

IESA

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NEWS LETTER

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THE DEAN'S CUISINE



A MESSAGE FROM DR. JEFF TURK...

Thank you for tuning in to our first newsletter! Our goal is to keep you connected with current academic and research efforts and opportunities, department updates, career opportunities, and to highlight students, alumni, faculty, staff, partners, and supporters. Many of you reading this have contributed to the success of IESA and we want to give back in this way. We are grateful for your interest and support! – Dr. Jeff Turk

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HOW YOU CAN SUPPORT



PLEASE CONSIDER AN END OF YEAR GIFT TO IESA!

While IESA is growing and in high demand, the University System of Georgia is experiencing extreme budget cuts that challenge our program and progress. Now, more than ever, we need help from the "outside". We graciously ask that you consider our students and their resources during this season of giving and contribute as you can. We will ensure that your gift circles back around to you and others through education, technology, and values!

[DONATE HERE OR AT UNGGIVE.ORG/IESA](https://unggive.org/ies)



HOT OFF THE PRESS

FROM THE UNG NEWSROOM:

[IESA Gains Approval for Master's Degree](#)

(click)

[IESA Celebrates 20th Anniversary](#)

(click)

[Upcoming GeoScience Workshop for High School Teachers](#)

(click)

NSF ADVANCED TECHNOLOGICAL EDUCATION PROGRAM GRANT PROJECT COMPLETED

IESA has successfully implemented a \$609,739 multi-year grant from the National Science Foundation's Advanced Technological Education Program that allowed for the development of courses for our Associate of Science pathway in Environmental, Earth & World Studies, and Spatial Science & Engineering, and certification in land surveying. The work very successfully met the original goals and expectations of the project, resulted in additional new courses and programs outside of the original goals, and met a critical workforce need in the state of Georgia by offering the required coursework necessary toward licensure as a professional land surveyor. The grant project's website can be viewed [here](#).



APPLYING GEOSPATIAL AND ENGINEERING TECHNOLOGY

INSTITUTE FOR ENVIRONMENTAL AND SPATIAL ANALYSIS

UNIVERSITY OF NORTH GEORGIA

National Science Foundation Advanced Technological Education Program Award #1700568



MAYMESTER 2023 STUDY AWAY PROGRAM: SW U.S.

Through UNG's Center for Global Engagement, Dr. Jamie Mitchem will be hosting a study away program next Maymester (2023) in the Rocky Mountains and adjacent areas of the southwestern United States region. This will be a field course designed to allow students to witness and experience several U.S. National Parks, monuments, state parks, and other places of geographic and geologic significance. Unique landforms, climates, biomes, and locations will be the focus. This sixteen-day journey across several southwestern states will be open to ten students who will earn 4 credit hours in GEOG/GEOL 4050K: Geography & Geology of U.S. National Parks (Southwest and Rocky Mountains). National Park sites will include Grand Canyon, Yellowstone, Arches, Bryce Canyon, Grand Teton, and many more! Sign up [here](#) to reserve your spot for this wonderful opportunity!



IESA STUDENTS USE SATELLITES TO EXAMINE LAKE LANIER

During the spring 2022 semester, a team of upper level IESA students worked together to analyze the waters of Lake Sidney Lanier. Under the guidance of Dr. Amber Ignatius, Clarence Jackson, Brittany Mann, Adam Freeland, Mary Katherine Perry, and Zach Boyd worked tirelessly to edit JavaScript code in Google Earth Engine and export data for analysis and interpretation. The team used satellite imagery from a variety of sensors such as MODIS, Sentinel 2, and Landsat.

Clarence Jackson presented their research findings at the April 2022 Apalachicola-Chattahoochee-Flint ACF Waters Conference in Albany, Georgia. As part of the conference's educational field trip, Clarence paddled the Flint River and considered the importance of the waterways downstream from Lake Sidney Lanier, "As my first conference I learned a lot about the ACF River Basin while meeting a lot of cool and interesting people. I believe that every IESA student should experience a conference," Clarence said. The student team is currently working to co-author a manuscript and submit their research for publication.



U.S. EPA ENVIRONMENTAL EDUCATION GRANT PROJECT COMPLETED

Dr. Jamie Mitchem recently completed a multi-year federal grant from the U.S. Environmental Protection Agency (EPA) titled "Educating Georgia Citizens on Native Forest Ecosystems and Sustainable Practices." The Environmental Education Grant, totaling \$160,070 began in 2018 with Dr. Allison Bailey and Dr. Jamie Mitchem as co-PIs. The project included eight in-person community workshops held on Saturdays on the Gainesville and Dahlonega campuses including activities in the Tumbling Creek Woods & Research Area adjacent to the Gainesville campus and Pine Valley near the Dahlonega campus. Community partners assisting IESA faculty, student workers, and staff with the workshops included Georgia Master Gardeners, Lumpkin Coalition, Georgia Forestry Commission, Georgia Tree Council, Chattahoochee Riverkeeper, Georgia ForestWatch, UGA Agricultural Extension, UNG Ecological Protection Lab, UNG Appalachian Studies Center, Upper Oconee Water Network, Soque River Watershed Association, and Hometown Harvest. Details about the project can be found on [this website](#) or by using [this StoryMap](#).



DR. SEMINACK'S GEOLOGICAL RESEARCH ON THE GA COAST

In June, Dr. Seminack participated in a weeklong research trip in Brunswick, GA, along with faculty from the UNG Biology Department, University of Georgia Center for Applied Isotope Studies, and Georgia College and State University. The research group has been working to piece together the environmental conditions of coastal Georgia at the end of the last ice age by combining geological and paleontological data, along with multiple age-dating techniques.

