Millersville Meteorology Hosts Unidata Regional Python Workshop

Millersville hosted a three-day Unidata Python and AWIPS CAVE Training Workshop in April 2017. The workshop was presented by Ryan May, John Leeman, and Michael James, software developers from Unidata Program Center in Boulder, CO. Unidata provides data services, tools, and cyberinfrastructure leadership that advance earth-system science, and enhance educational opportunities, and its Internet Data Distribution System is the means by which Millersville receives its meteorological data, products, and images, and the software that we use in the classroom to visualize these data. On the day of AWIPS training, Millersville alum Scott Jacobs (BS Meteorology, '88), a software engineer for NOAA National Weather Service (NWS) provided an overview of the AWIPS II system.

Python is an open source programming language that has been rapidly adopted by many atmospheric and ocean scientists as an alternative to proprietary packages such as MATLAB and IDL. AWIPS stands for Advanced Weather Interactive Processing System, and is used by all NWS Warning and Forecast Offices for the display and analysis of meteorological data. CAVE is the Common AWIPS Visualization Environment. Millersville is a leader in the use of Python programming in the earth sciences. Dr. Alex DeCaria is the instructor in ESCI 386, *Scientific Programming, Analysis and Visualization,* a required Python course taken primarily by meteorology and ocean sciences majors. DeCaria has recent published a textbook **Python Programming and Visualization for Scientists**.
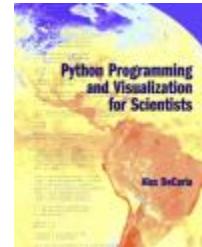
The workshop brought in 19 attendees, including faculty, staff, and students from UNC Asheville, Stockton University, Rutgers University, Penn State, SUNY Brockport, and the University of Maryland. Millersville was well represented by 6 undergraduate and graduate students.

