

ENDY Annual Report 2024-2025

I. Executive Summary

This has been an exciting year in ENDY with many pivotal events.

a. ENRE

Our online professional Masters degree program, graduate certificates, and graduate micro-certificates have now entered their second year. We have retained all our faculty from year one to continue teaching their courses for year two. ENRE is currently running a profit, which is impressive for this early in our program history. We had our first ENRE Graduate Certificate graduate, 2 ENRE Graduate Micro Certificate graduates, and 1 Environmental Resiliency Sustainability Graduate Certificate graduate. We currently have 12 MS students, 11 Graduate Certificate students, and 4 Micro Certificate students, with 3 MS students starting summer 2025 and 8 MS students starting in Fall 2025. We have updated ENREMS, ENRESGC, ENRCGC, and ENRCGM to add SUST 54003 as an elective.

b. Conserving the Natural State

ENDY hosted the *Conserving the Natural State* Forum at the Winfred Rockefeller Institute in Morrilton, AR on September 6-8th, 2024.

We had 61 attendees, 44 professionals and 17 students, representing the following institutions, companies, and agencies:

- University of Arkansas, Fayetteville
- University of Arkansas, Monticello
- University of Central Arkansas
- Arkansas State University
- Hendrix College
- National Wildlife Federation
- Arkansas Game and Fish Commission
- Arkansas House of Representatives
- Arkansas Water Resources Center
- Quail Forever
- Ducks Unlimited
- US Fish and Wildlife Service
- Five Oaks Ag Research and Education Center
- Lower Mississippi Valley Joint Venture

- Little Rock Air Force Base

There was a poster section with 9 posters presented, and over the course of the weekend, there were 26 oral presentations.

We met our goals of 1) highlighting U of A programs, 2) developing a network of researchers across the state working in environmental sciences, and 3) working with stakeholders to identify areas where such research is necessary and can help serve the state.

Student Output

ENDY awarded four PhDs and four Masters Summer 2024 through Spring 2025. Of our students in the program this year, seven held DAF awards and six held DDF awards. We have also accepted two new DDF for Fall 2025 (for a total incoming cohort of seven).

Our students published 1 book chapter, 18 papers, and presented 11 oral and 16 poster presentations at regional, state, national, and international conferences. They also presented 5 invited lectures, submitted 2 reports, and have 11 manuscripts in process.

Funding and Awards

15 ENDY students hold DAF (7) and DDF (8) Fellowships.

An ENDY student received a Global Change Revenue Geosciences Leadership scholarship (\$1,000).

An ENDY student received an AGU Biogeosciences Travel Grant (\$500)

An ENDY student received an NSF I-Guide Summer School Scholarship.

An ENDY student received an OMNI Endowed International Student Scholarship (\$2,000)

An ENDY student received the 2024 League of United Latin American Citizens National Scholarship Fund (\$2,000).

An ENDY Student was awarded Fulbright LASPAU funding for 2023-2025. (This makes three LASPAU students we have had one graduated, one transferred to UA funding, and one started in 2023).

An ENDY student received the FLUXNET Secondment 2025 from FLUXNET Coordination Project (\$7564).

An ENDY student received the Travel Botany Grant, Smithsonian (\$5000).

An ENDY student received the Matthew Tobin Cappetta Archaeological Scholarship, Society of American Archaeology (\$2500).

An ENDY student received the Richard Evans Schultes Research Award, Society of Ethnobotany (\$1500).

An ENDY student received the Latin American & Latino Studies Program Graduate Student Research Award, University of Arkansas (\$1500).

An ENDY student received The Two Steves Award, Society of Ethnobiology (\$5000).

An ENDY student received a Geography Fund award.

An ENDY student received the Ecological Forecasting Initiative Student Award Travel Grant (\$1,000)

An ENDY student received a University of Arkansas Graduate School Research Grant (\$2,000)

An ENDY student received the James H. White Doctoral Fellowship (\$1000).

An ENDY student received a FFAR Predoctoral Fellowship (\$90,000 for 3 years).

An ENDY student received the AFRI Predoctoral Fellowship, year 2. (\$180,000 for 3 years).

An ENDY student was nominated for the Philanthropic Educational Organization Scholar Awards.

[An ENDY student received the Gerald O. Mott Award.](#)

Two ENDY students co-wrote one of the most viewed articles of August-October 2024 in the Sustainability Journal.

An ENDY student was awarded the Campus Leadership Award.

An ENDY student was awarded the Community Ally of the Year Award.,

This year ENDY students have shown they are engaged and focused.

Highlights:

Alumni, Community and campus engagement

Our Alumni are active and contributing to their profession of choice!

ENRE was entirely taught by ENDY graduates, and they had a hand in making our first year profitable. All ENRE instructors have agreed to teach their courses again during the second year of the program.

See Appendix II – Alumni publications.

