

# The Portal

Official Newsletter of the Northern Gulf Institute

Fall 2009



**NGI**  
NORTHERN GULF INSTITUTE  
a NOAA cooperative institute

[www.NorthernGulfInstitute.org](http://www.NorthernGulfInstitute.org)

## REGIONAL COLLABORATION IS THE THEME AS NGI GATHERS IN MOBILE

*Researchers and students assembled at the third annual NGI Conference to share research and build collaborations*

The Northern Gulf Institute chose “Regional Collaboration” as the theme for its third annual conference. The NGI participates in a number of ongoing efforts in the northern Gulf of Mexico region that focus on regional collaboration, and this year’s conference offered a chance to share these activities with the scientists and students of NGI. The conference was held in Mobile, AL, on May 20-21, 2009. This new venue and the addition of paper sessions made for a successful conference with excellent participation from all the NGI institutions. The paper sessions allowed scientists and students to make in-depth research



NOAA Career Roundtable Discussion

presentations to highlight results of three years of hard work. Participants and attendees were enthusiastic about the addition of paper sessions to the conference, with many saying they experienced increased opportunities to network and build collaborations.

The opening plenary session provided an update on the Northern Gulf Institute and NOAA Cooperative Institute Office activities. Following that, the NGI state and federal partners presented a series of regional collaborations. NOAA’s Gulf of Mexico Regional Collaboration Team, Mississippi-Alabama Sea Grant, and USGS’s Gulf of Mexico program spoke first, and the Governors’ Gulf of Mexico Alliance (GOMA) followed with various presentations.

To submit info or ideas for upcoming newsletters, send an email to: [newsletter@NorthernGulfInstitute.org](mailto:newsletter@NorthernGulfInstitute.org).

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After a general introduction about GOMA, each GOMA Priority Action Team gave a presentation that outlined their research priorities and identified opportunities to partner with NGI. The teams' topics included Coastal Community Resilience, Identification and Characterization of Gulf Habitats, Wetland and Coastal Conservation and Restoration, Environmental Education, Water Quality for Healthy Beaches and Shellfish Beds, and Reducing Nutrient Inputs to Coastal Ecosystems.

The remainder of the conference focused on NGI research in a series of paper and poster sessions. Forty-nine papers and sixty posters made for a full schedule of concurrent



sessions. NGI scientists and students gave presentations that reflected the broad range of research that NGI conducts. Following the four research themes of NGI, scientists and students presented topics covering fish populations, sediments, tropics, modeling, social sciences, and others. Two large poster sessions provided another venue to present research to network.

Lynne M. Carter, program manager of the Southern Climate Impacts Planning Program (SCIPP) at LSU, brought the conference to a close with her keynote address on climate change. Dr. Carter, active in climate impacts and adaptation work and a member of the writing team for the 2009 Climate Impacts on the United States document from the Climate Change Impacts Program (CCSP), addressed current research and trends in climate change and spoke about the impacts of these changes and the importance of addressing issues at both research and policy levels.

The NGI thanks all the participants of the 2009 NGI Annual Conference. Special thanks go to all who helped plan and run the conference. **Please save the dates of May 19 - 20, 2010, for the 4th Annual NGI Conference in Mobile.**

## And the Winner is...

Student contests at each year's conference promote student participation. In addition to the usual photo and poster contests, a student paper contest was added to this year's conference. Winners were recognized and presented with awards.

