2023 NCAUG Fall Conference Agenda

Sparking Innovation:

Energizing GIS Technology for the Future

Sept 26-29th, Asheville, NC

Tuesday September 26th * times subject to change		
7:30am to 5:00pm	**Registration & Info Desk**	
8:00am to 12:00pm	Workshop Vanderbilt	**Modernizing Your Esri Platform** *Kent Rothrock & Kevin Jamison, Avineon*
12:00pm to 1:00pm	Lunch on your own	
1:30pm to 7:00pm	NCAUG Golf Event at Reems Creek Golf Club – Tee times begin at 1:30PM *Teams/Format TBD*	
1:00pm to 5:00pm	Workshop Vanderbilt	**Drone and Reality Mapping** *Coty Welch, Sr Solution Engineer, ESRI*

Wednesday September 27th * times subject to change		
8:00am to 5:00pm	**Registration & Info Desk**	
8:00am to 12:00pm	Gallery Amherst	**Exhibitor Set-up**
8:00am to 12:00pm	Workshop Vanderbilt	**Getting started with ArcGIS Arcade** *Tripp Corbin, SAM*
12:00pm to 1:00pm	Lunch on your own	
1:00pm to 1:30pm	Burghley Ballroom	**Plenary Session: Lucy Brady,** *NCAUG President* Welcome from NCAUG Business Meeting & Town Hall
1:30pm to 2:30pm	Burghley Ballroom	**The importance of a good elevator pitch to describe what you do** (with discussion) *Tripp Corbin, SAM*
2:30pm to 3:15pm	Burghley Ballroom	**Vendor Lightning Talks: AECOM , Atlas , Avineon , Bolton Menk , Dewberry , Duncan Parnell , Eagle View , ESP , ESRI , GeoData, GeoOwl , GPI, Local Government Federal Credit Union , NCSU , NV5 , Olsson , SAM , Sanborn, Surdex, WSP**
3:00pm to 3:30pm	Coffee Break – Gallery 3:15 Prizes	
3:30pm to 4:45pm	Burghley Ballroom	**Keynote Address: Trends in Spatial Data Science** **Suzanne Foss**, *Principal Product Lead, ESRI*
4:45pm to 5:00pm	Burghley Ballroom	**Info on Conference** – Schedule of presentations & special events NCAUG Board
6:00pm to 8:00pm		**Opening Night Party – Hi-Wire Brewery**

Thursday September 28th * times subject to change			
7:00am to 8:00am	Breakfast Buffet - Gallery		
7:00am to 12:00pm	Registration	**Registration & Info Desk**	
9:00am to 5:00pm	Gallery Amherst	**Exhibits Open**	
Breakout Sessions	Burghley Moderator: Michael Tutwiler		Vanderbilt Moderator: Matt Moore
8:00am to 8:30am	**ArcGIS Enterprise: Best Practices and Extending your System.** *Joe Weyl, Sr Solution Engineer, ESRI*		**A Geospatial Analysis of Landslide Susceptibility in a Section of Western North Carolina using GIS and Machine Learning Methods.** *Gazali Agboola, PhD Student, North Carolina A&T State* **University**
8:30am to 9:00am			**Advanced Geospatial Technologies for Improving Landslide Risk Analysis in Central Vietnam.** *Raja Das, Scholarship Winner, Graduate Student, NC State*
9:00am to 9:30am	**ArcGIS Enterprise Success Stories** *Kent Rothrock, Director of Managed Services, Aineon, Inc.*		**Leveraging technology in consulting forestry operations** *Sara Cerv, GIS Project Manager, GFR Forestry Consultants*
9:30am to 10:00am	**Energizing GIS Technology for the Future** *Samantha Dixon, 1Spatial*		**National Forests in North Carolina Roads and Trail Centerline Updates** *Bart Matthews, Geospatial Program Manager, National Forests in North Carolina*
10:00am to 10:30am	Break - Gallery		
Breakout Sessions	Burghley Moderator: Alana Sweatt		Vanderbilt Moderator: Rachel Patterson
10:30am to 11:00am	**Real Time Analytics using ArcGIS.** *Suzanne Foss, Principal Product Lead, ESRI*		**T-SAPP: Predictive Statewide Coastal Inundation Mapping for Road Networks** *Amanda TerBeek, GIS Analyst, ESP Associates* *Matthew Dudley, PE, CFM, Water Resources and GIS Department Manager, ESP Associates*
11:00am to 11:30am			**Statewide Municipal Boundaries Project** *Richard Elkins, Director - Land Records Mgmt, NC Dept. of Secretary of State*
11:30am to 12:00pm	**Transforming Decision-Making in Acute Disasters: The Power of Knowledge Graph Databases** *Victoria Tanoh, PhD student, North Carolina A&T State University*		**NC Flood Resiliency Blueprint. Status** *Hope Morgan, Project manager, AECOM*
12:00pm to 1:00pm	Lunch Buffet - Gallery		
Breakout Sessions	Burghley Moderator: Eddy Shipman		Vanderbilt Moderator: Andrew Bryson
1:00pm to 1:30pm	**Mapping High-Heat and Social Vulnerability in Buncombe County, North Carolina** *Hope Donnellan, Student, UNC Asheville*		**ArcGIS Experience Builder: Migrating from Web App Builder** *Peter Erlenbach, Solution Engineer, ESRI*
1:30pm to 2:00pm	**Assessing Viewshed Vulnerability at the Biltmore Estate in Asheville, NC** *Ian Johnson, GIS Analyst, UNC-Asheville's NEMAC*		
2:00pm to 2:30pm	**Tracking Land Cover and NDVI Changes Before and After Installation of a Groin on Sea Island, Georgia** *Diane Styers, Associate Professor of Remote Sensing, Western Carolina University*		**The Big Leap to Experience Builder** *Justin Castrati, GIS Project Manager, LJB Engineering* *Kelly Haws, LJB Engineering*
2:30pm to 3:00pm	**Discussing Green Infrastructure Solutions in Chronically Underserved Communities of Southeastern NC** *Dr. Joanne Halls, UNC Wilmington*		**Streamline document management with SharePoint & Esri Experience Builder integration.** *Michael Blair, Sr. IT/GIS Strategist & Architect, Innovate Inc*
3:00pm to 3:30pm	Break - Gallery		
Breakout Sessions	Burghley Moderator: Greer Shivers		Vanderbilt Moderator: Chase Bernard
3:30pm to 4:00pm	**Curating the Public Experience (Builder) - GSO Near Me** *Keith Watkins, GIS/EAM Administrator, City of Greensboro*		**Choosing an App for Field Data Collection: FieldMaps vs Survey123** *Laura Eng, GIS Analyst II, WSP*
4:00pm to 4:30pm	**Interactive Map and Dashboard to Enhance Rural Healthcare Access, Transitions, and Continuity of Care** *Joan Colburn, GIS Analyst, Mountain Area Health Education Center*		**Electric Vehicle Supply Equipment (EVSE) Suitability Analysis** *Dave Almond, Senior GIS Analyst, Town of Chapel Hill*
4:30pm to 5:00pm	**Street Improvement and Asset Management Projects utilizing Field Maps and GIS** *Michelle Lopez, Planner/GIS Specialist, Benesch* *Laura Fisher, PE, Project Manager, Benesch*		**Performing Manhole Inspections & Inventory with ArcGIS Field Maps and 360° Cameras** *James Mertz, GIS Project Manager, Bolton & Menk, Inc.*
5:30pm to 7:30pm	**Thursday Night Sponsor Party – Gallery, Amherst, & Garden Terrace**		

Friday September 29th * times subject to change		
8:00am to 9:00am	Breakfast Buffet - Gallery	
7:30am to 9:00am	**Registration & Info Desk**	
