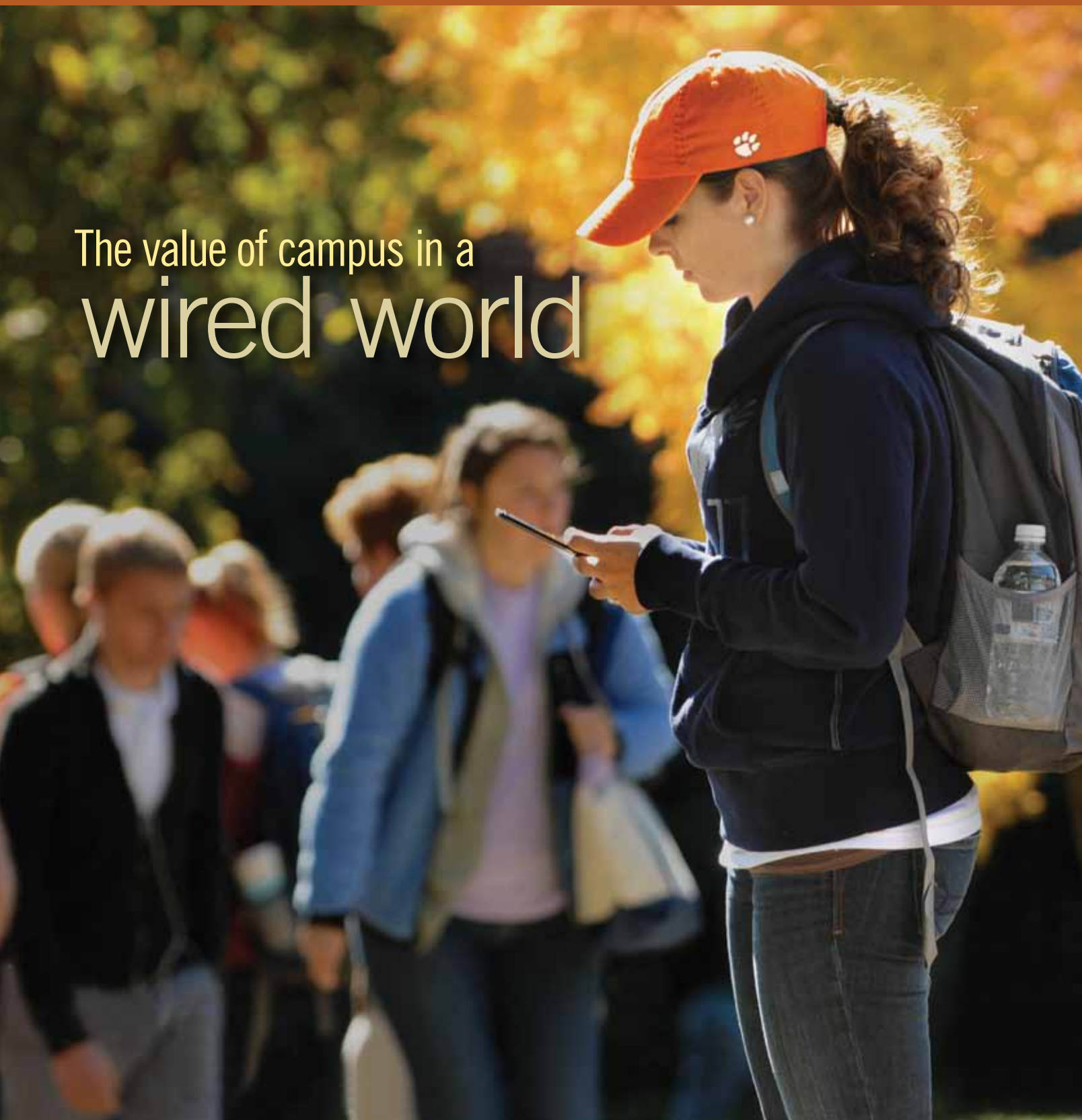


CLEMSON

WORLD MAGAZINE

SUMMER/FALL 2011

The value of campus in a
wired world



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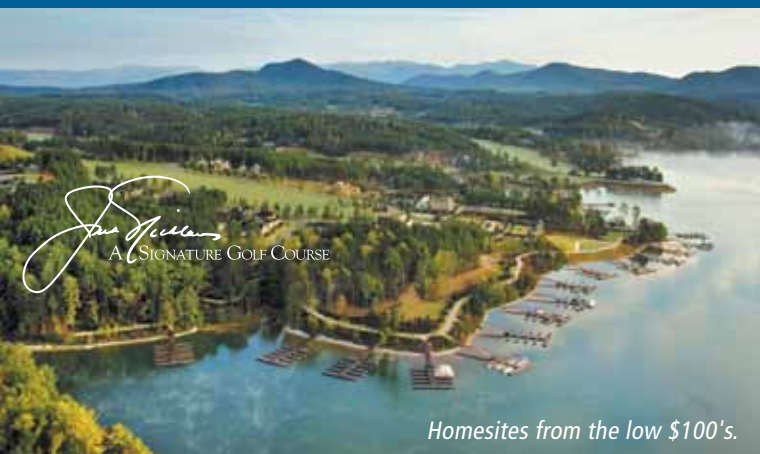
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EXTRAS ON THE WEB

View *Clemson World* online with lots of Web extras at clemson.edu/clemsonworld.

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Check out the University's social networks page for Facebook, YouTube, LinkedIn, news and calendar feeds, and much more at clemson.edu/campus-life/social-media/index.html.

See the University's Flickr site at flickr.com/photos/clemsonuniversity/collections for photos from campus, vintage collections, regional events and more.

Join us on Facebook at facebook.com/clemsonalumni and facebook.com/clemsonworld. 

Cover photo: Patrick Wright

Value of 'going away to college'

How important is the physical campus in a wired world?

"The goal is to have every student participate in Creative Inquiry, study abroad or a professional internship experience that connects what they are learning in the classroom to what they will be doing with their lives."

There's a serious conversation going on today about the cost and value of higher education. Questions are discussed around the dinner table, in print and in the blogosphere.

Does college cost too much? Is it worth the investment and/or the debt? Is there a higher-education "bubble" similar to the dot-com bubble or the housing bubble? Some critics say college is overpriced, oversold and underperforming in terms of preparing today's students for tomorrow's world.

Some ask if college is necessary at all. With new technology, can't people just learn everything they need to know via the Internet? If the virtual university is a reality, does that make the physical campus obsolete?

Microsoft founder Bill Gates, one of the world's most famous college dropouts, said in 2010 that "place-based" education is becoming less important. "Five years from now, on the Web, for free, you'll be able to find the best lectures in the world. It will be better than any single university."

However, his foundation's Gates Millennium Scholarships send thousands of talented students each year to the college or university of their choice. In fact, Clemson had 10 of them for the 2010-11 school year.