### Student Paper Contest Awards

#### **First Place - Shruthi Bheemireddy, MSU**

*Machine Learning-Based Ontology Mapping Tool to Resolve Heterogeneities in Coastal Sensor Networks*

#### **Second Place - John Ramirez-Alvila, MSU**

*Evaluation and Prediction of Sediment and Phosphorus Loads within the Town Creek Watershed, MS*

#### **Third Place - Lauren Showalter, DISL**

*Stable Isotope and Analysis of Mercury Concentrations in the Mobile Bay Food Web*

### Student Poster Contest Awards

#### **First Place - Anindita Das, LSU**

*Modeling Estuarine - Shelf Exchanges in a Deltaic Estuary: Implications for Coastal Carbon Budgets and Hypoxia*

#### **Second Place - Steven Scyphers, DISL**

*Restored Oyster Reefs as Natural Breakwaters for Estuarine Shorelines*

#### **Third Place - Charles Martin, DISL**

*Impacts of Invasive Nile Tilapia on Coastal Food Webs*

### Student Photo Contest Awards

First Place Landscapes

**MooJoong Shim, USM**

First Place Activities

**MooJoong Shim, USM**

Best Overall & First Place Flora

**Jibonananda Sanyal, MSU**

### Researcher Photo Contest Awards

First Place Landscapes

**Chris Gardner, NOAA**

First Place Flora

**Joe Baustain, LSU**

Best Overall & First Place Activities

**Charles Fulford, MSU**



Best Overall & First Place Flora  
Jibonanda Sanyal, MSU



Best Overall & First Place Activities  
Charles Fulford, MSU

## NGI SPEAKER SERIES

The NGI Speakers Series event continues to present a broad spectrum of speakers and draw interest from many of our partners and potential collaborators. As interest in the series grows and participation increases, the NGI is investigating additional methods to share the presentations and meet the increased demand. As speakers are scheduled, we will send an NGI Listserve notification and post information on the NGI web site.

The first speaker for 2009, was **Robert Arnone**, head of the Ocean Sciences Branch at the Naval Research Laboratory (NRL) located at Stennis Space Center, Mississippi. In his presentation *NRL Coastal Remote Sensing*, Dr. Arnone shared with us some of NRL's developmental activities for coastal modeling and remote sensing. Topics included ocean modeling, sensor development and selection, and processing systems. For more information about the NRL, please visit: <http://www7330.nrlssc.navy.mil>.

The second speaker for this year was **Kenneth Graham**,

the new Meteorologist-in-Charge for the National Weather Service New Orleans/Baton Rouge Forecast Office in Slidell. Graham spoke about the communication of risk and errors in forecasting hurricane tracks and intensity during tropical high-impact events. His talk titled *Just 20 Miles can Make a Difference* explored how errors in forecasting can significantly



alter the impacts to coastal and inland areas. The National Weather Service (NWS) is working on new techniques to communicate these risks to decision makers. Graham shared real data to show the subtleties of impact forecasting and techniques to communicate with federal, state, and local officials. For more information about our regional NWS, please visit: [www.srh.noaa.gov](http://www.srh.noaa.gov).

Our third speaker of the year was **Larry McKinney**, the Executive Director of The Harte Research Institute in Corpus Christi.



Dr. McKinney, in his presentation *Harte Research Institute – Thinking Deeper*, introduced the Harte Research Institute and its mission to

“support the long-term sustainable use and conservation of the Gulf of Mexico.” The “Harte Model” strives to take advantage of the synergy among and encourages multi-national and multi-disciplinary efforts by the USA, Mexico, and Cuba to solve problems that affect the health and sustainability of the Gulf of Mexico. For more information about the Harte Institute, please visit: [www.hartheresearchinstitute.org](http://www.hartheresearchinstitute.org).

## NORTHERN GULF INSTITUTE EXPANDS SUMMER MINORITY INTERNSHIP PROGRAM

The Northern Gulf Institute realizes the critical need to recruit and inspire the next generation and create a pool of talent for NOAA's future workforce and is expanding its Summer Minority Internship Program. The NGI works in partnership with the National Coastal Data Development Center (NCDDC) to expose students to career opportunities within NOAA and help them learn skills critical to NOAA now and in the future. NGI invited interns to its recent annual science conference where they participated in a Metadata training workshop, a NOAA Career Roundtable, and interacted with scientists and other students involved with the NGI research program.