Breakout Sessions	Burghley Moderator: Negrete Silver	Vanderbilt Moderator: Joe Battinelli
8:30am to 9:00am	**AddressNC Program Dashboard and WebApp Visualization** *Darrin Smith, Project Manager, CGIA*	**Integrating Webhooks into your GIS Workflows** *Alex Rouse, GIS Project Coordinator, Stewart*
9:00am to 9:30am	**Address Assignment Service Request System** *Todd Wilson, GIS Tech Solutions Manager, Mecklenburg County* *Angela Johnson, GIS Supervisor, Mecklenburg County*	**High Resolution Imagery for Change Detection and Stormwater Data Management** *Joe Wilson, EagleView*
9:30am to 10:00am	**NG911 and Addressing Tools** *Wendy Peloquin, Business Development Manager, Avineon*	**Understanding the DWG format and bringing that into ArcGIS Pro** *Tripp Corbin, SAM*
10:00am to 10:30am	Break	
Breakout Sessions	Burghley Moderator: Khalil McGruder	Vanderbilt Moderator: Jeremy Aycock
10:30am to 11:00am	**First Time Attendees Meetup**	**GIS for Botanical Garden Management** *Emma Martone, Curator of Grounds, High Point University - Mariana H. Qubein Arboretum and Botanical Gardens* *Charlie Charping, GIS Consultant & Project Manager, Langan Engineering & Environmental Services*
11:00am to 11:30am	**UAVs in Coastal Monitoring and Adaptive Mitigation Planning.** *Wes Cartner, Environmental Program Consultant, NCDOT*	**Modernizing GIS and Integrating with Existing Systems to Improve Data Transparency & Collaboration** *Ben Masters Associate Project Manager, Blue Raster* *Chris Gabris Senior Project Manager & GIS Team Lead, Blue Raster*
11:30am to 12:00pm	**Integrating Satellite and UAV Imagery for Enhanced Water Quality Assessment** *Eden Wasehun, PhD Student, North Carolina A&T State University*	**The Relationship Between Flooding from Hurricane Florence and Resulting Gentrification in Wilmington.** *Cate Arnold, Scholarship Winner, Undergraduate Student, UNC Wilmington*
12:00pm to 12:15pm	Break	
12:15pm to 1:00pm	Burghley Ballroom	**Awards & Closing Session**

Name	Job Title	Company/Employer/School	Title of Presentation	Abstract of Presentation	Presenter Short Bio
Alex Rouse	*GIS Project Coordinator*	Stewart	Integrating Webhooks Into Your GIS Workflows	Are you tired of manually inputting data, constantly checking Survey123 to see if a form has been submitted, or physically composing an email every time a high-priority item is acquired in QuickCapture? There must be a better way, right?? Well look no further than webhooks! In this presentation, we'll dive into how webhooks work, their benefits, as well as some real-world examples of how Stewart employees are automating their day-to-day GIS workflows to increase efficiency.	Alex Rouse is a GIS Project Coordinator in Stewart's Geospatial group. She has been with Stewart for 4 years and specializes in asset inventory and database management, data analysis, utility digitizing, and has a passion for GIS solutions and implementations. Alex graduated from North Carolina State University in 2019 with a Bachelor of Science degree in Geology, where she worked on numerous field projects in both North Carolina and New Mexico and began working with GIS.
Amanda TerBeek	*GIS Analyst*	ESP Associates	T-SAPP: Predictive Statewide Coastal Inundation Mapping for Road Networks	During Hurricane Florence, North Carolina faced severe flooding that impacted major roads and highways, hindering travel and emergency response. To address this, NCDOT and ESP developed T-SAPP, a web application that uses RENCI's ADCIRC model results to predict road flood inundation as storm advisories are released during active tropical storms. The web app was developed with AGOL's Experience Builder to provide visualization and metrics for predicted and historical roadway impact information that is updated through an automatic workflow. The mission of T-SAPP is to aid emergency management planning before flooding occurs.	Amanda TerBeek, GISP is a GIS Analyst at ESP Associates with 6 years of experience and specializes in floodplain mapping, flood risk analysis, and customizing web applications. She graduated with a BS in Marine Sciences and a BS in Geology from NC State. Matthew Dudley, PE, CFM is the Water Resources and GIS Dept. Manager at ESP Associates, Inc. in Raleigh, NC. with 20+ years of water resources industry experience. Over the past 9 years he has aided NCEM and NCDOT in expanding FIMAN and FIMAN-T flood warning apps by developing improved flood inundation maps and associated products.
Angela Johnson	*GIS Supervisor*	Mecklenburg County	Address Assignment Service Request System	Mecklenburg County GIS Addressing administers address number, address range, and road name assignments through the use of inter-local agreements county-wide including all of the county municipalities. ESRI's Address Data Management System was implemented at the County back in 2018. Current plans are to migrate the system from ArcMap to ArcPro this year. An important missing piece to administering change management with address assignments was a separate system to manage all incoming service requests from property owners, general contractors, Land Develops, etc. needing address assignments to happen quickly to help expedite their building permit requests. Deciding what technology tools would be best would be the major key to its success. This presentation will further explain the ESRI technologies and the roadmap to deploy the Address Assignment Service Request System.	Ms. Johnson has been with Mecklenburg County for more than 25 years and has primarily worked in the areas of both Land Records Management and Address Management. Ms. Johnson has extensive business knowledge toward address management which relates to its requirements for NextGen 911. Her workgroup works very closely with various public safety agencies (Police, Fire, and Medic) including County Code Enforcement who administers building permits and certificates of occupancy. Todd Wilson - GIS Tech Solutions Manager Mr. Wilson has been with Mecklenburg County for more than 25 years and has primarily worked in the areas of GIS Technology Management (Application Development and Database Administration). Mr. Wilson has been a certified GISP Professional since 2004 and also has a Masters in GIS Technology from North Carolina State University.
