

Kelsey E. Herndon

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EDUCATION:

- 2018 The University of Alabama in Huntsville
MS, Earth System Science
Thesis: *Applications of Satellite Remote Sensing for Monitoring Surface Water Dynamics in the Sahel*
- 2015 The University of Alabama
MA, Anthropology
Thesis: *The Embodiment of Status in the Mississippian Component of the Perry Site (1LU25)*
- 2011 Auburn University
BA, Anthropology; Minor: Spanish

EMPLOYMENT:

- 2016 - pres. The University of Alabama in Huntsville, Earth System Science Center
2021-pres Research Scientist (NASA-USAID SERVIR)
2018-2021 Amazonia Regional Science Associate (NASA-USAID SERVIR)
2016-2018 Graduate Research Assistant, West Africa (NASA-USAID SERVIR)
- 2020-2021 Consultant (GRH), Development of New- and Collection of Existing- Measurement, Reporting, and Verification Related Resources to Support Countries' MRV Implementation.
The World Bank Forest Carbon Partnership Facility
- 2016 DEVELOP, NASA Marshall Space Flight Center, Huntsville, AL
Summer 2016 Project Lead, Chaco Canyon Cross-Cutting
Spring 2016 GIS Consultant, Alabama Ecological Forecasting
- 2015 Project Manager
Environmental Corporation of America, Atlanta, GA
- 2012-2014 Graduate Teaching Assistant
Department of Anthropology, University of Alabama, Tuscaloosa

AWARDS, GRANTS, AND FELLOWSHIPS:

- 2023 US State Department Citizen Diplomacy Action Fund (**Co-PI** with Rebekke Muench). *Riverside Chats: Community Conversations towards Protecting Alabama's Freshwater Resources.*
- 2020-2024 NASA ROSES Interdisciplinary Research in Earth Science (**Co-I**, PI-Tim Murtha), *The Ancient Maya Landscape: Households, Settlement, and Ecology of the Lowlands*
- 2020 NASA Group Achievement Award, SAR Handbook Team
- 2020 SERVIR Global Award of Excellence, SAR Handbook Team
- 2019 NASA Science and Technology Office Peer Awards - Pounding the Pavement Award
- 2019 Mandela Washington Fellowship Reciprocal Exchange, US State Department (**Co-PI** with Rebekke Muench) Remote Sensing Capacity Building to Support Entrepreneurs in Togo

- 2018 NASA Group Achievement Award, MSFC Hurricane Harvey Disaster Response Team
- 2018 Graduate Student Researcher of the Year Award
Department of Atmospheric Science, The University of Alabama in Huntsville.
- 2018 **Third Place** winner from the College of Science Graduate Division in the Research Horizons contest, The University of Alabama in Huntsville, with *Applications of NASA Earth Observations for Monitoring Surface Water Availability for Pastoralists in Remote Regions of Tahoua, Niger* (**KE Herndon**, R Muench, E Cherrington, and R Griffin).
- 2017-18 Frédéric Bastiat Fellow in Applied Economics
The Mercatus Center, George Mason University; Arlington, VA.
- 2017 **Second Place** Poster in Graduate Student Physical and Liberal Sciences Category for the American Astronomical Society's Werhner von Braun Memorial Symposium with *Applications of NASA Earth Observations for Monitoring Surface Water Availability for Pastoralists in Remote Regions of Tahoua, Niger* (**KE Herndon**, R Muench, E Cherrington, and R Griffin).
- 2017 **First Place** winner from the College of Science Graduate Division in the Research Horizons contest, The University of Alabama in Huntsville, with *Utilizing NASA Earth Observations to Identify and Protect Ancient Chacoan Sites Throughout the San Juan Basin* (**KE Herndon**, S Neeley, D Cruz, and R Schick).
- 2016 **First Place** Poster in Graduate Student Physical and Liberal Sciences Category for the American Astronomical Society's Werhner von Braun Memorial Symposium with *Utilizing NASA Earth Observations to Identify and Protect Ancient Chacoan Sites Throughout the San Juan Basin* (**KE Herndon**, S Neeley, D Cruz, and R Schick).
- 2016 **Finalist** for Grand Prize in *EarthZine* Virtual Poster Symposium and **Best in Category** (Detecting Land Cover Change and Disturbances) in *EarthZine* VPS competition for *Can You Dig It? Identifying and Protecting Ancient Chacoan Ruins* (**KE Herndon**, S Neeley, D Cruz, and R Schick).
- 2016 **Finalist** for Grand Prize in *EarthZine* VPS competition and **Best in Category** (Monitoring Environmental Health and Disturbances) in *EarthZine* VPS competition for *Here, There, and Everywhere: Monitoring SPB Outbreaks in Alabama* (R Schick, M Klug, **KE Herndon**, and L. Sinclair).
- 2013 Student Travel Award
The South-Central Conference on Mesoamerica: Houston, Texas.
- 2013 Graduate Student Association Research and Travel Grant
The University of Alabama
- 2012 Student Travel
South-Central Conference on Mesoamerica: Lubbock, Texas.
- PEER-REVIEWED JOURNAL ARTICLES:**
- 2023 Schroder, W, T Murtha, C Golden, M Brown, R Griffin, **KE Herndon**, S Morell-Hart, AK Scherer. Regional Household Variation and Inequality across the Maya Landscape. *Journal of Anthropological Archaeology* 72:101552; <https://doi.org/10.1016/j.jaa.2023.101552>.

