

# *Insights* into Sustainable Engineering

Spring 2012

The Engineering School of Sustainable Infrastructure & Environment  
The Departments of Civil & Coastal Engineering and Environmental Engineering Sciences



**UF** | UNIVERSITY of  
**FLORIDA**

Greetings from the University of Florida!

It is my honor and pleasure to introduce you to our new school, the Engineering School for Sustainable Infrastructure and Environment (ESSIE) which formally began on July 1, 2011. ESSIE is the nexus where civil, environmental, and coastal and oceanographic faculty will come together to solve unique problems of sustainability. ESSIE houses the Department of Civil and Coastal Engineering and the Department of Environment Engineering Sciences. The School also encompasses seven research centers and institutes: the Center for Environmental Policy, Center for Multimodal Solutions for Congestion Mitigation, the Howard T. Odum Center for Wetlands, Center for Infrastructure Protection and Physical Security, Transportation Research Center, Water Resources Research Center, and the Bridge Software Institute. As the first Director, I am excited about this undertaking as we move into this new direction at UF.

Within the next two years, the current faculty and I will be looking for 7-9 top-notch researchers to fill faculty positions. Positions that are currently being advertised are in the areas of: Air Resources ; Aquatics, Wetlands and Systems Ecology; Coastal Engineering and Physical Oceanography; Geotechnical Engineering; and Infrastructure, Materials and Pavements. These new hires will join our dynamic, cross-disciplinary group of researchers and will have ample opportunities for collaborations, both within their research field and with interdisciplinary teams within our state-of-the-art laboratory and facilities for teaching and research. We are proud of these facilities, some of which have been featured in the national media as you will read about in this newsletter. They include 89,000 square feet of existing laboratory space, \$4M of new laboratories under construction, 3-D X-ray Tomographic Unit, Category 5 Hurricane Wind Simulator, Signal Control Lab, Vehicle Based Traffic Data Acquisition System, Full-scale Geo-engineering Soil Test Box, TARP Certified Stormwater Unit Operations and Process (UOP) Testing Facility, UF Atmospheric Photochemical Outdoor Reactor, and access to a Scanning Environmental Electron Microscope through the Major Analytical Instrumentation Center. For those of you who are out there and are ready to make a move to sunny Florida, I want to encourage you to watch for our advertisements of these positions in the upcoming months.

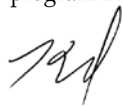
As for our students, we are encouraging them to embrace this new concept as well. There is a growing number of our undergraduate and graduate students who are participating in College-wide initiatives to foster entrepreneurship, innovation, and leadership skills in engineering. Once the School's initial design is set, the students are being encouraged to incorporate these new skills and think beyond the traditional lines of thinking in the areas housed within the school and to develop new directions for the fields in reference to research undertakings. I am convinced that our students, some of which have received national recognition and who are highlighted in the pages to come, will be acknowledged not only by their peers at UF, but across the nation for their innovative and insightful ways to resolve current national issues and pursue issues in critical areas not yet being explored.

As for our degree programs, we will continue to offer ABET-accredited bachelor's degrees in both civil engineering and

environmental engineering, Master's and doctoral degrees in Coastal and Oceanographic Engineering, Civil Engineering and Environmental Engineering Sciences. At the graduate level, our students have fifteen specialization areas within the school's programs to choose from with the possibility of additional interdisciplinary degrees and international collaborations. I am fortunate to work with 43 outstanding faculty who support the educational and research needs of 753 undergraduate, 337 masters and 161 doctoral students. Due to the diligence of the faculty, we have approximately \$34.7 million in research funding. An interesting item to note is that our total annual expenditures exceed \$27.3 million which I have found places us at the same level or more often higher in annual expenditures among our peer institutions.

Along with the new hire initiative, some of my additional initiatives for the school are to see the completion of the \$2M expansion of our Powel Laboratory and the \$800k renovation of the building housing the Center for Infrastructure Protection and Physical Security; to review academic and research programs within ESSIE; to establish a new website and newsletter; and to complete a strategic planning exercise with the current faculty that will define research and academic goals, objectives and tasks for the next three years. These could be seen as fairly lofty goals, but with the collaboration, assistance and support of our faculty, students, industrial and government sponsors and the rest of the School staff and administration, I believe we will reach these goals with great ease.

I am honored to have been selected as the first Director of this new School and even knowing the immensity of the tasks at hand, there is no doubt in my mind that this new venture will be a successful one. As part of the Gator Nation, we have a highly dedicated faculty and staff, driven students and an administration that supports the mission and vision of the Engineering School of Sustainable Infrastructure and Environment. I encourage you to visit our website at [www.essie.edu](http://www.essie.edu) and join our alumni group by joining our facebook or LinkedIn initiatives. To join our facebook group, please friend Nancy Glanville @ Nancy UFgrad-Coordinator. I am striving to have every ESSIE engineer (including those who graduated before the development of the School) say "My name is \_\_\_\_\_ and I am an alum of the number one (Civil, Coastal or Environmental) engineering program in the country!"



Dr. Kirk Hatfield

*Director*

*The Engineering School for Sustainable Infrastructure and Environment (ESSIE)*



# Congratulations to Dr. Treavor H. Boyer and Dr. David O. Prevatt for Winning NSF Career Awards



**Dr. Treavor Boyer** has received a prestigious National Science Foundation (NSF) Career Award for his proposal, "CAREER: Sustainable Urine Processes through Integration of Education and Research (SUPER)."

Dr. Boyer's vision is to develop robust engineering approaches for the treatment of water at various stages in its 'lifecycle'

so as to maximize water conservation, recover valuable materials, sequester harmful contaminants, minimize the production of waste byproducts, and advance the water-energy nexus. His project will focus on one aspect of the water lifecycle - urine source separation and treatment. This topic was chosen for its intrinsic importance for wastewater management, and because it encapsulates the key technical issues for a number of different water recycling strategies. The insights developed from the proposed work will lead to exciting new ideas for treatment and beneficial uses of water. It is anticipated the results will catalyze new research directions of significant interest to EPA in the context of innovative drinking water treatment technologies, DoD in sustainable wastewater treatment processes for forward operating bases and DOE in a fundamental understanding of subsurface biogeochemical processes.



**Dr. David Prevatt**, an Assistant Professor in the Department of Civil and Coastal Engineering, received an NSF Faculty Early Career Development award title "Career: Tornado-Resilient Structural Retrofits for Sustainable Housing Communities". The objectives of his research are to characterize tornadic wind loads on residential buildings and

compare the resultant structural response of traditional construction versus a structurally enhanced one. Study variables include both tornado parameters (vortex size, forward speed, pressure profile and swirl ratio), and building parameters (location relative to the tornado core, structural connections, and the main wind force resisting system). A 3-D Finite Element Analysis model of a light-framed residential structural system will be used as the prototype to establish its structural response. A database-assisted design (DAD) methodology will be used to analyze tornadic wind load time-histories from a model building and determine critical design loads and reactions for the structural system. Full-scale tests will be conducted to validate the numerical model and also to evaluate the structural and economic benefits of enhanced structural systems in houses. The effort will provide the basis for a tornado-resilient design methodology for residential structures.

**Congratulations to Dr. Boyer and Dr. Prevatt for a well-deserved recognition in their pursuit of excellence in their respective fields!**



**Dr. Robert (Bob) Thieke** has been named the College of Engineering Advisor of the Year! Among this recent honor, Bob has also been recognized for his excellence in the teaching arena. He won the College of Engineering Teacher of the Year Award in 1995, 2000 and 2005. He also won the National ASCE ExCEED Career Award for Excellence in Teaching in 2003. We congratulate Bob on all of these achievements!