Bart Matthews	*Geospatial Program Manager*	National Forests in North Carolina	National Forests in North Carolina Roads and Trail Centerline Updates	North Carolina is home to 4 national forests: Croatan, Uwharrie, Pisgah, and Nantahala National Forests (NFsNC). These forests are located in all three regions of North Carolina, providing visitors with unique landscapes. Terrain varies from rugged mountains, to gentle rolling hills, to sandy beaches, with ample recreation opportunities. These National Forest are made up of 1,619 forest service roads totaling 2,717 miles and 609 trails for exploring over 2,074 miles of National Forest. The NFsNC GIS Program utilized the high-resolution LiDAR acquired by the NC Department of Public Safety;Division of Emergency Management to update the road and trail centerlines GIS data managed by the NFsNC. The presentation provides an overview of the workflows the GIS Team used to improve the accuracy and completeness of forest transportation network databases.	Bart's 33 years of GIS experience led him to an exciting 15-year career with the US Forest Service (USFS). Starting in 2020 he transitioned from the Southwestern Regional Office GIS Department and accepted the position of GIS Program Manager for the National Forests in North Carolina. He works closely with the 4 NC national forest GIS Specialists to ensure a central unified process throughout the state. Prior to the USFS, he provided project development services within the private sector for utilities, oil and retail firms.
Ben Masters	*Associate Project Manager*	Blue Raster	Modernizing GIS and Integrating with Existing Systems to Improve Data Transparency & Collaboration	Since 2020, Blue Raster has worked with the City of Manassas Park in Northern Virginia to migrate their legacy GIS workflows and applications to ArcGIS Online and Esri's platform of GIS tools. ArcGIS allows for the City to expand their GIS offerings to the public and the multiple departments relying on analysis and mapping for day to day activities. To the City, ArcGIS as the platform and Blue Raster as the services provider offered innovation and continued development, capitalizing on the investment made in GIS. Within the platform, Manassas Park has integrated GIS with CAMA, CAD, and Asset Management tools, leveraging technology such as ArcGIS Velocity, Azure Logic Functions, and scripted automation. The ongoing work has allowed Manassas Park to achieve important milestones for centralizing data navigation, visualization, and analysis in support of their long-term vision for GIS. Our presentation will cover the steps taken to help Manassas Park execute their vision for long-term GIS Strategy, and how other city and county governments can do the same	Based in Charlotte, NC, Mr. Masters is an Associate Project Manager at Blue Raster with experience in geospatial problem solving, geospatial analysis, geospatial scripting, and project management. Mr. Masters supports the full project management lifecycle for a wide variety of clients across public and private sectors. This includes managing teams of application developers, DevOps Engineers, and GIS Analysts to deliver valuable solutions to Blue Raster's customers. While he formerly specialized in electric and gas utility GIS, his experience spans a variety of use cases within this industry including working with enterprise real estate groups, vegetation
Cate Arnold	*Student*	UNCW	The Relationship Between Flooding from Hurricane Florence and Resulting Gentrification in Wilmington	This research aims to observe if there is a correlation between gentrification in New Hanover County, North Carolina, and the impacts of flooding from Hurricane Florence in 2018. The project goal is to contribute to a rising interest in natural disaster impacts on community resilience and social changes within neighborhoods. Topics such as these are becoming increasingly crucial to act upon as society faces a rise in the intensity and frequency of natural disasters due to climate change. A large portion of research on this subject has taken place in New Orleans, Louisiana, following Hurricane Katrina in 2005. However, few studies outside this area specifically look at natural disaster impacts on local social changes, specifically gentrification. New Hanover County has a variable socioeconomic demographic and, similarly to New Orleans, is highly vulnerable to intense storms and flooding. The methodology for this research is mixed, pulling from both quantitative and qualitative methods to observe the relationship between Florence's flooding and gentrification from a numerical and neighborhood residential perspective. Overall the study intends to piece together a more holistic outlook on the process of gentrification in New Hanover County and how Hurricane Florence could have taken part in shaping some of these changes.	Cate Arnold is a senior undergraduate honors student at the University of North Carolina Wilmington, completing a double major in Environmental Science and International Studies with minors in Geospatial Technologies and Political Science. Growing up in Carolina Beach, NC, Cate developed an early appreciation for her outdoor surroundings. With time her interests extended to societal and environmental interactions, natural resource equity, and how legislation plays its role from a local to an international scale. When she is not in school, she works at a local restaurant and spends her time outdoors surfing and enjoying the water.
Charlie Charping	*GIS Consultant & Project Manager*	Langan Engineering & Environmental Servic	GIS for Botanical Garden Management	At High Point University, ESRI ArcGIS is used to collect and organize data on the thousands of trees, shrubs, and flowering plants that populate the arboretum and botanical gardens on campus. High Point University Staff and Langan Engineering teamed up to build a system that is user-friendly and adaptable across multiple departments in the organization. In this presentation we share the obstacles, lessons learned, and technical solutions used to create a system that is responsive to our unique needs.	Charlie has 15 years of professional GIS experience covering a broad spectrum of industries including campus facilities, infrastructure and asset management, utilities, mining, international humanitarian aid, and forestry. He has worked on projects ranging from logistical analysis to field data collection solutions to enterprise design and implementation. Charlie holds a Master's degree in Geospatial Information Science & Technology from North Carolina State University
Chris Gabris	*Project Manager & GIS Team Lead*	Blue Raster	Modernizing GIS and Integrating with Existing Systems to Improve Data Transparency & Collaboration	Since 2020, Blue Raster has worked with the City of Manassas Park in Northern Virginia to migrate their legacy GIS workflows and applications to ArcGIS Online and Esri's platform of GIS tools. ArcGIS allows for the City to expand their GIS offerings to the public and the multiple departments relying on analysis and mapping for day to day activities. To the City, ArcGIS as the platform and Blue Raster as the services provider offered innovation and continued development, capitalizing on the investment made in GIS. Within the platform, Manassas Park has integrated GIS with CAMA, CAD, and Asset Management tools, leveraging technology such as ArcGIS Velocity, Azure Logic Functions, and scripted automation. The ongoing work has allowed Manassas Park to achieve important milestones for centralizing data navigation, visualization, and analysis in support of their long-term vision for GIS. Our presentation will cover the steps taken to help Manassas Park execute their vision for long-term GIS Strategy, and how other city and county governments can do the same	Mr. Gabris is a Senior Project Manager and GIS Team Lead at Blue Raster and manages a portfolio of Federal, State, Municipal, private, and NGO clients. Mr. Gabris has experience in all aspects of the project management life cycle, leading teams of UI/UX Designers, GIS Specialists and Application Developers for web and mobile mapping application development. Blue Raster specializes in GIS application design and development, data analysis, and visualization, and is an Esri Gold Business Partner.
