UNIVERSITY OF FLORIDA

GATOR Engineering®

Spring 2004

Civil & Coastal Engineering

Message from the Chair

Dr. Joseph W. Tedesco

I am pleased to present the Spring 2004 issue of the CCE Department Newsletter. As in previous issues, this edition offers recent Department news, spotlights on our faculty members, and updates on our student chapter activities. I feel very honored and privileged for this unique opportunity afforded me to keep you informed of the continuing excellence and growing prestige of our academic and research programs.

The CCE Department educates students and conducts research in a variety of areas related to our state's and nation's needs in constructed infrastructure and infrastructure systems, hazards mitigation, and environmental processes. Our faculty are leaders in research in each of these areas, consistently attracting competitively awarded state and federal sponsored research. CCE Department research expenditures for the last fiscal year were nearly $17 million, once again placing the Department in the top ten nationally among all civil engineering programs for that category.

To further enhance our research programs, the CCE Department is moving rapidly forward with the construction of the Powell Structures Laboratory. The new facility (see artist's rendering above) will be constructed on the former Florida Department of Transportation Materials Office site on Waldo Road in Gainesville. Twelve design/build (DB) firms have submitted proposals for the project. Final selection of a DB firm is planned for this month. Construction is scheduled to be completed in the first quarter of 2005.

The CCE Department is also a leader in education. Our academic program has established itself as one of the most comprehensive in the nation. For the 2002-2003 academic year, the Department ranked 11th nationally in BSCE degrees conferred, 6th in MSCE degrees and 12th in Ph.D. Degrees. GO GATORS!

Our faculty continue to distinguish themselves in the civil engineering profession. Dr. Robert Thieke received the prestigious 2003 ASCE ExCEEd Career Teaching Award, Dr. Trey Hamilton was elected fellow to the American Concrete Institute, and Drs. Gary Consolazio and Michael McVay received the coveted K.B.Woods Best Paper Award at the 83rd Transportation Research Board Meeting in Washington, DC this past January.

Finally, on a more somber note, the faculty, staff and students of the CCE Department are deeply saddened by the tragic death of one of our brightest and most promising graduate students, Sudeer Reddy Satti. A native of India, Sudeer had recently completed his MSCE degree and was planning to move to New Hampshire to pursue a Ph.D. at the University of New Hampshire just a few days after his tragic death. Sudeer was a brilliant student and an aspiring scholar, who was admired and loved by his fellow students. During his three years as a graduate student in the CCE Department, Sudeer made many friends and became infatuated with American culture. He loved American sports and was a huge Gator fan. To preserve his memory, the CCE Department will establish a scholarship in his name (please see accompanying article on p. 6).

In closing, I want to express my sincere appreciation to our many alumni and friends for their generous financial support, which is essential to maintaining the high quality of our education and research programs to which you have grown accustomed. Your contributions truly make the difference.

It's great to be a Florida Gator!

Dr. Joseph W. Tedesco

CCE Faculty Activities

Dr. Clayton Clark, Assistant Professor, was appointed to serve a 3-year term as a member for the National Research Council (NRC) Committee on the Selection and Use of Models in the Regulatory Decision Process. Dr. Clark was also awarded the Florida Board of Education Grant-in-Aid for full-time study and research during the Spring and Summer 2004 semesters.

Dr. Michel K. Ochi, Professor Emeritus, was notified that his book, "Hurricane–Generated Seas" was recently published as part of the Elsevier Ocean Engineering Book Series. The book will serve as a reference for researchers, designers, graduate students, and technical managers in naval, ocean and coastal engineering.

Dr. Reynaldo Roque, Professor was recently appointed Editor-in-Chief of the International Journal of Road Materials and Pavement Design.

Dr. Robert Thieke, Associate Professor, was awarded the prestigious 2003 ExCEEd Career Award for Excellence in Teaching. The ExCEEd Faculty Recognition Awards Program was established by ASCE's Project ExCEEd (Excellence in Civil Engineering Education) and the ASCE Committee on Faculty Development to recognize and reward outstanding faculty.

