

In this issue:

LSU | College of the Coast & Environment

November 29, 2017

From Dean D'Elia

Alumni, students and friends,

Although the past few weeks have passed swiftly, we have been incredibly productive and are thrilled to report on just a few of many recent accomplishments. In late October, with CC&E playing a major role in leading the application effort, LSU was accepted for membership to the University Corporation for Atmospheric Research, or UCAR, a nonprofit consortium of more than 100 colleges and universities undertaking cutting edge research and education in atmospheric and related sciences. Headquartered in Boulder, CO, UCAR manages the National Center for Atmospheric Research, or NCAR, and provides additional services to strengthen and support research and education through its community programs. This will provide new opportunities for LSU faculty, staff and students.



Earlier this month, a number of CC&E students and faculty, including me, had the opportunity to attend and represent the College at the Coastal & Estuarine Research Federation, or CERF, conference, in Providence, RI. The CERF 2017 scientific program offered four days of timely, exciting and diverse information on a vast array of estuarine and coastal subjects. Attendees had the chance to attend outstanding presentations and join in on discussions concerning the coast and estuaries. As always, CERF meetings provide a great opportunity to network with scientists across the nation to advance the understanding and wise stewardship of estuarine and coastal ecosystems worldwide. For our students who attended, the event provides an excellent opportunity to meet and engage with future colleagues and to present their own work at an international meeting.

UCAR membership and our strong CERF participation are only two examples of the CC&E's and LSU's prominent leadership in coastal and environmental research, a strength highlighted in the University's Strategic Plan 2025 as one its six focus areas. This issue of *CC&E Today* includes several more examples.

Finally, as the end of the semester nears, I encourage our students to stay the course as they prepare for exams. Our next newsletter will discuss fall commencement in more detail, but please know how proud I am of this graduating class. It's an honor to have such talented students in our College.

Sincerely,

Christopher F. D'Elia

Want to learn more about CC&E?

Supporters and potential supporters of the **College of the Coast & Environment** are invited to a **presentation and tour of the College**.

Contact Kathe Falls for details at kfalls1@su.edu

[CLICK HERE TO GIVE](#)

Thank you for your support!

D'Elia, Benfield Represent CC&E at Ocean Leadership Forum

On October 25, the Consortium for Ocean Leadership, or COL, held its annual industry forum in Washington D.C. This year's topic, "Rigs to Reality," brought together more than 50 representatives from the oil and gas industry, government regulators, academics and NGOs to discuss viable future options for decommissioning oil rigs and converting them into artificial reefs. Decisions regarding this process require a myriad of scientific, regulatory, and engineering inputs and have implications for aging oil platforms in the Gulf of Mexico and off California.



CC&E Dean Chris D'Elia and Professor Mark Benfield attended the forum, representing the CC&E, which is a member of the COL. Benfield was part of a panel on "Characterizing Environmental Benefits and Risks," along with Dr. Milton Love (UCSB), Dr. Greg Stunz (TAMUCC), and Jorge Brenner (The Nature Conservancy).

Benfield's presentation provided perspectives on biological studies necessary to inform permits to reef rigs in deeper water (>1000 feet) and provided perspectives gained from research conducted in cooperation with ExxonMobil in the Gulf of Mexico. Benfield also pointed out some of the challenges associated with using ROVs to study marine life around oil platforms and illustrated some of the potential problems (and their solutions).

"As a biological oceanographer, I usually hear about only the biological aspects of converting rigs to reefs," Benfield said. "In addition to biology, this workshop gave me a chance to hear legal, regulatory, and engineering perspectives from a broad range of constituents. It was very informative."

Learn more about the event on the [forum webpage](#).

Watch [this short video](#) illustrating what an ROV can sometimes miss.



CC&E Returns to CERF

The College of the Coast & Environment made a strong showing at the Coastal & Estuarine Research Federation's, or CERF's, [24th Biennial Conference](#) on November 5 - 8, 2017, in Providence, RI. CERF, arguably the most important association devoted to the understanding and wise stewardship of estuarine and coastal ecosystems worldwide, provides an opportunity for the College's students and faculty to showcase recent research, as well as network with scientists and other professionals representing government agencies, businesses and nonprofits from North America's coastal states and provinces, as well as from more than 20 countries.