Darrin Smith	*Project Manager*	CGIA	AddressNC Program Dashboard and WebApp Visualization	Addresses have been identified as a priority statewide framework dataset and are easily integrated with other statewide sets such as parcels and building footprints. It is an essential component to State agency programs such as N.C. Broadband and as a fundamental requirement for validation and accurate call routing within NG911. The purpose of this abstract is to present how to navigate the operations dashboard environment to visualize statistics and change at the State and County scale and how access the nineteen quality control webapps. The AddressNC online application, designed in ESRI Experience Builder and hosted by NC OneMap will serve as the single source for visualizing quality control results, completeness, location precision, address duplication, sub-address densities, etc. At the same time the operations dashboard experience will serve to quantify the magnitude of change and where change occurs. It will support statewide assessment or filtering down to the county level to determine net additions and subtractions. Finally, it will track the frequencies and last submitted timestamps at the county level that is essential for reliability and confidence.	Darrin Smith is the GIS Project Manager for the AddressNC Program administered by the Center for Geographic Information and Analysis (CGIA) within the N.C. Department of Information Technology. He has over 30 years of experience that includes 13 years as an information technology project manager in the private and public sector including eight years as the Manager for the NC Orthoimagery Program Manager.
Dave Almond	*Senior GIS Analyst*	Town of Chapel Hill	Electric Vehicle Supply Equipment (EVSE) Suitability Analysis	Town of Chapel Hill GIS And Analytics Division conducted a suitability analysis to identify potential locations for EVSE installation in Orange County. Local jurisdictions of Chapel Hill, Carrboro, Hillsborough, Orange County and UNC engaged in a collaborative process to identify significant criteria for locating EVSE with the idea that a unified planning tool may lend itself to a stronger or more 'approvable' funding application.	Senior GIS Analyst for the Town of Chapel Hill. Higher education: Warren Wilson College and NCSU. Dave lives in Durham and spends his free time playing guitar and hanging with his family and friends.
Diane Styers	*Associate Professor of Remote Sensing*	Western Carolina University	Tracking Land Cover and NDVI Changes Before and After Installation of a Groin on Sea Island, Georgia	On Sea Island, Georgia, the installation of a groin to accommodate residential development has sparked debate on its effects on island geomorphology, ecological succession, and ecosystem health. Observations indicate a downward trend in vegetation cover and health. We quantified land cover by creating image classifications for 2009-2021 and assessed greenness using NDVI. Results indicate substantial steady decreases in marsh grasses and overall land area, and a steep decrease in NDVI after 2010.	I use geospatial data to assess patterns of socio-ecological processes driving landscape change. My research focuses on analyzing ecosystem structure and function and examining change over space and time in response to natural and human disturbances.
Eden Wasehun	*Ph.D Student*	North Carolina A&T State University	Integrating Satellite and UAV Imagery for Enhanced Water Quality Assessment	The rapid degradation of water quality in various inland water has become a pressing global issue, which necessitates the use of improved monitoring techniques that offer comprehensive and timely information. Satellite imagery has long been recognized as a valuable tool for monitoring large-scale environmental phenomena. The availability of high-resolution multispectral sensors on satellites provides a unique opportunity to observe water bodies at regional and even global scales. However, the limited spatial resolution of satellite imagery poses challenges when analyzing smaller water bodies. To overcome these limitations, UAV-based remote sensing data has emerged to be an essential technology. UAVs equipped with high-resolution optical sensors enable detailed and localized assessment of water quality parameters. Besides, the ability to fly at lower altitudes and frequent revisit times facilitates near-real-time monitoring and enhances our understanding of the dynamic nature of water quality. Thus, our research presents an approach that integrates satellite imagery and UAV imagery for water quality assessment. Keywords: satellite imagery, unmanned aerial vehicle (UAV) imagery, water quality assessment, multispectral sensors	Eden Wasehun is a Ph.D. student at North Carolina A&T State University. She is working with Dr. Leila Hashemi Beni. Her research focuses on assessing water quality using remote sensing and machine learning techniques.

Emma Martone	*Curator of Grounds*	High Point University	GIS for Botanical Garden Management	At High Point University, ESRI ArcGIS is used to collect and organize data on the thousands of trees, shrubs, and flowering plants that populate the arboretum and botanical gardens on campus. High Point University Staff and Langan Engineering teamed up to build a system that is user-friendly and adaptable across multiple departments in the organization. In this presentation we share the obstacles, lessons learned, and technical solutions used to create a system that is responsive to our unique needs.	Emma has a background in landscape design and project management and holds her bachelors degree in Landscape Architecture from Cornell University. Emma is passionate about connecting people to the natural world, and received a master's of professional studies in Public Garden Leadership from Cornell University. Currently, she serves as the Curator of the Mariana H Qubein Arboretum and Botanical Gardens at High Point University, where she oversees the day-to-day operations as well design and programmatic development of the gardens
Gazali Agboola	*Graduate Student*	North Carolina A&T State University	A Geospatial Analysis of Landslide Susceptibility in a Section of Western North Carolina using GIS and Machine Learning Methods	Landslides pose significant risks to human lives, infrastructure, and the environment The Howard Gap Road area in Western North Carolina, which was destroyed by landslides in December 2018, will be the subject of a geospatial analysis to determine its susceptibility to landslides in this study. We intend to map landslide-prone locations and provide useful insights for efficient mitigation options by utilizing Geographic Information System (GIS) methodologies and machine learning approaches. Our approach will involve the integration of various geospatial data layers, including terrain factors, geological information, precipitation data, and land cover characteristics. We will utilize a combination of GIS tools and machine learning algorithms, such as random forest and support vector machines, to develop a landslide susceptibility model. The model will be trained and validated using historical landslide occurrences and non-landslide areas as reference points. Performance evaluation metrics, such as AUC, precision, and recall will be employed to assess the predictive capabilities of the model. The results of our analysis will reveal areas with high susceptibility to landslides, indicating potential hotspots that require immediate attention in terms of risk management and land use planning. This study will highlight the effectiveness of GIS and machine learning techniques in landslide susceptibility analysis, offering valuable insights for proactive decision-making and disaster risk reduction efforts in the study area and similar regions. This material is based on work supported by the North Carolina Department of Transportation, Project # RP 2023-04	Gazali Agboola is a Ph.D. student at North Carolina A&T State University. My research area is geospatial analysis of land subsidence using GIS and remote sensing techniques with machine learning. I am currently working with Dr. Leila Hashemi Beni on research supported by the North Carolina Department of Transportation.
Hope Donnellan	*Student*	UNC Asheville	Mapping High-Heat and Social Vulnerability in Buncombe County, North Carolina	Tree cover in Asheville, NC, declined 6.4% between 2008 and 2018. Communities with limited vegetation to mitigate excessive heat can face negative health effects. This project builds on a prior heat risk study by using ArcGIS Pro to create a heat risk index for Buncombe County, NC, that compares land surface temperature, tree cover, and social vulnerability. A web interface will be produced to identify priority neighborhoods for Asheville Greenworks' tree planting initiatives.	Hope Donnellan is an undergraduate researcher at the University of North Carolina, Asheville. This summer she is partnering with Asheville Greenworks and Dr. Jackie Langille to utilize ArcGIS to map urban heat islands in Buncombe County, NC.