- 2023 **Herndon, KE**, W Schroder, T Murtha, R Griffin, C Golden, D Contreras, L Wang, A Bazarsky, GV Kollias, O Alcover
Google Earth Engine for Archaeologists: An Updated Look at the Progress and Promise of Remotely Sensed Big Data. *Journal of Archaeological Science: Reports*.
<https://doi.org/10.1016/j.jasrep.2023.104094>.
- 2023 Murtha, T, W Schroder, C Golden, **KE Herndon** and R Griffin. Does the past influence the present or the future? Deep Time, Land Use, and Remote Sensing in Southern Mexico. *Journal of Digital Landscape Architecture*, 8-2023, pp. [in print]
- 2022 Walker, KA, AI Flores-Anderson, R Griffin, **KE Herndon**, M Finer.
An Analysis of Fire Dynamics Near Indigenous Territories and Protected Areas in a Brazilian Agricultural Frontier. *Environmental Research Letters* 17(8). doi 10.1088/1748-9326/ac8237
- 2021 Schroder, W, T Murtha, C Golden, AK Scherer, S Morell-Hart, E Broadbent, AM Almeyda Zambrano, **KE Herndon**, R Griffin.
UAV LiDAR Survey for Archaeological Documentation in Chiapas, Mexico. *Remote Sensing* (2021), 13:23, 4731, doi: 10.3390/rs13234731
- 2021 Parache, HB, T Mayer, **KE Herndon**, AI Flores-Anderson, Y Lei, Q Nguyen, T Kunlamai, and R Griffin.
Estimating Forest Stand Height in Savannakhet, Lao PDR Using InSAR and Backscatter Methods with L-Band SAR Data. Submitted to *Remote Sensing Special Issue: National REDD+ Monitoring and Reporting*, 13:4516, doi: 10.3390/rs13224516.
- 2021 Nicolau, AP, A Flores-Anderson, R Griffin, **KE Herndon**, and FJ Meyer
Assessing SAR C-Band Data to Effectively Distinguish Modified Land Uses in a Heavily Disturbed Amazon Forest. *International Journal of Applied Earth Observation and Geoinformation*, 94:102214 doi: 10.1016/j.jag.2020.102214
- 2020 **Herndon, KE**, R Muench, E Cherrington, and R Griffin
An Assessment of Surface Water Detection Methods for Water Resource Management in the Nigerien Sahel. *Sensors* 20:431, doi:10.3390/s20020431.
- 2019 Nicolau, AP, **KE Herndon**, A Flores-Anderson, and R Griffin
A Spatial Pattern Analysis of Forest Loss in the Madre de Dios Region, Peru. *Environmental Research Letters* 14:124045, doi:10.1088/1748-9326/ab57c3.
- 2015 **Herndon, KE**, G Zaro, BA Houk, D Sandrock, E Vasquez, and A Booher
Investigating Urban Form and Kingship: Preliminary Results of the 2014 Chan Chich Archaeological Project. *Research Reports in Belizean Archaeology* 12: 339-346.
- 2014 Houk, BA, K Kelley, D Sandrock, and **KE Herndon**
The Chan Chich Archaeological Project and the Belize Estates Archaeological Survey Team, 2013 Season. *Research Reports in Belizean Archaeology* 11: 327-336.
- 2013 Davis, CB, KA Shuler, ME Danforth, and **KE Herndon**
Patterns of Interobserver Error in the Scoring of Enthesal Changes. *International Journal of Osteoarchaeology* 23: 147-151, doi: 10.1002/oa.2277.

- 2012 Perash, RM, JA White, **KE Herndon**, and DN Cook
Childhood Health and Nutrition at the Austin Site (22TU549), Tunica County, MS: A Comparative Analysis of Childhood Nutrition from Village and Mound Centers in Northwest Mississippi. *The Auburn University Journal of Undergraduate Scholarship* 1: 4-7.

EDITED VOLUMES AND BOOK CHAPTERS

- 2019 Flores-Anderson, A, **KE Herndon**, E Cherrington, and R Thapa (Eds.)
SAR Handbook: Comprehensive Methodologies for Forest Monitoring and Biomass Estimation. National Aeronautics and Space Administration (NASA), doi: 10.25966/nr2c-s697.
- 2019 Flores-Anderson, A, **KE Herndon**, E Cherrington, R Thapa, L Kucera, N Quyen, P Odour, and M Bako. Introduction and Rationale. In *SAR Handbook: Comprehensive Methodologies for Forest Monitoring and Biomass Estimation*, A. Flores, E. Cherrington, **K. Herndon**, and R. Thapa (Eds.). National Aeronautics and Space Administration (NASA), doi: 10.25966/1rgr-q551.
- 2019 Cherrington, E, A Flores-Anderson, R Thapa, **KE Herndon**, A Wahome, P Oduor, K Mubea, E Ouko, N Quyen, D Saah, M Bako, P Bartel, F Mensah, S Ofori, E Anderson, E Adams, R Muench, A Markert, L Ellenburg, K Markert, A Limaye, R Griffin.
Perspectives on the Future Application of SAR in Forest and Environmental Monitoring. In *SAR Handbook: Comprehensive Methodologies for Forest Monitoring and Biomass Estimation*, A. Flores, K.E. Herndon, E. Cherrington, and R. Thapa (Eds.). National Aeronautics and Space Administration (NASA), doi: 10.25966/p7xd-0a19.