CC&E has a rich history with the organization: Three of the federation's former presidents have LSU ties: Dean Chris D'Elia (1991-1993); Professor and Shell Chair Nancy Rabalais (1997-1999); and Louisiana Sea Grant College Program Executive Director Robert Twilley (2015-2017).

Several CC&E researchers participated in sessions on topics including coastal and estuarine nutrient pollution, ecological responses to climate-induced mangrove expansion into salt marshes and the impacts of extreme weather on estuaries.



CC&E Dean and former CERF President Chris D'Elia greets visitors to the LSU booth at CERF 2017.

CC&E hosted the LSU booth and reunion, with the goal of highlighting the University as a leader in coastal and estuarine research. The gathering attracted more than 100 attendees and provided opportunities for recruiting students and connecting with alumni.

LSU Designated EcoPartner with China

The U.S. Department of State has designated LSU an "EcoPartner" with China. The EcoPartnerships program encourages mutually beneficial arrangements between organizations from the U.S. and China, including NGOs, universities, businesses and local governments, with the goal of promoting energy security, economic growth and environmental sustainability. LSU and the Chinese Academy of Sciences will work together on conservation and management of wetlands through joint data collection and analysis that will develop research capabilities in both countries.

Aixin Hou, professor, Department of Environmental Sciences, sponsored LSU's application to the highly competitive program. "Being selected by the program exemplifies the world leadership of LSU and the CC&E in the field of wetland conservation and management and environmental sustainability," Hou said. "What makes us stand out is our research on the wetland plant-microbial-benthic ecosystem responses to environmental stress and remediation measures, as well as our long-term, highly productive collaboration with Chinese Academy of Sciences."

LSU is one of only three EcoPartnerships named in 2017. The other two are Capstone Turbine and BROAD Air Conditioning, which will develop combined cooling-heating power (CCHP) systems to improve energy efficiency in buildings, and the National Resource Defense Council and Shenzhen

Power Supply Bureau, which will focus on the establishment of market mechanisms for energy demand response, the integration of renewable energy into power grids and best practices for the design of electricity pricing and grid planning policies.

During the past nine years, the State Department-sponsored Ecopartnerships program has facilitated 42 partnerships, which have produced tangible results in energy and environmental technology.

LSU Joins Atmospheric Research Consortium

The [University Corporation for Atmospheric Research](#), or UCAR, announced that LSU has been accepted for membership to this prestigious organization. UCAR is a nonprofit consortium of more than 100 colleges and universities undertaking cutting edge research and education in atmospheric and related sciences.



An official signing of the agreement will take place at the [AGU Fall Meeting](#) in New Orleans on December 14.

Turner's Research on Sea Level Rise, River Deltas Published

R. Eugene Turner, Boyd Professor in the College of the Coast & Environment, along with colleagues Michael Kearney at the University of Maryland and Randall W. Parkinson at Florida International University, recently published their research on sea level rise and river deltas in the *Journal of Coastal Research*. Their findings: The fragile balance between sea level rise and sediment accumulation that deltas rely on is in peril.



"If the past is prologue, and deltas formed when sea level rise slowed, then it appears that the reverse will occur. Deltas will not be able to keep up with a rising ocean," Turner said.

[Read more.](#)

Rabalais Presents at TEDWomen

Nancy Rabalais, professor and Shell Endowed Chair in Oceanography and Coastal Sciences, presented a TED talk at [TEDWomen](#) in New Orleans on November 1, 2017. The theme of the conference was "Bridges." Rabalais spoke of bridging science to policy that strengthens environmental policies for improved water quality. In particular, she spoke of the low oxygen area in the Gulf of Mexico, commonly called the "Dead Zone." She noted the increase in size and worsening of the Dead Zone paralleled increasing nitrogen loads to the Gulf of Mexico from the Mississippi River watershed.



The complete, edited version of Rabalais' TED talk will be available within the next year on TED.com.

