



# GEORGIAVIEW REMOTE SENSING ACTIVITIES 2015 - 2016



## EDUCATION – REMOTE SENSING AND STEM



*Professor J.B. Sharma from University of North Georgia in Gainesville, Georgia, explains remote sensing at Gainesville High School in spring 2016.*



*Professor Curtis Hollabaugh from University of West Georgia in Carrollton, GA, explains the importance of managing water quality to Coweta County Performance Learning Center students in spring 2016.*

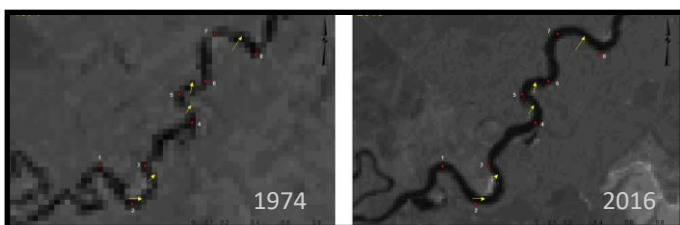
GeorgiaView promoted the importance and value of science via remote sensing and geospatial technologies to 118 students and five teachers at K-12 institutions. Dr. Seong hosted the 2016 Earth Observation Day event and a summer internship program at the University of West Georgia. Dr. J.B. Sharma visited Gainesville High School and demonstrated satellite data with hands-on exercises on Google Earth Engine and the MapGive humanitarian mapping application developed by the U.S. Department of State. Brandon Carlock from University of North Georgia visited the third grade students in the World Language Academy in Chestnut Mountain on May 2016 and conducted an activity based on Landsat satellites.

Remote sensing proved to be an effective tool for enhancing education for K-16 students in various STEM (science, technology, engineering, and math) fields and engaging them in scientific methods for real-world problem solving.

## RESEARCH – REMOTE SENSING AND ENVIRONMENT

### Case Study #1: Monitoring Stream Morphology

Dr. Tien Yee, Dr. Jidong Yang and Roneisha Worthy from Kennesaw State University traced the morphological changes of the Ocmulgee River in Georgia with two Landsat scenes that were taken in 1974 and 2016. They identified four locations that have experienced significant changes. Some sections showed meander cutoff, while others showed a systematic downstream shift.



*The morphological changes of Ocmulgee River in Georgia captured by the sensors onboard Landsat satellites. The yellow arrows indicate the locations of significant changes.*

### Case Study #2: Creating a Mosaic of Historical Aerial Photos

Dr. J.B. Sharma and two undergraduate interns at University of North Georgia made an orthophoto mosaic with the 1955-1956 aerial photos covering Lumpkin County in Georgia during the summer of 2016. A total of 79 images was used. The project promoted research and remote sensing experience at the university undergraduate and graduate level to increase numbers and visibility of graduating students with employment skills in remote sensing.



*An orthophoto mosaic of 1955-1956 aerial photos covering Lumpkin County, Georgia.*

GeorgiaView is a member of the AmericaView Consortium, a nationally coordinated network of academic, agency, non-profit, and industry partners and cooperators that share the vision of promoting and supporting the use of remote sensing data and technology within each state.



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## BENEFITS TO GEORGIA

- Remote sensing is a very important component of geographic information science (GIScience) and is critical for urban and environmental planning and management for the state of Georgia, now and in the future.
- Workforce development for STEM disciplines, such as GIScience and remote sensing, is critical to the economic and environmental well-being of Georgia.
- Because remote sensing technology is experiencing rapid development and deployment, this dynamically changing field has the potential to create significant economic opportunity in the near future for a growing state like Georgia.
- GeorgiaView consortium members are skilled educators and experienced scientists who are enthusiastic and collaborative. They support the development of solutions to the demanding challenges in the state of Georgia.
- In summary, GeorgiaView projects significantly benefit Georgia by improving planning methods, promoting safety and preparedness, educating its workforce, and facilitating information delivery.



*GeorgiaView helps K-16 students understand the importance of remote sensing in science and technology. This image shows Coweta County Performance Learning Center high school students measuring surface temperature using an infrared thermometer at University of West Georgia in Carrollton, Georgia, on March 24, 2016.*

## GEORGIAVIEW CONSORTIUM MEMBERSHIP

The GeorgiaView Consortium is open to the public, government agencies, institutions, universities, and industries. The current GeorgiaView Consortium members are identified below:

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