RESEARCH REPORTS AND CONFERENCE PROCEEDINGS:

- 2022 Hurst, H, KE Herndon, B Beltran, F Rossi, R Griffin, C Bettigole
SBX: Observaciones del Polígono San Bartolo-Xultun. In Resultados de Investigaciones, Años 2020-2022, B Beltran and H Hurst (Eds.), Report submitted to the Dirección General del Patrimonio Cultural y Natural de Guatemala Nueva Guatemala de la Asunción, December.
- 2021 Beltrán, B, C Bettigole, R Griffin, **KE Herndon**, H Hurst, F Rossi
Proyecto Regional Arqueológico San Bartolo-Xultun Pacunam Lidar Initiative I: Polígono San Bartolo-Xultun Year 1 Progress Report. On file with the Pacunam Lidar Initiative.
- 2019 **Herndon, KE**, R Griffin, A Flores-Anderson, E Cherrington, L Ellenburg, E Adams, A Markert, E Anderson, A Limaye, and D Irwin
15 Years of SERVIR: Applications of Earth Observations Toward Achieving Global Environmental Sustainability. IAC Conference Proceedings.
- 2016 **Herndon, KE**, S Neeley, D Cruz, and R Schick.
Utilizing NASA Earth Observations to Identify and Protect Ancient Chacoan Sites Throughout the San Juan Basin, New Mexico (Technical Report). On file with the NASA DEVELOP National Program Office.
- 2016 Schick, R, M Klug, **KE Herndon**, and L Sinclair.
Alabama Ecological Forecasting: Assessing Southern Pine Beetle Epidemics in Alabama's Bankhead National Forest Using NASA Earth Observations (Technical Report). On file with the NASA DEVELOP National Program Office.

- 2014 **Herndon, KE**, G Zaro, BA Houk, S Mitchell, and E Gallis
The 2014 Excavations of the Chan Chich Dynastic Architecture Project. In *The 2014 Season of the Chan Chich Archaeological Project*, edited by BA Houk, pp. 31-68. Papers of the Chan Chich Archaeological Project, Number 8. Department of Sociology, Anthropology, and Social Work, Texas Tech University.
- 2014 Willis, MD, BA Houk, **KE Herndon**, and C Walker
Structure from Motion Mapping of Structure A-15 at Chan Chich. In *The 2014 Season of the Chan Chich Archaeological Project*, edited by BA Houk, pp. 21-30. Papers of the Chan Chich Archaeological Project, Number 8, Department of Sociology, Anthropology, and Social Work, Texas Tech University.
- 2013 **Herndon, KE**, A Booher, and BA Houk.
The 2013 Excavations of Structure A-5, Chan Chich, Belize. In *The 2013 Season of the Chan Chich Archaeological Project*, edited by Brett A. Houk, pp 39-62. Papers of the Chan Chich Archaeological Project, Number 7. Department of Sociology, Anthropology, and Social Work, Texas Tech University.
- 2013 Houk, BA, CP Walker, M Willis, and **KE Herndon**
Structure from Motion Mapping and Remote Sensing at Structure A-5, Chan Chich, Belize. In *The 2013 Season of the Chan Chich Archaeological Project*, edited by Brett A. Houk, pp 27-38. Papers of the Chan Chich Archaeological Project, Number 7. Department of Sociology, Anthropology, and Social Work, Texas Tech University.
- 2013 Houk, BA, CP Walker, M Willis, and **KE Herndon**.
The Chan Chich Structure A-5 Mapping Project: A New Approach to Mapping and Remote Sensing a Maya Mound. Final report on file with the National Geographic Society/Waitt Grants Program (Grant Number W261-12).

POPULAR SCIENCE, BLOG POSTS, AND NEWS ARTICLES:

- 2020 Nicolau, AP, R Griffin, A Flores-Anderson, **KE Herndon**, FJ Mayer. Assessing SAR C-band Data to to Effectively Distinguish Modified Land Uses in a Heavily Disturbed Amazon Forest. *Spectrum* 14:3 pp. 7-83. http://sc.isprs.org/files/sc/newsletter/ISPRS%20SC_Vol14_No3.pdf
- 2020 Staiger, S, S Alvarez, P Mantelatto, A Varón, C Alomía, M Becerra, **K Herndon**
Hub partners of SERVIR-Amazonia get Ready to Communicate the Delivery of Geospatial Services. SERVIR-Amazonia. August 17. <https://servir.ciat.cgiar.org/hub-partners-of-servir-amazonia-get-ready-to-communicate-the-delivery-of-geospatial-services/>
- 2020 **Herndon, KE**, A Flores. Protecting Amazonia Forests by Mapping Forest Degradation using Cloud-Penetrating Satellite Imagery. USAID Climatelinks. July 24.
<https://www.climatelinks.org/blog/protecting-amazonia-forests-mapping-forest-degradation-using-cloud-penetrating-satellite>
- 2020 **Herndon, KE**, A Flores, L Kucera, F Meyer, P Land, C Hall, E Cherrington
What is Synthetic Aperture Radar? Article for NASA Earth Data website. April 16.
<https://earthdata.nasa.gov/learn/what-is-sar>
- 2019 Co-writer of *Synthetic Aperture Radar (SAR): For Forest Structure* animated video. NASA SERVIR Global.
<https://www.youtube.com/watch?v=em41MxplcDc>

