



Research on the Impacts of the Loop Current

Data from a 54-year HYCOM simulation of the Gulf of Mexico were analyzed to study the variability of upwelling and downwelling across the continental shelf slope of the De Soto Canyon region. Substantial near-bottom cross-slope low frequency motions cause isopycnal displacement of more than 100m vertically across the slope, potentially having important consequences for the shelf and slope ecosystem. These low-frequency motions are linked to intermittent Loop Current impingement on the West FL Shelf slope hundreds of kilometers to the SE of De Soto Canyon. [More Info>](#)



10 Reasons Why El Niño Has Been Here A Year

On March 6th, NOAA issued their monthly ENSO Discussion (a summary of the state of the tropical Pacific Ocean) and upgraded the "El Niño Watch" (meaning conditions are favorable for El Niño to develop in the next 6 months) that had been in place for nine months to an "El Niño Advisory" (El Niño conditions are present and likely to persist for 1-3 months). There are many indicators that El Niño has been in place since April of 2014....Here is a [blog](#) of the "Ten reasons why El Niño has been here since April" by **David Zierden**, State Climatologist.



"What If" Scenarios for Row Crops in the SE

The Florida Climate Center and COAPS hosted the 11th meeting of the Tri-State Climate Working Group for Row Crop Famers on February 9th. The goals for the day-long meeting were to examine future scenarios for row crop production in the SE US based on past trends; discuss potential changes in climate, competing land uses, and water availability; identify possible strategies that different stakeholder groups might use to anticipate and prepare for changes; and determine interest in exploring these issues more deeply together. [More Info>](#)

Inaugural Open House



The first CAPS/COAPS Open House was a huge success with 1,045 visitors in attendance! The Center for Advanced Power Systems (CAPS) and COAPS collaborated to make this year's event incredible. The Deep-C Consortium showcased research on impacts of the 2010 Deepwater Horizon oil spill. Visitors saw oil patties up close and learned how scientists can fingerprint them to determine the source of the oil. They also assisted in the building of an underwater robot, aka ROV (Remotely Operated Vehicle) and then tested it for neutral buoyancy in the pool with the assistance of SAIL's Robotics Team. Kids built mini-ocean drifters and learned about the information that researchers can gather from them while being able to see a real ocean drifter called a RAFOS. People interacted with the Gulf Atlas: Map Viewer to learn about the ocean's temperature, salinity, and currents. The Marine Data Center shared information on instruments that are deployed on ships and why it is important to collect marine data. Members of the Florida Climate Center demonstrated the power of wind, created clouds, explored the water cycle, and quizzed participants about Florida weather. Satellite Trivia challenged kids as they built their Candy Satellites. The Water Cycle on the Farm station engaged visitors to learn about soil properties and impacts of irrigation techniques. Overall, the February 21st event was fun, interactive, and educational for our Tallahassee community!



Thank you to everyone who helped to make this event successful and to the National Weather Service and Jet Propulsion Laboratory for their educational donations!



Student Achievements

Mike Kozar and Heather Holbach

were awarded the Dr. Jim O'Brien Travel Award, which provides each of them with \$1000 to attend the European Geosciences Union General Assembly in Vienna, Austria in April.



Harrison Harward

presented on "Coding for Currents: How Information From Research Vessels from the High Arctic to Southern Ocean is Processed and Used by Programmers" at the WIMSE (Women in Math, Science & Engineering) Research Symposium.



Rachel Weihs

organized a food drive, which resulted in 83 pounds of food to help America's Second Harvest of the Big



Connor Dacey's passion for meteorology leads to great research opportunities. He says, "being an NOAA Ernest Hollings F. Scholar gave me the opportunity to travel across the country and meet and work with many respected

Bend. This donation helped to provide more than 69 meals to neighbors in need.

professionals in our field". Click here to watch the [video](#) and read the [article](#).



COAPS in the Community



Boys & Girls Club at Oak Ridge Elementary and Nims Middle School

Hannah Hiester introduced the students to types and effects of weather through interactive landslide and flooding activities, and Melissa Griffin jazzed up the water cycle with an interactive game called the Incredible Journey. Thank you to John Steffen for your assistance with B&G Club!