Additionally, fossils of bison and mammoths were unearthed at the study site, which allow paleontologists to study the ancient fauna of southeast Georgia. Specifically, Dr. Seminack has been analyzing how the river systems along coastal Georgia have changed during the last ice age, and how geological evidence of these ancient rivers can be used as a proxy to determine past climatic conditions. Dr. Seminack and his research group's findings have recently been published in the journal of Quaternary Science Reviews [linked here](#).



DR. MITCHEM CO-AUTHORS ARTICLE IN JOURNAL OF ENVIRONMENTAL STUDIES AND SCIENCES

Dr. Jamie Mitchem co-authored a peer-reviewed research article, "Attitudes toward climate change and scientific stories", in the *Journal of Environmental Studies and Sciences* with Dr. Caitlin Wills from the Department of Communication, Media, and Journalism at UNG and former IESA faculty member, Dr. Allison Bailey. The article was published on June 15, 2022. It used data from multiple focus groups conducted on the Dahlenega and Gainesville campuses including students who had responded to an online survey they completed as part of Dr. Mitchem's UNG Presidential Innovation Award funded project.

The purpose of this study was to determine climate change perceptions and understand more completely how attitudes of climate change are developed. The study confirmed a generation gap and revealed the importance of relating to individual's personal experiences.



MEET OUR NEW FACULTY/STAFF



COL [R] Steven Fleming (Ph.D.) is a Professor of Geospatial Science and Intelligence with the Institute for Environmental and Spatial Analysis and the University of North Georgia. Prior to joining IESA, he served for seven years as a Professor of the Practice of Spatial Sciences at the Spatial Sciences Institute (SSI) of the University of Southern California's Dornsife College of Letters, Arts and Sciences and as a Research Professor with USC's Institute for Creative Technologies. He currently holds adjunct professorship in these roles.

Prior to him joining USC in 2015, he served on active duty for 30 years, gaining operational combat experience with Joint and NATO units/staffs on multiple deployments in support of Operation Enduring Freedom. He culminated his military career at the United States Military Academy, West Point, New York, where he served as an Academy Professor of Geospatial Information Science and Deputy Head of the Department of Geography and Environmental Engineering. With a teaching background in physical geography, remote sensing, photogrammetry, surveying, geographic information systems, cartography, military geospatial operations, and geospatial intelligence, Dr. Fleming taught capstone courses at USC and at West Point in graduate and undergraduate-level human security and geospatial intelligence academic programs as well as remote sensing, human security, disaster management, and other geographic information science and technology courses. He will continue to teach courses in these areas at the University of North Georgia. His research specialties include: applications of geospatial technologies for national defense (military operations, homeland security, and disaster management); airborne and space-based image collection systems; dynamic mapping of coastal regions; and online, blended education/training using emerging content-delivery technologies/methodologies.

MEET OUR NEW FACULTY/STAFF



Steven Hooks has been a part-time faculty member of IESA for several years and recently accepted a full-time position as Senior Lecturer of Surveying Practice to support the department's endeavors in land geomatics. Steven has twenty-five years of professional experience in the private sector performing a variety of roles in engineering and surveying. He earned his Master of Civil Engineering from Norwich University and is a Certified Federal Surveyor, a Certified Floodplain Manager, and a GSWCC-approved trainer.

Additionally, he was recently elected to the Board of Directors of the Surveying and Mapping Society of Georgia. He enjoys working to advance surveying and believes we should all endeavor to improve outreach, recruitment, and training. Steven lives near Sugar Hill with his wife and four children. He enjoys tinkering and the three Cs: camping, cycling, and cooking.



Dale Caldwell has been a part-time faculty member of IESA for several years and recently accepted a full-time position as Lab Technology Coordinator and Research Associate. Dale has fifteen years of work experience with federal Clean Water Act implementation, permitting, enforcement, investigations, and policy, as well as environmental education and advocacy. His work has been conducted for and with several federal, state, and local government agencies, and most recently as Chattahoochee Riverkeeper's

Headwaters Director. Dale lives in Gainesville and enjoys traveling, exploring, mountains, coastal waters, reading, and auto racing.

ALUMNI SPOTLIGHT



Christopher Sorrell graduated Magna Cum Laude in 2021 with a Bachelor of Science in Environmental Spatial Analysis with certificates in Environmental Science, Geospatial Information Science, and Fundamentals of Geospatial Technology. He is now a stormwater specialist for Jackson County's Public Development department. His duties include MS4 inspections and reporting, public education and outreach, and implementation of Green Infrastructure and

Low Impact Development ordinances. He uses ESRI products coupled with other database systems to maintain structural inventory and other records, and works closely with their GIS department on several progressive efforts. When asked about IESA, Christopher shared: "I'm thankful for the great professors who teach in IESA and still network with several of them. I'd encourage students to reach out to employers that they may be interested in pursuing. That kind of initiative really stands out and helped me land an internship. Remember that you get what you put into the program and the faculty and staff see that effort and can cheer you on and point you in the right direction. You simply have to ask and not be afraid to follow your passion."

ALUMNI SPOTLIGHT



Cat Corrales graduated in 2021 with a Bachelor of Science in Environmental Spatial Analysis. She is currently enrolled in California State University's Master of Science in Geographical Information Science degree program. Additionally, Cat works to tutor elementary school students at an after-school STEM program. In her free time, Cat enjoys visiting parks, nature preserves, and identifying native plant species. She also enjoys spending time with her cats, Derek and Charles.

THANK
for your
YOU
support!