J.E.**, 2013. The 1970 Clean Air Act and termination of rainfall suppression in a U.S. urban area. *Atmospheric Environment* 75:141–146. <https://doi.org/10.1016/j.atmosenv.2013.04.041>
27. **Diem, J.E.**, 2013. Response to comments on “Influences of the Bermuda High and atmospheric moistening on changes in summer rainfall in the Atlanta, Georgia region, the United States.” *International Journal of Climatology* 33:3086–3088. <https://doi.org/10.1002/joc.3654>
26. **Diem, J.E.**, D.P. Brown, and J. McCann. 2013. Multi-decadal changes in the North American monsoon anticyclone. *International Journal of Climatology* 33:2274–2279. <https://doi.org/10.1002/joc.3576>

25. **Diem, J.E.** 2013. Comments on "Changes to the North Atlantic subtropical high and its role in the intensification of summer rainfall variability in the southeastern United States." *Journal of Climate* 26:679–682. <https://doi.org/10.1175/JCLI-D-11-00390.1>
24. **Diem, J.E.**, 2013. Influences of the Bermuda High and atmospheric moistening on changes in summer rainfall in the Atlanta, Georgia USA region. *International Journal of Climatology* 33:160–172. <https://doi.org/10.1002/joc.3421>
23. **Diem, J.E.**, M.A. Hursey*, I.R. Morris*, A.C. Murray*, and R.A. Rodriguez*. 2010. Upper-level atmospheric circulation patterns and ground-level ozone in the Atlanta metropolitan area. *Journal of Applied Meteorology and Climatology* 49:2185–2196. <https://doi.org/10.1175/2010JAMC2454.1>
22. **Diem, J.E.** 2009. Atmospheric characteristics conducive to high-ozone days in the Atlanta metropolitan area. *Atmospheric Environment* 43:3902–3909. <https://doi.org/10.1016/j.atmosenv.2009.04.050>
21. **Diem, J.E.** and D.P. Brown. 2009. Relationships among monsoon-season circulation patterns, gulf surges, and rainfall within the Lower Colorado River Basin, USA. *Theoretical and Applied Climatology* 97:373–383. <https://doi.org/10.1007/s00704-008-0081-x>
20. **Diem, J.E.**, and D.M. Styers*. 2008. Ozone exposure and potential for vegetation injury within the Atlanta, Georgia metropolitan area. *Southeastern Geographer* 48:172–183. doi:10.1353/sgo.0.0020.
19. **Diem, J.E.** 2008. Detecting summer rainfall enhancement within metropolitan Atlanta, Georgia USA. *International Journal of Climatology* 28:129–133. <https://doi.org/10.1002/joc.1560>
18. **Diem, J.E.**, and D.P. Brown. 2006. Tropospheric moisture and monsoonal rainfall over the southwestern United States. *Journal of Geophysical Research – Atmospheres* 111, D16112. <https://doi.org/10.1029/2005JD006836>
17. **Diem, J. E.** 2006. Anomalous monsoonal activity in central Arizona, USA. *Geophysical Research Letters* 33, L16706. <https://doi.org/10.1029/2006GL027259>
16. **Diem, J.E.**, C.R. Ricketts*, and J.R. Dean*. 2006. Impacts of urbanization on land-atmosphere carbon exchange within a metropolitan area in the USA. *Climate Research* 30:201–213. <https://doi.org/10.3354/cr030201>
15. **Diem, J.E.** 2006. Synoptic-scale controls of summer precipitation in the southeastern United States. *Journal of Climate* 19:613–621. <https://doi.org/10.1175/JCLI3645.1>
14. **Diem, J.E.** 2005. Northward extension of intense monsoonal activity into the southwestern United States. *Geophysical Research Letters* 32:Art.No.L14702. <https://doi.org/10.1029/2005GL022873>
13. **Diem, J.E.**, and T.L. Mote. 2005. Inter-epochal changes in summer precipitation in the southeastern United States: Evidence of possible urban effects near Atlanta, Georgia. *Journal of Applied Meteorology* 44:717–730. <https://doi.org/10.1029/2005GL022873>
12. **Diem, J.E.** 2004. Explanations for the spring peak in ground-level ozone in the southwestern United States. *Physical Geography* 25:105–129. <https://doi.org/10.2747/0272-3646.25.2.105>