Drs. **Bjorn Birgisson**, Assistant Professor, **Reynaldo Roque**, Professor, **Byron Ruth**, Professor Emeritus, Christos Drakos, Researcher and Marc Novak were awarded the Canadian Technical Asphalt Association Editor's Award for Best Technical Paper for "Mechanisms of Instability Rutting in Hot Mix Asphalt Pavements," Proceedings, Canadian Technical Asphalt Association, 2003, pp. 135- 152.

Dr. Joseph W. Tedesco, Professor and Chairman, was selected to serve on the ASCE Task Committee for Faculty Licensure (TCFL) by ASCE National President Patricia Galloway. The TCFL will recommend how ASCE can encourage and facilitate the professional licensure of civil engineering faculty members.

Dr. H.R. Trey Hamilton, Associate Professor, was recently informed of his election to Fellow of the American Concrete Institute. His election will be formally announced at the ACI annual meeting in Washington, D.C. this spring. His election is in recognition of his outstanding contributions to the production or use of concrete materials, products, and structures in the areas of education, research, development, design, construction, or management.

Dr. Perry Green, Assistant Professor provided the lecture for a series six-hour programs entitled: "Basic Design for Stability - Columns and Frames." The program developed by AISC and the SSRC provides a practical understanding stability provisions in the AISC Specification. Dr. Green was also awarded the 2003 Hyland R. Jones Grant for his research contribution to "Quantifying Effects of Pruning Type and Dose on Trunk Stress from Wind Loading."

Dr. Fazil Najafi, Associate Professor co-presented the paper, "Comparison of Chemical Agent and Toxic Industrial Material Sensor Technologies for Uses in Transportation Security" at the 2004 Transportation Research Board Annual Meeting in Washington, D.C. Dr. Najafi is also the adviser for the UF Society of Hispanic Professional Engineers student chapter.

CCE Welcomes Dr. Clint Slatton

Dr. K. Clint Slatton joined the University of Florida faculty in August 2003. He is jointly appointed as an Assistant Professor in the Civil and Coastal Engineering (CCE) Department and the Electrical and Computer Engineering (ECE) Department.

Clint received B.S. and M.S. degrees in aerospace engineering from The University of Texas at Austin (UT), Austin, TX in 1993 and 1997, respectively. He received M.S. and Ph.D. degrees from UT in electrical engineering in 1999 and 2001, respectively. From 2002 to 2003, he was a Postdoctoral Fellow with the Center for Space Research at UT, where he worked on novel data fusion techniques for interferometric synthetic aperture radar (InSAR) and airborne laser swath mapping (ALSM) data. He has also worked at the NASA Jet Propulsion Laboratory (JPL) in the Radar Sciences Section.

He is the director of the Adaptive Signal Processing Laboratory in the ECE Department and a member of the Geosensing Engineering and Mapping Research Center in the CCE Department. His research interests include remote sensing, multiscale estimation, data fusion, adaptive signal processing, and ALSM and InSAR applications.

Clint has established research projects with UF graduate students in both the ECE and CCE Departments on multiscale data fusion and pattern recognition applied to ALSM data. Since arriving at UF, he has presented these results at the American Geophysical Union (AGU) Fall Meeting and has submitted papers to IEEE Geoscience and Remote Sensing journals. In total, he has authored or co-authored 20+ book chapters, papers, and technical reports.

Clint taught a graduate course in digital signal processing in ECE last fall, and he is developing and teaching a new class on remote sensing data analysis and phenomenology in CCE this spring.