**Dr. Robert (Bob) Dean** participated in a conference in Novosibirsk, Russia sponsored by the Russian Academy of Sciences on "Construction of Artificial Lands in Coastal and Offshore Areas". Bob was presented with an award which read: "Russian Academy of Sciences, Research Council for World Ocean Working Group 'Seashores' hereby presents its Coastal Science and Engineering Award to Robert G. Dean 'In Recognition of His Outstanding Technical Expertise and Leadership in Coastal Engineering and Improving the Conditions of Coastlines Around the World.'"



Congratulations to **Dr. Siva Srinivasan** who was recently promoted to Associate Professor in our civil and coastal engineering transportation group. Dr. Srinivasan's areas of expertise include Transportation Planning and Policy Evaluation; Activity-Based Approaches for Travel-Demand Modeling and Forecasting; Travel Impacts of new Information and Communication Technologies; GPS and GIS Applications for Travel-Data Collection and Analysis; and Application of Advanced Econometric Methods for Transportation Problems.



Congratulations to **Dr. Yafeng Yin** who was recently promoted to Associate Professor in our Transportation group in the Department of Civil & Coastal Engineering. Dr. Yin's areas of expertise include Transportation Network Modeling; Highway Traffic Operations; Transit Planning and Operations; Infrastructure Asset Management; and Assessments and Evaluations of Intelligent Transportation Systems Technologies.



Congratulations to **Dr. James P. Heaney!** He has been selected as the 2012 recipient of the Julian Hinds Award. This prestigious award was presented by the American Society of Civil Engineers to recognize him for his contributions to the field of water resources development.

# Florida's hurricane lessons could save homes, lives in tornado-prone areas

Filed under Engineering, Research on Thursday, May 12, 2011.

GAINESVILLE, Fla. — Scientists combing through the destruction left behind by the massive twister that swept through Tuscaloosa, Ala., last month say beefing up building codes and retrofitting existing homes with building techniques honed in hurricane-battered Florida could save property and lives in tornado-prone areas throughout the country.

“Since Hurricane Andrew struck Florida back in 1992, Florida’s building construction professionals and building officials have continually improved their structural load paths, which means that connections between the roof and wall framing and between wall to foundations have been strengthened,” said David O. Prevatt, an assistant professor of civil and coastal engineering at the University of Florida and principal investigator of the project. “In contrast, older homes in Tuscaloosa had mainly toe-nailed rafter connections, and almost none had adequate foundation anchors.”

The project is being funded by a National Science Foundation RAPID Response Grant for Exploratory Research to investigate and gather data about wind damage to, and performance of, wood-frame structures in the affected areas. Prevatt acknowledged that there is no defense against the most devastating tornado winds, which can top 200 mph, but he said he believes improvements in home construction can make houses and apartment buildings safer in less severe tornado conditions.

“There is no magic bullet here. An EF4 or EF5 level wind will still level even the best -constructed homes in its path,” Prevatt said. “The challenge facing us is to somehow improve performance of our existing homes so that more of them can survive the less intense EF0 to EF2 tornado and by so doing better protect its occupants.”

The NSF recognized the urgency with the grant request because this type of data on structural failures is perishable; once debris removal begins, there is no way to analyze the performance of the wood structures, said John W. van de Lindt, a professor of civil, construction and environmental engineering at the University of Alabama. The grant is being provided to UF to work in close collaboration with UA and other researchers.

The research team inspected the 5.9-mile affected tornado path in Tuscaloosa on May 2- 5 to analyze wood-frame structures that were not damaged by trees. The team received clearance from FEMA’s Engineering Division and inspected 150 structures, including single-family homes (one- and two-story) and apartment complexes. Collecting more than 3,000 photos, the team determined the EF-Scale rating in relation to damage for each of the 150 structures, with values ranging from EF0 to EF5,



depending on the location within Tuscaloosa. Based on that data, Prevatt

said, states that experience frequent tornado activity would be well-advised to beef up their building codes to more closely resemble those in the Sunshine State.

**“Retrofitting is a costly business... But realistically what price are you willing to pay for your family’s safety?”**

However, he said, even more lives and property could be saved by encouraging homeowners to retrofit their houses to be more

wind-resistant.

“Retrofitting is a costly business but the opportunities might exist immediately after a disaster to build back something that will perform better than what was lost. This requires effort to go above and beyond the minimum current requirements of the building code,” Prevatt said. “But realistically what price are you willing to pay for your family’s safety?” “Other team members include:

- Andrew Graettinger, associate professor of structural engineering and materials, and David Grau, assistant professor of construction engineering and management, both at The University of Alabama
- William L. Colbourne, director of wind and flood hazard mitigation, Applied Technology Council
- Rakesh Gupta, professor of wood science and engineering, Oregon State University
- Shiling Pei, assistant professor of civil and environmental engineering, South Dakota State University
- Samuel Hensen, branch engineering and technical manager, Simpson Strong-Tie Co.

The team will continue working with the National Science Foundation grant and the International Residential Code to begin the process of making changes to ensure load paths are enhanced to better protect the life safety of the occupants. The research team also will be available for the city of Tuscaloosa and surrounding areas as the rebuilding process begins.



## Development of a novel technology for protecting welders from toxic welding fumes

Exposure to toxic metals released from welding operation such as hexavalent chromium, nickel and manganese causes various adverse health effects including lung cancer. The Aerosol and Particulate Research Laboratory (APRL) under the leadership of Dr. Chang-Yu Wu has developed a novel Amorphous Silica Encapsulation (ASE) technology that can drastically reduce the toxicity of the welding fume. The magic lies in the modification of the shielding gas to allow in-situ encapsulation of the metal fumes by a thin layer of amorphous silica at the welding zone. The technology allows a welder to operate as if he/she is using a regular shielding gas. The research

team just successfully carried out a field demonstration at Tooele Army Depot. Hexavalent chromium concentration is reduced to below the new OSHA standard and actually below instrument detection limit. The bioavailability of all three toxic metals is also confirmed to be greatly minimized. Recognizing the technology's contribution to protecting the health and safety of Naval welders, the Society of Naval Architects and Marine Engineers will award the research team the 2011 Elmer L. Hann Award in November 2011.

For any questions regarding the ASE technology or the related research, contact Dr. Wu at [cywu@ufl.edu](mailto:cywu@ufl.edu) or 352-392-0845.

## EES students complete “Capstone course” requirement in Guatemala



In August, ESSIE faculty and students met with el Ministerio de Ambiente y Recursos Naturales (MARN) in Guatemala to plan for the capstone design project. Shown from left to right: Abner Gonzalez (MARN), Mario Morales (MARN), Giovanni Tobar (MARN, Deputy for Natural Resources), Professor Tim Townsend, Erin White, Antonio Yaquian, Nadia Mijangos (MARN), Henry Sep (MARN).

This fall, a team of ten undergraduate environment engineering students traveled to Guatemala as part of their capstone design course. In their final year of study, all EES undergraduate students complete a capstone engineering experience that builds on their education from previous classes and integrates elements of engineering, economics, communication, and sustainability. The capstone team, directed by Professor Timothy Townsend, worked in coordination with government officials, municipal leaders, and the local communities to provide engineering expertise that will result in a safer and more sustainable system to manage the region's solid waste.