The ten interns selected for the 2009 summer program represented a diverse group and spanned a variety of edu-



cation levels: undergraduate and graduate students and one Ph.D. candidate. A variety of disciplines were represented including the natural sciences (with fisheries-related studies), communications, and sociology.

The students were placed at member universities, NOAA labs, and state agencies across the Gulf of Mexico region and spent ten weeks working with science mentors. The internships concluded with a visit to Stennis Space Center and presentations of the interns' summer activities to NOAA program managers.

The NCDDC, NOAA Environmental Satellite Data and Information Service Diversity Council, and the Southeast Regional Office of National Marine Fisheries Service jointly fund the Minority Internship Program, now in its second year. The program goals are to expose minority students to careers in NOAA and to the importance of data standards and validation and to provide information about and support their careers as scientists. Planning for the 2010 Summer Minority Internship Program is underway with additional funding partners and NOAA. Programs such as NGI's Summer Minority Internship Program are critical to helping NOAA and other federal sciences agencies remain viable by interacting with young scientists pondering future career paths.

For more information about participating, contact Jay Ritchie, NGI Education and Outreach Coordinator, at: [jritchie@ngi.msstate.edu](mailto:jritchie@ngi.msstate.edu).

## NGI FELLOW NAMED TO NATIONAL ACADEMY OF SCIENCES PANEL ON EVERGLADES RESTORATION PROGRESS COMMITTEE

The National Academy of Sciences (NAS) selected Robert Twilley to serve on their Committee on Independent Scientific Review of Everglades Restoration Progress. This panel operates within the NAS division of Earth and Life studies as part of the Water Science and Technology Board. Congress has mandated this panel to review progress toward achieving the restoration goals of the Comprehensive Everglades Restoration Plan.



“Restoring the Everglades is one of the largest ecosystem restoration programs with many of the challenges similar to restoring the Mississippi River delta,” said Twilley. “I look forward to tackling these challenges with other members of the panel to provide guidance on

how to achieve effective large-scale restoration efforts in the United States and abroad.”

Twilley, Associate Vice Chancellor of Research and Economic Development at Louisiana State University (LSU), leads the Coastal Sustainability Agenda and is a professor of Oceanography and Coastal Sciences. He is a member of the NGI Council of Fellows, composed of senior scientific/technical representatives from each NGI member academic institution and NOAA.

For more information, please visit:  
<http://www.lsu.edu/highlights/2009/03/twilley.shtml>.

## NGI PI IS RECIPIENT OF 2009 HANS ALBERT EINSTEIN AWARD



Bill McAnally

William McAnally, a principal investigator on three research projects sponsored by NGI, is the 2009 Hans Albert Einstein Award recipient. The Executive Director of the American Society of Civil Engineers (ASCE) stated that McAnally is honored for his “exemplary career as a researcher, manager, and educator. Most notable are his outstanding contributions to the engineering

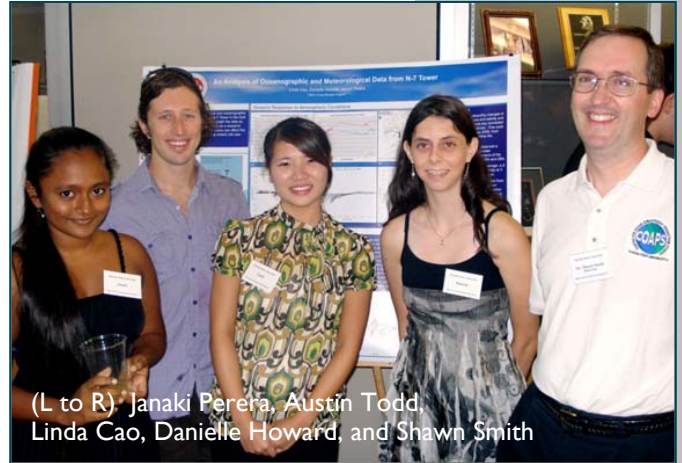
profession in the areas of hydraulics, sedimentation, and environmental and navigation engineering and for his inspirational mentoring and professionalism.”