11. **Diem, J.E.**, L.B. Coleman*, P.A. DiGirolamo*, C.W. Gowens*, N.R. Hayden*, E.E. Unger*, G.B. Wetta*, and H.A. Williams*. 2004. Comments on "Rainfall modification by major urban areas: Observations from spaceborne rain radar on the TRMM satellite." *Journal of Applied Meteorology* 43:941–950. [https://doi.org/10.1175/1520-0450\(2004\)043%3C0941:CORMBM%3E2.0.CO;2](https://doi.org/10.1175/1520-0450(2004)043%3C0941:CORMBM%3E2.0.CO;2)
10. **Diem, J.E.**, and D.P. Brown. 2003. Anthropogenic impacts on summer precipitation in central Arizona, USA. *The Professional Geographer* 55:343–355. DOI: 10.1111/0033-0124.5503011
9. **Diem, J.E.** 2003. A critical examination of ozone mapping from a spatial-scale perspective. *Environmental Pollution* 125:369-383. [https://doi.org/10.1016/S0269-7491\(03\)00110-6](https://doi.org/10.1016/S0269-7491(03)00110-6)
8. **Diem, J.E.** 2003. Potential impact of ozone on coniferous forests of the interior southwestern United States. *Annals of the Association of American Geographers* 93:265–280. <https://doi.org/10.1111/1467-8306.9302001>
7. **Diem, J.E.** 2002. Remote assessment of forest health in southern Arizona, USA: Evidence for ozone-induced foliar injury. *Environmental Management* 29:373–384. <https://doi.org/10.1007/s00267-001-0011-5>
6. **Diem, J.E.**, and A.C. Comrie. 2002. Predictive mapping of air pollution involving sparse spatial observations. *Environmental Pollution* 119:99–117. [https://doi.org/10.1016/S0269-7491\(01\)00308-6](https://doi.org/10.1016/S0269-7491(01)00308-6)
5. **Diem, J.E.**, and A.C. Comrie. 2001. Allocating anthropogenic pollutant emissions over space: Application to ozone pollution management. *Journal of Environmental Management* 63:425–447. <https://doi.org/10.1006/jema.2001.0492>
4. **Diem, J.E.**, and A.C. Comrie. 2001. Air quality, climate, and policy: A case study of ozone pollution in Tucson, Arizona. *The Professional Geographer* 53:469–491. <https://doi.org/10.1111/0033-0124.00298>
3. **Diem, J.E.**, and A.C. Comrie. 2000. Integrating remote sensing and local vegetation information for a high-resolution biogenic emissions inventory - application to an urbanized, semi-arid region. *Journal of the Air and Waste Management Association* 50:1968–1979. <https://doi.org/10.1080/10473289.2000.10464223>
2. **Diem, J.E.** 2000. Comparisons of weekday-weekend ozone: Importance of biogenic volatile organic compound emissions in the semi-arid southwest USA. *Atmospheric Environment* 34:3445–3451. [https://doi.org/10.1016/S1352-2310\(99\)00511-7](https://doi.org/10.1016/S1352-2310(99)00511-7)
1. Comrie, A.C., and **J.E. Diem**. 1999. Climatological analysis and forecast modeling of carbon monoxide concentrations in Phoenix, Arizona. *Atmospheric Environment* 33:5023–5036. [https://doi.org/10.1016/S1352-2310\(99\)00314-3](https://doi.org/10.1016/S1352-2310(99)00314-3)

Other Published Materials

Diem, J.E., 2003. Instructor's manual and test bank for *Physical geography: the global environment* by H.J. de Blij, P.O. Muller, and R.S. Williams. Oxford University Press: New York.

On-Line Projects

Creator of the *Climate Literacy Labs* (climateliteracylabs.org)

Submissions Supervised

Faculty adviser on GSU's submission to the EPA's Campus RainWorks Challenge proposal that was a finalist in the 2015 competition (<http://sites.gsu.edu/jdiem/research-areas/giras/>)

Scholarly Presentations

Lead-authored and presented

- Evapotranspiration from developed land and urban watersheds in a humid subtropical climate. Presented at the Annual Meeting of the American Geophysical Union, 11-15 December 2023, San Francisco, California.
- Comparisons of reanalysis and ground-observed lower-troposphere winds over equatorial Africa. Presented at Annual Meeting of the American Meteorological Society, 8 January 2023, Denver, Colorado.
- Using a water budget approach to quantify inflow and infiltration impacts on urban streamflow. Presented at the General Assembly of the European Geophysical Union, 23 May – 27 May 2022, Vienna, Austria. Virtual.
- Using water budgets to estimate inflow and infiltration across the Atlanta region. Presented at the Apalachicola-Chattahoochee-Flint Waters Conference, 26 April – 28 April 2022, Albany, Georgia.
- Intra-annual variations in streamflow elucidate the effects of urbanization on watersheds. Presented at the Georgia Water Resources Conference 2021, 22 March – 23 March 2021, online.
- Multi-decadal rainfall trends in western Uganda derived from satellite-based datasets. Presented at the General Assembly of the European Geophysical Union, 7 April – 12 April 2019, Vienna, Austria.
- Evaluation of long-term, satellite-based rainfall estimates in a climatic transition zone in equatorial Africa. Presented at the Annual Meeting of the American Meteorological Society, 6 January – 10 January 2019, Phoenix, Arizona.
- Recent intensification of the seasonal rainfall cycle in equatorial Africa revealed by farmer observations, satellite-based estimates, and station measurements. Presented at the Annual Meeting of American Association of Geographers, 10 April – 14 April 2018, New Orleans, Louisiana.
- Synoptic characteristics of extreme heat days in the southeastern United States. Presented at the Annual Meeting of the American Meteorological Society, 22 January – 26 January 2017, Seattle, Washington.
- Characteristics of extreme heat days in the southeastern United States. Presented at the Georgia DNR Climate Change Conference, 2 November – 3 November 2016, Jekyll Island, Georgia.
- Assessing the effectiveness of extensive green roofs at improving environmental conditions in Atlanta, GA USA. Presented at the Annual Meeting of Association of American Geographers, 29 March – 2 April 2016, San Francisco, California.
- Satellite-based rainfall data reveal a recent drying trend in central equatorial Africa. Presented at the Annual Meeting of Association of American Geographers, 21-25 April 2015, Chicago, Illinois.
- A drying trend in central equatorial Africa. Presented at the Fall Meeting of the American Geophysical Union, 9-13 December 2013, San Francisco, California.