At the beginning of August, several project team members traveled to Guatemala and met with officials from el Ministerio de Ambiente y Recursos Naturales (MARN, or Guatemala's Ministry for the Environment and Natural Resources), local citizens, and municipal leaders. Two project locations were identified. The entire capstone team returned to Guatemala to collect necessary site data for their final designs. The team raising funds for the visit and developing conceptual engineering plans to present to the officials and community. The students look forward to delivering a solid waste management plan that will have a real, measurable impact on the environmental health of the two communities in Guatemala.



# Design of Groundwater-Level Monitoring Network

Dr. Louis Motz has been awarded a project by the South Florida Water Management District (District) to design a groundwater-level monitoring network for the Upper Floridan Aquifer in the south Florida area covered by the District. This project, which is part of the District's 10-year plan to optimize monitoring networks across the District, will help reduce uncertainties in the District's numerical groundwater flow models by optimizing the District's groundwater monitoring network for the Upper Floridan Aquifer. Dr. Motz, along with Dr. Shirish Bhat, will design a network that recommends the number and locations of groundwater monitoring wells and frequency of data sampling that will provide equivalent or better quality data with the same number of wells or fewer wells, compared to the existing groundwater monitoring network.

A technical approach has been developed to optimize the District's Upper Floridan Aquifer groundwater-level monitoring network. Time series analyses will be

performed to determine the temporal variability of the sample data. Sampling frequency will be recommended based on the ability to detect short-term and seasonal groundwater-level fluctuations and to discriminate between the effects of short-term and long-term hydrologic stresses. An ArcGIS-based geostatistical analysis will be performed to characterize the spatial variability in the groundwater level data.

Groundwater levels will be estimated at locations in the study area where data do not exist. A potentiometric map (showing the elevations to which water rises in wells) of groundwater levels in the Upper Floridan Aquifer in the study area will be constructed, and an uncertainty map will be constructed to indicate errors associated with the potentiometric map and to illustrate the areas where additional monitoring wells are needed.

The existing groundwater-level monitoring network within the District will be evaluated by comparing it to the optimal network that is recommended for implementation. Areas within the existing network with both excess



Existing Upper Floridan Aquifer groundwater monitoring wells within the District.

and insufficient coverage will be identified. Recommendations will be made to implement the optimized groundwater-level monitoring network based on minimizing the number of monitoring wells subject to constraints established for allowable errors of estimate for groundwater levels in the District.

## Cohesive Soil and Rock Investigation

Professors David Bloomquist and D. Max Sheppard, along with Postdoctoral Researcher Raf Crowley have been working with the Florida Department of Transportation to predict bridge scour



depth for rock and cohesive soil. Bloomquist, Sheppard, and Crowley have developed two unique instruments, the Sediment Erosion Rate Flume (SERF) and the Rotating Erosion Testing Apparatus (RETA) to study this problem.

With the new instruments, engineers can take in-situ rock core or Shelby tube samples and directly measure erosion rate. Testing with the instruments is fully automated through a series of computercontrolled feedback loops (with a LabView interface). Engineers can set the instruments to "test" and erosion can be measured over the course of a few days with minimal monitoring. The SERF uses an advanced laser-ultrasonic system combined with a high-precision stepper motor to advance samples during erosion



tests. The RETA utilizes feedback control between a torque cell/clutch and a variable-speed rotating motor. Crowley, Bloomquist, and Sheppard hope to use results from their research to develop a better method for predicting local scour depths in the vicinity of a bridge pier.

## films at UF hurricane simulator lab



Kevin O'Connor, host of the PBS series "This Old House," and his crew are taping at the University of Florida hurricane research lab on Wednesday using the portable UF hurricane simulator at the UF eastside campus in Gainesville.

By Nate Crabbe  
Staff writer for Gainesville Sun

A television crew visited Gainesville on Wednesday to make sure "This Old House" doesn't blow down.

The crew of the PBS home improvement series filmed at the University of Florida's structures and materials research laboratory on its Eastside campus. A hurricane simulator used to test building materials was turned on "This Old House" host Kevin O'Connor, subjecting him to winds up to 120 mph and driving rain.

"The purpose of this story is to come and see where the science is developed, to learn what it means when 120-mile-an-hour winds sweep up your roof," O'Connor said.

The segment is expected to air during a series of shows starting in January. The shows are focusing on the renovation of a house in a high-wind zone on the Rhode Island coast.

The show allows UF to showcase research into making storm-resistant building materials, said Forrest Masters, an assistant professor of civil and coastal engineering.

"It's a great means to educate the public about hurricane hazards," he said.

The hurricane simulator is nicknamed the Medusa, after features that look like a giant metal version of the snakes on the mythic creature's head. O'Connor strapped himself to a wood frame as Masters directed his crew of students to slowly turn up the wind speed, leaving O'Connor soaked and clutching on ropes and the wood to stay upright.

"The force on you is incredible," O'Connor said as the crew filmed his reaction to the experience. "I can only imagine what it's like up against the buildings."

The show next moved to a crane-like device that pulls on a roof to demonstrate the pressure caused by high winds. David O. Prevatt, an assistant professor in the department of civil and coastal engineering, showed how metal connectors and straps help prevent a roof from separating during a storm.

The machines are designed to produce the type of conditions seen during a hurricane. UF researchers deploy weather towers in an actual hurricane to get the measurements for the work.

"As we like to say, we're taking the lab to the hurricane and we're taking the hurricane to the lab," Prevatt said.

O'Connor said he had been in storms of maybe 40 mph, but the hurricane simulator was unlike anything he had experienced. The heavy winds made it difficult to breathe, he said.

"It hurts. It really hurts," he said.

O'Connor has been the host of "This Old House" since 2003. The show was originally hosted by UF alumnus Bob Vila. The UF hurricane simulator is a popular stop for television programs. The Discovery Channel's "Mythbusters" filmed there for a 2009 show on whether it is better to have windows open rather than closed during a hurricane.

"We busted the myth," Masters said.

Contact Nathan Crabbe at 338-3176 or [nathan.crabbe@gvillesun.com](mailto:nathan.crabbe@gvillesun.com). For more stories on the University of Florida, visit [www.thecampusun.com](http://www.thecampusun.com).



# Florida T2 Center Activities include FHWA Summits and Showcases

## Center for Infrastructure Protection and Physical Security (CIPPS)

### Now Offering a Critical Infrastructure Protection Certificate (CIPC)

The Civil and Coastal Engineering (CCE) Department has established a *Critical Infrastructure Protection Certificate (CIPC)* program for students interested in furthering their knowledge in the area of protecting the Nation's critical infrastructure systems against blast, shock, and impact incidents. The CIPC program is a 9- credit program, that is compatible with the decision by the College of Engineering to select the area of security and critical infrastructure protection as one of its focus areas.

The Center for Infrastructure Protection and Physical Security (CIPPS), established by the CCE Department in 2006, provides a solid foundation for both the proposed focus area in the College of Engineering and the CIPC program. This program could be expanded in the future to several tracks, one in each of the COE engineering departments.

The proposed Critical Infrastructure Protection Certificate was formulated to meet the education needs of a diverse group of potential students, while working within the current CCE curriculum to optimize the delivery of education and faculty resources. The Critical Infrastructure Protection Certificate program will be administered through the CCE Department. It is further anticipated that offering this Certificate will strengthen relationships between the COE and government and industry sectors, which are expected to increased enrollment in both the MS and PhD programs, following completion of the Certificate. Further, it is envisioned that this new program will create new R&D funding opportunities, and enhanced job placement for COE graduate and undergraduate students.