Hope Morgan	*Project manager*	Aecom	NC Flood Resiliency Blueprint. Status	NC Department of Environmental Quality is working on the NC Flood Resiliency Blueprint Which will create basin strategies across the state. The NC Blueprint draft is due to the general assembly in December of this year. This presentation will be a status update.	Ms. Morgan is Hope is currently the Technical Excellence Lead for the Geospatial Domain as well as the Geospatial Delivery Service Manager for Flood Solutions East with AECOM. Her responsibilities include Floodplain Mapping Survey, Floodplain mapping productions, Terrain creation, and CNMS. Hope Morgan has worked in remote sensing/GIS for 25 years. Hope is the Director of the Professional Practice Division of ASPRS
Ian Johnson	*GIS Analyst*	UNC-Asheville's NEMAC	Assessing Viewshed Vulnerability at the Biltmore Estate in Asheville, NC	Concerned with how the viewscapes in Asheville and the surrounding mountains are changing due to increased developmental pressure, The Biltmore Company partnered with UNC-Asheville's NEMAC to develop a viewshed analysis tool to assess the potential impacts on historic and guest-facing viewsheds. Using LiDAR to generate DEMs and leveraging ArcGIS Online, Experience Builder, and local parcel and permit data, the tool examines potential threats to the quality of the Biltmore Estate's viewsheds.	Greg Dobson is the Director of GIS and Engagement at UNC Asheville's NEMAC, an applied research center at UNC Asheville. With over 20 years of GIS experience, he is responsible for all of the Center's GIS activities, engagement and outreach, and leads a small team of GIS professionals. He is a graduate of Appalachian State University and holds the GISP certification
James Mertz	*GIS Project Manager*	Bolton & Menk, Inc.	Performing Manhole Inspections & Inventory with ArcGIS Field Maps and 360° Cameras	This presentation will focus on the applied use of Field Maps for ArcGIS and examples of utility data collection. Participants will learn through collection examples the need to catalog storm and sanitary assets and how workflows can be modified to include new technologies; including the use of a 360° camera to record manhole condition. By using 360° camera imagery, communities have a deliverable that truly shows the conditions of their water and wastewater systems at that point in time. This presentation will focus on GIS, GIS data collection methods, and 360° photography to assess the condition of assets more efficiently and will empower participants to look for additional ways to collect relevant data about their water and wastewater systems	Jim is a project manager who began his career in 2011 and has served in a variety of project roles, including project management, GIS project development, UAV services, multimodal transportation planning, public engagement, and safety and mobility analysis. He believes that the power of technology can help create more sustainable communities. A problem-solver at heart, Jim is passionate about providing creative solutions using a broad array of technological resources. A North Dakota native, and University of North Dakota graduate, he has enjoyed the transition to North Carolina, and appreciates both the warmer weather and the unique infrastructure needs that come with a dynamic and growing region
Phil Nagel	*GIS Developer*	Bolton & Menk, Inc.	Performing Manhole Inspections & Inventory with ArcGIS Field Maps and 360° Cameras	This presentation will focus on the applied use of Field Maps for ArcGIS and examples of utility data collection. Participants will learn through collection examples the need to catalog storm and sanitary assets and how workflows can be modified to include new technologies; including the use of a 360° camera to record manhole condition. By using 360° camera imagery, communities have a deliverable that truly shows the conditions of their water and wastewater systems at that point in time. This presentation will focus on GIS, GIS data collection methods, and 360° photography to assess the condition of assets more efficiently and will empower participants to look for additional ways to collect relevant data about their water and wastewater systems	Phil is a GIS developer who began his career in 2014. He worked for a county and city government before joining Bolton & Menk in 2018. Phil provides GIS services to municipal and internal clients. He is experienced in GIS data creation/maintenance related to municipal and utility applications, Python scripting, and web-based GIS. Phil likes the power a map can have, how information and messages can be conveyed easily, and how he can design products that are easy and intuitive to use.
Joan Colburn	*GIS Analyst*	Mountain Area Health Education Center	Interactive Map and Dashboard to Enhance Rural Healthcare Access, Transitions, and Continuity of Care	Rural access to healthcare is challenging, especially in mountainous regions. To enhance healthcare access, transitions, and continuity of care, MAHEC gathered data on reproductive health and substance use disorder resources in WNC and partnered with UNC Asheville's NEMAC to develop an interactive map and data dashboard. Leveraging ArcGIS Online, Web AppBuilder, Experience Builder, and Living Atlas of the World, the applications support making data-driven clinical and public health decisions.	Joan Colburn, MLIS, has recently retired from her role as Director of Library Services at Mountain Area Health Education Center (MAHEC) in Asheville and is presently consulting on GIS services. With a degree in Geography, and Masters level coursework in Medical Geography, she has been creating maps for MAHEC for 10 years
J. Greg Dobson, GISP	*Director of Geospatial Technology, Research Scientist*	Mountain Area Health Education Center	Interactive Map and Dashboard to Enhance Rural Healthcare Access, Transitions, and Continuity of Care	Rural access to healthcare is challenging, especially in mountainous regions. To enhance healthcare access, transitions, and continuity of care, MAHEC gathered data on reproductive health and substance use disorder resources in WNC and partnered with UNC Asheville's NEMAC to develop an interactive map and data dashboard. Leveraging ArcGIS Online, Web AppBuilder, Experience Builder, and Living Atlas of the World, the applications support making data-driven clinical and public health decisions.	Greg Dobson is the Director of GIS and Engagement at UNC Asheville's NEMAC, an applied research center at UNC Asheville. With over 20 years of GIS experience, he is responsible for all of the Center's GIS activities, engagement and outreach, and leads a small team of GIS professionals. He is a graduate of Appalachian State University and holds the GISP certification
Dr.Joanne Hall	*Professor, Dept. of Earth & Ocean Sciences*	UNCW	Discussing Green Infrastructure Solutions in Chronically Underserved Communities of Southeastern NC.	Coastal ecosystems provide an array of ecosystem services including reducing the potential impact from flooding. Impacts from natural disasters can be hardest hit in disadvantaged areas where there are fewer resiliency measures in place. This presentation will outline a project, funded by NASA, where we have investigated the ideal locations for implementing Green Infrastructure, have identified the most chronically disadvantaged and underserved areas, and have implemented community engagement workshops to listen, discuss, and identify GI solutions that meet the needs of community residents. Results from this work will be used by local governments to prioritize future planning and funding opportunities	Dr. Halls is a Professor of Geography in the Dept. of Earth & Ocean Sciences at UNC Wilmington where she uses spatial statistics to investigate patterns in coastal environments, wildlife abundance and movement, and social equity and environmental justice
Joe Weyl	*Sr Solution Engineer*	ESRI	ArcGIS Enterprise: Best Practices and Extending your System	Following the ArcGIS Enterprise best practices model will allow organizations the ability to grow and extend their GIS Systems to other departments and capabilities for a more holistic enterprise geospatial environment. These practices give GIS Managers and IT staff knowledge to extend this system beyond a base ArcGIS Enterprise deployment and to allow for more mission focused applications. Once these foundational practices are in place other systems, business and geospatial, can be integrated with ArcGIS Enterprise to support operational goals. Examples of extending the ArcGIS Enterprise system are adding user managed data stores and extending ArcGIS Enterprise through server roles will be discussed in this session.	Joe Weyl is a Senior Solution Engineer at Esri specializing in State government. He is located in Charlotte, North Carolina and connects with GIS users across the Southeast. Joe attended the State University of New York, College of Environmental Science and Forestry receiving a Bachelor's of Science degree in Forest Resource Management
Joe Wilson	*District Manager NC/SC*	EagleView	High Resolution Imagery for Change Detection and Stormwater Data Management	Each county tax office in NC has the ongoing task of tracking new residential and commercial structures, as well as all improvements, additions, and demolished structures. There are many municipalities and county stormwater divisions faced with maintaining impervious surface GIS data for calculating stormwater utility fees. Through the use of EagleView's high-resolution aerial imagery and machine learning processes, local government agencies are now able to quickly detect property changes and accurately extract impervious square footage per tax parcel.	Joe Wilson has enjoyed his extensive GIS career that spans over 27 years. After honorably serving in the United States Navy Seabees, Mr. Wilson attended UNC Charlotte (Go Niners!), where he served as a GIS intern with Mecklenburg County (1995) and ESRI (1996). After earning his B.S. in Environmental Science degree in 1997, Mr. Wilson was recruited by ESRI, and has since held GIS positions as a GIS Manager, consultant, developer, trainer, and sales executive. Mr. Wilson is currently employed with EagleView (formerly Pictometry), where he serves the Carolinas as District Manager.