[Read more.](#)

Hooper-Bùi Gives Voice to Ant in Documentary

Linda M. Hooper-Bùi, associate professor, Department of Environmental Sciences, is a featured speaker in the short documentary [Critter Speak](#), an environmental art and education project for the portable museum of Gulf of Mexico biodiversity, CRUDE LIFE. The documentary features guests from diverse professions, including a state senator, a shrimper and several biologists, who speak as critters of the marsh, swamp, and ocean, including an eel, red algae, and Hooper-Bùi's "Acrobat Ant. The "critters" share their views on Gulf of Mexico biodiversity, their experiences throughout the BP Oil Spill, the health of the ecosystem, land loss, climate change, and possible solutions for the future.



The project is funded by the National Academy of Sciences, Keck Futures Initiative.

See Hooper-Bùi's "Acrobat Ant" interview [here](#).



"Earth as Art" on Display

A mini display of four beautiful satellite images of Earth from space has been installed by R. Hampton Peele (above), research associate, Louisiana Geological Survey, or LGS, and R. Eugene Turner, LSU Boyd Professor, Department of Oceanography and Coastal Sciences. The images were originally produced by USGS and NASA through their joint project, "Earth as Art." The project was designed to reach a broader constituency of supporters for their earth-imaging satellite programs.

While the original intent for the "Earth as Art" project was to showcase the artistry of satellite images, Peele and Turner see these images as powerful educational resources for LSU students, faculty and their guests. An additional panel has been developed by Peele and DeWitt Braud of the Coastal Studies Institute, with assistance from LGS cartographer Lisa Pond, to explain the science and technology of satellite remote sensing. Four new satellite images will be rotated into the display regularly.

This mini "Earth as Art" series is on display across the hall from Room 1209 in the Energy, Coast and Environment building. Come by and view these spectacular, revealing images of our Earth.

DOCS Hosts Hydric Soil Identification Course

CC&E's Department of Oceanography and Coastal Sciences hosted a two-day workshop October 19-20 addressing the field identification and delineation of hydric soils. Workshop attendees gained the skills required to identify hydric soils in the field and conduct hydric soils delineations within Louisiana and across the Gulf Coast region. Topics included the formation and morphology of wetland soil features, data collection requirements for proper hydric soil description and identification, the application of hydric soils to state and federal wetland delineation processes and the use of hydric soils indicators for wetland delineation. Additionally, the workshop was applicable to those working throughout the Atlantic region and other areas of the country.

Workshop attendees were given the opportunity to take field trips to the Baton Rouge levee and to Bluebonnet Swamp & Nature Center, which provided a one-of-a-kind hands-on classroom experience outdoors, where they were tasked with determining the boundary line between upland and wetland soils. Attendees gained useful soil classification skills that will be applied in the field when conducting wetland delineations.

Allen, Byrnes Join CC&E Advisory Council

The College of the Coast & Environment welcomes two new members to its Advisory Council: Timothy J. Allen and Mark R. Byrnes.

Tim Allen is general manager of Apache Louisiana Minerals LLC., a subsidiary of Apache Corporation, which is responsible for surface management of over 267,000 acres of wetland properties in South Louisiana, located in the parishes of Terrebonne, Lafourche, Cameron, Iberia, Vermilion and Plaquemine. He is a 1983 graduate of LSU with a bachelor's degree in engineering technology and is a registered professional land surveyor in Louisiana, Texas and Mississippi. He is actively engaged in wetland conservation efforts across the coast through the efforts of Apache Corporation and local, state, federal, university and NGO conservation partners.



Allen

Mark R. Byrnes, Ph.D., is senior coastal scientist and principal at Applied Coastal Research and Engineering. For the past 31 years, he has been a principal investigator/program manager on more than 85 coastal and nearshore process studies as a research scientist at the U.S. Army Engineer Research and Development Center, Coastal and Hydraulics Laboratory

(formerly the Coastal Engineering Research Center); Coastal Geology Section chief for the Louisiana Geological Survey; and research professor at LSU's Coastal Studies Institute. He earned his Ph.D. in oceanography at Old Dominion University in 1988.



Byrnes

Both Allen and Byrnes bring significant coastal environmental science knowledge and experience to the Council. The CC&E looks forward to a long, successful partnership with them.

CC&E Appoints New Advisory Council Chair

Charles S. "Trey" McCowan, III, partner in the Baton Rouge office of Kean Miller, LLP, has been appointed chairman of LSU's College of the Coast & Environment Advisory Council. He is an alumnus of the College, earning his master's in environmental science (environmental planning and management).