CCE Welcomes Dr. Jung-Wuk Hong

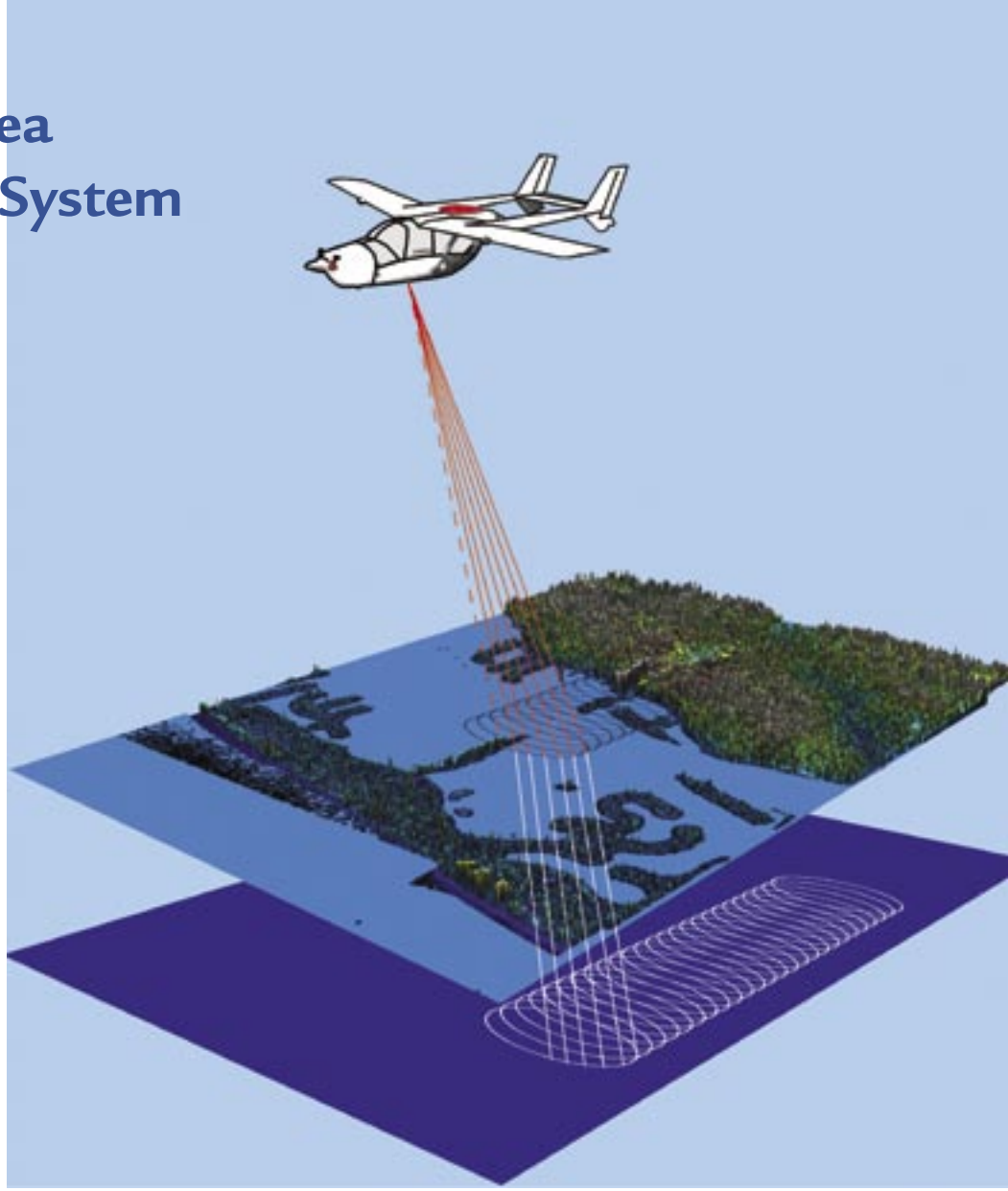
Dr. Jung-Wuk Hong joined CCE in January as a Postdoctoral Research Associate and will be performing numerical simulations with the CCE Computational Mechanics Group under the technical direction of Dr. Joseph W. Tedesco.

Dr. Hong received his B.S. degree in 1994 from Yonsei University and his M.S. degree in 1996 from Korea Advanced Institute of Science and Technology (KAIST), both in South Korea. After working in a construction company on several bridge projects for a few years, he came to United States in 2000 to pursue his doctoral studies at the Massachusetts Institute of Technology (MIT). He worked under the supervision of world-renowned finite element method expert Professor K. J. Bathe, and received his Ph.D. degree from MIT in Civil and Environmental Engineering in 2003. His research topic during his doctoral studies was the Method of Finite Spheres, a novel meshless numerical technique.