Implementation of recent program changes

We continued to build ENRE and implemented a new course for summer 2025. ENRE was profitable its first year, and we have 27 students matriculated into the program.

ENDY also hosted the first Conserving the Natural State forum, and it was successful. We have discussed making this a biannual conference to stay connected with a network of researchers across the state working in environmental sciences and to continue highlighting U of A programs.

II. Productivity Measures in numbers of grant dollars, student growth, new faculty, new administrators and award and honors

Our students are engaged professionals and one way to view this is through conference presentations. Thanks to GSIE and GPSC our students are able to present at many prestigious conferences nationally and internationally!

Travel grants to our students totaled \$16,600 this year.

DAF/DDF received \$210,000 this year.

Students received \$412,000 from TA/GA positions.

Students received \$144,000 on other fellowships and internships.

Grants applied for totaled \$74,000.

Successful grants totaled \$43,000 with \$31,000 still pending.

Foreign Governments funded students for \$22,000 this year.

Since we do not accept students without funding or mentors, we are still tied to the ten original assistantships ENDY was provided at the founding nearly three decades ago. We work hard to find additional funding for students so we can continue to maintain and grow our program. This year we graduated four PHD and four MA students, and we have accepted seven new students for Fall 2025. This number of students should be contextualized relative to our limited hard-funded support (we only had four assistantships open for Fall 2025).

Our directors are active in ENDY research and acknowledged for their work.

Our ENDY Directed was inducted into the National Academy of Science, becoming the first UA faculty member to be selected for membership in the National Academy of Sciences, and the Fulbright College of Arts and Sciences set up a lecture series on ecology, evolution, and organismal biology in his honor.

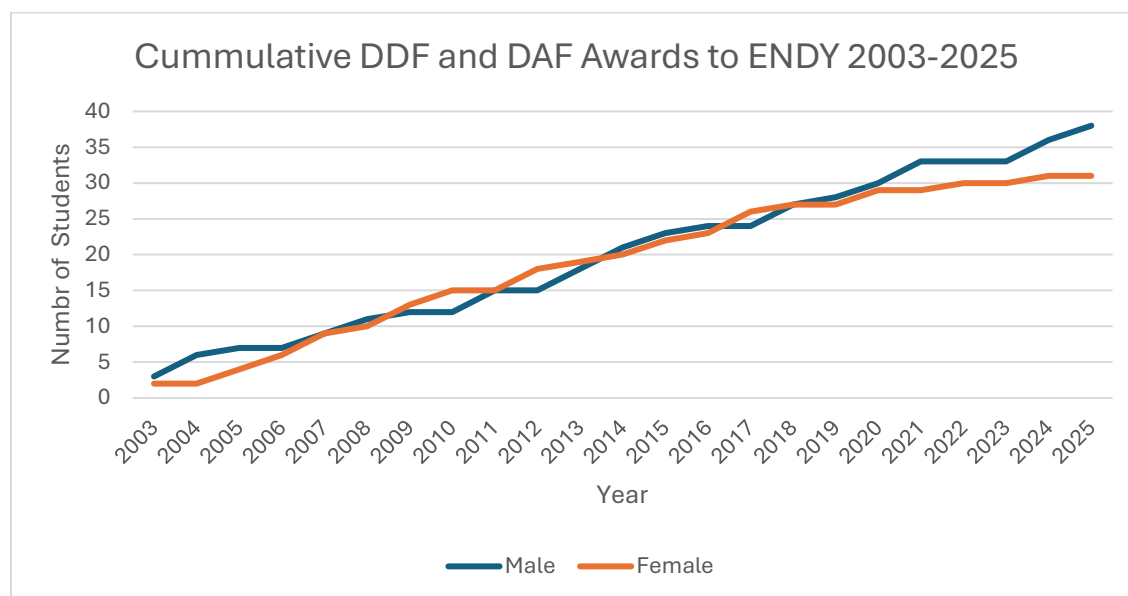
We welcomed a new Assistant Director to our program with the retirement of our previous Assistant Director of 22 years.

Our Assistant Director served as the new Environmental Dynamics Student Association Advisor.

Faculty are always being added and this year is no exception. We currently have over 70 affiliated faculty members, all with active research in environmental sciences. These are all available to serve as graduate student mentors and committee members. We have a reputation on campus for assisting students and working with departments and colleges across our campus. This makes ENDY a desirable choice for students whose career aspirations and interests are interdisciplinary and fall at the intersection of traditional disciplinary boundaries associated with human-environmental interactions.

We continue to add any ENRE instructors as ENDY Faculty so our current students can take advantage of their wide-ranging skills and work experiences.