- 2019 Flores-Anderson, A, **KE Herndon**, RB Thapa, L Kucera
From Theory to Practice: Freely-available eBook Enables Monitoring and Protection of Forests Worldwide. USAID Climatelinks. May 28. <https://www.climatelinks.org/blog/theory-practice-freely-available-ebook-enables-monitoring-and-protection-forests-worldwide>
- 2018 **Herndon, KE**, R Muench, E Cherrington, and R Griffin
Changing Patterns of Water in the Tahoua Region of Niger. *Esri Map Book*, Volume 33:122-123.
- 2017 Cruz, D, S Neeley, **KE Herndon**, and R Schick.
Chaco Canyon Cross-Cutting: Identifying Community Signatures with NASA Earth Observations. *Earthzine*, July 25, 2017. <https://earthzine.org/2017/07/25/chaco-canyon-cross-cutting-identifying-community-signatures-with-nasa-earth-observations/>
- 2017 Klug, M, L Sinclair, R Schick, and **KE Herndon**.
Assessing Southern Pine Beetle Epidemics in Alabama Using NASA Earth Observations. *Earthzine*, July 12, 2017. <https://earthzine.org/2017/07/12/assessing-southern-pine-beetle-epidemics-in-alabama-using-nasa-earth-observations/>
- 2014 Lynn, CD, VR Beasley, AS Cohen, HF Dengah II, JL Funkhouser, **KE Herndon**, and AB Persons.
Anthropology is Elementary and can be Taught There. In *Anthropology News: Council on Anthropology in Education* 55(5):34-35.

PROFESSIONAL PRESENTATIONS, PANELS, AND CONVENED CONFERENCE SESSIONS:

- 2023 Flores-Anderson, A, HB Parache, V Martin-Arias, SA Jiménez, **KE Herndon**, S Mehlich, F Meyer, S Agarwal, S Ilyushchenko, M Agarwal, A Nicolau, A Markert, D Saah, E Cherrington. Recommendations for Optimal Analysis Ready Data from a Global Evaluation of Open Source and Commercial Products for Sentinel-1. Abstract submitted to the Annual Meeting of the American Geophysical Union, San Francisco, CA. December 11-15
- 2023 Maganini, M, **KE Herndon**, R Griffin, D Irwin. Lessons Learned from Integration of Open Source Geospatial Tools with University Curricula. Abstract submitted to the Annual Meeting of the American Geophysical Union, San Francisco, CA. December 11-15.
- 2023 Carey, L, B Hernández Sandoval, A Flores-Anderson, E Anderson, E Cherrington, **KE Herndon**, N Copeland. Use of Earth Observations to Assess Connectivity between a Community-Managed Forest and Three Protected Areas in Northwestern Guatemala and Southern Mexico. Abstract submitted to the Annual Meeting of the American Geophysical Union, San Francisco, CA. December 11-15.
- 2023 Walker, K, M Becerra, **KE Herndon**, A Poortinga. Using Earth Observations to Monitor Ecosystems and Deforestation for Improved Decision-Making Around the Globe. Poster to be presented at the Annual Meeting of the Ecological Society of America in Portland, OR. August 6-11.
- 2023 Griffin, R., **KE Herndon**, L Ellenburg. Evidence for Hydrologic Engineering in the Ancient Americas using NASA Earth Observations. Poster to be presented at the Alabama Water Resources Conference, Orange Beach, Alabama; September 6-8.
- 2023 **Herndon, KE**, R Muench, C Lowry. Riverside Chats: Community Conversations towards Protecting Alabama's Freshwater Resources. Poster to be presented at the Alabama Water Resources Conference, Orange Beach, Alabama; September 6-8.

- 2023 Parache, H, A Flores-Anderson, S Jimenez, V Martin, **KE Herndon**, F Meyer, S Agarwal, M Agarwal, S Ilyushchenko, A Markert, A Nicolau, D Saah, E Cherrington. Global Evaluation of Open-Source and Commercial Analysis Ready Data Products for Sentinel-1. Poster presented at the International Geoscience and Remote Sensing Symposium (IGARSS), Pasadena, CA, July 16-21.
- 2023 Griffin, R, M Schick, F Bayat, T Klug, **KE Herndon**, B Au, S Greaves, K Taylor. A Classroom with a View: Sally Ride EarthKAM and STEM Education from the International Space Station. Poster presented at the ESRI User Conference, San Diego, California; July 10-12.
- 2023 Murtha, T, W Schroder, C Golden, **KE Herndon**, and R Griffin. Does the past influence the present or the future? Deep Time, Land Use, and Remote Sensing in Southern Mexico. Paper presented at the 23rd Annual Digital Landscape Architecture Conference. Dessau, Germany. May 25-28.
- 2023 Schick, M., R. Griffin, **KE Herndon**, F Bayat. Investigating the Land Use Legacy of the Maya Civilization in the Northeastern Peten, Guatemala, through LiDAR Remote Sensing. Paper presented at ASPRS: The Imaging and Geospatial Information Society's Mid-south Regional Conference at Oak Ridge National Laboratory, Knoxville, TN. April 21.
- 2023 Griffin, R, **KE Herndon**, H Hurst, F Rossi, and B Beltran. Remote Sensing of Constructed Landscapes in Northern Guatemala. Poster presented at the 88th Annual Meeting of the Society for American Archaeology, Portland, OR. March 29-April 2.
- 2022 **Herndon, KE**, R Griffin, H Hurst, B Beltran, F Rossi, L Gamez, C Bettigole, M Klug, F Bayat. Airborne Lidar to Characterize Ancient Land Use in the Tropical Forests of Peten, Guatemala. Poster presented at the American Geophysical Union Annual Meeting, Chicago, IL, December 12-16.
- 2022 Maganini, M, **KE Herndon**, R Muench, R Griffin. Lessons Learned from Integration of Open Source Geospatial Tools in University Curricula. Paper presented at the American Geophysical Union Annual Meeting, Chicago, IL, December 12-16.
- 2022 Parache, HB, A Flores-Anderson, **KE Herndon**, S Jimenez, V Martin, FJ Meyer, S Agarwal, M Agarwal, S Ilyushchenko, A Markert, A Nicolau, D Saah. Evaluating SAR Radiometric Terrain Correction Solutions: Optimal Products for Applied Users. Paper presented at the American Geophysical Union Annual Meeting, Chicago, IL, December 12-16.
- 2022 **Herndon, KE**, K Chan-Bagot, K Mosely, Z Naraine, B Zutta, C Evans, A Nicolau, HB Parache, V Martin. Monitoring the Dynamics of Guyana's Coastal Mangroves using Synthetic Aperture Radar and Optical Data in Google Earth Engine. Poster presented at the American Geophysical Union Annual Meeting, Chicago, IL, December 12-16.
- 2022 **Panelist** (with N. Searby, D. Degroot, J. Howe, and N. Maher) for Keynote Panelist Discussion (moderated by J. McNeill) at the History of NASA and the Environment Symposium, Georgetown University, September 29-30.
- 2022 **Herndon, KE** and D Irwin. 17 Years of SERVIR: Applications of Earth Observations to Improve Environmental Decision Making around the Globe. Paper presented at the History of NASA and the Environment Symposium; Georgetown University, September 29-30.