Justin Castrati	*GIS Project Manager*	LJB Engineering	The Big Leap to Experience Builder	We will be talking about the sunset of ArcGIS Web App Builder, the migration to the new Experience Builder, and our experience with that transition. Web App Builder has been the bread and butter of GIS users pretty much since the inception of ArcGIS Online and the Enterprise Portal environment. Now it is going away and the apps that were built with this model will eventually need to be replaced with Experience Builder. Our goal is to share the considerations we made and the pitfalls we encountered during this migration in the hopes that it will help others have a smooth transition. We also want to share how we considered the needs of the customer in the hopes that it will help others limit impact for internal and external users of various GIS web applications.	Justin Castrati is a GIS Project Manager for LJB Engineering with more than 10 years of experience in the GIS world. He started from the ground up in GIS as a technician before climbing up the ranks of GIS across the government and private sectors through coordinator and developer roles. During that time, he learned how to imagine new projects that would shape the future of GIS in the government and private sector organizations that he worked for. Today, Justin uses his skills to help LJB Engineering provide new and powerful GIS solutions for towns and municipalities across our state. Kelly Haws – Co-Presenter Kelly Haws is a GIS Manager at LJB Inc. located in Miamisburg, OH. She manages a team of Project Managers, GIS Analysts and Technicians, with staff located in LJB's Kernersville, NC office. Kelly has over 15 year experience with utilities and over 13 years experience in local government. She utilizes her experience to provide utility solutions for local governments.
Keith Watkins	*GIS/EAM Administrator*	City of Greensboro	Curating the Public Experience (Builder) - GSO Near Me	ArcGIS Experience Builder provides a flexible interface for development of Greensboro's public-facing web apps. By embedding 11 URL parameter-enabled Dashboards within a single tabbed Experience, GSO Near Me presents a wide range of address-specific city services and facility information in an easy to navigate environment. 185,000 addresses are processed weekly via Python to calculate nearby services and facilities, limiting spatial selections required at run time, improving app performance.	Keith Watkins is the EAM and GIS Administrator for the City of Greensboro in North Carolina, where his main goal is improve the city's asset management system by incorporating geographic analysis, data management and user empowerment.

Kelly Haws	*GIS Manager*	LJB Engineering	CoPresentor The Big Leap to Experience Builder	We will be talking about the sunset of ArcGIS Web App Builder, the migration to the new Experience Builder, and our experience with that transition. Web App Builder has been the bread and butter of GIS users pretty much since the inception of ArcGIS Online and the Enterprise Portal environment. Now it is going away and the apps that were built with this model will eventually need to be replaced with Experience Builder. Our goal is to share the considerations we made and the pitfalls we encountered during this migration in the hopes that it will help others have a smooth transition. We also want to share how we considered the needs of the customer in the hopes that it will help others limit impact for internal and external users of various GIS web applications.	Kelly Haws is a GIS Manager at LJB Engineering. She manages a team of Project Managers, GIS Analysts and Technicians, with staff located in LJB's Kernersville, NC office. Kelly has over 15 years experience with utilities and over 13 years experience in local government. She utilizes her experience to provide utility solutions for local governments
Kent Rothrock	*Director of Managed Services*	Aineon, Inc.	ArcGIS Enterprise Success Stories	ArcGIS Enterprise represents the next logical evolution in server-side GIS and has many content management functions not previously available. While it has been available for several years, many GIS offices are still in the early adoption phase or otherwise planning for implementing ArcGIS Enterprise and all of the potential functionality that it offers. This presentation will discuss in some detail several successful implementations of ArcGIS across the state of North Carolina. Included will be examples of end products and improved workflows for specific clients as well as some technical details including working with branch-versioned databases and content management challenges.	Kent Rothrock is the Director of Managed Services for Avineon, Inc. He has over 25 years of experience, having consulted for numerous public and private clients throughout his career. He currently manages a team that helps clients to manage all types of GIS data (spatial and non-spatial) and applications; implement custom tools, processes and workflows; build desktop and mobile applications; and provide high-quality DBA support. Kent holds a M. A. Degree in Geography from Appalachian
Laura Eng	*GIS Analyst II*	WSP	Choosing an App for Field Data Collection: FieldMaps vs Survey123	The application chosen for your team's field data collection plays a major role in the development, management, and usability for employees in the field. Although both Field Maps and Survey123 serve similar purposes, these applications are packed with different capabilities that are best to identify before their implementation. It will save your team time and effort to get clear on the differences between these applications before making a decision. Let's walk through the pros and cons of each application and their best-use case scenarios BEFORE you find yourself in a situation where you are chalking up a work-around for a solution that is already configured for you in the other application. This presentation will help you pick the right application for your field data collection process so that your efforts can be concerted on the actual data collection needed for your client.	Laura Eng is a GIS Analyst for WSP. She has over 3 years of experience using ESRI products to achieve clients' geospatial needs. Her educational background is in Environmental Studies (Bachelors from UCF) and Urban and Regional Planning (Masters from UCF).