Student DAF-DDF and Gender Graph 2003-2025



Appendix I – Student Bibliography

Publications

Books

López-Rojas, M., Cavallini-Morales, C., Acevedo-Peralta, B., & Benfer A. K. (under review). The Transportation of Faunal and Floral Resources along the Agua Caliente - Nuevo Corinto Path from AD 800 to 1550 in Costa Rica. In Y. Núñez-Cortés, R. Herrera, & G. McCafferty (eds.), *The Cultural Mosaic of Central America*. University of Utah Press.

Peer Reviewed Articles

Cooper, C.F., and T. Malone. “Assessing the Value of ‘Wildness’ to U.S. Consumers with Application to Farm-Raised and Wild-Foraged Mushroom Demand.” *Agricultural and Resource Economics Review*. (Under revision).

Cooper, C.F., J. Tack, L.L Nalley, P. Chaminuka, S. Maali, E. Farmer, M.A. Gore. “Quantifying Yield Losses from Bt Resistance among Maize Cultivars in South Africa.” *Nature Communications* (Under revision).

Grantz, E.M., & B.E. Haggard. 2025. Database organization and trend analysis for the Arkansas 319(h) Nonpoint Source Management Program in support of the Arkansas Nutrient Reduction Strategy. Arkansas Water Resources Center, Fayetteville, AR, MSC 400: 42 pp.

Grantz, E.M., B.A. Austin, & B.E. Haggard. 2024. Water sampling for bacteria along Clear Creek within the Upper Illinois River Watershed. Arkansas Water Resources Center, Fayetteville, AR, MSC 399: 3 pp.

Grantz, E.M., S.E. Lewis, & B. Roark. 2024. Metrics for watershed success. Arkansas Water Resources Center, Fayetteville, AR, MSC 396: 44 pp.

Austin, B.J., **E.M. Grantz**, & B.E. Haggard. 2024. Water sampling, analysis, and load estimation within the Brush and Robert’s Creek subwatersheds within the White River and Beaver Lake Watershed. Arkansas Water Resources Center, Fayetteville, AR, MSC 397: 22 pp.

Kouame, J., M.C. Savin, C.D. Willett, T.R. Butts, **E. Grantz**, et al. Biphasic models improved S-metolachlor dissipation endpoint predictions. 2024. *Agrosystems, Geosciences & Environment*, doi: 10.1002/agg2.70026

McMullen, T., **E.M. Grantz**, G. Thompson & B.E. Haggard. 2024. Changes in streamflow statistics and catchment land uses across select USGS Gages in Northwest and West-central Arkansas. *Journal of Contemporary Water Research and Education*, doi: 10.1111/j.1936-704X.2024.3400.x

Hemmati, M., Messadi, T., Gu, H., Seddelmeyer, J., & **Hemmati, M.** (2024). Comparison of embodied carbon footprint of a mass timber building structure with a steel equivalent. *Buildings*, 14(5), 1276. <https://doi.org/10.3390/buildings14051276>

Hemmati, Moein, Messadi, T., Gu, H., & **Hemmati, M.** (2024). LCA operational carbon reduction based on Energy Strategies Analysis in a mass timber building. *Sustainability*, 16(15), 6579. <https://doi.org/10.3390/su16156579>

Mansourihanis, O., Zaroujtaghi, A., **Hemmati, M.**, Maghsoodi Tilaki, M. J., & Alipour, M. (2024). Unraveling the tourism–environment–equity nexus: A neighborhood-scale analysis of Texas urban centers. *Urban Science*, 8(3), 82. <https://doi.org/10.3390/urbansci8030082>

Khatiwada, K. R., Pradhananga, S., & Nepal, S. (2024). Inferring the impacts of climate extreme in the Kabul River Basin. *Regional Environmental Change*, 24(1), 17. <https://doi.org/10.1007/s10113023-02167-3>

Kirkpatrick, A. G., Lazagabaster, I. A., Robinson, J. R., Rowan, J., Campisano, C. J., Reed, K. E., Scott, J. R., & Ungar, P. S. (2025). Dental microwear of bovids from the Pliocene-Pleistocene transition in the lower Awash Valley, Ethiopia. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 670, 112932. <https://doi.org/10.1016/j.palaeo.2025.112932>

Kissi-Somuah, D. In progress. Experiences of Psychological Distress from Climate Change Maladaptation: The Case of Ghana's Keta Sea Defense. Target journal submission: *Water Science*

Kissi-Somuah, D. In progress. Waste Minimization Strategies Among Households in Elmina, Ghana. Target submission: *African Geographical Review*.