While at MIT, Dr. Hong also participated in the I-campus project funded by MicroSoft to establish an electronic version of educational materials for mechanics courses in Mechanical Engineering. In 2003, he was awarded the Young Scholar Fellowship at the Second MIT Conference on Computational Fluid and Solid Mechanics. The CCE Department is fortunate to have Dr. Hong on the faculty, and eagerly looks forward to his contributions to research in the computational mechanics area.

CATS: Coastal Area Tactical Mapping System

Ramesh Shrestha, Bill Carter and Clint Slatton
The GEM Research Center
Department of Civil & Coastal Engineering



INTRODUCTION

The United Sates Navy requires timely and highly accurate imagery of both the surface and underwater environments in the coastal zone (CZ) to detect and identify tactical obstacles and mines while conducting organic mine counter-measure (MCM) missions from airborne platforms. The need for day or night operation, the small target sizes, and the air-water interface provide significant technical challenges to the reliable characterization of submerged features and must be overcome for accurate target characterization.

The Department of Civil & Coastal Engineering (CCE), University of Florida (UF) was recently awarded a research grant from the US Navy to develop a unique coastal area tactical-mapping system (CATS) for mapping both on-shore and littoral environments that make up the CZ. The ultimate goal of the research is to develop a sensor system for an unmanned aerial vehicle (UAV) suitable for tactical operations. The CATS system will be based on Photon Counting Airborne Laser Swath Mapping (PC-ALSM) technology and optimized for low altitude operations (nominally 600 to 1000 meters above local ground level) from light fixed-wing aircraft. The proposed sensor will provide a low operating cost method of mapping both topographic and shallow water (surf to several meters deep) bathymetric features of the CZ. The CATS system will identify and precisely locate obstacles to tactical operations, day or night, and even in moderately inclement weather. It will also be useful for post-strike damage assessment.

THE TECHNOLOGY

The conceptual design of the PC-ALSM is based on a high altitude airborne photon-counting laser altimeter developed at the NASA Goddard Space Flight Center (GSFC) that will eventually be deployed in a satellite. Key members of GSFC research team, industry partners Optech International and Dynetics, Inc. will collaborate with UF researchers on the design and testing of CATS.

The GSFC work has already shown theoretically, and confirmed with field tests, that the conventional high signal to noise ratio (SNR) approach to ALSM does not make the most efficient use of the available laser photons. The effective surface return rate (density of spatial sampling) can be increased by up to two orders of magnitude, for a given laser output power, by emitting the available photons in a high frequency train of low energy (few micro-joule) pulses and using single photon detection, as opposed to emitting a low frequency train of high energy pulses and using many photon pulse detection. Military applications will benefit from the PC-ALSM systems because the hardware and power requirements will make it feasible to operate from a UAV, and the system will be able to operate day or night, even in areas of atmospheric haze or light to moderate fog.

The CATS will use a frequency doubled NdYAG microlaser. The 0.530 m wavelength light will penetrate shallow water and map the bottom out to depths of about 5 meters, depending on the clarity of the water. Most coastal defense mines and obstructions are placed in shallow water. The CATS system will enable the Navy to assess the defenses that their assault forces will have to deal with upon landing, and determine what actions should be taken to destroy or remove the defenses before the assault.

CATS CONCEPT

Because the PC-ALSM system will operate from relatively low altitudes, rather than from high altitudes, as the GSFC system did, adequate signals levels can be achieved with very modest aperture (few cm diameter) optics. Other advantages of the PC-ALSM system will include: longer component life times; small, lightweight, energy efficient electronics; and eye-safe laser radiation

levels. Overall, the PC-ALSM systems have the potential to be at least a factor of three, smaller, lighter and less costly to build than current commercially manufactured conventional ALSM systems. The PC-ALSM sensor developed by this research team will serve as a proof-of-concept for low-altitude PC-ALSM, and will be housed in a single-engine aircraft. However, follow-on systems will be able to meet size, weight, and power specifications required to operate from a small to moderate size UAV with minimal modifications.