Climate variability and change. Presented at the Fall Meeting of the American Geophysical Union, 9-13 December 2013, San Francisco, California.

Validation of satellite-based rainfall products for western Uganda. Presented at the 109th Annual Meeting of Association of American Geographers, 9-13 April 2013, Los Angeles, California.

Climate-literacy laboratory exercises for undergraduate students in an introductory weather and climate course. Presented at the Fall Meeting of the American Geophysical Union, 3-7 December 2012, San Francisco, California.

Multi-decadal changes in the North American monsoon anticyclone. Presented at the Fall Meeting of the American Geophysical Union, 3-7 December 2012, San Francisco, California.

Understanding global warming using an inquiry-based exercise. Presented at the 96th Annual Meeting of the National Council for Geographic Education. 4-7 August 2011, Portland, Oregon.

Atmospheric characteristics conducive to high-ozone days in the Atlanta metropolitan area. Presented at the 64th Annual Meeting of the Southeastern Division of the Association of American Geographers, 22-24 November 2009, Knoxville, Tennessee.

Relationships among monsoon-season circulation patterns, gulf surges, and rainfall within the Lower Colorado River Basin, USA. Presented at the Annual Meeting of Association of American Geographers, 22-27 March 2009, Las Vegas, Nevada.

Tropospheric moisture and monsoonal rainfall over the southwestern U.S., Presented at the Fourth Symposium on Southwest Hydrometeorology, 20-21 September 2007, Tucson, Arizona

Anomalous monsoonal activity in central Arizona, USA. Presented at the 61st Annual Meeting of the Southeastern Division of the Association of American Geographers, 19-21 November 2006, Morgantown, West Virginia.

Impacts of urbanization on land-atmosphere carbon exchange within a U.S. metropolitan area. Presented at the Annual Meeting of Association of American Geographers, 7-11 March 2006, Chicago, Illinois.

Northward extension of intense monsoonal activity into the southwestern United States. Presented at the 60th Annual Meeting of the Southeastern Division of the Association of American Geographers, 20-22 November 2005, West Palm Beach, Florida.

Synoptic-scale controls of warm-season wet periods and dry periods in the southeastern United States. Presented at the Annual Meeting of Association of American Geographers, 5-9 April 2005, Denver, Colorado.

The Norcross anomaly: Evidence of possible urban effects on precipitation near Atlanta, Georgia. Presented at the 59th Annual Meeting of the Southeastern Division of the Association of American Geographers, 21-23 November 2004, Biloxi, Mississippi.

The Norcross anomaly: Proof of urban effects downwind of Atlanta, Georgia? Presented at the Annual Meeting of Association of American Geographers, 14-19 March 2004, Philadelphia, Pennsylvania.

A critical review of ozone-mapping research. Presented at the 58th Annual Meeting of the Southeastern Division of the Association of American Geographers, 23-25 November 2003, Charlotte, North Carolina.

The stratosphere as a source of atmospheric pollution in the southwestern United States. Presented at the Annual Meeting of Association of American Geographers, 5-8 March 2003, New Orleans, Louisiana.

Human impacts on summer precipitation in central Arizona, USA. Presented at the 57th Annual Meeting of the Southeastern Division of the Association of American Geographers, 23-26 November 2002, Richmond, Virginia.

A conceptual model of ozone-induced foliar injury in southern Arizona's "sky islands." Presented at the Annual Meeting of Association of American Geographers, 19-23 March 2002, Los Angeles, California.

An enhanced summertime moisture signal in central Arizona. Presented at the Annual Meeting of Association of American Geographers, 19-23 March 2002, Los Angeles, California.

Air quality and climate: a case study of ozone pollution in Tucson, Arizona. Presented at the Annual Meeting of Association of American Geographers, February 27 – March 3, 2001, New York, New York.

Regression-based spatial modeling of ozone in the Tucson region. Presented at Air and Waste Management Association 93rd Annual Meeting and Exhibition, 19-22 June 2000, Salt Lake City, Utah.