Participants in the Critical Infrastructure Protection Certificate program can select three courses from the list shown below.

- Introduction to Protective Structures (required of all participants)
- Advanced Protective Structures
- Retrofit Methods for Protective Structures
- Applied Protective Technology
- Impact Engineering

Typically, graduate students involved with the R&D activities at CIPPS take all five courses. Participants will be awarded the Certificate upon their completion of all graduate degree requirements.

#### The prerequisites for program participation are:

- A BS degree in civil engineering with a specialization in structures
- Must be a graduate degree seeking student
- Completion of CES 6108 – Structural Dynamics
- Maintain a minimum GPA of 3.2 in the graduate program

### FHWA Every Day Counts Summits

Last fall, the Florida T2 Center successfully organized and hosted 10 regional Every Day Counts (EDC) Summits for invited guests representing state departments of transportation, FHWA, key leaders for local agency professional organizations and industry in ten different states for the Federal Highway Administration (FHWA). The purpose of the EDC Summits was to launch the FHWA Administrator's (Victor Mendez) initiative designed to identify and deploy innovation aimed at shortening project delivery, enhancing the safety of our roadways, and protect the environment. FHWA Deputy Administrator, Greg Nadeau, conducted opening comments and lead the closing round table discussions at each of the ten Summits.

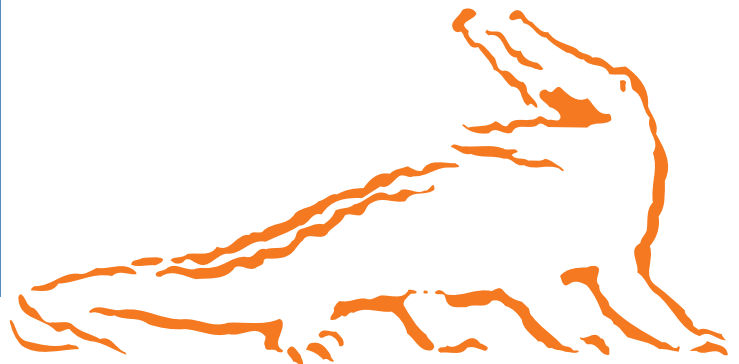
### Highways for LIFE Demonstration Showcases

In addition, the Florida T2 Center continues to organize and host a series of demonstration showcases on behalf of FHWA's Highways for LIFE (HfL) program that focuses on advancing Longer-lasting highway infrastructure using Innovations to accomplish the Fast construction of Efficient and safe highways and bridges. The three goals of HfL are to:

- Improve safety during and after construction
- Reduce congestion caused by construction
- Improve the quality of the highway infrastructure

Showcases include a technical session and a site visit, some of which occur during the middle of the night to observe actual construction. Recent showcases:

- Rapid Removal and Replacement of U.S. 15/29 Bridge Over Broad Run near Gainesville, VA
- Accelerated Bridge Construction (ABC) in Washington, DC, Montpelier, VT and Sullivan's Island, SC
- Precast Concrete Pavement Systems in Ontario, CA and Fairfax, VA
- Performance Contracting for Construction (PCfC) in Clare, MI
- Prefabricated Bridge Elements in Frederick, MD and LaGrange, GA
- Prefabricated Concrete Pavement Systems (PCPS) in Newark, DE and Mt. Arlington, NJ





# Congratulations to EES NSF Graduate Fellows!



Jen Apell



Amy Borello



Stephanie Ishii



Christine Valcarce

One of the most prestigious graduate fellowships available is the Graduate Fellowship from the National Science Foundation. This past year five environmental engineering graduates were awarded this fellowship: **Jen Apell, Amy Borello, Stephanie Ishii, Gwen Ryskamp** (not pictured), and **Christine Valcarce**. Amy and Christine will continue their doctoral studies at UF in EES under the guidance of Dr.

David Mazyck, while Stephanie will continue her doctoral studies at under the guidance of Dr. Treavor Boyer. Jen will pursue her doctorate at Massachusetts Institute of Technology and Gwen will do so at either Nebraska or Michigan State. These awards bring great honor to the recipients, to EES and to the new Engineering School of Sustainable Infrastructure and Environment.

## Students participate in IRF Road Scholar program

The 2011 IREF (International Road Federation) Road Scholar Program welcomed 21 students from 16 countries. The annual 10-day IRF Road Scholar Program gathers international graduate students who have demonstrated significant educational accomplishments as well as a desire to use their education to improve their home countries. Three students from the University of Florida Department of Civil and Coastal Engineering joined the program, namely Ohhoon Kwon and Kwang-Kyun LIM both from South Korea, and Johnny CHAN from Hong Kong Highways Department.

### Special points of interest:



University of Florida  
Department of Environmental  
Engineering Sciences

University of Florida  
Department of Civil and  
Coastal Engineering

Visit UF Hurricane Research

### Managing Editor

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### The Dreznes Cup

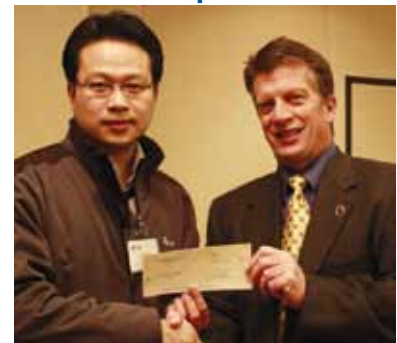
Other than the visits and meetings, students were divided into four teams and competed for the first ever Dreznes Cup. The cup is named after IREF Chairman Mike Dreznes for his devotion to the fellowship program.

This year, one of our students, Ohhoon (2nd from left) with his teammates won the “Dreznes Cup” final-exam team competition that included building a bridge with food items and earning points in a Jeopardy-like contest.



### The Jerry Shea Leadership Award

Another student from The Department of Civil & Coastal Engineering was recognized for his outstanding leadership skills and the ability to work seamlessly in a team



environment. Johnny Chan (pictured above on left) was selected by IRF and presented with the Jerry Shea Leadership Award. The award is named for Gerald (Jerry) P. Shea, a renowned engineer who exemplified quality leadership and who devoted much of his time to the IRF Fellowship Program.

The Department of Civil & Coastal Engineering applauds the efforts of these students and are proud of their accomplishments. Way to go Gator Engineers!

## CONFERENCE

### UF American Concrete Institute Pervious Concrete Competition

On October 16, 2011 the student chapter of the American Concrete Institute competed in the National ACI Pervious Concrete Competition, which also marked their first participation in an ACI Competition since the inception of their chapter this fall semester. The competition was held as part of the National Convention in Cincinnati, Ohio. The goal of the competition was to design a concrete mix that was both pervious and a high tensile strength. The students assisted in designing pervious mixes and testing cylinders. Eight concrete mix designs were proved the two designs with the most favorable characteristics selected for each of the two teams.

Three students from the chapter traveled to Cincinnati where 33 teams submitted cylinders for the competition. The competition commenced on Sunday morning beginning with flowrate tests. After being evaluated for flowability, the cylinders were subjected to splitting tensile test to see how well the concrete would withstand real world loads. Scoring was based on the results of these tests, theoretical costs of the mix designs, and their submitted written report.

A luncheon was held the following day to announce the winners. Kenneth C. Hover, a professor in the Civil and Environmental



Engineering Department at Cornell University, was the speaker. Following his presentation was the announcement of the schools that placed in the strength to cost ratio and overall performance categories. One of the teams from UF placed first in the overall performance category, the second team from UF places 13th overall.