Millersville Meteorology has had a long history of involvement in Unidata. Since its inception in 1987, a Millersville faculty member has served in some capacity on Unidata governance committees. The late Dr. Russell DeSouza, professor of meteorology until his untimely passing in 1997, not only represented Millersville but became known as the guardian for smaller institutions to ensure that they were represented in the decisions being made on the nature and distribution of data. His legacy is remembered in the Russell L. DeSouza Award for Outstanding Contribution to the Unidata Community. Today, Dr. Sepideh Yalda serves on the Unidata Advisory Committee.
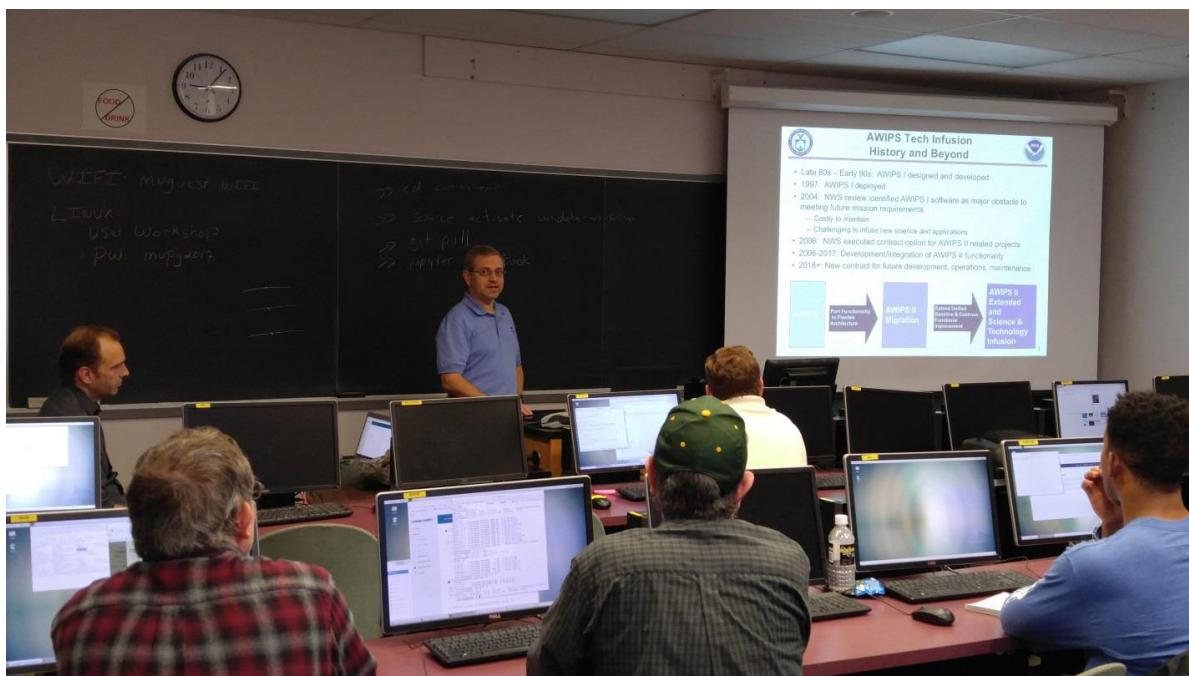
MU Alum Scott Jacobs, BS Meteorology ('08) provides an overview of the National Weather Service's AWIPS analysis and visualization software system.
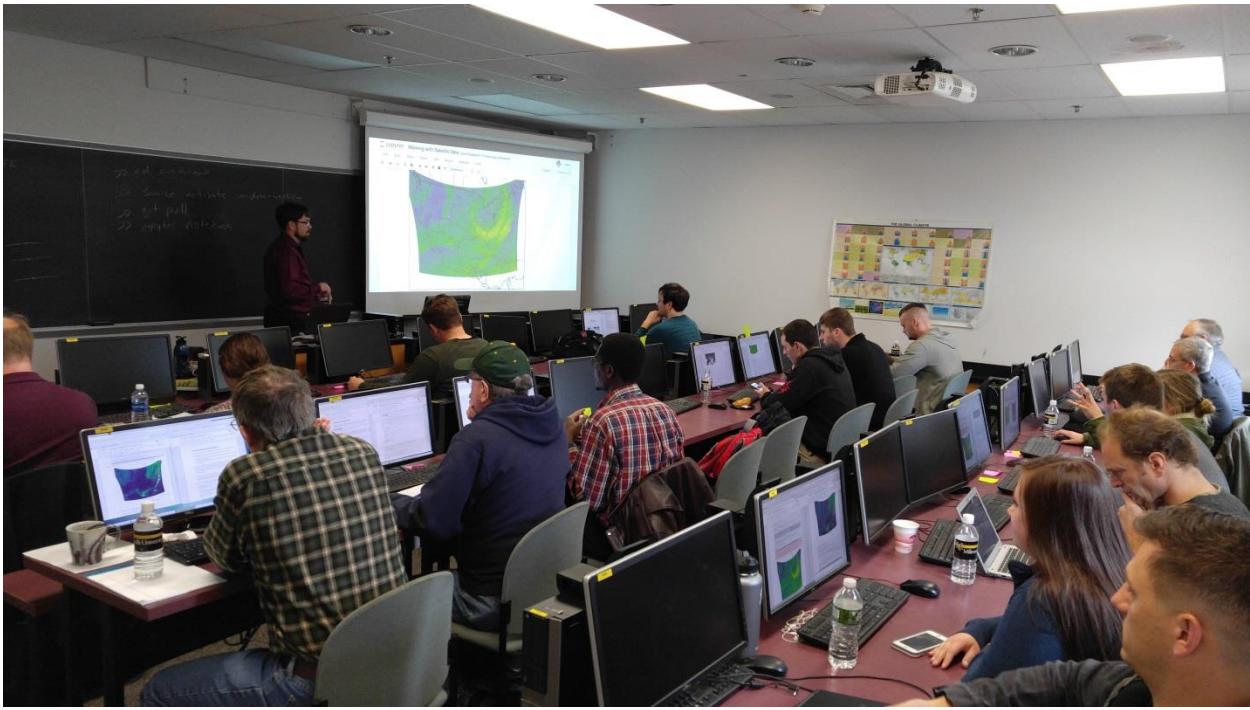
Unidata's John Leeman describes how to ingest and display satellite imagery using Unidata-developed Python packages.

Attendees at the Unidata Regional Python and AWIPS CAVE Training Workshop held at Millersville University in April.