CURRENT ALSM RESEARCH AT UF

The UF is uniquely qualified to develop PC-ALSM because it already has invested more than 1.5 million dollars in a conventional ALSM unit, integrated a high resolution multi-spectral digital camera into the same aircraft to collect ALSM and photography simultaneously, and has used ALSM, digital photography and ground survey methods to map many areas in Florida that will be used to test, calibrate and characterize the CATS unit. No other academic institution in the nation has comparable facilities and experience with combining these technologies.

Among academic institutions, UF has led the way in ALSM research for the past six years. Most notably, it was the only University invited by the Department of Defense, Joint Precision Strike Demonstration (JPSD) Group to participate in mapping the World Trade Center site after the Sept. 11, 2001 attack.

UF has operated its own airborne laser mapping system, jointly owned with Florida International University, for about five years. The system has been used in more than 50 projects to support Local, State, Federal agencies and private companies. The success of the program has led the National Science Foundation (NSF) to fund a new Center for Airborne Laser Mapping (NCALM) to be operated jointly by UF and the University of California, Berkeley.

"Our current ALSM system uses return signals of thousands of photons per pulse which requires a lot of power," Shrestha says. Thousands of photons are needed because the current sensor is not sensitive enough to detect single photons. The single photon system, in theory, will be able to detect every single photon fired that comes back. The ability to detect a single photon is what makes the equipment very small," Shrestha says.

Along with the sensor development, new computer software will be developed to processes and analyze the CATS data. "PC-ALSM technology has the potential to provide some of the highest resolution three-dimensional imagery ever acquired from an airborne platform. These new data should reveal details of the natural coastal environment of great value to the Navy, coastal engineers, and geo-morphologists," Slatton says.

SUPPORT FOR CATS

CATS will be a new generation airborne laser scanning system able to penetrate water in the surfzone, which could make it invaluable to Marine Expeditionary Forces (MEF) needing to detect mines prior to a planned landing. Based on an initiative sponsored by Congressman Cliff Stern and Senator Bill Nelson, the U.S. Congress has provided $2 million for the first year of the program.

EVENTUAL GOAL

The ultimate goal of CATS project is to deploy in a UAV to provide a method of high-speed three-dimensional mapping of surface and submerged surf zone obstacles in coastal waters including shallow bathymetric features, and onshore beaches and adjoining uplands topography. The CATS observations would also facilitate the computation of the power spectrum of the near shore waves. For UAV applications, the CATS data would be transmitted, via satellite link or direct radio broadcast, to a base station for immediate processing. The three dimensional digital model produced from the CATS would provide accurate coordinates for the surface points relative to the Global Positioning System (GPS) reference frame. The model could be used to plan a wide variety of military operations, including pre-landing bombardment of obstacles, the detection of mines in coastal waters, selection of optimal landing sites, and the location of natural hazards. Ultimately, the three dimensional spatial information could be used to create virtual models that could be displayed inside helmet faceplates.

Doug McLeod (Florida DOT), Bill Sampson, Rick Dowling (Chair of Highway Capacity Committee), Scott Washburn, Bill McShane

CCE Calls on All Gators and Friends at TRB

The CCE Department held its Second Annual Reception at the Transportation Research Board Annual Meeting in Washington, D.C. in January. The reception provided an opportunity for engineering alumni, faculty, students and friends of UF to gather and get caught up on what is happening professionally and personally. The Department plans to expand the event in the future and make it an annual tradition. Many thanks to Ms. Sandy Greenwood for her part in making the reception a success.

