



37th Annual Louisiana Remote Sensing and GIS Workshop

Louisiana's Premier Workshop on Remote Sensing, GIS,
Mapping Science, Spatial Analysis, and GeoInformatics

May 6th, 7th and 8th, 2025

LSU Energy, Coast and Environment Building
93 South Quad Drive
Baton Rouge, Louisiana

AGENDA

Tuesday, May 6, 2025

- 7:00 am – 10:00 am **Vendor Set-up in Exhibition Area**
- 9:00 am – 5:00 am **Registration**
Esri Hands on Learning Lab
- 9:00 am – 10:00 am **Continental Breakfast**
- 10:00 am – 10:05 am **Welcome and Announcements/Housekeeping**
Kathrine Cargo, GISP, LARSGIS Workshop Chair
- 10:05 am – 11:15 am **Session 1: Artificial Intelligence and Imagery**
Gold Sponsor: Mississippi Coding Academy
Moderator: Warren Kron, GISP, Es²
- 1) *Enterprise GIS Innovations in Data Collection*
Jason Carr, Louisiana Department of Transportation and Development
 - 2) *LSU Earth Scan Laboratory: 36-year Overview of Remote Sensing in Support of Emergency Response, Education, and Research*
Nan Walker, PhD, Director, Earth Scan Laboratory, Department of Oceanography and Coastal Sciences, College of the Coast and Environment, Louisiana State University
- 11:15 am – 11:30 am **Break**



11:30 am – 12:15 pm **Session 2: Keynote Address**
How Geospatial Science Supports the Studies of the Coast and Environment

Dr. Clint Willson is the Callais & Woods Professor and Dean for the College of the Coast and Environment at LSU. Clint has been at LSU for 27 years, after having earned a B.S. in Aerospace Engineering from Penn State University and M.S. in Environmental Health Engineering and Ph.D. in Civil Engineering degrees from the University of Texas at Austin. He also currently serves as the Director of the Center for River Studies and was the 2022-23 Erich and Lea Sternberg Honors Professor at LSU's Ogden Honors College.

Willson's areas of research include water resources engineering, water quality and sustainable infrastructure, and he has been heavily involved in coastal sustainability and water resource issues throughout his time at LSU. He serves on the executive committee for the LSU Coastal Ecosystem Design Studio and the Center for Collaborative Knowledge and is the faculty advisor for the LSU Global Water Brigades.

12:15 pm – 1:15 pm **Taco Tuesday Lunch**
Sponsored By: GeoJobe

1:15 pm – 2:45 pm **Session 3: LiDAR**
Gold Sponsor: HDR
Moderator: Michelle Fischer, US Geological Survey

- 1) *LiDAR Remotely Sensing Technologies for Ground Pools Detection*
H. Duong Fischer and Kevin A. Caillouet, St. Tammany Parish Mosquito Abatement District
- 2) *Photon Counting LiDAR: What Is It and Why Use It?*
Matt Hiland, The Sanborn Map Company, Inc.
- 3) *Determination of Above Ground Biomass Density at the Spruill Farm, North Carolina with a LiDAR Sensor Flying on a Drone*
Jinchun Yuan, Department of Natural Sciences, Elizabeth City State University

2:45 pm – 3:15 pm **Break**
Sponsored By: DDG



3:15 pm – 4:00 pm

Session 4: Land Cover

Gold Sponsor: Surdex

Moderator: Sadie Whitehurst, LA Dept. of Culture, Recreation and Tourism

- 1) *Spatial Analysis of La Nana Bayou Watershed in East Texas to Assess Stream Health*
Rylee Gabbert, I-Kuai Hung, Daniel Unger and Jiyeon Kim, College of Forestry and Agriculture, Stephen F. Austin State University, Nacogdoches, TX
- 2) *Predicting Land Use Change and Degradation in Baton Rouge Using MOLUSCE: A Remote Sensing and GIS-Based Approach*
Esi Dadzie, Yaw A. Twumasi, Zhu Ning, Jeff Dacosta Osei, Dorcas Twumwaa Gyan, Daniel Aniewu, Priscilla M. Loh and Kingsford K. Annan, Department of Urban Forestry, Environment and Natural Resources, Southern University and A&M College, Baton Rouge, LA

4:00 pm – 4:15 pm

Break

4:15 pm – 5:00 pm

Session 5: Planning & Environment

Moderator: Thomas Rickett, Acadian Ambulance

Gold Sponsor: Es²

- 1) *Defining the Urban Core: Urban Fabric and Patterns of Development in Baton Rouge*
Justin Priola, GISP, Data, Analytics and Performance, Department of Information Services, City of Baton Rouge-Parish of East Baton Rouge, LA
- 2) *GIS in Academia*
Fran Harvey, GISP, Vibriyogn Epuri and Regina Adhikari, Global Geospatial Institute, Baton Rouge, LA