Michael Blair	*Sr. IT/GIS Strategist & Architect*	Innovate Inc	Streamline document management with Sharepoint & Esri Experience Builder integration.	The Challenge: Innovate Geospatial team reviewed document management systems lacking desired functionality and requiring extensive implementation and expensive licensing. Solution: Innovate developed a custom Esri experience builder widget integrating Sharepoint files with a geospatial system. It creates relationships between features/tables and documents, enabling document management support in any new experience builder project. Integration with Azure Active Directory enables single sign-on experience, connecting ArcGIS Enterprise and SharePoint.	Experienced Geospatial Strategist & Architect with 30+ years managing IT and geospatial projects. Expertise in application development, data visualization, and Enterprise system architecture. Holds certifications as AWS Solutions Architect and Certified Scrum Master. Leading cloud migrations and application modernization. Advises on architecture changes, workflow efficiencies, and integration. Proactively pursues and manages strategic partnerships for IT/GIS unit.
Michelle Lopez	*Planner/GIS Specialist*	Benesch	Town of Cary's Street Improvements Project utilizing Field Maps and GIS	Every year the Town of Cary completes a Pavement Condition Survey (PCS) that involves approximately 500 miles of town-maintained roadways within the town's limits to determine Pavement Condition Ratings (PCRs). The PCR (Phase I) allows identification of roads that need to be further investigated for next paving season. Phase II of this process is a Pavement Repair Survey (PRS) of approximately 21 miles that involves walking the individual segments to determine necessary pavement repairs. This information is developed into design plans and quantities/cost estimate so the contractor can make the necessary improvements to maintain quality of roads the citizens of Cary expect. Phase III includes construction management. Our project team has been involved with this annual project for over 7 years and each year makes improvements to the process. For example, the Worst First method for identification of streets for the PRS phase evolved into the paving groups with permanent numbers. This change reduced construction fatigue, mobilization, outreach, and construction costs. For the FY 23 Street Improvement Project we assessed how we could improve the process of the data collection for the continuous improvements. Previously, field data was collected solely on hard copy maps and then had to be manually transcribed into GIS and CAD formats for development into plans. This process was very time and labor intensive. We transitioned into all mobile data collection utilizing Field Maps paired with a GNSS receiver. The field collection time for the data took approximately the same amount of time as the paper maps from the previous years, but the pre and post processing time significantly decreased.	Michelle Lopez, GISP, AICP, is a GIS Specialist/Urban Planner for Benesch. She holds a Master's of Geospatial Information Science & Technology degree from NCSU. She has over 5 years of experience in consulting, working with DOT's and local governments across the country for a variety of NEPA planning, public involvement, asset management, field data collection, and database management projects.
Peter Erlenbach	*Solution Engineer*	ESRI	ArcGIS Experience Builder: Migrating from Web App Builder	ArcGIS Experience Builder empowers you to quickly transform your data to interactive, mobile optimized web apps and web pages. Flexibility, integration, mobile optimization, and interconnection are keys that set it apart from alternatives. Learn the building blocks of Experience Builder including pages, windows, widgets, data sources, layouts, and themes, as well as how they work together seamlessly, then adapt the content on different screen sizes, integrate with ArcGIS Survey123 and ArcGIS Dashboards apps to streamline processes, and interact with your data for immersive experience	Peter Erlenbach is a Solution Engineer at Esri within the State and Local Government division. Peter holds a Master's in Geographic Information Science from North Carolina State University. Peter has roughly a decade of professional experience in GIS where he primarily focuses on helping State and Local Governments realize the power of GIS. Within the realm of GIS, Peter enjoys python scripting, web & mobile
Raja Das		Scholarship	Advanced Geospatial Technologies for Improving Landslide Risk Analysis in Central Vietnam	In Vietnam, tropical storms are a significant catalyst for devastating landslides. This research introduces a comprehensive framework for precise prediction of landslide occurrences, encompassing their spatial, temporal, and size probabilities. By leveraging landslide inventories from three notable typhoons, we developed spatial probability models, estimated size probabilities, and computed temporal probabilities. These independent probabilities were then combined to generate nine distinct hazard scenarios and six risk scenarios, offering quantitative assessments of landslide risk over 2, 5, and 10-year intervals for both road and stream networks in central Vietnam	Raja is a geospatial analyst working on landslide hazard and risk modeling. Raja completed double master's in applied Geology and Geospatial Analysis from the University of Calcutta, India and East Tennessee State University, USA, respectively. Raja currently is in the fourth year of his Ph.D. program at Center for Geospatial Analytics, NC State University. His current research focuses on integrating remote sensing and geospatial technologies with AI-algorithms and field-based observations to understand and model landslide hazards. His long-term research goal is to develop a comprehensive understanding and expertise on various other natural hazards, such as floods, land subsidence, and others, and to understand the impact of climate change on these hazards
Richard Elkins	*Director - Land Records Mgmt*	NC Dept. of Secretary of State	Statewide Municipal Boundaries Project	A tool has been created to create and maintain a single Statewide Municipal Boundaries (corp limits and ETJs) for NC. Use of the tool is designed to eliminate redundant requests to local governments from multiple agencies for the same data and eliminate multiple versions with varied levels of completeness. We'll explore the need, how to submit your data, and the advantages for doing so.	Richard A Elkins, GISP is the Director of the Land Records Management Program at the NC Secretary of State and is a Co-Chair of the GICC's Working Group for Municipal Boundaries
Samantha Dixon	*Account Executive*	1Spatial	Energizing GIS Technology for the Future	Building and connecting a Spatial Data Infrastructure is no easy task. From the required collaboration to the workflow and everywhere in between, there are pitfalls along the way. Organizations must work with local data suppliers, other organizational departments, and even federal partners to support the data supply chain. When building an initial data supply chain for, say, Parcels or Next Generation 911, good data governance is required. Join us to learn how to implement a data supply chain to support an entire spatial data infrastructure.	Samantha is currently a Senior GIS Consultant working with 1Spatial out of Washington DC. Samantha has 15 years of GIS experience! Working to help organizations improve data quality and processes through automation
Sara Cerv	*GIS Project Manager*	GFR Forestry Consultants	Leveraging technology in consulting forestry operations	Technological advancements in the forestry industry have provided unique opportunities to innovate operations. This improves efficiency of processes and effectiveness of applications, which increases productivity and allows scalability for the individual company. Database management and accessibility, hosted in ArcOnline, and remote sensing imagery, collected by satellites or unmanned aerial vehicles, are two technological advancements that have innovated operations at GFR Forestry Consultants.	My professional background is broad and encompasses forestry, geospatial analysis, and educational outreach. At GFR Forestry Consultants, my day-to-day operations include developing applications in ArcOnline, supporting foresters in technological advancements, and geospatial analysis.