- 2022 Parache, H, A Flores-Anderson, **KE Herndon**, V Martin, FJ Meyer, S Agarwal, S Ilyushchenko, A Markert, A Nicolau
Evaluating SAR Radiometric Terrain Correction Solutions: Optimal Products for Applied Users. Paper presented at the Pecora Conference, October 23-28.
- 2021 Walker, KA, AI Flores-Anderson, R Griffin, **KE Herndon**, M Finer
An Analysis of Fire Dynamics Near Indigenous Territories and Protected Areas in a Brazilian Agricultural Frontier. VonBraun Student Poster Competition of the American Astronautical Society, October 12-14.
- 2021 Walker, KA, AI Flores-Anderson, R Griffin, **KE Herndon**, M Finer
An Analysis of Fire Dynamics Near Indigenous Territories and Protected Areas in a Brazilian Agricultural Frontier. AGU Fall Meeting, December 13-17.
- 2021 **Herndon, KE**, R Griffin, H Hurst, F Rossi, B Beltran, D Irwin
Applications of Remote Sensing for Delineating and Documenting the Biodiversity of a Proposed UNESCO World Heritage Site in Peten, Guatemala. AGU Fall Meeting, December 13-17.
- 2021 Flores-Anderson, AI, **KE Herndon**, HB Parache, V Martin, F Meyer, S Agarwal, S Ilyushchenko, A Markert, A Nicolau.
Evaluating SAR Radiometric Terrain Correction Products: Optimal Products for Applied Users. AGU Fall Meeting, December 13-17.
- 2021 Parache, HB, T Mayer, **KE Herndon**, AI Flores-Anderson, Y Lei, Q Nguyen, T Kunlamai, and R Griffin.
Estimating Forest Stand Height in Savannakhet, Lao PDR Using InSAR and Backscatter Methods with L-Band SAR Data. AGU Fall Meeting, December 13-17.
- 2021 **Herndon, KE** (primary convener), B Zutta, S Wilson, and N Searby.
Session GC009: Advances in the Use of Earth Observations for Mitigating Major Environmental Challenges in North, Central, and South America and the Caribbean Islands. AGU Fall Meeting, December 13-17.
- 2020 **Panelist** (with E Podest, A Rosenquist, J KelIndorfer, R Thapa, and T Erickson) for Capacity Building in the Field of SAR Remote Sensing: Comparing Current Training Resources, Tools, and Services to Community Needs (convened by F Meyer, D Saah, A Nicolau, and T Erickson,) at the AGU Fall Meeting, December 8.
- 2020 **Herndon, KE** (primary convener), C Gasco, S Wilson, and N Searby. Session GC080: Use of Earth Observations in Mitigating Major Environmental Challenges in the Americas. Oral and poster session convened at the AGU Fall Meeting, December 15.
- 2020 Tenneson, K, B Zutta, S Staiger, C Gasco, JL Fernandes, DS Saah, **KE Herndon**, A Flores.
Building a Scientific Consortium for Applied Research for the Amazon in the Context of the COVID-19 Pandemic. Poster presented at the Annual AGU Fall Meeting, December 7-11.
- 2020 Novoa, S, L Villa, M Becerra, D Castillo, A Nicolau, **KE Herndon**, N Khanal, B Zutta, K Tenneson, and DS Saah.
A Near Real-Time Mine Alert System Using Sentinel-1 Data. Paper presented at the Annual AGU Fall Meeting, December 15.