5:30 pm – 8:30 pm

Vendor Social Event

Sponsored By: Es² and Louisiana Seafood

Location: LSU Center for River Studies, 100 Terrace Avenue, Baton Rouge



Wednesday, May 7, 2025

- 8:30 am – 5:00 pm **Registration**
Esri Hands on Learning Lab
- 8:30 am – 9:00 am **Continental Breakfast**
- 9:00 am – 9:05 am **Welcome and Announcements**
Kathrine Cargo, GISP, LARSGIS Workshop Chair
- 9:05 am – 10:15 am **Session 6: Geospatial Data**
Moderator: Kate Friedman
Gold Sponsor: NEI
- 1) *What's up with Census Data?*
Lynn Dupont, ASLA, GISP, New Orleans Regional Planning Commission
 - 2) *Utilizing GIS to Understand the Urban Forest*
Brett Wallace, PLA, PMP, Recreation and Parks Commission of East Baton Rouge Parish, LA and Warren Kron, GISP, Es²
 - 3) *The State Historic Preservation Office's Automated Dashboard to Track and Visualize Section 106 Reviews*
Sadie Whitehurst and Rachel Watson, PhD, Division of Archaeology, Office of Cultural Development, State of Louisiana
- 10:15 am – 10:45 am **Break**
Sponsored By: Geo Teche
- 10:45 am – Noon **Session 7: GIS Applications**
Moderator: Phillip Breaux, LSU Center for Analytics & Research in Transportation Safety
- 1) *Planning the Future: An Interactive GIS Dashboard for Wastewater Management*
Blake Simon, Freese and Nichols, Inc.
 - 2) *GIS in Public Safety: Empowering Local First Responder and Citizens*
Michael Stein, Data, Analytics and Performance, Department of Information Services, City of Baton Rouge-Parish of East Baton Rouge, LA
 - 3) *Application/GIS Enterprise Modernization*
Monica Crout and Brett Weideman, Louisiana Department of Transportation and Development



Noon – 1:30 pm	Boxed Lunch
Noon – 1:30 pm	Student Poster Review
12:15 pm – 1:00 pm	Session 8: Student Lightning Talks Moderator: Courtney Poirier Chicola, PhD, University of Louisiana at Lafayette <ol style="list-style-type: none">1) <i>Where Education Meets Ecology: A Spatial Analysis of How Educational Attainment Shapes Tree Canopy Cover in East Baton Rouge Parish</i> Kingsford Annan, Department of Urban Forestry, Southern University2) <i>Analyzing the Hydrological Efficiency of Culvert at the New Rafe Mayer Road in the Alsen/St. Irma Lee Community</i> Jeff Dacosta Osei, Department of Urban Forestry, Southern University3) <i>Spatial Analysis of Industrial Pollution and Its Impacts on Health in St. John the Baptist Parish, Louisiana</i> Dorcas Gyan, Department of Urban Forestry, Southern University4) <i>Remote Sensing Driven Digital Twins for Designing Resilient Wetland-Based Solar Farms</i> Alexander Dunaway, School of Landscape Architecture, LSU5) <i>Green Gold Exploration: Sustainable Gold Mapping Using Remote Sensing in Wasa Amenfi Districts of Ghana</i> Jeff Dacosta Osei, Department of Urban Forestry, Southern University
1:30 pm – 2:30 pm	Session 9: Road Networks Moderator: Justin Priola, GISP, City of Baton Rouge, LA <ol style="list-style-type: none">1) <i>Real-Time GIS for EMS</i> Thomas Rickett, Acadian Ambulance2) <i>Updating DOTD Internal Reports</i> Jason Carr, Louisiana Department of Transportation and Development
2:30 pm – 2:45 pm	Break Sponsored By: EagleView
2:45 pm – 3:45 pm	Session 10: Hurricane Katrina Panel Discussion Moderator: Brent Yantis, University of Louisiana at Lafayette Gold Sponsor: Esri Panelists: Lynn Dupont, Kathrine Cargo, and Hampton Peele
3:45 pm – 4:00 pm	Break



- 4:00 pm– 5:00 pm **Session 11: Student Poster Contest and Awards Ceremony**
Moderators: Lynn Dupont and Brent Yantis
- 5:00 pm – 8:00 pm **Workshop Social Event – Crawfish Boil**
Sponsored By: NEI
Location: ENCE Building Grounds

Thursday, May 8, 2025

Vendor Technology Workshops

- 8:30 am – 11:00 am **Registration**
Esri Hands on Learning Lab
- 8:30 am – 9:00 am **Continental Breakfast**
- 9:00 am – 11:00 am **Session 12**
Moderator: Andrew Milanes, PE, GISP, Es²
- 1) *ArcGIS & GeoAI*
 Ryan Poe, Esri
- 2) *Accuracy on the Line: Protecting Infrastructure with Trimble Catalyst*
 Kevin Cormier and Eric Bock, NEI
- 11:00 am – Noon **Vendor Take-down in Exhibition Area**