Kissi-Somuah, D., Holland, E.C. In progress. Rural-Urban Migration, The Extent of Urbanization: A Case Study of Rural Migrants from Northern Ghana to Accra. Target Submission: *Ethnic and Migration Studies or Environment & Urbanization*

Nyantakyi, B.E., Nyantakyi-Frimpong, H., **Kissi-Somuah, D.** In progress. Climate Change Adaptation Finance at the Micro-Scale and Sustainable Farming Practices in Ghana. Target journal submission: Climate Change or Climate and Development

Nyantakyi-Frimpong, H., **Kissi-Somuah, D.** In progress. Experiences of Psychological Distress from Climate Change Maladaptation: The Case of Ghana's Keta Sea Defense. Target journal submission: Social Science & Medicine

Mantooth, M. (in progress) An analytical evaluation of an American resource periphery: Maine, 1970-2020. [based on AAG poster]

Mantooth, M. (under review). An analytical evaluation within economic geography of Maine and its resource industries, 1600-present. *Doctoral Dissertation*.

O'Callahan, A. & Naithani, K. (2025). Continental scale drivers of soil microbial biomass and community composition. In preparation.

O'Callahan, A. (2024). "Ode to the College Social Justice Club." Roots Magazine, edited by Amelia Southern Uribe. Issue 02. Zero Hour Arkansas, pp 16.

O'Callahan, A. (2025). "Not Lost Yet." The Nature of Our Times: Poems on America's Lands, Waters, Wildlife, and Other Natural Wonders online gallery anthology, published by Poets for Science.

Scott, S., Ward, A., & **O'Callahan, A. (2025).** "Summary of the Third Annual AEOIP Workshop." NASA.

St. Rose A., **O'Callahan A.**, Smith H., Muniyasamy A., Dunn III J. E., Bradford J., and Naithani K. (2025). A Comprehensive Review and Synthesis of Diversity Indices and Their Use in Ecology. In preparation.

Ivanov, V., Ungar, P., Ziker, J., Abdulmanova, S., Celis, G., Dixon, A., Ehrich, D., Fufachev, I., Gilg, O., Heskell, M., Liu, D., Macias-Fauria, M., Mazepa, V., Mertens, K., Orekhov, P., **Peterson, A.**, Pokrovskaya, O., Sheshukov, A., Sokolov, A., Sokolova, N., Spiegel, M., Sponheimer, M., Stammler, F., Taylor, T., Terekhina, A., Valdayskikh, V., Volkovitskiy, A., Wang, J., Zhou, W., 2024. A Convergence Science Approach to Understanding the Changing Arctic. *Earth's Future* 12:e2023EF004157.

Smith, H.W., Ashworth, A.J., King, S., Kreman, C., Miller, D.M., Nalley, L.L., and Owens, P.R., 2024. Remote sensing reveals trends in vegetative recovery and land cover transformation post-reclamation at Tar Creek Superfund Site. *Discover Geoscience*.
<https://doi.org/10.1007/s44288-024-00057-7>

Ashworth, A.J., Avila, A., **Smith, H.W.**, Winzeler, T.E., Owens, P.R., Flynn, C., O'Brien, P., Philipp, D. and Su, J., 2024. Predicting spatiotemporal patterns of productivity and grazing

from multispectral data using neural network analysis based on system complexity. *Agrosystems, Geosciences & Environment*. <https://doi.org/10.1002/agg2.20571>

Reports

Han, Y., Fehring, L. K., Wang, J., Yao, J., **Garrett Kirkpatrick, A.**, Scott, J. R., Chen, X., Wang, Q., Ungar, P. S., & Zhang, D. (2024). Paleodiet reconstruction of *Procavia przewalskii* from the Qinghai Lake Basin during the Early and Middle Holocene. *Journal of Archaeological Science: Reports*, 60, 104808. <https://doi.org/10.1016/j.jasrep.2024.104808>

López-Rojas, M., Cárdenes-Sandí, G., & Salgado-González, S. (2024). Botanical Resources and Pre-Columbian Subsistence in Nuevo Corinto, Costa Rica. *Journal of Archaeological Science: Reports*, 53, 104351. <https://doi.org/10.1016/j.jasrep.2023.104351>.

Invited Lectures

Nabuwembo, M.G. (2025). Seminar in GIS: Introduction to Google Earth Engine (GEOS 59703). “Cloud geoprocessing using Google Earth Engine to identify agricultural adaptation in Malawi.” Department of Geosciences, University of Arkansas

Smith, H.W., Heffernan, C.J., Ashworth, A.J., Bullock, D., Nalley, L.L., Tullis, J., Owens, P.R. Harvesting Insights: Machine learning to predict U.S. maize and soybean yields. *Crop Soil and Environmental Sciences Departmental Seminar*. University of Arkansas, Fayetteville, AR, February 3, 2025.

Smith, H.W., Ashworth, A.J., Bullock, D., Kharel, T.P., Nalley, L.L., Owens, P.R. Where can we grow? Machine learning to predict the future of U.S. corn. *Three Minute Thesis Competition Final Round*. University of Arkansas, Fayetteville, AR, November 23, 2024.