Overall the trip was successful. Despite the fact that this was the first ACI competition UF has competed in they were able to not only place but win first in overall performance. All this could not have been done without the dedicated members of the chapter, faculty advisor Dr. Christopher Ferraro and help from the FDOT State Materials Office.



UF Transportation Engineering student.

### Annual Student Conference

Each year in March, the The Center for Multimodal Solutions for Congestion Mitigation showcases the latest in transportation-related research conducted by graduate students at the University of Florida. Students from the departments of civil engineering, industrial and systems engineering, urban and regional planning, occupational therapy, environmental engineering and other related discipline areas attend and/or present papers and posters. The conference is free and open to transportation professionals in academia, and in the private and government sectors. Awards are given to students for outstanding presentations and posters. This year, students from the departments of epidemiology, civil and coastal engineering and urban and regional planning won awards for their presentations, and environmental engineering and civil and coastal engineering students won awards for posters. The judges presiding over the awards selection were members of the CMS's External Advisory Board. The CMS Annual Student Conference is held in conjunction with the center's External Advisory Board meeting.

### Presentations

- 1st Place - **Yanning Wang**, Ph.D. Student, Epidemiology
- 2nd Place - **Ruoniu (Vince) Wang**, Ph.D. Student, Urban & Regional Planning
- 3rd Place - **Dimitra Michalaka**, Ph.D. Student, Civil & Coastal Engineering

### Posters

- 1st place - **Ori Baber**, Ph.D. Student, Environmental Engineering
- 2nd Place - **Brett Fuller**, M.E. Student, Civil & Coastal Engineering
- 3rd Place - **Kwangkyun Lim**, Ph.D. student, Civil & Coastal Engineering

## ASCE continuing the tradition of excellence

Over sixty members of the University of Florida student chapter of ASCE represented the university in the 2011 ASCE Southeast Student Conference this past spring. Following months of preparation and two days of hard-fought civil engineering competition, UF emerged in 4th place overall.

Memorable moments included the UF Eckhoff Steel Bridge Team placing 1st after an utterly dominating build time of 6.61 minutes and an extraordinary economy of \$1.35M. Equally impressive, the UF Concrete Canoe team powered to a 2nd place title after posting consistently high scores and achieving first place in the Women's Sprint and Coed races. Rounding out the events, UF got the

judges' attention to achieve 3rd place in the Professional Paper Presentation.

One of the more curious events was the Balsa Bridge competition. UF submitted the second smallest bridge that supported a weight of almost 300 lbs. to the surprise of everyone, including the UF Balsa Bridge Team. After bonuses and efficiency were calculated, UF placed 1st. Other successful ventures included the Transportation, Concrete Cubes, and T-Shirt Design Competitions.

While the team finished strong, preparing for the 2012 competition has already begun. With the continued support of the faculty and sponsors such as Suwannee American Cement and Kimley-Horn, the unrivaled determination of the University of Florida

students will rise to meet the challenge of the forthcoming competition head-on.



## Todd Davis



Todd Davis, P.E. (Ph.D. candidate in structural engineering) is crossing time zones and cultures once again. Under the advisement of University of Florida's Dr. Ronald A. Cook, P.E., Todd is researching the short-term and long-term performance of adhesive anchors in concrete, which has taken him to Germany to spend his summer in the Institut für Werkstoffe im Bauwesen (IWB) laboratory at the University of Stuttgart. He received a research grant from the German

Academic Exchange Service (DAAD) to investigate the effect of early age concrete on the short-term bond strength of adhesive anchors, the goal of which is to determine when it is practical to install and load adhesive anchors following concrete casting. As the IWB laboratory is internationally recognized as a leader in research and testing in anchorage to concrete, this is a wonderful opportunity for Todd to work with and learn from his German colleagues.

This isn't Todd's first time in Germany, nor his first time overseas. As the son of an army officer, Todd spent a year in kindergarten and later his junior and senior years of high school (1988-1990) in Manheim, Germany. While in high school, Todd had the rare opportunity to travel to Berlin with his track team in the spring of 1989, six months prior to the fall of the Berlin Wall. His team visited Checkpoint Charlie and crossed over into the East German sector of Berlin. One of his souvenirs from that time in Germany is a piece of the Berlin wall.

Todd's first experience living overseas as an adult began in 1999, when he and his wife, Shana (civil engineer) moved to Guatemala and opened a regional office for a non-profit engineering development organization. It was Todd's desire to further equip himself as a structural engineer that brought him back to the U.S. and to Gainesville in 2007.

Having experienced the advantages of cultural immersion during his years in Guatemala, Todd chose to complete two semesters of German at UF prior to his arrival in Germany, even though all the IWB staff speak English.

This research opportunity for Todd was all made possible due to Dr. Cook's twenty-year mutually beneficial relationship with research faculty from the University of Stuttgart. Those years of collaboration have included various research projects, journal papers, the development of US and International codes pertaining to anchorage to concrete, and the hosting of two research students from the University of Stuttgart at UF. Todd had the pleasant experience of collaborating with one of those students who spent eight months at UF in 2009.

Todd has been selecting coursework during his time at UF that would prepare and position himself to play an effective role in both private practice and academia, possibly in an international setting. His goal is to partner with international academicians and engineers in both the private and non-profit sector in order to advance the understanding of engineering theory, ethics, and design for future engineers; conduct research in international partnerships; facilitate code development; and also influence infrastructure decisions that will empower and improve the quality of life of historically underrepresented members of society.

While the cross-cultural experience and witnessing firsthand the change in Germany since reunification will be enjoyable and educational, Todd ultimately expects that his time of professional research training in Germany will better equip himself and strengthen his resolve for his future goals of international engineering research and practice in this increasingly multicultural, interconnected world.

## Katie Indarawis



Happenstance. We can all share a story about these series of seemingly unlinked events and how they come together at the end of the day when the pieces just fit together. This is the story of one student's journey toward her PhD...we would like to introduce Mrs. Katie Indarawis.

Katie graduated high school in 1997 ranking 14th out of her graduating class of about 432 students. She says she was probably the only AP kid in her classes that had all intentions of attending community college and never even applied to a university. She completed her Associate of Arts at Santa Fe Community College in Gainesville, FL in 1999. She transferred to UF where she double majored in mathematics and statistics, not engineering since she feared she would not pass thermodynamics. Upon graduation of those two bachelor degrees, she got married and decided she wanted to become a community college instructor. She took a year off to study for the GRE and worked as a nanny.

She was admitted into the UF College of Education to complete a one year master's program in 2003. During her teaching internship at Gainesville High School she thoroughly enjoyed working with the high school students and was offered a full-time position at the school beginning the fall of 2004. Although she loved this job she saw that there were fundamental issues with the school system which she quickly found discouraging. After some reflection she turned her sights back to an engineering degree. With the assistance of a number of "fantastic advisors" in the civil engineering department, Katie was able to return to school at UF for a third undergraduate degree. She chose civil engineering because she didn't think she could get through all of the chemistry in the environmental engineering curriculum. At some point she discovered that she enjoyed water treatment so she petitioned to take her senior design class through the environmental engineering department where she developed a mentor relationship with Dr. David Mazyck. Although pregnant with her first child during her last semester in the fall of 2007, Dr. Mazyck offered her a job at one of his off-campus labs. According to Katie, it was in those labs that she discovered that she thoroughly enjoyed doing research.