Spatial modeling of ambient ozone in the Tucson region. Presented at the Annual Meeting of Association of American Geographers, 4-7 April 2000, Pittsburgh, Pennsylvania.

Spatial allocation of pollutant emissions in the Tucson region. Presented at 95th Annual Meeting of Association of American Geographers, 24-27 March 1999, Honolulu, Hawaii.

Development of the System for Management, Observation and GIS Modeling of Air Pollution (SMOGRAM). Presented at Electric Utilities Environmental Conference, 11-13 January 1999, Tucson, Arizona.

Seasonal and interannual climate controls on forest and wildland fire in the Southwest. Presented at American Meteorological Society 23rd Conference on Agricultural and Forest Meteorology, 2-6 November 1998, Albuquerque, New Mexico.

Development of a biogenic emissions inventory for a southwestern, semi-arid city. Presented at American Meteorological Society 2nd Urban Environment Symposium, 2-6 November 1998, Albuquerque, New Mexico.

Estimating biogenic emissions for urban airshed modeling in Tucson, Arizona. Presented at Air and Waste Management Association 91st Annual Meeting and Exhibition, 14-18 June 1998, San Diego, California.

Development of a biogenic emissions inventory for urban airshed modeling in Tucson, Arizona. Presented at Annual Meeting of Association of American Geographers, Boston, MA, 25-29 March 1998, Boston, Massachusetts.

Development of a biogenic emissions inventory for the Tucson region. Presented at Pima Association of Governments' Regional Symposium on Air Quality Monitoring/Modeling in the Tucson Region, 9-10 February 1998, Tucson, Arizona.

- SMOGMAP (System for the Management, Observation, and GIS Modeling of Air Pollution). Presented at Pima Association of Governments' Regional Symposium on Air Quality Monitoring/Modeling in the Tucson Region, 9-10 February 1998, Tucson, Arizona.
- Climatological analysis and modeling of carbon monoxide concentrations in Phoenix, Arizona. Presented at American Meteorological Society 10th Conference on Applied Climatology, 19-23 October 1997, Reno, Nevada.
- Carbon monoxide climatology and forecast model development for Phoenix, Arizona. Tucson Environmental Planning Advisory Committee, 7 July 1997, Phoenix, Arizona.
- A climatological analysis and modeling of carbon monoxide concentrations in Phoenix, Arizona. Presented at Annual Meeting of Association of American Geographers, 1-5 April 1997, Fort Worth, Texas.
- Climatological analysis of carbon monoxide concentrations in Phoenix, Arizona. Presented at Western Geography Graduate Student Conference, 14-16 February 1997, Tucson, Arizona.

Other presentations; * indicates M.S. advisee as presenter

- Pangle, L.A., Diem, J.E., Lowe, S. Contrasting the subsidies and losses of potential streamflow from urban headwaters due to subterranean infrastructure-mediated flows. The Water Science Conference (WaterSciCon 2024), 24-27 June 2024. St. Paul, Minnesota.
- Fagunloye, O.*, and Diem, J.E. 2024. Exploring intra-annual variations in urban effects on precipitation in the Atlanta, GA USA region. The North American Cartographic Information Society Annual Meeting. October 17. Tacoma, WA.
- Huth, T., Konecky, B., Hutchings, J., Diem, J., Palace, M., Salerno, J., Bailey, K., Namusisi, S., Hartter, J. Seasonal interplay of moisture source and terrestrial processes in western Ugandan precipitation isotope composition. Annual Meeting of the American Geophysical Union, 11-15 December 2023, San Francisco, California.
- Orimolade, O.,* Diem, J.E. 2023. Assessing urban impacts on surface-water quality across the Atlanta region. Georgia Water Resources Conference, March 30. Athens, GA.
- Pangle, L.A., Diem, J.E., Milligan, R., Hughes, L., Adams, E. 2022. A combined quantitative-qualitative analysis of freshwater intrusion into sewers, sanitary sewer overflows, and socio-hydrological perspectives within a metropolitan-Atlanta urban watershed. Frontiers in Hydrology Meeting, June. San Juan, Puerto Rico.
- Pangle, L.A., Diem, J.E., Milligan, R., Adams, E., Murray, A. 2021. How Groundwater Infiltration into Sanitary Sewers Modulates Streamflow Dynamics in Urban Watersheds. American Geophysical Union Fall Meeting, December 15. New Orleans, LA. Online.
- Carlton, D.K.*, Diem, J.E., Pangle, L.A. 2021. Estimating Actual Evapotranspiration for an Urbanized Watershed. American Geophysical Union Fall Meeting, December 15. New Orleans, LA.
- Gebregiorgis, D., Bedaso, Z.K., Cobb, K.M., Pangle, L.A., Diem, J.E., Asrat, A. 2021. Stable Isotopic Insights into Intraseasonal Variability of East African Monsoon