Williams, D., Guest Lecturer. 2025. Seminar in GIS: Introduction to Google Earth Engine (GEOS 59703). *Time-series tick suitability mapping using big data and cloud computing*. Department of Geosciences, University of Arkansas.

Williams, D. Guest Lecturer. 2025. Epidemiology Public Health (PBHL 56103). *Geographic Information Systems and Public Health*. Department of Human Health and Performance, University of Arkansas.

Presentations – oral

Cooper, C.F. “Exploring Market & Policy Options for Specialty Crop Growers in the Mississippi Delta” Farm Foundation Capstone Presentations, USDA-ERS – September 11, 2024

Dotse Bampoe, G., Huang, Q., and Henry, C. “Producers’ Perception of Water Shortage Risks and the use of Irrigation Practices,” Southern Agricultural Economics Association, 56th Annual meeting 2024

Escalante, L.E. Spatial variability in greenhouse gas emissions in a furrow-irrigated soybean field on a silt-loam soil in Southeast Arkansas. American Society of Agronomy Annual Meeting, Presenter. San Antonio, TX, November 2024.

Grantz, E.M., & B.E. Haggard. 2024. Water quality changes and perspectives at the Buffalo National River. AWRA, UCOWR, NIWR 60th Anniversary Joint Water Resources Conference, Oct. 2024, St. Louis, MO

Grantz, E.M. & B.E. Haggard. 2024. Water quality changes and perspectives in the Buffalo National River over the last two decades. Conserving the Natural State Forum, Sept. 2024, Morrilton, AR

Kissi-Somuah, D. “Waste Minimization Strategies Among Households in Elmina, Ghana.” AAG Annual Meeting, 2025.

Nabuwembo, M.G., (2024). “Remote Sensing and the patterns of Agricultural Adaptation. A Study of Pigeon pea in Malawi.” International Technical Symposium, ASPRS, Virtual

Ruegsegger, A. †, **O’Callahan, A.,** Naithani, K., & Ogle, J. “Patterns and Drivers of Floristic Quality and Plant Diversity in the Beaver Lake watershed.” EcoREU Expo, University of Arkansas, Fayetteville, AR. July 16-17, 2024. Presentation.

Osborne, S. D., Derakhshani-Molayousefi, M., & Chevrier, V. (2024). “Molecular Dynamics Simulations of Chao-and Kosmotropicity: Implications for Bioavailability and Habitability.” Presented at Lunar and Planetary Science Conference, 2025.

Wehbi, Hanan and Kemper, Nathan (2024). Factors Influencing the Transition to Renewable Energy in Rural American Communities: The Role of Multi-Level Governance. Presented at North American Meetings of the Regional Science Association International, New Orleans, LA.

Williams, D., “Stress Management Essentials”. Presented at Association of American Geographers Annual Meeting, March 2025.

Presentations – poster

Abrego Bonilla, J. Poster: “Impact of ENSO Phases on Precipitation and Tornado Dynamics,” AAG Annual Meeting, Detroit, MI, 2025.

Abrego Bonilla, J. Poster: “Mapping Panama’s Water Budget Dynamics,” AAG Annual Meeting, Hawaii (Virtual), 2024.

Dotse Bampoe, G. Arkansas State Climate Information and Services Workshop, Friday, October 25, 2024 Auditorium, Engineering and Information Technology Building, University of Arkansas at Little Rock

Gasmi, Farah and Aly, Mohamed (2024). High-Resolution Flood Mapping in Northwest Arkansas Using Lidar and Google Earth Engine. Presented at Geological Society of America 2024 Annual Meeting. Anaheim, CA

Khatiwada, K. R., Tang R., Moon J.B., Stinchcomb, G. E., El Masri B., Runkle B.; Towards a generalized model to represent the complexities of methane flux processes in forested wetlands, In American Geophysical Union (AGU) annual meeting, 9-13 December 2024, Washington, D.C. USA

Khatiwada, K. R., Tang R., Moon J.B., Stinchcomb, G. E., El Masri B., Runkle B.; Understanding the role of environmental drivers in determining methane flux in forested wetlands, In American Society of Agricultural and Biological Engineers (ASABE) State Section meeting, 4 October 2024, Fayetteville, AR, USA

Mantooth, M. “An analytical evaluation of an American resource periphery: Maine, 1970-2020.” American Association of Geographers Annual Meeting, Detroit Michigan; March 24-28, 2025

Nabuwembo, M.G, (2024). "Measuring Agricultural Adaptation using Remote Sensing: A Study of Pigeon pea in Malawi." Graduate Society of Women Engineers Poster Competition Winner, 2nd Place Fayetteville

Peter, B.G., **Nabuwembo, M.G., (2024).** "Measuring Agricultural Adaptation using Remote Sensing: A Study of Pigeon pea in Malawi." American Geophysical Union-AGU, Washington DC, USA

Nabuwembo, M.G., (2024). "Measuring Agricultural Adaptation using Remote Sensing: A Study of Pigeon pea in Malawi." National Association of Black Geoscientists, Atlanta, Georgia, USA

Nabuwembo, M.G., (2024). “A Machine Learning Approach to Studying the Cooling Effects of Urban Green Spaces (UGS) in Southeast US”, Boulder, Colorado, USA

Ruegsegger, A. †, **O’Callahan, A.**, Naithani, K., & Ogle, J. “Patterns and Drivers of Floristic Quality and Plant Diversity in the Beaver Lake watershed.” Arkansas Water Resource Center. Annual Conference, Fayetteville, AR. July 16-17, 2024. Poster.