McCowan

"We are excited to welcome Trey in this role. He is an accomplished attorney and respected member of the business community and clearly understands the link between academia, industry and the coastal environmental sciences," said Christopher F. D'Elia, dean of the LSU College of the Coast & Environment.

CC&E's Advisory Council is dedicated to the creative development of the financial and intellectual resources of the college. The Advisory Council provides guidance in making the CC&E a responsive and effective partner with academia and private, corporate, and public sectors as it strives to fulfill its mission.

ALUMNI SPOTLIGHT

Gregory M. Olson

M.S., Environmental Sciences, 2012

Ph.D., Environmental Sciences, 2015*

**Among CC&E's first Environmental Sciences Ph.D. graduates*

ENVS alumnus Dr. Gregory Olson currently teaches chemistry at Denham Springs High School in Livingston Parish. He recently talked with CC&E Today about his teaching and research experiences in both the M.S. and Ph.D. programs.



Olson

How did your ENVS degree programs prepare you for your career?

I had the opportunity to teach ENVS 1126, on the essential principles of environmental sciences, comprehensive and fundamental understanding of sound science, stewardship and sustainability in environmental sciences. That, along with my experience in analytical environmental chemistry throughout my master's and doctorate, prepared me to tackle secondary education.

Want to give a shout-out to anyone in ENVS?

I worked with several professors who made a lasting impression on me. I worked for Dr. Ralph Portier while I was a graduate assistant. He was my major professor and

my mentor, and he started me on my path as an environmental chemist. Additionally, I had significant help from Dr. Ed Laws and Dr. Vince Wilson during the pursuit of my graduate degrees, each offering their individual expertise helping me grow as a student and scientist. As a research associate I had the privilege to work for Dr. Ed Overton. This experience furthered the understanding I had gained in my graduate work, it refined my techniques and polished the knowledge that was cultivated by my graduate committee.

Additionally, working with both Dr. Wilson and Dr. Kevin Armbrust as an instructor/dual enrollment specialist for the CC&E helped me gain a better understanding of the logistical and administrative side of academic programs. All of these professors have had a lasting effect on me, each teaching me useful information to help me better myself as a lifelong student and scientist. I will always be thankful for my time under their tutelage at LSU.

You're teaching now, but is research still on your mind?

While working for Dr. Overton, I was able to expand my understanding of crude oil analysis and biomarker fingerprinting. This was most definitely helped along by working with Dr. Buffy Meyer in the RCAT lab. With the help of my colleagues I was able to develop a method for relatively quick biomarker analysis using established as well as in-house ratios as part of a program that can be easily used. It was a blend of functional knowledge augmented by a user-friendly interface. I am still working on additional ideas involving biomarker analysis; however I have slowed down since taking a position as a high school chemistry teacher. I am still involved in projects that stem from my work while at LSU despite leaving the department, and I plan on maintaining my research interests as long as I can.



STUDENT SPOTLIGHT

Two DOCS Students Named Knauss Fellows

CC&E graduate students Andy Muench and Sarah Margolis have been named 2018 Sea Grant Knauss Fellows. The Knauss Fellowship, sponsored by the National Sea Grant College Program, matches graduate students involved in ocean and coastal resources with hosts in federal, legislative or executive branch offices for one year.

Muench, a native of Waukesha, WI, currently studies plant community dynamics in created marshes in the lab of Tracy Quirk, assistant professor, Department of Oceanography and Coastal Sciences. He will work as a policy analyst for the U.S. Department of Treasury in the office of Gulf Coast Restoration.



Muench

Margolis, who is nearing completion of a Master of Science degree in oceanography and coastal sciences at LSU, has been placed at the NOAA National Marine Fisheries Service Advanced Sampling Technology Program. She earned a Bachelor of Arts degree in marine science from Boston University.

This year the National Sea Grant Office received and considered 128 applications from 31 Sea Grant programs.

"This is an extreme honor that reflects their young professional careers and scholarly



LSU well represented: Four of these five Knauss fellows represent LSU. (L-R) Alvaro Armas (LSU MPA, RNR), Andy Muench (LSU DOCS), Michelle Felterman (Tulane Law), Bret Sparks (LSU Law) and Sarah Margolis (LSU DOCS).