The ASCE established the Hans Albert Einstein Award in 1988 to honor Einstein’s outstanding contributions to the engineering profession and advancements in the areas of erosion control, sedimentation, and alluvial waterways.

McAnally spent over 30 years working with the U.S. Corps of Engineers. His passion for teaching motivated him to pursue M.S. and Ph.D. degrees in Coastal and Oceanographic Engineering from the University of Florida in 1973 and 1999, respectively. Six years ago McAnally retired from the Corps and began his career at Mississippi State University. Dr. McAnally may be reached via email at: [mcanally@gri.msstate.edu](mailto:mcanally@gri.msstate.edu).

## YOUNG SCHOLARS PARTICIPATE IN NGI RESEARCH AT COAPS

This summer, three high school students taking part in Florida State University’s Young Scholars Program (YSP) worked with scientists at the Center for Ocean-Atmospheric Prediction Studies (COAPS) on a research



(L to R) Janaki Perera, Austin Todd, Linda Cao, Danielle Howard, and Shawn Smith

project for the Northern Gulf Institute. YSP is a six-week residential science and math program for Florida high school juniors and seniors with significant potential for careers in the sciences, engineering, and health professions (<http://bio.fsu.edu/ysp/>). The three YSP students – Yilin “Linda” Cao, Danielle Howard, and Janaki Perera – spent two days a week at COAPS and worked with Shawn Smith, Steve Morey, Austin Todd, and Jacob Rettig to analyze meteorological and oceanographic data collected at NGI tower N7 in the northern Gulf of Mexico. The students identified differences between the meteorological sensors that could be attributed to the exposure of the instruments and blockage of the airflow around the tower from specific wind directions.

Using the best-exposed instruments, Janaki searched for evidence of a nocturnal increase in easterly winds over Apalachee Bay, a feature that has been observed by recreational fishermen in the region. Her preliminary results showed evidence of these nocturnal easterlies during the spring months. Danielle and Linda collaborated to associate variations in the vertical structure of ocean water temperature and salinity at N7 with occurrences of strong winds. In addition, the students identified an occurrence of increased fresh water in the upper ocean at N7 that may be associated with the propagation of flood water from the Suwannee River in April 2009.

The students presented their research findings at the YSP poster session in at Florida State’s King Life Sciences Building. The YSP students’ preliminary analysis will support ongoing research by Austin Todd about the life cycle

of the gag grouper. For more information on NGI research at COAPS, please visit <http://coaps.fsu.edu/ngi/>.

## LSU HOSTS “GRAND CHALLENGES IN COASTAL RESILIENCY” WORKSHOP

In January the LSU Offices of Research and Economic Development, Center for Computation and Technology, AgCenter, and Foundation and the SeaGrant, NOAA, and Shell Oil teamed to sponsored the first in a series of planned workshops aimed at addressing challenges in an integrated approach to disaster management and decision support. The focus of this session was “Transforming Coastal Inundation Modeling to Public Security.” Speakers included representatives from Louisiana’s Governor’s Office of Homeland Security and Emergency Preparedness, the National Hurricane Center, the National Weather Service, NOAA, US Army Corps of Engineers, US Geological Survey, Alabama’s Emergency Management Agency, and seven universities – all who helped the attendees learn more about when, how, and what decisions are made using data currently available and about pressing data needs and issues that require solutions.

The workshop consisted of discussion sessions that followed panel speakers on four topics: 1) Resolving Needs of Decision Support and Applications; 2) Resolving Modeling Capabilities – Research, Design, Retrospective Analyses; 3) Resolving Decision Support Tools – Interface of Modeling and Decisions; and 4) Resolving Data Needs to Enhance Modeling – Decision Support Tools.