Rosenburg, D.” Heavy Metal Never Dies: 9,800 Years of Metal Pollution from Laguna Sausacocha,” Peru. 51st Annual Midwest Conference on Andean & Amazonian Archaeology & Ethnohistory. University of Illinois, Urbana-Champaign, March 7, 2025.

Vahid Belarghou, Rasool and Aly, Mohamed (2024). Assessing the Impact of Urbanization on Land Surface Temperature and Land Use/Land Cover Dynamics in Arkansas: A 20-Year Spatiotemporal Analysis Using Machine Learning & Google Earth Engine. Presented at Geological Society of America 2024 Annual Meeting. Anaheim, CA

Williams, D., “Temperature-Based Tick Suitability in Arkansas.” Presented at Conserving the Natural State Forum, September 2024.

Williams, D., “Temperature-Based Tick Suitability in Arkansas.” Presented at International Medical Geography Symposium, July 2024.

Certifications Completed

Adult and Pediatric First Aid/CPR/AED ID - 01I12KI

Certified Drone Pilot (Remote Pilot Certificate; FAA Part 107)

Climate Change Roster of Experts – United Nations

Diplomacy in the Modern World

FAA Part 107 Certificate, Federal Aviation Administration

FAA Recreational UAS Safety Test Certificate, Federal Aviation Administration

Graduate Certificate in Sustainability

Public Speaking and Communication for Speaking in Public with Confidence

Memberships

“Lutung” Primate Study Group

American Association of Biological Anthropology

American Association of Geographers

American Geophysical Union

American Planning Association

American Society for Photogrammetry and Remote Sensing (ASPRS) UARK Student Chapter

American Society of Agronomy

American Society of Photogrammetry and Remote Sensing – University of Arkansas Chapter

Association for Women in Mathematics

Association of Women Geoscientists

Bibiniba Foundation

Cartography and Geographic Information Society

Citizen's Climate Lobby

Climate Change Social Science Network (CCSSN)

Crop Science Society of America

Ecological Forecasting Initiative (EFI)

Ecological Society of America (ESA)

EFISA, Ecological Forecasting Initiative

Engineer's School of Peru, CIP No 244246

Environmental Dynamics Student Association

Geographic Information Science and Systems Specialty Group, AAG

Geospatial Professional Network

Graduate Professional Student Congress

Graduate Student Affinity Group, AAG

IEEE - Geoscience and Remote Sensing Society.

IKA FABIONA – Fakultas Biologi Universitas Nasional Alumni Association

Institute of Environmental Management and Assessment (IEMA)

International Association for Landscape Ecology-North America (IALE-NA)

International Phytolith Society

NASA STAAR Rocketry Team

National Association of Black Geoscientists

National Institutes of Water Resources

National Society of Leadership and Success

North American Invasive Species Management Association (NAISMA)

North Carolina ArcGIS User's Group

OpenStreetMap US

Perhimpunan Ahli dan Pemerhati Primata Indonesia (PERHAPPI)

PERMIAS – Indonesian Student Association Chapter Arkansas

Peru's National Scientific, Technological, and Technological Innovation

Pollinator Partnership Northwest Arkansas

Primate Research Center, Universitas Nasional

Regional Development and Planning Specialty Group, AAG

Remote Sensing Specialty Group, AAG

Society for Freshwater Science

Society of Ethnobiology

Society of Ethnobotany

Soil and Water Conservation Society

Soil Science Society of America

The Africa Specialty Group, AAG

The American Association of Geographers

The Rural Geography Special Group (RGSG), AAG

Translation Working Group, Ecological Forecasting Initiative

Universities Council on Water Resources

Urban Geography Specialty Group, AAG

Water 5.0 Collaborative

Women In Soil Ecology (WISE)

YouthMappers, University of Arkansas Chapter

Volunteering

2024 AAG Conference Assistant

2024 AAG Conference Session Chair

Archeology Month Trivia Night

Arkansas Union (5 hours)

Arkansas Union Sustainability (5 hours)

Big Paws of the Ozark (700 hours)

Black Graduate Student Association

Environmental Dynamics Student Association

Fulbright Scholars of University of Arkansas

Graduate Professional Student Congress

International Cultural team (33 hours)

International Students and Scholars (152 hrs)

InterVarsity University of Arkansas (1 hour @ week)

Make A Difference Day 2024 (2hours)

NW Arkansas Championship presented by P& G (5 hours)

NWA Black Heritage East Mountain Cemetery Project

Photographer, Friends of India, University of Arkansas.

