OHIOVIEW 2022-2023 ACTIVITIES
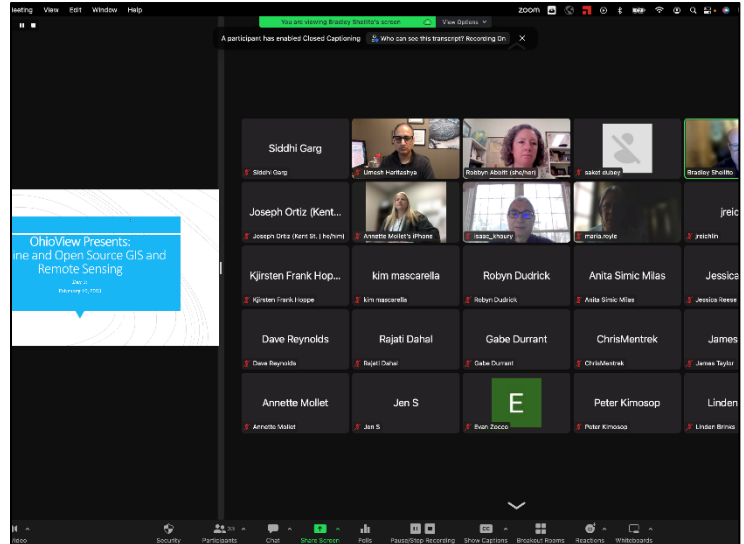
OhioView Presents: Workshop Series

OhioView member universities Youngstown State University, University of Toledo, Bowling Green State University, Kent State University, Miami University, and University of Dayton presented two workshops on February 10 and 24, 2023. There were six sessions held across the two days with an estimated 40-50 participants per session. PIs from each university presented sessions that covered a variety of remote sensing and geospatial topics that used freely available software and data. These workshops are the latest in an ongoing series and were held online to be open to participants from across the country throughout AmericaView.

OhioView Teacher Training

Ohio teachers participated in professional development to learn how to incorporate satellite imagery and GIS analysis through ArcGIS Online into student projects. A University of Toledo graduate student developed a Google Earth Engine tool to map urban heat island using thermal imagery from Landsats 8 and 9. The tool gives middle and high school students an opportunity to see urban heat island on a neighborhood level for the first time.

Wetland and Crop Status Monitoring

Bowling Green State University (Dr. Anita Simic Milas) was part of the ORIGIN (Ohio River Integrated Geospatial Interinstitutional Network) program in collaboration with KentuckyView and West VirginiaView. Undergraduate and graduate students were involved in field work and mapping crop biochemistry and trends in wetland vegetation important for water quality of nearby water bodies.

Attendees of the 2023 OhioView Presents workshops participated online via Zoom to receive instruction on multiple types of remote sensing and GIS applications using freely available software and data.
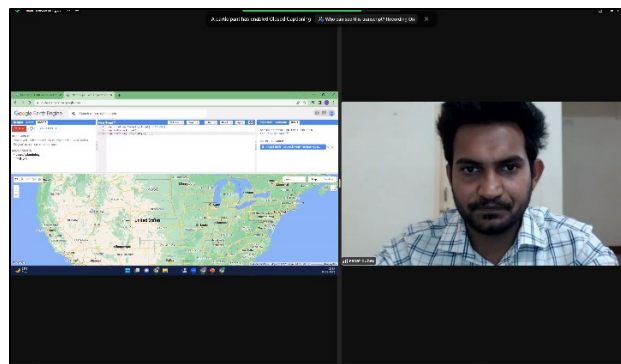

ORIGIN / SPLIT (SPatial LITeracy) students – Peer learning: Students learned from each other how to collect field data and map crop status using various machine learning models and visualization techniques. Landsat 8/9, Sentinel-2, and drone data were used for crop mapping.

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americaview.org

AmericaView Website:
www.AmericaView.org
Christopher McGinty, Executive Director:
chris.mcginty@americaview.org
Lisa Wirth, Program Director:
lisa.wirth@americaview.org
Lindi Quackenbush, Board Chair:
ljquack@esf.edu

- Initiated in 1997, OhioView is a consortium of Ohio universities dedicated to furthering education, research, and workforce training in Earth Observation Science. OhioView is overseen by a Board of Directors made up of PIs from several of the universities in the consortium. Many OhioView schools participate in the OhioView Software Pool, by which the member schools contribute to a central fund dedicated to purchasing specialized remote sensing software at a significant cost savings to each school. This software enables the classwork, educational efforts, and research conducted by OhioView universities.

- The OhioView "Online GIS and open-source remote sensing" workshops served numerous faculty, students, and workforce members in Ohio and across the US over two days. Instruction included using building ArcGIS StoryMaps (Dr. Bradley Shellito), analysis of multispectral and hyperspectral classification (Dr. Joseph Ortiz), using NASA SeaDAS with ocean color and water quality (Dr. Anita Simic Milas, Mr. Mir Alam, and Mr. David Olatunj), image processing with Google Earth Engine (Dr. Umesh Haritashya and Dr. Saket Dubey), using Google Earth Engine for analysis of urban heat islands (Dr. Kevin Czajkowski and Tahmineh Ladi), and mobile data collection with the ArcGIS Field Maps app (Ms. Robbyn Abbitt).

- One of the longest running OhioView initiatives is the SATELLITES (Students and Teachers Exploring Local Landscapes to Interpret the Earth From Space) Program. This is offered yearly to K-12 teachers (particularly middle and high school level) in Ohio. and provides teachers and students with hands-on, inquiry-based science and STEM education using geospatial technologies. The student created projects are then presented and showcased at the annual SATELLITES Conference held each spring in Toledo, Ohio that was held on May 10, 2023 this year.

- The ORIGIN program established a network of institutions, researchers and students who applied existing and developed new algorithms for monitoring water quality and water related issues such as wetland and crop status.

- The SPLIT (Spatial LITeracy) Geoscience program deepened students' understanding of geoscience using geospatial information through field and hands-on training series. This program was also funded by the NSF.

- Regional partners include NASA Glenn Research Center and the Old Woman Creek State Nature Preserve.

Teachers in Toledo learning about taking GLOBE observations to study the 2023-2024 solar eclipses and urban heat island effect

Participants at the 2023 online OhioView Presents remote sensing workshops receive instruction on using Google Earth Engine Javascript for image processing.

Informal educators being introduced to the Google Earth Engine Urban Heat Island Tool.

OhioView Principal Investigator:

Anita Simic Milas

Bowling Green State University

1.419.372.4035

asimic@bgsu.edu

https://www.ohioview.org

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