At Clemson, we are taking these questions seriously. Over the coming year, I plan to examine and speak often about the value of higher education, particularly a Clemson education.

As the fall semester gets under way, I begin with several observations.

Anecdotes are not data.

It's not hard to find examples of people who have spent too much and gone too deeply into debt for a degree that does not really prepare them for a high-paying career.

But statistics show that the gap in both income and employment rates between high school graduates and college graduates is very real. And the gap has grown, not contracted, over the past decade and during the recession. For 2010, unemployment for college grads age 25 to 34 was 4.9 percent versus 13.7 percent for high school grads.

That doesn't mean that every college is right for every student or family, or even that everyone needs a college degree.

We're confident, however, that most Clemson students leave us with a valuable degree and a manageable debt load. Their default rate is under 2 percent.

Our colleges and universities are valuable institutions.

They're sources not only of learning but of research and discovery, the creation of new knowledge.

Despite the validity of some criticisms, I worry about what seems at times to be an all-out assault on higher education itself. Some schools will fold in the coming decade as "bricks and mortar institutions." Those that survive will be the ones that adapt and change. **As a nation, we need to take care that some of our most valuable institutions for the stewardship, study and transmission of culture don't disappear altogether.**





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Clemson World is published three to four times a year for alumni and friends of Clemson University by the Division of Advancement. Editorial offices are in the Department of Creative Services, Clemson University, 114 Daniel Dr., Clemson, SC 29631-1520 (FAX: 864-656-5004). Copyright© Creative Services, Clemson University. Story ideas and letters are welcome, but publisher assumes no responsibility for return of unsolicited manuscripts or art. Send address changes to Records, Clemson University Foundation, 155 Tiger Park, Ste. 105, Clemson, SC 29633 (FAX: 864-656-1692), or call 1-800-313-6517.