Tri Cycle Farms

University Programs

Volunteer Action Center / Student Engagement (4 hours)

Women in GIS Uganda – GIS volunteer

In the News

News article links

[2024 Winners of King, Nolan and OMNI Faculty Awards Announced | University of Arkansas](#)

[An ENDY student received the Gerald O. Mott Award.](#)

[An ENDY student was accepted as a Member of the Roster of Experts for the United Nations Framework Convention on Climate Change \(UNFCCC\).](#)

[An ENDY student was second runner-up in the Graduate Society of Women Engineers Poster Competition.](#)

[Biggadike Innovation Grant Workshop Empowers Engineering Educators | University of Arkansas](#)

[Bumpers College's Kariyat Receives Entomology National Teaching Award | University of Arkansas](#)

[Chasing the Elusive al-Khamsin, Wind of Legend | University of Arkansas](#)

[Eartha's Farm & Market Workshop Confronts Urban Social, Economic and Environment Food Desert Habitiats - Free Press of Jacksonville](#)

[Environmental Resiliency Completes First Year as Online Offering | University of Arkansas](#)

[Environmental Resiliency Courses Available for Summer, Fall | University of Arkansas](#)

[Environmental Resiliency Online Certificate Tops Off Graduate Education | University of Arkansas](#)

[Environmental Resiliency Program Now Enrolling Students for Summer Courses | University of Arkansas](#)

[Four women professors share their cross-cultural experiences at the UofA | Lifestyles | uatrav.com](#)

[Fulbright College Faculty Recognized Among World's Most Cited Researchers | University of Arkansas](#)

[GSIE Welcomes New Class of Distinguished Doctoral, Doctoral Academy Fellows | University of Arkansas](#)

[Kvamme Retires After Two Decades of Supporting Environmental Dynamics; Reception Thursday | University of Arkansas](#)

Lanoue band [KICK THE WICKED: Release Three New Tracks - Heaven's Metal Magazine](#)

[Peter Ungar Chosen as Member of the National Academy of Sciences | University of Arkansas](#)

[Photogrammetry and Remote Sensing RSO Schedules Annual Meeting | University of Arkansas](#)

[Registration Now Open for 'Conserving the Natural State' Forum Sept. 6-8 | University of Arkansas](#)

[Researchers Across U of A Ranked Among Top in the World | University of Arkansas](#)

[Robyn Lane Explores Misconceptions Around Landscape Architecture, Learning Opportunities | University of Arkansas](#)

[Spring Drone Social at Agri Park Saturday | University of Arkansas](#)

[The Making of a Scholar; Ungar Joins Ranks of Elite Group of Scientists |](#)

[U of A Professor Leads Grant to Broaden Participation, Inclusion in Geosciences Workforce | University of Arkansas](#)

Appendix II – Graduate Publications 2024-2025

Seither, B., & **Craig, C.A.** (2025). River tourism, thermal stress, and river discharge on the Buffalo National River. *Journal of Ecotourism*.
<https://doi.org/10.1080/14724049.2025.2478009>

Craig, C.A., & Karabas, I. (2025). Sustainability science in management curriculum: Cognitive and affective sustainability learning in an MBA course. *International Journal of Management Education*, 23(2), 101153. <https://doi.org/10.1016/j.ijme.2025.101153>

Craig, C.A. (2025). Weather: An organizational stakeholder for United States National Seashores. *Tourism Management*, 108, 105123.

Craig, C.A., & Evans Jr., R. (2025) Beach camping, weather, and COVID-19: A case of Hawaii, United States. *Tourism in Marine Environments*, 19, 3-4.
<https://doi.org/10.3727/216901925X17394386176046>

Craig, C.A. (2025). Glamping: A review. *Journal of Outdoor Recreation and Tourism*, 48, article 100858. <https://doi.org/10.1016/j.jort.2025.100858>

Karabas, I., & **Craig, C.A.** (2025). Double-edged sword: To keep or abandon the tip request? *SAGE Business Cases*. <https://doi.org/10.4135/9781071970836>

Craig, C.A. (2025). Conserving the Chicago River's ecosystem during climate change: The Shedd Aquarium case. *SAGE Business Cases*. <https://doi.org/10.4135/9781529697599>

Oxarart, R.A., & **Craig, C.A.** (2024). Elon Musk's Twitter takeover and WARN Act violation: A human resource planning case. *Journal of Critical Incidents*.