- 2020 Zutta, B, TD Oyedoyun, M Simard, **KE Herndon**.
Development of a Mangrove Monitoring and Evaluation System in Guyana. Poster presented at the Annual AGU Fall Meeting, December 7-11.
- 2020 Mayer, T, H Baldwin, **KE Herndon**, A Flores, T Kunlamai, Q Nguyen, P Towashiraporn, and S Wilson.
Capacity Building Engagement for Estimating Forest Stand Height Utilizing the SAR Handbook. Poster presented at the Annual AGU Fall Meeting, December 7-11.
- 2020 Baldwin, H, T Mayer, **KE Herndon**, A Flores, Q Nguyen, P Towashiraporn, and S Wilson.
Estimating Forest Stand Height in Savannakhet, Lao PDR Using InSAR and Backscatter Methods with L-Band SAR Data. Poster presented at the Annual AGU Fall Meeting, December 7-11.
- 2019 **Herndon, KE**, A Flores-Anderson, E Cherrington, R Thapa, L Kucera, D Saah, Nguyen Quyen, R Muench, Helen Baldwin, Emily Adams, Phoebe Oduor, Ashutosh Limaye, Bako Mamane, Krishna Vadrevu, Sylvia Wilson, Sasha Gottlieb, and Francisco Delgado.
Leveraging the Power of SAR for Forest Monitoring Systems. Poster presented at the Annual Fall Meeting of the American Geophysical Union, December 9-13, San Francisco, California.
- 2019 Nicolau, AP, A Flores-Anderson, R Griffin, and **K Herndon**.
Distinction of Deforestation Drivers in the Amazon using Synthetic Aperture Radar (SAR) C-band Data. Paper presented at the Annual Fall Meeting of the American Geophysical Union, December 9-13, San Francisco, California.
- 2019 Kucera, LM, **KE Herndon**, A Flores-Anderson, EA Cherrington, M Poplar, RB Thapa, S Wilson
Design Thinking for the Applied Sciences: Developing a Novel Approach to Encourage the Use of Synthetic Aperture Radar (SAR) and Open Source Tools for Forest Monitoring. Paper presented at the Annual Fall Meeting of the American Geophysical Union, December 9-13, San Francisco, California.
- 2019 Cherrington, EA, LM Kucera, AB Thomas, D Weiss, A Flores-Anderson, **KE Herndon**, RB Thapa, AS Limaye, and D Irwin
Micro-Blogging as Micro-Storytelling: Lessons Learned using Social Media to Engage Audiences and Bring Science Down to Earth, from Space to Village and Elsewhere. Paper presented at the Annual Fall Meeting of the American Geophysical Union, December 9-13, San Francisco, California.
- 2019 **Herndon, KE**, R Griffin, A Flores-Anderson, E Cherrington, L Ellenburg, E Adams, A Markert, E Anderson, A Limaye, and D Irwin
15 Years of SERVIR: Applications of Earth Observations toward Achieving Global Environmental Sustainability. Paper presented at the International Astronautical Conference, Washington, D.C., October 21 – 25.
- 2019 Nicolau, AP, A Flores-Anderson, R Griffin, and **KE Herndon**
Applicability of SAR Sentinel-1 Data to Distinguish Drivers of Deforestation in the Amazon. Paper presented at the XXV IUFRO World Congress in Curitiba, Brazil, Saturday, October 5, 2019.
- 2019 Hyman, G, **KE Herndon**, F Chistie, M Finer, V de Faria, FJ Cerignoni
From Space to Village: An Overview of SERVIR's Forest Monitoring Resources. Paper presented at the World Resources Institute's Global Forest Watch Summit, Washington, D.C., June 18-19.

- 2019 **Herndon, KE**, A Flores, E Cherrington, R Thapa, D Saah, N Quyen, R Muench, B Rushi, E Adams, P Odour, K Mubea, A Limaye, B Mamane, K. Vadrevu, S Wilson, and S Gottlieb
Leveraging the Power of SAR Observations for Forest Monitoring Systems. Poster presented at the ESA Living Planet Symposium, Milan, Italy, May 13-17.
- 2019 **Herndon, KE**
Enhancing Early Warning Systems with Synthetic Aperture Radar. Paper presented at the Global Forest Observation Initiative Plenary Meeting, Maputo, Mozambique, April.
- 2018 **Herndon, KE**, R Muench, EA Cherrington, and R. Griffin
Applications of Remote Sensing for Monitoring Surface Water Availability for Pastoralists in Remote Regions of the Nigerien Sahel. Paper presented at the Annual Fall Meeting of the American Geophysical Union, December 10-14, Washington, D.C.
- 2018 Kucera, L., Flores, A, **KE Herndon**, RB Thapa, D Saah, NH Quyen, EA Cherrington, R Muench, BR Rushi, EC Adams, P Oduor, AS Limaye, and K Vadrevu
How to Leverage the Power of SAR Observations for Forest Monitoring Systems. Poster presented at the Annual Fall Meeting of the American Geophysical Union, December 10-14, Washington, D.C.
- 2018 Nicolau, A, **KE Herndon**, A Flores, and R Griffin
A Spatial Pattern Analysis of Gold Mining-Related Forest Change in the Madre de Dios Region, Peru. Poster presented at the Annual Fall Meeting of the American Geophysical Union, December 10 – 14, Washington, D.C.
- 2018 Nicolau, A, **KE Herndon**, A Flores, and R Griffin
Applications of NASA Earth Observations for Monitoring Forest Loss in the Madre de Dios Region of Peru. Poster presented at the American Astronomical Society's Wernher von Braun Memorial Symposium. October 23 – 25; Huntsville, AL.
- 2018 Nicolau, A, A Flores, K Markert, **KE Herndon**, and R Griffin
Integrating Python and ArcGIS to Create a Suite of Tools for Land Cover Classification and Accuracy Assessment on the Madre de Dios Region, Peru. Poster presented at the Esri User Conference, San Diego, CA, July 8-13.
- 2018 **Herndon, KE**, R Muench, E Cherrington, and R Griffin
Applications of NASA Earth Observations for Monitoring Surface Water Availability for Pastoralists and Small-Scale Agriculturalists in Remote Regions of Tahoua, Niger. Poster presented at the 2018 UAH Research Horizons Poster Symposium. April 9 – 13; Huntsville, AL.
- 2017 Muench, R, M Jones, **KE Herndon**, L Schultz, J Bell, E Anderson, K Markert, A Molthan, E Adams, E Cherrington, A Flores, G Layne, R Lucey, T Munroe, S Pulla, G Tondapu, and A Weigel.
Collaborative, Rapid Mapping of Water Extents During Hurricane Harvey Using Optical and Radar Satellite Sensors. Poster presented at the American Geophysical Union Annual Meeting, New Orleans, LA, December 10 – 15.
- 2017 **Herndon, KE**, R Muench, E Cherrington, and R Griffin
An Assessment of Surface Water Detection Algorithms for the Tahoua Region, Niger. Poster presented at the American Geophysical Union Annual Meeting, New Orleans, LA, December 10 – 15.