Innovative Materials Research

Dr. Bjorn Birgisson is spearheading several teams of UF investigators applying novel, innovative techniques in civil engineering materials research. Dr. Birgisson's primary research focus includes the characterization and modeling of fracture, damage, and degradation in bituminous materials and concrete, as well as other fiber or polymer-based modifications of these materials. Since coming to UF, Dr. Birgisson has developed a long-term research initiative that integrates advanced material characterization techniques and numerical simulation tools into materials research. Recently completed work in collaboration with Dr. Reynaldo Roque at UF, and sponsored by the Florida Department of Transportation, has led to the development of the first fracture model to account for both crack initiation and the discontinuous nature of crack propagation observed in asphalt materials. This new model for pavement fracture has recently been integrated into a new viscoelasticity-based pavement fracture simulator. Similarly, collaborative efforts are underway with the Florida Department of Transportation to identify the mechanisms of water damage in flexible pavements. A significant component of Dr. Birgisson's concentration is the integration of new nondestructive testing methods into material characterization. For example, a digital X-Ray tomographic imaging system is being used to characterize the effects of void structure and aggregate gradation on the fracture behavior of asphalt mixtures common to Florida. At the micromechanical level where fracture initiates, asphalt mixtures are complex composite materials, consisting of a matrix of aggregates, binder, and air voids. Figure 1 shows a typical horizontal digital X-ray tomography image of a coarse-graded asphalt mixture.

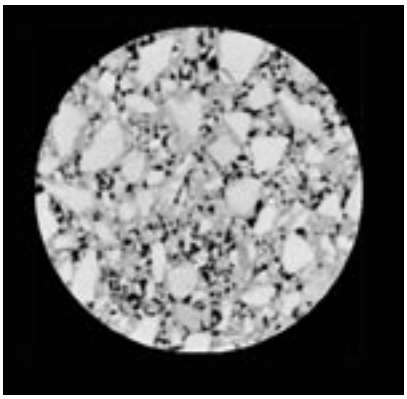


Figure 1 Horizontal digital X-ray tomographic imaging slice through an asphalt mixture

Based on the knowledge obtained from the microstructural characterization of asphalt mixtures, it is possible to construct micromechanical models of asphalt specimens. These micromechanical models are used to simulate the fracture initiation and crack growth in asphalt mixtures. Figure 2 shows typical predicted cracking results from a simulated Superpave indirect tension test at the point when cracking initiates and at failure, respectively. Using the knowledge gained from these simulations, it is possible to initiate identification of gradation and aggregate characteristics that enhance the fracture resistance of mixtures, and thus minimize the possibility of premature pavement failure due to cracking.

In addition to cracking, another distress mode exhibited by flexible hot mix asphalt pavements is instability rutting, in which the material in the wheel path displaces laterally to form slip planes and ruts in the surface of the asphalt layer. In this case, failure is attributed strictly to the asphalt mixture properties and usually occurs within the top 50 mm of the asphalt concrete layer. Recent work by Drs. Birgisson and Roque has shown that high transverse, near - surface shear stresses at low confinement in the vicinity of the edges of radial tires may partly explain the mechanism of instability rutting. Figure 3 depicts predicted maximum shear stress magnitudes and their associated direction under a typical radial truck tire. The plotted vectors indicate the formation of shear planes beneath the loaded area. It is observed that the direction of the shear stresses under the first rib of the radial tire may form shear planes that tend to "shove" the material away from the tire path. Based on the results of their work, Drs. Birgisson and Roque are in the process of developing a new laboratory test that better captures the effects of the predicted stress states associated with instability rutting in pavements.

Finally, Dr. Birgisson has been collaborating with Dr. Charles Beatty from the UF Department of Materials Science and Engineering and Dr. Siobhan Matthews, from the Dunkalk Institute of Technology, Dunkalk, Ireland, to integrate recent advances in nano-modification of clay/polymer systems and polymer processing into concrete and asphalt materials for improved impact resistance and ductility properties. So far, this research has been extremely promising, leading to the development of ductile concrete, in which the failure strain of concrete is extended 2-3 times greater than that of unmodified concrete. It is hoped that similar approaches may also be used for asphalt concrete to economically enhance its fracture and permanent deformation properties, resulting in longer lasting pavements.