- Prediction. American Geophysical Union Fall Meeting, December 13. New Orleans, LA.
- Konecky, B.L., Diem, J.E., Palace, M.W., Hutchings, J., Salerno, J., Bailey, K., Hartter, J. 2021. Storm- to Seasonal-Scale Variations in East African Precipitation $\delta^{18}\text{O}$, $\delta^2\text{H}$, D-Excess, and $\Delta^{17}\text{O}$ from Daily Monitoring in Western Uganda. American Geophysical Union Fall Meeting, December 13. New Orleans, LA.
- Pangle, L.A., Adams, E., Diem, J., and Milligan, R. 2021. Contextualizing Infiltration and Inflow Within the Streamflow Regime of Urban Watersheds. Georgia Water Resources Conference. March 22. Online.
- Konecky, B.L., Salerno, J., Bridges, R., Bailey, K., Hutchings, J., Diem, J., Palace, M.W., and Hartter, J. 2020. The Unusual 2018-2019 Rainy Seasons in Western Uganda through the Lens of Precipitation Isotopes, Satellite Data, and Farmer Observations. American Geophysical Union Fall Meeting, December 7. Virtual.
- Konecky, B.L., Diem, J., Palace, M.W., Salerno, J., Hutchings, J., and Hartter, J. 2019. Evaluation of Triple Oxygen Isotopes in Daily East African Precipitation as a Potential Tracer of Recycled Continental Moisture. American Geophysical Union Fall Meeting, December 3-7. San Francisco, CA.
- Sung, H.S.*, and **Diem, J.**. 2019. Rainfall Variability in Western Uganda. Annual Meeting of American Association of Geographers, April 6-10, Washington, D.C.
- Sung, H.S.*, and Diem, J.. 2018. Rainfall Variability in Western Uganda. GSU Scientific Computing Day, October 26, Atlanta, GA.
- Breytenbach, E.*, Diem, J.E., Ryan, S.J., Chapman, C. and Hartter, J. 2013. Following the rains: Perceptions of climate change around Kibale National Park, Uganda. Annual Meeting of Association of American Geographers, Los Angeles, CA.
- Ryan, S.J., Hartter, J., Palace, M., Diem, J., and Chapman, C.. 2013. Parks, People, and Fragments: Remediating De-coupled Research into Natural-Human Systems. Annual Meeting of Association of American Geographers, Los Angeles, CA.
- Hartter, J., Palace, M., Ryan, S.J., Diem, J., and Chapman, C.A. 2013. Forest Loss, Agricultural Intensification, and the Islandization of Protected Areas in the African Albertine Rift. Annual Meeting of Association of American Geographers, Los Angeles, CA.
- Ryan, S.J., Southworth, J., Hartter, J., Fuda, R.K., Dowhaniuk, N., and Diem, J.E. 2015. Household Influences on Fragmentation in an African Park Landscape. 27th International Congress for Conservation Biology 4th European Congress for Conservation Biology. August 2-6, 2015. Montpellier France.
- Hartter, J., Ryan, S.J., Palace, M., Diem, J., and Chapman, C.A. 2012. Population, Environment, and Climate in the Albertine Rift: Understanding Local Impacts of Regional Change. American Geophysical Union Fall Meeting. December 3-7, 2012. San Francisco, CA.

Public Lectures

- Urbanization and the Hydrological Cycle: Two Atlanta Case Studies. Presented as part of the Spring 2025 colloquium series sponsored by the Department of Geography at Indiana University, 18 April 2025.
- People & Climate in Uganda. Presented with Drs. Joel Hartter and Bronwen Konecky at the Global Livingston Institute (Kabale, Uganda), 27 May 2018.

Heat in the Southeast: Characteristics, Trends, and Relation to Global Climate Change. Presented at Clayton State University (Morrow, GA), 23 February 2018.

The 1970 Clean Air Act and Termination of Rainfall Suppression in a U.S. Urban Area. Presented as part of the 2013/2014 colloquium series sponsored by the Department of Physics and Astronomy at Georgia State University, 3 December 2013.

Introduction to the Climate System and Climate Change. Presented with Dr. Greg Huey of the Georgia Institute of Technology at the Atlanta Science Tavern, 17 April 2010.

Enhanced Rainfall Downwind of Atlanta, Georgia. Presented as part of the Fall 2007 seminar series sponsored by the Department of Geology and Geography at Georgia Southern University, 25 October 2007.

The Norcross Anomaly: Proof of Urban Effects on Precipitation Downwind of Atlanta, Georgia? Presented as part of the 2005/2006 Randolph W. Chapman colloquium series sponsored by the Department of Earth Sciences at the University of New Hampshire, 2 February 2006.

Local Anthropogenic Impacts on Warm-Season Precipitation in Central Arizona, USA. Presented as part of the 2003/2004 colloquium series sponsored by the Department of Geography and Regional Development at The University of Arizona, 3 October 2003.