As she began getting deeper into her research she realized that something was missing – teaching. It was at this time that she decided that she wanted to teach at a university and needed a PhD. Fortunately, Dr. Mazyck was able to recommend her to Dr. Treavor Boyer, who is now her PhD advisor. Prior to beginning her PhD in the Fall of 2009, Katie became pregnant again but she was determined to start her PhD anyway and she made arrangements with Dr. Boyer to start working in the labs early that summer before the baby arrived.

Married now for nine years and two children later, Katie continues to work hard at completing a PhD in the environmental engineering sciences department under Dr. Boyer. Katie claims that every person's journey is different. To her, it doesn't matter how you reach your end goal, or how long it takes you, or how many times you feel like you are starting all over again, the important thing is that you keep working hard toward your goals and never lose sight of what's more important and to her it is her family. Katie plans to graduate with her PhD within the next two years. As you might surmise, she is an incredible woman and an inspiration to many of our students!



## Dimitra Michalaka received the Future Industry Leader Spotlight Award at TransOvation conference in Virginia

Dimitra Michalaka, a Ph.D. student in the Department of Civil and Coastal Engineering, received several awards in the last couple of months.

First, she was selected as the recipient of the 2010-2011 Women's Transportation Seminar (WTS) Central Florida

Chapter Frankee Hellinger Graduate Scholarship. The scholarship is awarded annually to women pursuing graduate studies in transportation or a related field. A certificate along with the amount of \$2,500 was given to her at the WTS Central Florida 14th Annual Scholarship and Awards Reception that took place on Monday, March 21, 2011 at the Dubsread Golf Club in Orlando.

Dimitra also received the "2011 Gator of Engineering Attribute Graduate Student Award for Leadership" from the UF College of Engineering which is one of the Gator Engineer Student Recognition Awards. Five undergraduate students and five Ph.D. students were selected by Dean Abernathy and the UF College of Engineering Undergraduate Scholarships and Awards Committee for recognition for the following five attributes: creativity, leadership, integrity, professional excellence and service to the global community. The College announced and recognized the Gator award winners during the 2011 New Student Convocation on Friday, August 19. During the ceremony, Dimitra was a part of

Dean Abernathy's platform. Also, the College of Engineering will host a reception in honor of this year's award recipients to be held on November 14, 2011 at the Sweetwater Branch Inn Bed and Breakfast in Gainesville.

And most recently Dimitra received one additional award. She received the "Future Industry Leader Spotlight Award" from the American Road & Transportation Builders Association (ARTBA). Of those who were considered for the award, only two female students were selected from across the US. The criteria for the award, set by ARTBA, states that the recipient must be enrolled in undergraduate or graduate studies at a U.S. college or university, have an outstanding academic record, and demonstrate extraordinary leadership skills within and outside the academic environment. ARTBA covered Dimitra's expenses to attend the TransOvation Workshop and Exhibit that took place on September 6-9, 2011 at Lansdowne Resort & Conference Center in Leesburg, Virginia. A recognition plaque was given to Dimitra on September 7 during the TransOvation gala dinner.

Dimitra feels that all the awards she received are an important acknowledgement of all her efforts and a great incentive to continue working hard and getting involved with organizations that have as a goal to make a positive impact on our society. She also wanted to say that getting these awards were a result of being part of an outstanding research and teaching environment here at UF which significantly contributed to her professional and personal development. Finally, she would like to sincerely thank her advisor, Dr. Yafeng Yin, and Dr. Lily Elefteriadou and the other faculty for their continuous support.

## Wastewater Design Capstone Class

For the 6th year in a row a team of engineering students from the Wastewater Design Capstone Class has won both the State of Florida and North American Environmental/Wastewater Student Design Competition. The team, Semper Aquam developed, presented and defended their design entitled "Stormwater Cycling Design Options in an Urban Industrial Watershed", first at the Florida Water Resources Conference in April 2011 in competition against other Florida engineering schools in Orlando, and most recently on 16 October 2011 in Los Angeles at the Water Environment Federation Conference, one of the largest Water Environment conferences on earth (18,000 participants this year). The students and faculty member, Dr. John Sansalone, P.E. are in the Engineering School of Sustainable Infrastructure and Environment (ESSIE). Students of Semper Aquam and the students from the five previous winning design teams (2006-2011) who have taken the class are from Environmental, Civil and Chemical Engineering. Semper Aquam's design focused on development, performance and economics of sustainable infrastructure for urban water



Front row: Mallory Peterson, Emily Henderson, Jacqueline Martin, Back row: Dr. John Sansalone, Jacob Diamond, Yuan Gan, Robert Compton

treatment and reuse in semi-arid Southern California. Previous teams developed green infrastructure and water treatment designs for the University of Florida campus, for highway systems in South Louisiana, for wastewater treatment and reuse in Tallahassee and Greater Orlando, as well as for shipping ballast water treatment in Tampa.



The National Society of Professional Engineers (NSPE) Honors Awards Task Force has selected **Mr. George R. Knecht** as winner of the 2011 NSPE Distinguished Service

Award. George was recognized nationally at the NSPE Annual Conference in Las Vegas, Nevada on July 15, 2011. Congratulations to this CCE Advisory Board member and Gator superstar!

## Gator Alum and Current Civil PhD student are each recognized by Engineering News Record (ENR) Southeast

Loreen Bobo, a Civil Engineering graduate, and Mr. Adnan Javed, a current Civil Engineering PhD candidate, have both been recognized by ENR Southeast as are part of



ENR's "Top 20 Under 40."

**Loreen Bobo**

was recognized for her notable accomplishments as the Florida Department of Transportation's District 5 Employee of

the Year and received the National Edmund Friedman Young Engineer of the Year award. Loreen is currently on the team for the proposed \$3 billion, 20 mile reconstruction of Interstate 4 through Orlando. She is serving as an assistant maintenance engineer.

Mr. **Adnan Javed** is the Sarasota County project manager and stormwater engineer. In his current position, he is responsible for the county's Stormwater Infrastructure Repair and Replacement program aimed at improving the country's approaches to stormwater rehabilitation projects. He is slated to receive his PhD from the Department of Civil and Coastal Engineering this spring semester.

Congratulations to these outstanding Gator Engineers!

## In memorium...

It is with deep sadness that we have lost one of our own. PhD student, **Michael David Ahrens** lost his battle with cancer and passed away on April 27, 2011. Michael earned his masters degree from UF in 2005 and had recently returned to complete his PhD. Even with the debilitating issues of chemotherapy, Michael was able to work a full-time job and take nine credit hours of coursework this past year. Michael had a very positive outlook on life and he will remain an inspiration to us all. Michael is survived by his wife Kay (an employee of UF) and his two sons, Jonathan and David. He was employed as a manager for LOADTEST (Gainesville,FL), a deep foundation testing firm and subsidiary of Fugro (International). He was 45 years old.



In recognition of the second anniversary of the Haiti earthquake, we take time to once again remember one of our own. **Brendan S. Beck**, P.E. (BSCE '98), lost his life on January 12, 2010 in the Haiti earthquake. The earthquake occurred shortly after Brendan arrived in Port au' Prince and was trapped inside the Hotel Montana. He was in Haiti as a USAID consultant regarding sustainable infrastructure for eco-tourism to provide long-term benefit to the Haitian economy. Brendan had planned to return to the University of Florida to pursue an advanced engineering degree in Sustainable Infrastructure.