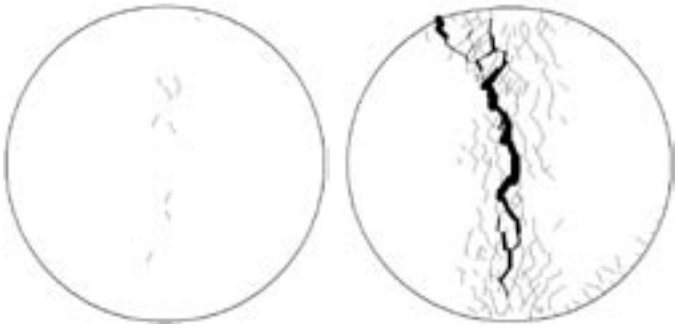


Figure 2 Typical predicted crack patterns in asphalt mixtures

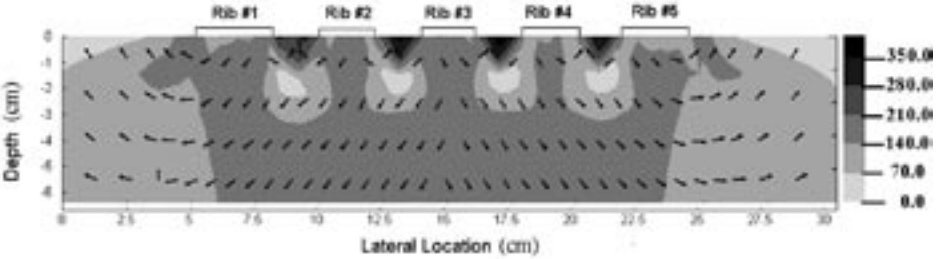


Figure 3. Maximum shear stress magnitude (in kPa) and direction under the finite element modeled radial tire load.

ASCE Steel Bridge Team members busy fabricating the 2004 bridge

Steel Bridge Team networking at 2003 World Steel Bridge

2004 Concrete Canoe form taking final shape

UF-ASCE Student Chapter Continues Tradition of Excellence

The UF American Society of Civil Engineers (ASCE) Student Chapter continued its traditions of excellence, service, and outreach during the 2003-2004 academic year. With 250 members, UF-ASCE is one of the largest and most active student organizations at the University of Florida, and one of the largest ASCE student chapters in the nation.

The Fall semester was a busy time for members. The Steel Bridge Team represented the chapter and the department at the 2003 World Steel Bridge Symposium, where team members networked with bridge professionals and spread the word about department activities. Several chapter members also attended the ASCE Florida Section meeting in September, where two members were recognized as top civil engineering students in the state. Brad Choi received the Outstanding Graduate Student Award, while Rachel Conn received the Outstanding Service Award.

The Spring semester brings preparations for the annual Southeast Region Student Conference, being held in Tampa during March. Over 25 student chapters from around the southeast meet to compete in academic events and share ideas. UF Civil Engineering students have been preparing since August for the two largest events, the Concrete Canoe and Steel Bridge competitions, with the goal of qualifying for the national competitions in these events.

Other chapter activities include service projects such as adopt-a-highway, early engineering education initiatives in area middle schools, and Habitat for Humanity construction, along with the ever popular BBQ's and happy hours.

Request for Scholarship Donations

The CCE Department is soliciting donations for the Sudeer Reddy Satti Scholarship established to honor the memory of one of the Department's most brilliant and beloved graduate students. The scholarship will be awarded each year to the student who best exhibits those admirable qualities that defined Sudeer: brilliant scholarship, honesty and integrity, and generosity of spirit. Please make checks payable to the University of Florida Foundation, Inc. and mail to the address below:

Sudeer Reddy Satti Scholarship Fund
Department of Civil & Coastal Engineering
365 Weil Hall
University of Florida
PO Box 116580
Gainesville, FL 32611-6580

CCE Faculty & Alumni Win K.B. Woods Award


Gary R. Consolazio


Michael C. McVay


G. Benjamin Lehr

Drs. Gary R. Consolazio, Michael C. McVay and Mr. G. Benjamin Lehr were awarded the prestigious K.B. Woods Award for their paper, "Dynamic Finite Element Analysis Of Vessel-Pier-Soil Interaction During Barge Impact Events" at the 83rd Transportation Research Board Meeting in Washington, D.C. The K. B. Woods Award was established by the TRB Executive Committee in 1971 and may be given annually for the outstanding paper published in the field of design and construction of transportation facilities. It honors the 19th chairman of the Highway Research Board, who was professor emeritus of engineering in the Schools of Engineering at Purdue University and active in the affairs of the Board throughout his career.