Meteorologists and a Case of Problematic Conclusions: Arguments for Employing a Geographical Approach When Studying Precipitation-Enhancement in the Atlanta Area. Presented as part of 2002/2003 colloquium series sponsored by the Department of Geography at The University of Georgia, 31 January 2003.

The Carbon Cycle. Presented at Biosphere 2 Earth Semester Program, February 1998, Biosphere 2 Center, Oracle, AZ.

Public Discussions

The Georgia Drought: Our Health in the Balance. A panel discussion with A.P. Georgakakos, J.E. Kundell, and D.E. Stooksbury. Hosted by Rollins School of Public Health at Emory University. 9 April 2008.

Honors and Awards

Georgia State University Sparks Award, 2016 (<https://tinyurl.com/hnasala>)

Georgia Space Grant Consortium, A CO₂-Monitoring Network for Climate Literacy, co-investigator, 2014

STEM Faculty Fellowship, Georgia State University, 2009.

Remote Sensing Mini-Grant, GeorgiaView, 2005.

Writing Across the Curriculum Course-Development Grant, Georgia State University, 2003.

Research Initiation Grant, Georgia State University, 2003.

Travel Grant, The University of Arizona Graduate and Professional Student Council, 2000.

Third Place, Regional Scholarship Competition, Grand Canyon Section of Air and Waste Management Association, 1999.

Second Place, Climate Specialty Group Student Paper Competition, 95th Annual Meeting of Association of American Geographers, Honolulu, HI, 1999.

Travel Award, Association of American Geographers Climate Specialty Group, 1999.
 First Place, National Scholarship Competition, Air and Waste Management Association, 1999.
 Travel Grant, The University of Arizona Graduate and Professional Student Council, 1999.
 Second Place, Excellence in Student Presentation, 2nd Annual American Meteorological Society Urban Environment Symposium, Albuquerque, NM, 1998.
 Graduate Scholarship, Southern Arizona Environmental Management Society, 1998.
 Honorable Mention, Climate Specialty Group Student Paper Competition, 94th Annual Meeting of Association of American Geographers, Boston, MA, 1998.
 Third Place, National Scholarship Competition, Air and Waste Management Association, 1998.
 Travel Grant, The University of Arizona Graduate and Professional Student Council, 1998.
 Scholarship, Tucson Women's Transportation Seminar, 1996.
 University Fellowship, Department of Geography and Regional Development, The University of Arizona, 1995.

External Funding

2023. National Science Foundation. DISES: Understanding invisible socio-environmental systems through pesticide exposure across human-wildlife interactions in tropical forest-agricultural mosaics. Co-Principal Investigator. **(\$1,026,146** over four years)
 2019: National Science Foundation. Analyzing the magnitude, variability, and governance of infrastructure-mediated flows in urban watersheds. Co-Principal Investigator. **(\$399,992** over three years)
 2017: National Science Foundation. Understanding the role of moisture transport in rainfall variability and agricultural decision making. Principal Investigator. **(\$399,998** over three years)
 2017: Centers for Disease Control and Prevention. Testing social and environmental predictors for disease occurrence in Uganda. Co-Investigator **(\$50,127)**
 2015-2018: National Geographic Society Education Foundation. Georgia alliance grant. Principal Investigator. **(\$82,500; \$27,500** per year)
 2014: National Institutes of Health. Disparities in exposure to environmental threats. Co-Investigator. **(\$295,883** over one year)
 2011: National Science Foundation. CNH-Ex: Land-use intensification and protected-area vulnerability in Africa's Albertine Rift. Co-Principal Investigator. **(\$249,950** over two years)
 2009: National Aeronautics and Space Administration. Creating an enduring legacy of exemplary global climate change education for secondary science teachers and underserved students in Georgia. Co-Investigator. **(\$499,950** over three years)

Professional Development

GSU Experiential, Project-based Interdisciplinary Curriculum (EPIC) Course Alignment Workshop, 19 August 2021 and 7 January 2022. Online.
 The City of Atlanta Community Resilience Workshop, 9 November 2015. Atlanta, GA
 National Academies Climate Change Education Roundtable, 21-22 October 2010. Washington, DC

NASA Climate Modeling Workshop, Center for Environmental and Sustainability
Education, Dickinson College, 8-12 August 2010, Carlisle, PA
Institute for the Scholarship of Teaching and Learning (SoTL), 1-2 June 2009, Amicalola
Falls, GA
Geography Faculty Development Alliance (GFDA) workshop, 19-26 June 2004, Boulder,
CO
Partnership for Reform in Science and Mathematics (PRISM) Institute, 23-24 April 2004,
Atlanta, GA