Project GOO (Gulf Oil Observers) Field Study

Deep-C Consortium's educators, Amelia Vaughan and Brittany Pace worked with the Booker T. Washington's Marine Science Academy students to collect oil patties along the Gulf coast at the Naval Air Station in Pensacola, Florida in February. The oil patties were sent to Woods Hole Oceanographic Institution for analysis. These patties can be fingerprinted to determine the source of the oil.

[More info>](#)



Encouraging Beginning Scientists

The Capital Regional Science & Engineering Fair is a culminating event where middle and high school students who have won their science fairs at their local schools compete for awards and a chance to proceed to State and International Science Fair competitions. On February 13th, Melissa Griffin (Environmental Science Division), Brittany Pace and Amelia Vaughan (Chemistry Division) served as judges for this event at FSU's Tully Gym.



Big Bend Leon Association for Science Teaching (BLAST) Student Photography Award Reception was hosted at COAPS to recognize science photography achievement.

FSU's Women in Math, Science, & Engineering (WIMSE) toured COAPS

on February 10th. They met with female scientists (Melissa Griffin, Alex Bozec, and Hannah Hiester) and discussed careers with Jocelyn Elya, Heather Holbach, Rachel Weihs, and Brittany Pace.



Griffin and Pace also were science fair judges at Canopy Oaks Elementary, along with Dr. Kat Maksimova at Buck Lake Elementary's 5th grade Science Fair. These budding scientists were excited to share their projects.



Children's Day

On January 31st, the Museum of Florida History hosted the 32nd Annual Children's Day. The Deep-C Consortium and the Florida Climate Center had an array of interactive activities for all the children to enjoy. Thank you Brittany Pace, Melissa Griffin, Erick Olvera-Prado, Amelia Vaughan, John Steffen, and Akhilesh Mishra for participating. [More info>](#)



Oceans Day at the Capitol

This year's theme for Florida Oceans Day at the Capitol was "Ocean Stewardship and Legacy" and focused on protecting Florida's coasts and oceans for its residents. Three GoMRI consortia, Deep-C along with C-IMAGE and CARTHE, shared information about their oil spill research with the legislators and lobbyists in Tallahassee on March 12th. [More info>](#)



FSU Day at the Capitol

On March 17th, the university's academic departments and research centers gathered to celebrate the many successes and to share information with legislators and the public. Thank you COAPS scientists (Xiaobiao Xu, Vasu Misra, Hannah Hiester, Mark Bourassa) and Brittany Pace for participating. [More info>](#)

Contact Outreach Coordinator [Brittany Pace](#) if you are aware of an education or outreach opportunity that COAPS might want to be involved in.



Farewell to Jordan Yao

Jordan Yao started working for COAPS in 1997. Yao was the first computer expert in COAPS and became an Associate in Research Computing. Besides keeping the hardware going, Yao taught a non-credit programming course for students. Dozens of students benefited from his training which allowed them to graduate earlier.



Thank you Jordan for 18 years of service!



Who's Who in Science

Emeritus Professor Dr. James J. O'Brien, Meteorology and Oceanography, has been selected to have his biographical data included in the book: Who's Who in Science and Engineering, 2016 - 2017. This book is the source for current biographical information that documents the latest achievements of leaders in such fields as oceanography, aerospace, and environmental engineering. The 2016 - 2017 edition will chronicle the lives of these distinguished individuals for our reference audience.



20 Years of COAPS

In anticipation of COAPS' upcoming 20-year Anniversary, we are creating a "History of COAPS." So we need your help in building a photographic archive. Past and present

students, researchers, and scientists are encouraged to send in photographs with captions from your time at COAPS. Please send entries to [Amelia Vaughan](#).

Recent Publications

COAPS authors are in **bold**.

Ali, M.M., P.V.Nagamani, N. Sharma, R.T Venu Gopal, M. Rajeevan, G.J.Goni and **M. A Bourassa**, 2015: Relationships Between Ocean Mean Temperatures and Indian Summer Monsoon Rainfall. Atmospheric Science Letters. (accepted)

Nguyen, T., S.L. Morey, D.S. Dukhovskoy, and E.P. Chassignet: Non-local impacts of the Loop Current on cross-slope near-bottom flow in the northeastern Gulf of Mexico. Geophysical Research Letters (in press).

Paget, A., **M. A. Bourassa**, and M. D. Anguelova, 2015: Comparing in situ and satellite-based observations of oceanic whitecaps. J. Geophys. Res. (in press).

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