- 2017 **Herndon, KE**, R Muench, E Cherrington, and R Griffin
Applications of NASA Earth Observations for Monitoring Surface Water Availability for Pastoralists and Small-Scale Agriculturalists in Remote Regions of Tahoua, Niger. Poster presented at the American Astronomical Society's Wernher von Braun Memorial Symposium. October 24 – 28; Huntsville, AL.
- 2017 **Herndon, KE**, R Muench, E Cherrington, and R Griffin
Changing Patterns of Water Occurrence from 1986 – 2016 in the Tahoua Region of Niger: Implications for Water Resource Management for Smallholder Farmers and Pastoralist Communities. Poster presented at the Esri User Conference, San Diego, CA, July 10-14.
- 2017 **Herndon, KE**, R Muench, E Cherrington, and R Griffin
Water for Agricultural Smallholders in West Africa: The Impact of Climate Change on Small Water Body Dynamics in the Tahoua Region of Niger. Paper presented at the Annual Meeting of the American Association of Geographers, Boston, MA, April 5-9.
- 2017 Schick, R, M Klug, **KE Herndon**, and L Sinclair
Alabama Ecological Forecasting: Assessing Southern Pine Beetle Epidemics in Alabama's Bankhead National Forest using NASA Earth Observations. Paper presented at the Annual Meeting of the American Association of Geographers, Boston, MA, April 5-9.
- 2017 **Herndon, KE**, S Neeley, D Cruz, R Schick, and R Griffin
Utilizing NASA Earth Observations to Identify and Protect Ancient Chacoan Sites Throughout the San Juan Basin, New Mexico. Poster presented at the University of Alabama in Huntsville Research Horizons Poster Competition.
- 2016 **Herndon, KE**, S Neeley, D Cruz, R Schick, and R Griffin
Utilizing NASA Earth Observations to Identify and Protect Ancient Chacoan Sites Throughout the San Juan Basin, New Mexico. Poster presented at the American Astronomical Society's Wernher von Braun Memorial Symposium, Huntsville, AL, October 25.
- 2015 Mitchell, S, **KE Herndon**, and BA Houk
Beyond the Model: Using Structure from Motion to Identify Taphonomic Processes in Burial CC-B11 at Chan Chich, Belize. Paper presented at the 2015 Annual Southcentral Conference on Mesoamerica: San Antonio, Texas.
- 2015 Houk, BA, MD Willis, **KE Herndon**, and CP Walker
The Structure A-15 Maneuver: A Novel Application of Structure from Motion Mapping at Chan Chich, Belize. Paper presented at the 2015 Annual Meeting of the Society for American Archaeology: San Francisco, California.
- 2014 CD Lynn, VR Beasley, **KE Herndon**, HF Dengah, and AB Persons.
Anthropology is Elementary and can be Taught There: Teaching Four-Field Anthropology to 3rd and 4th Grade Students. Paper presented at the 113th Annual Meeting of the American Anthropological Association, Washington, DC, December 3-7.
- 2014 **Herndon, KE**, BA Houk, and DS Sandrock
The 2014 Excavations at Chan Chich, Belize. Paper presented at the 2014 Belize Anthropology and Archaeology Symposium: San Ignacio, Belize.