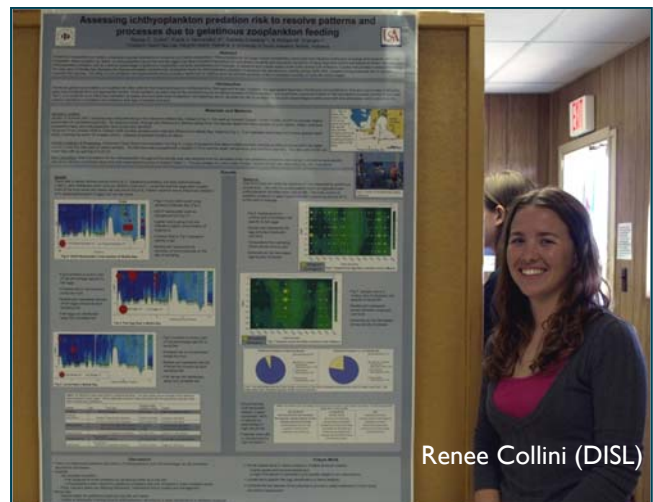
For more information about the workshop, including webcast coverage, visit:  
[www.lsu.edu/highlights/2009/01/workshop.shtml](http://www.lsu.edu/highlights/2009/01/workshop.shtml).

## NGI SPONSORS THE GULF OF MEXICO’S 2009 GRADUATE STUDENT SYMPOSIUM

The NGI, along with the University of Alabama (UA), Dauphin Island Sea Lab (DISL), Department of Marine Sciences of the University of South Alabama (USA), Mobile Bay National Estuary Program, and American Academy of Underwater Sciences, sponsored the Gulf of Mexico’s 2009 Graduate Student Symposium (GSS) held at DISL in April. A total of 73 graduate students participated in this year’s GSS and came from higher education institutions in the Gulf region including three NGI partner institutions: the University of Southern Mississippi (USM), Louisiana State University (LSU), and DISL. One

of NGI’s Education and Outreach team members, Dr. Tina Miller-Way, served as a judge for the event.

Charles Martin with the USA/DISL won 3<sup>rd</sup> Best Oral Presentation and the People’s Choice Award. Isabella



D'Ambra, also with USA/DISL, won 2<sup>nd</sup> Best Oral Presentation. Ivey Ellis with AU won Best Oral Presentation. Renee Collini with DISL won Best Poster award.

The mission of the GSS is to provide graduate students in aquatic, marine, and biological sciences the opportunity to exchange information and ideas and to present their research in a supportive and peer-dominated setting. This symposium provides a forum for graduate students to practice presentations prior to professional meetings and degree defenses and to network with regional students and faculty. For more information about this event, visit [msgso.disl.org/gss.html](http://msgso.disl.org/gss.html).



## JULIEN LARTIGUE ACCEPTS THE NOAA NGI SCIENCE COORDINATOR POSITION

In February of this year NGI welcomed Julien Lartigue as its Science Coordinator. Lartigue comes to this position with solid academic and government affairs credentials from his time spent working in university marine labs, U.S. Congress, and NOAA.

The NOAA NGI Science Coordinator is a jointly funded position between NOAA's Office of Laboratories and Cooperative Institutes and Coastal Services Center. One



Julien Lartigue

of Lartigue's primary responsibilities is to ensure the effective integration of NGI's research with NOAA's mission in the Gulf of Mexico by strengthening ties with other NOAA research in the Gulf and NOAA's Gulf of Mexico regional collaboration team.

Dr. Lartigue's education background includes a B.S. in Biology from Swarthmore College and a Ph.D. from the University of

South Alabama. His areas of research expertise include algal physiology, biological oceanography, and ecology. The NGI thanks him for his participation at this year's NGI Annual Conference where he spoke at the NOAA Career Roundtable.

Dr. Lartigue may be reached via email at: [julien.lartigue@noaa.gov](mailto:julien.lartigue@noaa.gov).