Suzanne Foss	*Principal Product Lead*	ESRI	Real Time Analytics using ArcGIS	Real-time data comes from many sources – devices, sensors, IoT platforms, apps, and more. Working with this data effectively requires ingestion, visualization, streaming/recurring analysis, and often alerting and action. These capabilities exist across a range of products that meet different use cases. ArcGIS GeoEvent Server and ArcGIS Velocity provide a real-time framework in ArcGIS, as options for on-premises and SaaS. Join the discussion to understand how elements of ArcGIS can connect to virtually any type of streaming data, perform real-time analytics and processing on streaming data, and automatically disseminate information and alert personnel when specified conditions occur. Learn how to create analytic models to process high-volume historical data to gain insights into patterns, trends, and anomalies in your big data.	Suzanne currently serves as Product Manager at Esri for Spatial Analytics and Data Science. She has worked at Esri for 15 years across areas of expertise including spatiotemporal analysis, suitability modeling, real-time analytics, and big data. Her early career in GIS included work on geographic intelligence systems with Lockheed Martin. Before joining Esri in 2009, she completed her masters degree in Geography from UC Santa Barbara, with a focus on agent-based modeling and human travel behavior
Todd Wilson	*GIS Tech Solutions Manager*	Mecklenburg County Govt	Address Assignment Service Request System	Mecklenburg County GIS Addressing administers address number, address range, and road name assignments through the use of inter-local agreements county-wide including all of the county municipalities. ESRI's Address Data Management System was implemented at the County back in 2018. Current plans are to migrate the system from ArcMap to ArcPro this year. An important missing piece to administering change management with address assignments was a separate system to manage all incoming service requests from property owners, general contractors, Land Develops, etc. needing address assignments to happen quickly to help expedite their building permit requests. Deciding what technology tools would be best would be the major key to its success. This presentation will further explain the ESRI technologies and the roadmap to deploy the Address Assignment Service Request System.	Mr. Wilson has been with Mecklenburg County for more than 25 years and has primarily worked in the areas of GIS Technology Management (Application Development and Database Administration). Mr. Wilson has been a certified GISP Professional since 2004 and also has a Masters in GIS Technology from North Carolina State University
Tripp Corbin	*GIS & Aerial Business Development Manager*	Surveying and Mapping, LLC. (SAM)	Understanding the DWG format and bringing that into ArcGIS Pro	Engineers, Surveyors, Landscape Architects, and others produce a lot of data that we like to bring into our GIS databases. Autodesk products such as AutoCAD, Civil 3D, and Map 3D are commonly used by these other professionals to create their designs and as-builts. The DWG file is the common file format used by all these applications. To successfully import this data into your GIS it is important to understand the capabilities and limitation of the DWG and how ArcGIS Pro interacts with it. This presentation will discuss the capabilities and limitations of the DW	Tripp Corbin is the GIS and Aerial Business Development Manager at SAM. With over 28 years of geospatial experience, Mr. Corbin is recognized as an industry expert with a variety of geospatial solutions including ArcGIS. He has authored 3 books on ArcGIS Pro.
Victoria Tanoh	*Student*	North Carolina A&T State University	Transforming Decision-Making in Acute Disasters: The Power of Knowledge Graph Databases	During acute disasters, the importance of making informed decisions quickly cannot be overstated. In such situations, traditional decision-making methods often fall short due to their reliance on limited data sources, resulting in inefficiency and delays. However, the implementation of a knowledge graph database can significantly transform the decision-making process during these critical events. A knowledge graph is a powerful tool that allows for the organization and integration of vast amounts of data from various sources, enabling decision-makers to have a comprehensive and real-time understanding of the situation at hand. This innovative approach entails the integration and analysis of diverse datasets, including spatial information, to equip decision-makers with a comprehensive understanding of the situation. Integrating a knowledge graph database in Geographic Information Systems (GIS) domain can significantly bolster decision-making capabilities in emergency disasters. The use of a knowledge graph database not only enables faster response times but also facilitates data-driven analysis and the development of proactive strategies. As the frequency and intensity of disasters continue to rise, leveraging a knowledge graph database can be a crucial tool in improving decision-making processes and ultimately saving lives. With its ability to efficiently organize and integrate massive amounts of various data types; both structured and unstructured, a knowledge graph becomes an invaluable tool for revolutionizing decision-making during disasters.	Victoria is a PhD student and a graduate research assistant in North Carolina A&T State University
Wendy Peloquin	*Business Development Manager*	Avineon	NG911 and Addressing Tools	As local governments are modernizing and adopting new workflows as part of the adoption of NG911, Avineon has developed an ArcGIS Pro Add-in too to assist local governments in the creation and maintenance of addresses that are NG911 complaint. This presentation will walk through the process of migrating to a schema that is fully compliant and what tools can be used to streamline the process of adding new addresses.	Wendy Peloquin, GISP is a Business Development Manager at Avineon with over 15 years of industry experience. She earned a B.S. in Geography and a Certificate in GIS from UGA and a Masters degree in GIS Administration from the UWF. Wendy is an active member of URISA International and is currently serving as a Chair and Instructor URISA's GIS Leadership Academy (GLA).

Wes Cartner	*Environmental Program Consultant*	NCDOT	UAV's in Coastal Monitoring and Adaptive Mitigation Planning	Known as the Bonner Bridge to the locals, the Marc Basnight Bridge to tourists, but primarily as B-2500 to NCDOT; has been a monumental bridge project for the record books. Providing even more firsts' for a state that is already recognized as the First in Flight; through the use of immerging technologies of Unmanned Aerial Systems coupled with elaborate coordination across multiple State and Federal agencies (DOD, DOI, USACE, Fish and Wildlife, DCM , WRC, DWR, etc.) an opportunity as unique as the environment it aimed to save became "air-borne". While pursuing the wetland restoration efforts for the Significant Cultural Heritage Bodie Island Light House Mitigation site, NCDOT became one of the first state governments to implement Aerial Pesticide Application methods aimed at tackling the invasive species of reed called Phragmites. The culmination of these efforts while small in footprint (by design), packed a large punch of productivity that minimized many potential tourism impacts and NPS concerns, paving the way for success. This project championed the use of Unmanned Aerial Systems (UAS/Drones) to apply , acquire multispectral imagery/Ortho imagery, model vegetation health, and track project effectiveness. By implementing these immerging technologies, we were able to not only reduce further destruction to the environment via foot/machinery traffic while addressing the phragmites, but also creating a much safer environment for tourists to still enjoy the Bodie Island Lighthouse attraction during the process. These plans were constructed through close coordination with the National Park Service, Department of Interior, as well as the United States Army Corps of Engineers to achieve input and satisfaction from all parties. This collaboration produced an adaptive mitigation plan that will ultimately address the invasive phragmites damages that were degrading not only a beacon of tourism for the state, but also a significant cultural heritage site with crucial natural environments.	Location Analytics Specialist with a demonstrated history of working in the Civil Engineering industry. Skilled in LiDAR, Ortho Imagery, UAS, CADD, Global Positioning Systems (GPS/RTK), ArcGIS, ENVI, and 3D Modeling. Strong engineering professional with a M.S. Geoscience focused in GIS and Remote Sensing from University of North Carolina at Wilmington.