Poster Presentations

Student Poster Competition

- 1) *MODIS-Derived Chlorophyll-a and Phytoplankton Size Fraction Algorithms for the River-Dominated Louisiana Shelf*
Arnab Paul & Eurica D'Sa, Louisiana State University, Baton Rouge LA
- 2) *Port Fourchon, America's Working Coast*
Christos Baos & Nina Freeman, Louisiana State University, Baton Rouge LA
- 3) *Enhancing Roseau Cane Health Monitoring Using Drone-Based Spectral-Spatial Resolution Merging in the Mississippi River Delta*
Bijaylaxmi Sahoo, Louisiana State University, Baton Rouge LA
- 4) *Using Drones to Monitor Restorative Thinning at Philmont Scout Ranch in Cimarron, New Mexico*
John Jenkins, Stephen F. Austin State University, Nacogdoches TX
- 5) *Mapping Cultural and Architectural Shifts in the Carrollton Historic Neighborhood Using GIS*
Miles B. Jordan, Louisiana State University, Baton Rouge LA
- 6) *Utilizing UAV Multispectral Imagery to Assess Short-Term Plant Responses to Saltwater Intrusion*
Madeline Moore, Diana Taj, Jorge Villa, University of Louisiana at Lafayette, Lafayette LA
- 7) *Beyond NDVI: Identifying the Most Informative Spectral Indices for Health Assessment in Classified Wetland Vegetation*
Manisha KC, Xuelian Meng, Basant Awasthi, Bijaylaxmi Sahoo, Sudeep Kuikel, Mizbath Sresto, Louisiana State University, Baton Rouge LA
- 8) *Spatiotemporal Analysis of Vegetation Dynamics based on Empirical Orthogonal Function Analysis at Multi-Time Scales and Remote Sensing Techniques in Rockerfeller Wildlife Refuge*
Manisha KC, Louisiana State University, Baton Rouge LA
- 9) *Mapping AED Devices Using DJI Mativ Mini 2 Drones on a University Campus*
Matthew Petre & Dan Cagle, Stephen F. Austin State University, Nacogdoches TX
- 10) *Determination of Optimal Unmanned Aerial Vehicle Pre-Flight Parameters for Orthophoto Mosaic Generation over Forested Environments*
Victoria Williams, Daniel Unger, David Kulhavy, I-Kuai Hung, Yanli Zhang, Stephen F. Austin State University, Nacogdoches TX



Professional Posters

- 1) *Climactic Hazard Vulnerability Assessment of Transportation Assets in Southeast Louisiana*
Leslie Couvillon & Tom Haysley, Regional Planning Commission, New Orleans LA
- 2) *Ancient Courses Mississippi River Meander Belts (Harold N. Fisk, 1944) Overlying Louisiana 2020 LANDSAT-8 Satellite Imagery Mosaic (Dewitt H. Braud, 2021)*
R. Hampton Peele, Coastal Ecosystem Design Studio, Louisiana State University, Baton Rouge LA
- 3) *Analyzing Environmental Factors and Birth Outcome Disparities in New Orleans: A Neighborhood-Level Assessment of Low Birthweight and Premature Births*
Alexis Williams, MPH, Kathleen Aubin, MSPH, Kate Friedman, MNS, George Frierson, MA, Robin Gruenfeld, MPH, Dr. Tri Tran, Louisiana Department of Health, Bureau of Infectious Diseases, Bureau of Family Health, Louisiana March of Dimes, New Orleans LA



2025 Workshop Volunteers:

Amy Brassieur	Iberia Parish Government
DeWitt Braud	Department of Oceanography and Coastal Sciences
Phillip Breaux, GISP	Center for Analytics & Research in Transportation
Kathrine Cargo, GISP	Orleans Parish Communication District
Adam Constantin	Coastal Protection and Restoration Authority of Louisiana
Chelsea Core, GISP	Duplantis Design Group
Leslie Couvillion, GISP	New Orleans Regional Planning Commission
Lynn Dupont, ASLA, GISP	New Orleans Regional Planning Commission
Christine Evans	St. Tammany Parish GIS
Michelle Fisher	USGS National Geospatial Program
Kate Friedman, MNS	Louisiana Office of Public Health
Alliott Green	Geo Teche
Fran Harvey, GISP	Global Geospatial Institute
Warren Kron, GISP	Es ² , Inc.
Melodie Landry	City of Baton Rouge/Parish of East Baton Rouge
Rusti Liner, GISP	River Parishes Community College
Molly McGraw, Ph.D.	Southeastern Louisiana University
Andrew Milanes, PE, GISP	Es ² , Inc.
Brad Mooney, GISP	Louisiana Department of Wildlife and Fisheries
Hampton Peele	Coastal Ecosystem Design Studio, Louisiana State University
Aimee Preau, GISP	Louisiana Dept. of Environmental Quality
Justin Priola, GISP	City of Baton Rouge/Parish of East Baton Rouge
Thomas Rickett	Acadian Ambulance
Sadie Whitehurst	LA Office of Cultural Development/Division of Archeology
R. Brent Yantis	Regional Application Center at the University of Louisiana at Lafayette
Kathryn Zeringue	New Orleans Regional Planning Commission