Craig, C.A., & Karabas, I. (2024). Forecasting thermal stress for sports tourists at the 2026 FIFA World Cup. *International Journal of Biometeorology*. DOI: 10.1007/s00484-024-02785-4

Craig, C.A. (2024). Forecasting Australia's arrivals with climate indices. *International Journal of Tourism Cities*, 10(3), 1098-1108. DOI: 10.1108/IJTC-01-2024-0004

Ma, S., & **Craig, C.A.** (2024). Global climate resources and climate change for beach tourism (1950-2019). *Tourism in Marine Environments*, 19(1), 2319723.
<https://doi.org/10.3727/216901924X17183461071881>

Craig, C.A., & Oxarart, R. (2024). The sustainability of island tourism during climate change: A case of Hawaii, United States. *Sustainability*, 16, 4680. <https://doi.org/10.3390/su16114680>

Craig, C.A., Nochebuena-Evans, L., & Evans, R. (2024). Campgrounds and climate change: An extreme weather event study for nature-based entrepreneurship. *Journal of Business Venturing Insights*, 22, e00477. <https://doi.org/10.1016/j.jbvi.2024.e00477>

Ma, S., **Craig, C.A.**, & Feng, S. (2024). Applying a phenology algorithm to establish camping seasons in the United States. *Journal of Ecotourism*, 23(2), 217-227. <https://doi.org/10.1080/14724049.2023.2283396>

Craig, C.A. (2024). Climate Resource View (CRV): A case of thermal safety at United States National Parks. *Journal of Outdoor Recreation and Tourism*, 45, 100737. <https://doi.org/10.1016/j.jort.2024.100737>

McCormick, B., **Craig, C.A.**, Gilbertz, S., Wood, B., & Karabas, I. (2024). Assessing the influence of traditional in-seat, online, and emergency remote teaching (ERT) modalities on sustainability learning in Human Geography. *Journal of Geography in Higher Education*. DOI: 10.1080/03098265.2024.2316701

Craig, C.A. (2024) Boston Market: Can the rotisserie chicken chain be turned around? *SAGE Business Cases*. <https://doi.org/10.4135/9781071940075>

(2025). In T. Lansford, **D. H. Holt**, J. Callahan, J. Covarrubias, W. F. Lesperance, Jr., & R. Redding (Eds.), *Political Handbook of the World 2022-2023 Volume 1* (87th ed., vol. 1). New York, New York: Sage.

(2025). In T. Lansford, **D. H. Holt**, J. Callahan, J. Covarrubias, W. F. Lesperance, Jr., & R. Redding (Eds.), *Political Handbook of the World 2022-2023 Volume 2* (87th ed., vol. 2). New York, New York: Sage.

Holt, D. H., Johnston, B. (in press 2025). Chapter 5: Executive Leadership and Governing by Twitter. *The Trump Term: Scholars Assess Its Unprecedented Impact on the American Presidency and the Future of the Republic*. New York: SUNY - State University of New York Press.

Brye, J. B., **Lunga, D. D.**, & Brye, K. R. (2024). Rice response to struvite and other phosphorus fertilizers in a phosphorus-deficient soil under simulated furrow-irrigation. *Journal of Soil Science and Plant Nutrition*, 24(4), 7491–7506. <https://doi.org/10.1007/s42729-024-02054-8>

Gorczyński, L. E., Wilson, A. R., **Odhiambo, B. K.**, & Ricker, M. C. (2024). Coastal forest change and shoreline erosion across a salinity gradient in a micro-tidal estuary system. *Forests*, 15(6), 1069. <https://doi.org/10.3390/f15061069>

Frankel, T. E., Crowell, C., Orledge, S., Giancarlo, L., & **Odhiambo, B. K.** (2025). Identifying potential trace metal contamination impacts of a coal ash landfill on the largest Chesapeake Bay tributary (Chester, VA, USA). *Environmental Toxicology and Chemistry*, 44(3), 802–811. <https://doi.org/10.1093/etjnl/vgae073>

Boyer, C.N., E. Park, C. Hellwinckel, **S.A. Smith**, W. Maples, and G. Perez-Quesada. 2024. “Estimating Prevented Planting Coverage Factor Variation.” *Agricultural and Resource Economics Review*. 53, 356–370. [[Link](#)].

Smith, S.A. and A.R. Khanal. 2024. “Understanding ASEAN Agricultural Production, Consumption, and Trade Potential.” *Choices*. Volume 39 Quarter 3. [[Link](#)].

Boyer, C.N., L. Chen, G. Perez Quesada, and **S.A. Smith**. 2024. “Unwelcomed Guests: Impact of Deer Harvest on Corn and Soybean Wildlife Damage.” *Crop Protection*. Volume 183, September 2024, 106753. [[Link](#)].

Weiss, E. (2024). *On the warpath: My battles with Indians, Pretendians, and Woke Warriors*. Academica Press.