Dr. Gary R. Consolazio is an Assistant Professor of Civil Engineering and a member of the Structural Engineering group at the University of Florida, Department of Civil and Coastal Engineering. Upon completing his Ph.D. at the University of Florida in 1995, he joined the Civil and Environmental Engineering faculty at Rutgers University in New Jersey. There he taught and conducted infrastructure related research until 1998, at which time he returned to the University of Florida as a faculty member. His areas of specialization include the characterization of extreme-event loading of civil infrastructure systems, numerical analysis of structural response, numerical methods, and engineering software development. In particular, his current research activities focus on dynamic loading and response of structures subjected to vessel collisions and vehicle impacts, blast loading of structural components, soil-structure interaction, and performance of concrete exposed to severe fire. His research has been supported by agencies such as the National Science Foundation, the Florida Department of Transportation, and the United States Air Force Research Laboratory. Gary is a member of the American Concrete Institute (ACI), the American Society of Civil Engineers (ASCE), and the ASCE Blast, Shock, and Vibratory Effects Technical Committee. He teaches courses in structural analysis, structural design, numerical methods, and computer programming.

Dr. Michael C. McVay is a professor of Geotechnical Engineering at the University of Florida in the Department of Civil and Coastal Engineering. He holds degrees from the State University of New York (B.S. and M.S.), and the University of Massachusetts (Ph.D.). Since his early PhD work (1981) on buried pipes/culverts, Dr. McVay has been actively researching soil-structure interaction. He has authored over 90 papers, articles and reports on the subject with primary focus (past 15 years) on deep foundations. In collaboration with structural engineering colleagues, he is the co-developer of the FB-Pier Program (Sponsors: FDOT, FHWA, NCHRP), used by hundreds of consulting firms to analyze/design bridge piers for extreme events. Recently, he has been awarded a patent on wireless pile monitoring during installation, which is under development (Startup company: Smart-Structures). Mike McVay is a member of several professional organizations (ASTM, ASCE, TRB), served on a number of international conference committees, and is currently on the editorial board of ASTM's Geotechnical Journal. He has also received a number of publication awards (ASTM's Hogentogler, 1997 & ASEE 1990), accommodations (US Air Force), as well as the NSF Young Investigator Award (1983). Mike likes to kayak and lives in Gainesville Florida with his daughter, Kari.

Mr. G. Benjamin Lehr attended the University of Florida in Gainesville, Florida, from August 1995 to May 2002. During this time he received a Bachelor of Science in Civil Engineering, graduating with honors in May 2000, and a Master of Engineering degree, with concentration in civil engineering structures, in May 2002. Through his undergraduate and graduate academic career at the University of Florida, Mr. Lehr was an active member in both the American Society of Civil Engineers and Chi Epsilon Civil Engineering Honor Society. In June 2002, Mr. Lehr began his professional career as a highway bridge engineer with Reynolds, Smith, and Hills, Inc. in Jacksonville, Florida. Currently, Mr. Lehr continues his professional development, working with Reynolds, Smith, and Hills, Inc. and aspires to become a registered engineer in the state of Florida.

CCE Alumni and Friends News

Charles F. Potts, past member of the Department of Civil and Coastal Engineering visiting committee, was presented with Honorary Membership in the Association of Asphalt Paving Technologists at their annual meeting held in Baton Rouge, Louisiana, on March 9, 2004. Mr. Potts was recognized for his outstanding contributions to asphalt technology and the asphalt paving industry. Between 1967 and 1984 he held various positions in the Florida Department of Transportation including State Materials Engineer and Director of Operations. During that time implemented many changes to improve the quality and cost efficiency of asphalt pavement construction. In 1992 he became President of APAC, a large paving contractor, and Senior Vice President of Ashland, Inc., a petroleum/ refining/chemical/construction company.

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CCE Needs Your Support

In this time of receding support from the State Government, we need the help of our loyal alumni and friends. Any donations you can make to the Department will help to sustain the vitality and quality of our education programs. Thank you in advance.

Joseph Tedesco

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