In loving memory of Brendan, the family

created the "Brendan S. Beck P.E. Fund for Sustainable Infrastructure" through the Civil & Coastal Engineering (CCE) Department. The University of Florida chapter of Engineers Without Borders through the University of Florida Office of Sustainability is partnering with various charitable foundations and plans to use proceeds from Brendan's Fund to build in Haiti.

You may go to the link below to support Brendan's legacy and to honor a fallen member of the Civil Gator family: [www.uff.edu/Appeals/BrendanBeck](http://www.uff.edu/Appeals/BrendanBeck)



## Hall Of Fame – Spangler Award

It is an honor and privilege to introduce our second and 2011 inductee into the Civil Gators Hall of Fame **Mr. Lawrence L. Smith, P.E.**. AAs with the inaugural inductee, he too is a Gator, as he obtained both a bachelor's and master's degree in Civil Engineering from the University of Florida. After graduation, he completed initial assignments in the private sector and military before beginning what would become a storied career in public service.

Throughout most of his career, he never was far from the University and the Civil Engineering Department. Consequently, he remained a supporter of the Department and a role model to many UF civil engineering students that went on to notable careers of their own. He oversaw many graduate students' research projects, and working with UF professors, provided the funding and projects that resulted in many graduate degrees.

Larry's commitment to the field of Civil

Engineering did not stop with his exemplary career in public service and deep commitment to the UF Department of Civil and Coastal Engineering. He was involved in many professional and technical

organizations, including local, state and national associations. These include: Transportation Research Board (TRB), American Association of State Highway and Transportation Officials (AASHTO), Strategic Highway Research Board (SHRP), American Society of Testing and Materials (ASTM), American Society of Civil Engineers (ASCE), where he served as President of the Florida Section.



Looking for a job? Are you a Gator alum? We will post jobs on Facebook that are sent to us by Gator alumni and others looking to hire. All it takes is to friend "Nancy UFgrad-Coordinator"

# “GRAND GUARD” Reunion



Excitement was in the air on October 14, 2011, when the University of Florida Alumni Association hosted our prestigious 50th Year “GRAND GUARD” Reunion. During the weekend’s events, the Grand Guard Civil Engineering Class held a special reception for the 1961 graduates and a few of their distinguished professors: Dr. John Schmertmann and Dr. Don Sawyer (note: Dr. Paul Zia was unable to attend). Roger Seals (member, CE ’61) led the charge and rallied his fellow alums for an afternoon of memories, fellowship and fun! Between learning from Dr. Kirk Hatfield about the new Engineering School of Sustainable Infrastructure and Environment (ESSIE); sharing stories of touching memories; hearing about current research projects; lots of laughter and honoring their beloved professors, it was an event that will not soon be forgotten.

They met the current ASCE Student Chapter President, Miss Jillian Berrey, who shared the latest “happenings” on campus along with the 2010 and 1961 ASCE Annual Reports for comparison. Then, much to her surprise and delight, the Class of ’61 presented Jillian with an extremely generous \$2500 donation for the Chapter! It was indeed a glorious afternoon and fun was had by all. This was the first of a new annual tradition for the College’s Department of Civil and Coastal Engineering. We are already looking forward to next year!



# We are proud of our 2011 Gator Grads

## CCE GRADUATES

### PhD

#### Spring 2011

Acar Ozlem  
Yu Chen  
Parvesh Kumari  
Xiaoyu Zhu

#### Summer 2011

Aditya Ayithi  
Jinseok Hong  
Qiang Li,  
Eileen Rosa Pesantes  
Tavares  
Di Wu

#### Fall 2011

Andrew James Condon  
Ashish Kulshrestha  
Carlos R. Lopez  
Cuie Lu  
Tianying Niu  
Young Jun Park  
Eileen Rosa Pesantes  
Tavares

#### Masters

##### Spring 2011

Benjamin Ashcraft  
Addisu Bekele  
Michael Biffel  
Stephen Bouwer  
John Brown  
Qian Cheng  
William Cole  
Krishnarao Dase  
Sally Deschamps  
Karen Dshon  
Shusila Dhungana  
Gary Drew  
Christopher Egan  
Robert Ferguson  
Jacob Frye  
Brett Fuller  
Jessica Grant  
Xue Gu  
Simon Guevara  
Ali Hanes  
Su Hao  
Roberto Herrera,  
Nicholas Kanelidis  
Priyank Kothari  
Dan Li, Weijie Liu

Sebastian Lopez  
Saahith Mallavarapu  
Matthew McCaul  
Russell McCloud  
Mitsuhiro Narisawa  
Robert Newsom  
Kenneth Pasken  
Anand Patil  
Alexander Poling  
Balas Purushothaman  
Keyang Ren  
Peter Simms  
Jarrod Stern  
Yongyang Tang  
Jorge Uy  
Taylor Vogt  
Jordan Walker  
Ze Wang  
William Woodington  
Yipeng Xie  
Xi Zheng

#### Summer 2011

Mohammed Hussain Al-Yami  
Michael Allen Antinelli  
Beau Brooks  
Tricia Ann Caldwell  
Chi Ho Johnny Chan  
Gary Scott Downing  
Jonathan Richard Farley  
Chelsea Lynn Gainer  
Avshalom Ganz,  
Liran Hadad  
John Douglas Herrin  
Rachel Lee Jackson  
Judith Elizabeth Johnson  
Matthew S. Jones  
Clark Emery Letter  
Jessica Lee Mackey  
Marc Robert Mackey  
Kenton Elliot McBride  
Joshua Cory Miles  
Sushmit Shreyans  
Saman Yarmohammadi  
Nicholas Joel Zwemer

#### Fall 2011

SungJin Ahn  
John William Stephen Allen  
Bahar I. Armaghani  
Nelson Javier Arnez  
Stephen Matthew Belser  
Matthew Michael Bolyard  
Carolyn Dowd Bonaventura  
Thomas A. Brauer

Chad Cassett  
José E. Cedeño Llorens  
Tina Blake Chancey  
Sadie Adeline Dalton  
Rodrigo Pereira de Castro  
Kevin Joseph Crump  
Andrés Eduardo Dos Santos  
Keith Alan Erdman  
Marc Richard Erwin  
Florian Alan Fiebig  
Sarah Ann Futral  
Yaming Han  
Lauren Louise Hart  
Jun He  
Nikhil Dinesh Usha Hegde  
José Gilberto Hernández  
Meridith Lee Hollister  
Daniel Abraham Koch  
Michelle Krawczyk  
Austin Lon Lovejoy  
Cuie Lu  
Taban Mamaghanizadeh  
Matthew Kyle McElhoney  
Joseph Robert Messina  
Evangelos Mintsis  
Randy Burton Murray  
Jessica Lynn Rigdon  
Katherine Jean Roark  
Dany Romero  
Hemant Mahadev Salokhe  
Cheryl Renee Stewart  
Lucy Marie Terza  
Chris E. VanLaningham  
Robert Alan Walters  
Luping Yang

