

## OHIOVIEW 2020-2021 ACTIVITIES

**OhioView Remote Sensing Workshops**

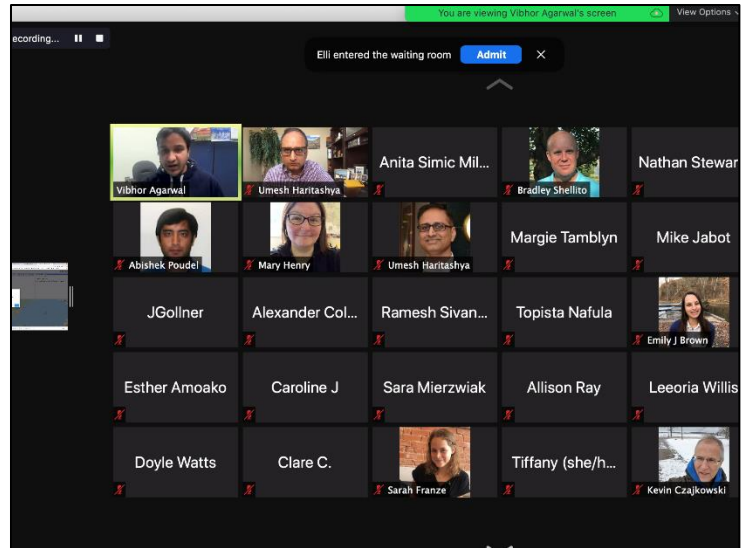
OhioView member universities Youngstown State University, University of Toledo, Bowling Green State University, Kent State University, Central State University, and University of Dayton presented two workshops for a combined approximately 100 participants on February 5 and 26, 2021. PIs from each university presented a section of the workshop that covered a variety of remote sensing and geospatial topics that used freely available software and data. Due to Covid-19, this workshop was held online and thus opened to participants from across the country throughout AmericaView.

**OhioView Teacher Training**

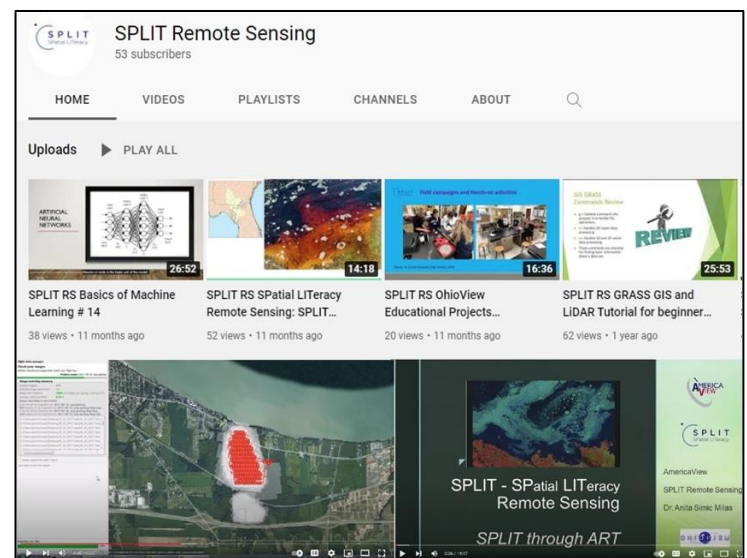
Three Ohio teachers participated in OhioView professional development to learn how to incorporate satellite imagery and GIS analysis through Multispec and ArcGIS Online. During the summer of 2021 the teachers collaborated with high school students who were part of the University of Texas STEM Enhancement in Earth Science (SEES) Program. The teachers will use the techniques they learned in their classrooms in the 2021-2022 school year.

**Water Quality Monitoring and Education**

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. The goal was to establish a network to monitor water quality and involve undergraduate and graduate students in mapping in conjunction with the Spatial Literacy in Remote Sensing (SPLIT) program at BGSU.



*Participants in the OhioView Remote Sensing workshops joined online via Zoom to receive instruction on multiple types of remote sensing applications using freely available software and data.*



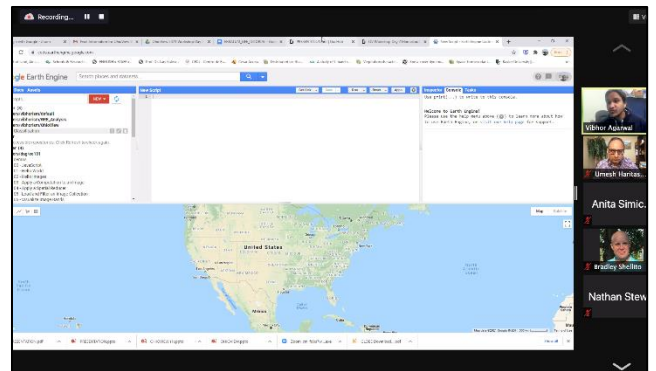
*ORIGIN / SPLIT students created YouTube videos in the 'SPLIT Remote Sensing' channel to educate the public and students about mapping algal blooms by using various remote sensing software and visualization techniques.*

## BENEFITS TO OHIO

- Initiated in 1997, OhioView is a consortium of universities in Ohio 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 “Remote Sensing on a Shoestring” workshops served approximately 100 faculty, students, and workforce members over two days. Instruction included using Earth Sciences Missions imagery in Google Earth Pro (Dr. Bradley Shellito), normalized difference calculations of Sentinel-2 data using Multispec (Dr. Joseph Ortiz), land cover classification of Sentinel-2 imagery using QGIS (Dr. Anita Simic Milas), classification using Google Earth Engine (Dr. Umesh Haritashya), ground validation using the NASA Globe Observer app (Dr. Kevin Czajkowski), and estimating evapotranspiration using Landsat imagery and QGIS (Dr. Sakthi Subburayalu). There were also short guest presentations by Peder Nelson and Brian Campbell from the NASA Earth Science Education Collaborative.
- 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. This year the students presented at a virtual conference through the GLOBE Midwest Collaborative.
- The ORIGIN program established a network of institutions, researchers and students who would develop algorithms for monitoring water quality issues such as algal blooms.
- The SPLIT Remote Sensing research-educational cascade model supported water quality related research and offered high school and university students the opportunity to gain hands-on field remote sensing research skills. This model was also funded by the NSF.
- Regional partners include NASA Glenn Research Center and the Old Woman Creek State Nature Preserve.



*K-12 SATELLITES students at the GLOBE Midwest Collaborative Conference present their investigation how weather affects the speed of their slide in the playground.*



*Participants at the online OhioView Remote Sensing workshops receive instruction on using Google Earth Engine for imagery classification.*



*Participants in the OhioView Teacher Training program use a remote-controlled TerraRover with an infrared sensor on it to observe the temperature of sports fields.*

OhioView Principal Investigator:

Anita Simic Milas

Bowling Green State University

1.419.372.4035

asimic@bgsu.edu



<http://www.ohioview.org>



@OHViewGeo