Margolis

achievements," said Robert Twilley, executive director, Louisiana Sea Grant College Program. "And it is very exciting that the Louisiana Sea Grant College Program will have a total of four 2018 Knauss Fellows serving in Washington, D.C. next year."

Aarons Selected for CERF "Rising TIDES"

The Coastal and Estuarine Research Federation, or CERF, selected DOCS Ph.D. student Anika Aarons to receive a 2017 Rising TIDES (Toward an Inclusive, Diverse, and Enriched Society) Conference Mentoring Program award for this year's CERF 24th Biennial Conference in Providence, RI. Rising TIDES supports the participation of underrepresented minority students and their mentors at the conference. Aarons, whose research interests include wetland biogeochemistry, nutrient cycling and soil microbiology, was mentored by Lori Sutter, a research professional in plant, water and soils at the University of Georgia.



Aarons

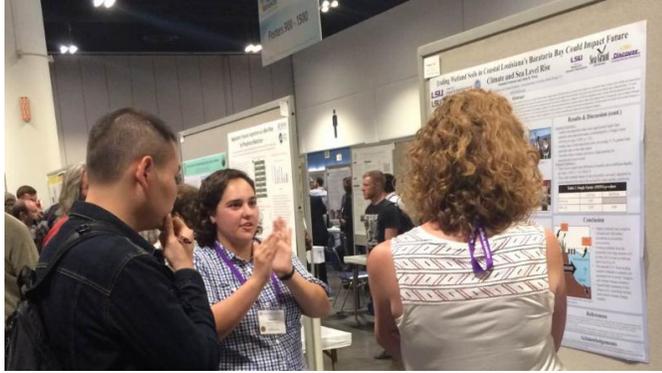
CERF selected 11 student/mentor pairs from an applicant pool of 75. "We were extremely impressed with both the number and the high quality of the applications we received," said Dr. Hilary Neckles, USGS Research Ecologist, CERF President-Elect, and chair of the Rising TIDES selection committee. "We are excited to engage these exceptional students and their mentors in broadening participation in coastal and estuarine science, and we look forward to growing CERF's URM mentoring program in future years."

Read more on Rising TIDES [here](#).

Fontenot Takes First, Second in Poster Competitions

Kudos to coastal environmental

science senior Amanda Fontenot for award-winning poster presentations at recent scientific meetings. At the annual International Meeting of the Soil Science Society of America in Tampa in October, she was awarded second place for her poster talk, "Eroding Wetland Soils in Coastal Louisiana's Barataria Bay Could Impact Future Climate and Sea Level Rise." Fontenot, an undergraduate from Houston, won the award in the graduate student competition.



Fontenot (middle) discusses her award-winning poster at the International Meeting of the Soil Science Society of America.

"I really enjoyed presenting at this meeting," Fontenot said. "And I was able to get feedback on my research that I am continuing for my Honors thesis."

Fontenot also presented at the Coastal & Estuarine Research Federation Annual Meeting in Providence, RI, in November, where she was awarded first place in the undergraduate poster competition for presenting "Tidal Fluctuations of pH, DIC, and DOC in a Sandy Hook Bay Coastal Wetland." The presentation was the result of research Fontenot performed during her summer NOAA Hollings Internship. A recent LSU "[Featured Tiger](#)," Fontenot was awarded the 2016 Ernest F. Hollins Scholarship, which provided a cash award and paid internship with NOAA.

"Presenting at both of these conferences gave me the opportunity to network with other scientists, learn about different areas of coastal research, and practice communicating and defending my research to others," she said. "All in all, they were both great experiences for me to have during my undergraduate career."

UPCOMING EVENTS

Coast & Environment Graduate Organization (CEGO)

Fall 2017 Seminar Series

All seminars 11:30 -12:30
Dalton J. Woods Auditorium
Energy, Coast & Environment Building

December 1

"Oil, Gas and Health Impacts on People"
Wilma Subra
Subra Company Environmental Consulting



CC&E ALUMNI -- New job? New location? We want to hear from you!
Send your Alumni Update to kfalls1@lsu.edu

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