## NOAA HIRES GULF OF MEXICO REGIONAL COORDINATOR

Kristen Laursen joined NOAA's National Marine Fisheries Services as their Gulf of Mexico Regional Coordinator earlier this year. Laursen has a B.S. in Biology from the College of William and Mary and an M.S. in Oceanography and Coastal Sciences from Louisiana State University where she studied wetland ecology. She is a 2005 Knauss Marine Policy Fellow and worked in NOAA's Office of Program Planning and Integration. During this time, Kristen was the analyst for half of NOAA's Ecosystem Goal and the Leadership Sub-Goal within Mission Support and served on the Executive Secretariat for the interagency Subcommittee on Integrated Management of Ocean Resources.

Laursen recently coordinated NOAA's Stakeholder Forum at the Gulf of Mexico Alliance All-Hands-Meeting to provide input on the region's leading challenges and opportunities as NOAA revises its strategic plan.

Kristen may be reached via email at: [kristen.r.laursen@noaa.gov](mailto:kristen.r.laursen@noaa.gov).



Kristen Laursen



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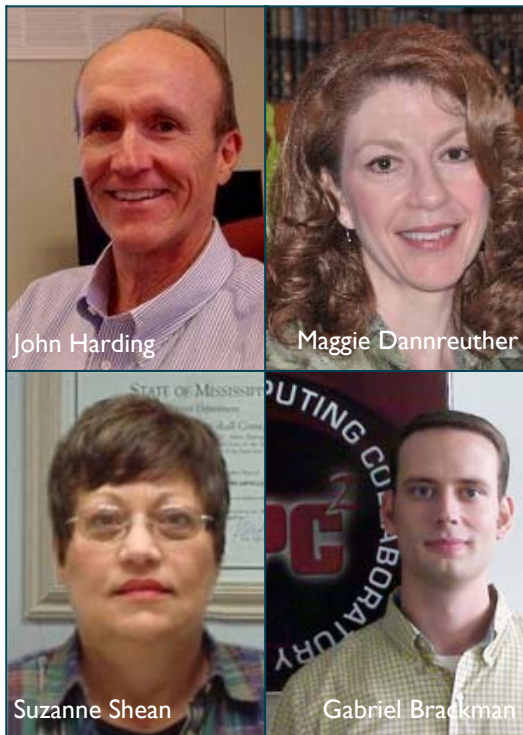
### SUBMIT TO FUTURE ISSUES OF THE NEWSLETTER:

We invite you to send any newsworthy items to be included in upcoming issues. Please send your submissions to: [newsletter@NorthernGulfInstitute.org](mailto:newsletter@NorthernGulfInstitute.org). We encourage you to include any photographs or images with your articles to make them more interesting.

## 2009 NGI PERSONNEL CHANGES AND ADDITIONS

There are some new faces at the Program Office of the Northern Gulf Institute along with some changes in responsibility. At the beginning of the year, Mike Carron became Co-Director of NGI. He replaces Glade Woods who remains associated with NGI and is leading the building effort. Glade's new title is Associate Director of GRI for External Relations.

Replacing Mike Carron as NGI Chief Scientist is John Harding. John brings expertise in marine science and physics and experiences as the former Chief Scientist of the Naval Oceanographic Office and



former head of the Naval Research Laboratory's Ocean Dynamics and Prediction Branch. Jay Ritchie has added Education and Outreach to his responsibilities and Sharon Hodge moved to Projects Manager. Janet Haselmaier is now the Business Manager for the NGI.

Personnel additions include Suzanne Shean who brings remote sensing, cartography, GIS, and web design experience and supports education and outreach. Gabriel Brackman, of the High Performance Computing Collaboratory at MSU, is serving as tech support and web developer for the Northern Gulf Institute. Gabriel and Suzanne joined the team in January.

Maggie Dannreuther is the newest member of the Northern Gulf Institute and provides assistance with education and outreach efforts. She brings professional experiences that include business analysis and development, marketing, evaluation, strategic planning, project and operations management, and teaching.

The Northern Gulf Institute is excited about these personnel changes and additions and looks forward to growing collaborations with our member academic institutions, NOAA, and other partners.



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