- 2014 **Herndon, KE**, BA Houk, M Willis, and CP Walker.
The Structure from Motion Solution: Mapping Structure A-5 at Chan Chich, Belize. Paper presented at the 2014 Annual Meeting of the Society for American Archaeology: Austin, Texas.
- 2013 **Herndon, KE**, BA Houk, M Willis, CP Walker, and A Booher.
Structure from Motion Mapping and Remote Sensing at the Maya Site of Chan Chich, Belize. Paper presented at the Southcentral Conference on Mesoamerica: Houston, Texas. November 2, 2013.
- 2012 White, JA, **KE Herndon**, and KA Shuler.
Linear Enamel Hypoplasias at Newton Plantation, Barbados: A Comparative Study in Caribbean Slave Health. Paper presented at the First Annual Auburn University Research Week: Auburn, Alabama.
- 2012 **Herndon, KE** and KA Shuler.
Analyses of Pathological Lesions in Commingled Remains from a Slave Cemetery at Newton Plantation, Barbados. Poster presented at the 39th Annual Meeting of the Paleopathology Association: Portland, Oregon.
- 2012 Shuler, KA, H Shroeder, W Stevens, and **KE Herndon**.
Sugar, Health, and Slavery: Forty Years of Bioarchaeological Research at Newton Plantation, Barbados. Paper presented at the 81st Annual Meeting of the American Association of Physical Anthropologists: Portland, Oregon.
- 2012 Davis, CB, KA Shuler, ME Danforth, and **KE Herndon**.
Let's Get Real About MSM: Reliability in Scoring Techniques. Poster presented at the 81st Annual Meeting of the American Association of Physical Anthropologists: Portland, Oregon.
- 2012 White, JA and **KE Herndon**.
Linear Enamel Hypoplasias at Newton Plantation, Barbados: A Comparative Study in Caribbean Slave Health. Poster presented at the 82nd Annual Meeting of the American Association of Physical Anthropologists: Portland, Oregon.
- 2012 **Herndon, KE** and KA Shuler.
Analyses of Pathological Lesions in Commingled Remains from a Slave Cemetery at Newton Plantation, Barbados. Poster presented at the First Annual Auburn University Research Week: Auburn, AL.
- 2012 White, JA, **KE Herndon**, and KA Shuler.
Linear Enamel Hypoplasias at Newton Plantation, Barbados: A Comparative Study in Caribbean Slave Health. Paper presented at the 89th Annual Meeting of the Alabama Academy of Science, Anthropology Session: Tuskegee, AL
- 2011 Perash, RM, JA White, **KE Herndon**, and DN Cook.
Health and Nutrition at the Austin Site (22TU549), Tunica County, MS: A Comparative Analysis of Childhood Nutrition from Village and Mound Centers in Northwest Mississippi. Poster presented at the 80th Annual Meeting of the American Association of Physical Anthropologists Undergraduate Poster Symposium: Minneapolis, Minnesota

TEACHING AND TRAINING EXPERIENCE:

- 2021 Trainer, Introduction to Google Earth Engine for Archaeologists. Virtual workshop provided to the University of Florida LiDAR Working Group, November.

- 2020 Science Advisor, NASA DEVELOP at Marshall Space Flight Center
Amazonia Disasters Project
Advisees: Caley Feemster, Marco Vallejos, Paxton LaJoie, Perren Wright
- 2020 Trainer, Applications of Google Earth Engine to the Monitoring of Gold Mining (Madre de Dios) (Co-led with Milagros Becerra, Lucio Villa, Sidney Novoa, and Africa Flores). Virtual workshop provided by SERVIR Amazonia to Programa Nacional de Conservación de Bosques para la Mitigación del Cambio Climático del Ministerio del Ambiente del Peru (PNCBMCC-MINAM). August 3-5.
- 2019 Trainer, Applications of Google Earth Engine, Collect Earth Online, and Synthetic Aperture Radar to Map Land Cover Change in Latin America. Workshop provided as part of the SERVIR-Amazonia Colombia Needs Assessment in Bogota, Colombia, August 30.
- 2019 Mentor, NASA-MUREP Internship, Satellite Remote Sensing to Address Indigenous Land Management Challenges.
Student: Matthew Collins
- 2019 Trainer, Forest Stand Height Estimation using Synthetic Aperture Radar (co-led with Helen Baldwin) SERVIR Science Coordination Office, Huntsville, AL. May 30-31.
- 2019 Trainer, Applications of Remote Sensing to Address Environmental Challenges (co-led with Rebekke Muench). African Geospatial Intelligence Agency, Lome, Togo. June 24 – 28.
- 2018 Judge, Alabama State Science and Engineering Fair, The University of Alabama in Huntsville, April 7.
- 2018 Peer Editor, *Perpetua: The University of Alabama in Huntsville's Undergraduate Research Journal*
- 2017 Guest Lecture, Providence Elementary School Robotics Team
At the request of Michelle Barnett, Library Media Specialist
Title: *Using NASA Satellites to Monitor Surface Water in West Africa*
- 2017 Trainer, Introduction to Google Earth Engine Workshop (with Rebekke Muench, Emily Adams, and Emil Cherrington). Invited workshop for the Second Annual AfriGEOSS Symposium; Accra, Ghana, June 2020.
- 2014 University of Alabama Graduate Teaching Assistant; ANT 100: Introduction to Anthropology and ANT 102: Cultural Anthropology
- 2013 Instructor; Four-Field Anthropology at Tuscaloosa Elementary Magnet School
- 2012 – 2014 University of Alabama Graduate Teaching Assistant
Courses: ANT 100: Introduction to Anthropology, ANT 100: Introduction to Anthropology (online), ANT 102: Cultural Anthropology, Human Behavioral Ecology Research Group (research lab)
- 2012 Guest Lecture; ANTH 1000 Introduction to Anthropology
At the request of Dr. Kristina Shuler, Auburn University
Title: *Health and the Transition to Agriculture*
- 2012 Guest Lecture; ANTH 1000 Introduction to Anthropology
At the request of Dr. Arianne Gaetano, Auburn University
Title: *Health and the Transition to Agriculture*

2011 Auburn University Undergraduate Teaching Assistant; ANTH 4960 Special Topics: Bioarchaeology

2009-11 Auburn University Tiger Tutor for Student Athletes
Classes tutored: Anthropology of Gender, Introduction to Anthropology, Anthropological Theory, Calculus I, and Global Geography