### Bachelor's

#### Spring 2011

Christian Alvarez  
Dustin Alwood  
Avian Avena  
Jeremy Becker  
Kacey Bladergroen  
Randall Booker  
Javier Briz  
Justin Brosseau  
Wilfredo Burgos  
Heather Byers  
German Calvo Ho  
Matthew Campbell  
Joshua Canova  
Amy Cavaretta  
Christopher Coleman  
Bradley Cooney  
Horatiu Corban  
Marcel Cordes  
Stephen Creighton  
Michael Crumpton  
Zachary Faraone  
Miguel Fernandez-Annicaert  
Kevin Frost  
Arban Gjonbibaj  
Peter Hanka  
Andrew Hanna  
John Haynie  
Lee Hellstrom  
Corey Hill  
John Hillman  
Brandon Hinson  
Eric Ho  
Daniel Holden  
Eric Holhouser  
Hamza Hosein  
Jack Hulsberg  
Lynn Itani  
John Jenks  
Asha John  
Lakeisha John  
Johny Kalim  
James Keokosal  
John Keough  
Brent Langolis  
Elizabeth LaBoone  
Sergio Lizarazo  
Kyle Longville  
Michael Mack  
Jonathan Marshall  
Lucio Martinez  
Julian McKinley  
Daniel McRae  
Gustavo Morris  
Stephen Mothena  
Lynn Nguyen  
Matthew Noldan  
Jacob Nussel  
Justin Oakes  
Jerry Paris  
Carlos Pena  
Sandra Perez  
Cameron Pettit  
John Pole  
Antonio Renda  
Xavier Rios  
John Robertson III  
David Roueche  
Priscilla Sale

Geyzer Salgado  
Sandro Sanchez Bernaola  
Jennifer Seip  
Cory Snyder  
Steven Sonberg  
James Stephenson III  
Tyler Stevenson  
Aaron Stolear  
Kiet Ta  
Matthew Taylor  
Victoria Tomiczek  
Sarah Tsang  
Donald Watson Jr.  
Peter Whitfield  
Carey Wilkinson  
Chase Wilkinson  
Matthew Wilson  
Richard Wilson  
William Worton II  
Travis Young  
Christa Zuccarino

#### Summer 2011

Anthony Alexander Crousillat  
Andrés Morales Wolff  
Stephen Douglas Shortridge II  
Natalie Gail York

#### Fall 2011

John Michael Agamie  
Abraham Alende  
Eduardo Aiache Arfelli  
Anthony D. Atyeo  
Luke Aaron Berry  
Brent Aaron Billington  
Eric Robert Brolund  
Eliot Lee Brown  
John Paul Buehrig  
John F. Burch III  
Andrew John Byrd  
Oscar F. Calle  
Blaine Michael Carter  
Ryan Anthony Catarelli  
Nathan Allen Clemmons  
Dennis Jay Croyle  
Simon Ernesto Cuadra  
Carly Ann Davis  
Juan Ramón De LaCruz  
Michael P. Derbaum  
Mariana Diaz Torres  
Adamo Bela DiSisto  
Addison Clark Duke  
Gabriel Aziz Eslait  
Joseph Alexander Esposito  
Travis James Fledderman  
Jonathan Joel Foster  
Phillip Sergio Garcia,  
David Alexander  
Gordon  
Matias Groetaers  
Travis Jake Hastay  
Peter Alexande Hill  
Gordon Jeffery Hines  
Douglas O. Homan  
Ryan J. Hormel  
Jennifer Katherie James  
Maxwell Thomas Kaplan  
Ashlie Melissa Kerr  
Victor Konn  
Alexander Wolfgang  
Kribbs  
Thomas Laroue  
Skylar Christine Solis  
LaRussa  
Juan Camilo Losada  
Garrett James Masiulis  
David Christopher  
McBride  
Sasa Milivojevic  
Jesse Vanhram Mitchell  
Alaa Sayed Mourad  
Moniaishi Mashila-  
Christanta Mtenga  
Kayla Christine  
Permenter  
Jerry Marcus Piccolo  
Ashley E. Piercy  
William Don Pigozzi  
Samantha Leigh Reilly  
Jason Edward Ressler  
Brian Matthew Rivers  
Shane L. Robinson  
Alejandro Saulea  
Ellen Amanda Saunders  
Briston Ross Schroedter  
John Leslie Schwartz III  
Ross William Sheddin  
Holly Ann Simon  
Benjamin Clarke Smith  
Ryan Jeffrey Stiftinger  
Matthew Michael Tebow  
Tuan Duc Vo  
Christopher Kyle Watson  
Brian John Wemple  
Kelsey Jennine Wood  
Wenshu Zhang

## EES GRADUATES

### PhD

#### Spring 2011

Joshua A. Dickenson  
Ruben Alexander Kertesz,  
Yu Wang

#### Summer 2011

Alexander F. Gruss  
Paul Anthony Indeglia  
Chance Venable Lauderdale  
Jianye Zhang

#### Fall 2011

Stuart Bryan Norton  
Sejin Youn  
Jianye Zhang

### Masters

#### Spring 2011

Alia Shanna Ali  
Taruja Uttamrao Borker  
Pamela Sue Brown  
Libby Chang  
Sarah Esther Hisami  
Comstock  
Jeffery T. Donalson  
Timothy Scott English II

Keith Alan Jones  
Esther Elizabeth Kaufman  
Graham Paul Knopp  
Justin Randolph Leech  
Jeremy Christian McBryan  
Shabnam Mostary  
James Pack  
Sowmya Sankaran  
Joseph Leroy Smith  
Taccara Nakia Williams  
Yongqiang Yang

#### Summer 2011

Rachel Elizabeth Donahue  
Christina Beth Herr  
Wesley Allen Markham  
Ryan Alexander Messer  
Loren Taylor Moore  
Patrick Ryan Stephen  
O'Donoghue  
Gretchen Oulmarie Suárez-  
Peña  
Christine Odalyis Valcarce  
Maurice Bruns Vaughan IV  
Brandon Taylor Wood

#### Fall 2011

Ori Ryan Baber  
Jean Shepherd Brown  
Ronald Josué Castillo Chaves  
Jessica Christianson  
Sara Lyn DeBerry  
Sylvia Deputy  
David Gregory  
Melissa Dawn Gunter  
Christina C. Hoffman  
Patrick Alexander Howard  
Jonathan Robert Jasinski  
Aimee Jordan  
Wichanon Lertsakorn  
Ronald Daren Payne  
Adeeba-Abdul Raheem  
Richard Mark Roberts  
Sarah Noemi Rodriguez  
Andrea C. Ruane  
Rahlys Nicole Ruff  
Sowmya Sankaran  
Jayil Iván Santos Rivera  
Karl Matthew Seltzer  
Abhinav Singhania

### Bachelor's

#### Spring 2011

Alexandra Rae Bigger  
Taylor James Bomarito  
Gregory Allen Brenner  
David Lee Brooks  
Lia Patricia Brune  
Aniela S. Burant  
Brittany S. Carl  
Haley René Carter  
Robert Francis Compton  
Jacob Sullivan Diamond  
Heather Marie Groce  
Shaina Alysa Kelly  
Julie Rose Midgette  
James Dylan Nesler  
Viet Hoai Nguyen  
Mallory Shea Peterson  
Rachael June Shea  
Katy Rae Smith  
Karl Davis Snyder  
Paul Ward Stevenson  
Andrew John Walker  
Kyle Elizabeth Taylor

#### Summer 2011

Jacqueline Marie Martin  
**Fall 2011**  
Allison Nelida Belle  
Lauren Noelle Bresnahan  
Peter Andrew Brown  
Stephanie Lauren Carusillo  
Troy Logan Chasteen  
Katie Lynne Erickson  
Yuan Gan  
Wesley Brandon Gates  
Katherine Cody Graf  
Jianying Guan  
Emily Elizabeth Henderson  
Lindsay Alexandra Hyde  
Lizmarie Maldonado  
Victor Clay Martin  
Amanda O'Donnell  
James Robert Wally  
Heather Lynn Waters  
Claes Peter Westring  
Erin B. White  
Hillary Lynn Willison



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