Selected Service

Outreach

Reviewer: *Annals of the Association of American Geographers, Applied Geography, Atmospheric Environment, Climate and Development, Climate Dynamics, Climate Research, Climatic Change, Earth and Space Science, Energy and Fuels, Environmental Management, Environmental Modelling and Software, Environmental Monitoring and Assessment, Environmental Pollution, Environmental Research, Environmental Science & Technology, Geophysical Research Letters, Heliyon, Hydrological Processes, Hydrology Research, International Journal of Climatology, Journal of Applied Meteorology, Journal of Applied Meteorology and Climatology, Journal of Arid Environments, Journal of Geography, Journal of Geophysical Research – Atmospheres, Journal of Hydrology, Journal of Hydrometeorology, Journal of Regional Science, Journal of the Air and Waste Management Association, Meteorologische Zeitschrift, Monthly Weather Review, Natural Hazards, Physical Geography, PLOS One, Proceedings of the National Academy of Sciences, Remote Sensing Applications: Society and Environment, Science of the Total Environment, Scientific Reports, The Professional Geographer, Theoretical and Applied Climatology, Urban Climate, Water Resources Research*

2021-present: Member of *Environment and Planning F* editorial board

2018: Proposal reviewer for NSF's Environmental Sustainability Program

2018: Proposal reviewer for NSF's Hydrologic Sciences Program

2018: Proposal reviewer for NSF's Climate and Large-Scale Dynamics Program

2015-2018: Interim Coordinator of Georgia Geographic Alliance

2015: Proposal reviewer for NSF's Geography and Spatial Sciences Program

2012: Proposal reviewer for NSF's Geography and Spatial Sciences Program

2008: Discussant of climate change, Clayton State University

2005-2007: Member of *Environmental Pollution* editorial board

2005-2019: "Meteorology Event" coordinator for the Science Olympiad Regional Competition

2004: Guest lecturer for Integrated Science program of the College of Education

2002-2003: "Road Scholar" coordinator for the Science Olympiad Regional Competition

1998: Presenter at the Pima College Summer Academy

1997: Guest Lecturer, Third Annual Environmental Awareness Conference at Coronado Middle School (Tucson, AZ)

Intramural

- 2024-2025: Appointed member (Chair) of Promotion & Tenure Area Committee (Natural and Computational Sciences), GSU College of Arts & Sciences
- 2022-2023: Appointed member of Promotion & Tenure Area Committee (Natural and Computational Sciences), GSU College of Arts & Sciences
- 2022-present: Faculty adviser for Seedlings (student environmental group)
- 2019-2020: Member of GSU's Quality Enhancement Plan (QEP) assessment committee
- 2019-2020: Chair of self study for Department of Geosciences at Georgia State University
- 2019: Elected member of GSU CAS dean's triennial evaluation committee
- 2019: Member of GSU's Sparks Award committee
- 2018: Search committee chair for lecturer hire in the Department of Geosciences at Georgia State University
- 2017: Search committee chair for water-sciences hire in the Department of Geosciences at Georgia State University
- 2017: Member of GSU's Sparks Award committee
- 2016-2017: Executive committee for Department of Geosciences at Georgia State University
- 2016: Member of chair evaluation committee in the Department of Geosciences
- 2016: Member of College of Arts & Sciences Faculty Grievance Board
- 2016: Member of College of Arts & Sciences faculty awards committee
- 2015: Faculty adviser for GSU's submission to the EPA's Campus RainWorks Challenge
- 2012: GSU representative on USG STEM Education Task Force
- 2012: Member of ad-hoc committee of the University Senate to review the procedures of the Academic Program Review
- 2012: Search committee chair for lecturer position in the Department of Geosciences at Georgia State University
- 2012-2016: Member of College of Arts & Sciences Graduate Council
- 2012-2016: Director of Graduate Studies for the Department of Geosciences at Georgia State University
- 2011: Search committee chair for two visiting lecturer positions in the Department of Geosciences at Georgia State University
- 2010: Chair of chair evaluation committee in the Department of Geosciences at Georgia State University
- 2009-2010: Chair of self-study for Department of Geosciences at Georgia State University
- 2009-2010: University System of Georgia Science, Technology, Engineering, and Math (STEM) faculty fellowship
- 2008-2009: Search committee chair for position in Geographic Information Systems/Urban Health in the Department of Geosciences at Georgia State University
- 2008: Reviewer of Georgia State University research initiation grant proposals
- 2007-2008: Search committee chair for position in Urban Health/Geographic Information Science in the Department of Geosciences at Georgia State University
- 2007: Search committee chair for two positions in Physical Geography in the Department of Geosciences at Georgia State University

2007-2009: Representative from the Department of Geosciences in the university senate at Georgia State University

2006-2010: Undergraduate director in the Department of Geosciences at Georgia State University

2006-2008: Executive committee for Department of Geosciences at Georgia State University

2006-2009: Pullen Library faculty liaison for Department of Geosciences at Georgia State University

2006-2008: Coordinator of learning-outcomes assessment for Department of Geosciences

2004-2005: Coordinator of critical-thinking assessment for Department of Anthropology and Geography

2004-2005: Coordinator of learning-outcomes assessment for Department of Anthropology and Geography

2004: Georgia State University representative for GeorgiaView

2004-2005: Faculty search committee (Physical Geography) for Department of Anthropology and Geography at Georgia State University

2004-2005: Faculty search committee (GIS/Public Health) for Department of Anthropology and Geography at Georgia State University

2004: Reviewer of Georgia State University dissertation grant proposal

2003-2005: Executive committee for Department of Anthropology and Geography at Georgia State University

2002: Faculty search committee for Department of Anthropology and Geography at Georgia State University

2002-2003: Coordinator of colloquium series for Department of Anthropology and Geography at Georgia State University

2001-2005: Pullen Library faculty liaison for Department of Anthropology and Geography at Georgia State University

1999: Graduate student representative on faculty search committee for Department of Geography and Regional Development at The University of Arizona

1997: Undergraduate Student Writing Task Force, College of Social and Behavioral Sciences, The University of Arizona

Graduate Students Advised

Theses

Andrew Berens. "The use of In Situ Gamma Radiation Measurements as a Method of Determining Radon Potential in Urban Environments" 2016

Charles F. Breeden. "A Multitemporal Analysis of Georgia's Coastal Vegetation, 1990-2005" 2008

Dinah K. Carlton. "Effects of Urban Land Cover on Magnitude and Interannual Variability of Evapotranspiration: 2022

John R. Dean. "Improving Summer Drought Prediction in the Apalachicola-Chattahoochee- Flint River Basin with Empirical Downscaling" 2008

Chee Hill. "Land Cover Change Impacts on Multidecadal Streamflow in Metropolitan Atlanta GA, USA" 2016

Elvira Breytenbach. "Following the Rains: Evidence and Perceptions Relating to Rainfall Variability in Western Uganda" 2013

Olamiposi Fagunloye. "Exploring Intra-Annual Variations of Urban Effects on Precipitation in the Atlanta, GA, USA Region" 2024

Sharon L. Murphy. "Assessing the Effectiveness of Extensive Green Roofs at Improving Environmental Conditions in Atlanta, Georgia" 2015

Oluwatosin Orimolade. "Assessing Urbanization Impacts on Surface Water Quality in the Atlanta Region" 2023

Diane M. Styers. "Ozone Damage Potential to Loblolly Pine Ecosystems in Metropolitan Atlanta, Georgia" 2005

Hae Seung Sung. "Rainfall in an Equatorial Africa Transition Zone: Examining Rainy-Season Characteristics and Trends in Western Uganda" 2019

Edward E. Unger. "The Relationship Between High Ozone Days and Atmospheric Patterns in Atlanta, Georgia" 2005

Brian L. Vann. "Intensive Study of Ambient Carbon Dioxide Variability in Urban Atlanta" 2011

Liudmyla Zapukhliak. "An Investigation of Recent Climate Change in Southern Ukraine" 2020

Practica

Olorunfemi Adeyemo. "Evaporation from Impervious Surfaces in the Southeastern United States" 2023

Joshua Bakin. "Atlanta's Urban Heat Island Can Be Mitigated While Simultaneously Solving Other Problems" 2017

William Beauford. "Geotechnical Drilling and Exploration" 2022.

Prince Osei Bonsu. "Current Precipitation Trends for the Apalachicola-Chattahoochee-Flint River Basin" 2023

Darin David. "An Estimate of Suspended Sediment within Gulf Shore and Estuarine Waters along Panama City Beach, Florida using Landsat 7 Imagery and Spectral Mixture Analysis" 2012

Paula Edwards. "Apalachicola Chattahoochee Flint River Basin Precipitation Study" 2011

Oluwafemi Ogunsanya. "Influence of Urbanization on Precipitation Patterns within the Atlanta Metropolitan Area" 2022

Robert Troy. "Urbanization Impacts on Diurnal Streamflow Variation within the Atlanta Metropolitan Area" 2019

Nicolas Vrey. "GIS Based Guide for Erosion Control to Decrease Sedimentation Rate of Lake Weiss In Floyd County, Georgia" 2012

Courses Taught

Introduction to Physical Geography (Lecture): The University of Arizona

Introduction to Physical Geography (Climatology lab): The University of Arizona

Introduction to Physical Geography (Geomorphology lab): The University of Arizona

Introduction to Weather and Climate (Lecture): Georgia State University

Advanced Weather and Climate (Lecture): Georgia State University

Environmental Climatology (Seminar): Georgia State University

Quantitative Spatial Analysis (Lecture): Georgia State University

Climatic Variability and the Carbon Cycle (Seminar): Georgia State University

Introduction to Remote Sensing (Lecture): Georgia State University

Climatic Change (Lecture): Georgia State University
Global Climate Change (Lecture): Georgia State University
Research Methods in the Geosciences (Seminar): Georgia State University
Senior Seminar (Seminar): Georgia State University