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Discovery and learning are intensely social processes.

Nothing about human nature has really changed all that much in the last millennium. Since the invention of books, there have been people who are true self-learners. But those people are the exception, not the rule.

Human beings are social creatures, and discovery and learning are intensely social processes. **Even with the latest technology, most of us learn best in a structured environment populated by teachers, peers and family.**

Education should be transformational.

The Web provides instant access to a whole world of information and knowledge, but also a distracting swamp of half-truths and mind-numbing trivia. We need guides to help us through it.

Online education is exploding, and it should. When it is well-designed and executed, it can reach more students, more conveniently with a rich, deep, interactive experience. But it's no substitute for the experience of "going away to college." We must bring that experience into the 21st century and make it meaningful for today's students.

The best education is not transactional but transformational. It's not: "You pay X amount in tuition, and you get a degree." Rather it is: "You give us four years, and you get a life-changing experience."

That's why a key feature of Clemson's 2020 plan is its focus on the engaged student. The goal is to have every student participate in Creative Inquiry, study abroad or a professional internship experience that connects what they are learning in the classroom to what they will be doing with their lives as persons of consequence and substance.

Our campus has always been the place where students have the opportunity to become transformed – a place where brains are fed, minds are opened and lifelong connections are made. Simply put, it's the Clemson Experience.

James F. Barker, FAIA
President

Solid Orange — It's up to us

As we return to Memorial Stadium, let's remember that orange isn't just a color. It's thinking and acting like a winner. It's knowing that everything we do reflects on every other Tiger. It's upholding our legacy. It shows the world that the Clemson Family is

Solid Orange.

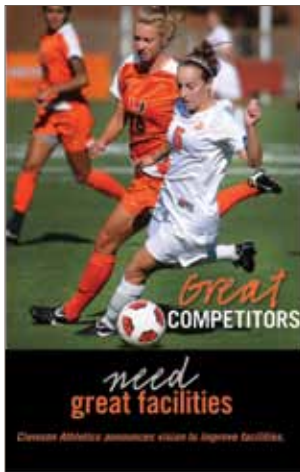
Athletics to upgrade facilities

CLEMSON ATHLETICS IS committed to being a source of pride for alumni and the state; to being a nationally prominent program through high levels of performance and accomplishment; to integrity, sportsmanship and fair play; to the welfare of student athletes and all students.

And, as most fans know, athletic facilities — fine fields, top equipment, fan seating, attractive venues, and brick and mortar enhancements — play a huge role in building championship programs.

Earlier this year, Clemson Athletics announced a goal to invest \$50 million over the next five years in capital projects. The master plan includes enhancements to facilities for soccer, tennis, golf, diving, baseball, basketball and, of course, football.

The projects, pending Clemson Board of Trustees and S.C. Legislature approval, will be funded through private gifts and generated athletics revenues. For renderings and more on the athletic facilities upgrades, go to clemson.com and review the facility plans under each respective sport or contact Bobby Couch at bcouch@clemson.edu. For naming opportunities, go to clemson.edu/giving/how/giftdesignations/areas/athletics.html.



Back to the Astro — students earn top award for Astro3

FOUR SENIOR ARCHITECTURE STUDENTS AND A performing arts student recently earned the top award of the Ideal Theatre Student Design Competition, hosted by The U.S. Institute for Theater Technology, a national association for performing arts and entertainment professionals.



The Clemson team received the Honor Award for their renovation plan of the Astro movie theater located in downtown Clemson.

Under the leadership of Clemson architecture professor Robert Bruhns, the students — Charles Kane, Allender Stewart, Michael Deere, Evaline Dadulla and Harry Averett — conceived a project that transformed the unused movie house into a multipurpose performance facility that would host both University and community productions.

Pershing Rifles RULE!

CLEMSON PERSHING RIFLES COMPANY C-4 IS THE NATIONAL champ yet again! The win marks the sixth national title in seven years for the Clemson drill team and the ninth since 2000.

Company C-4 of the National Society of Pershing Rifles traveled to Ohio State University in March to compete in the 150th Anniversary Varsity Rifles Drill Competition. C-4 returned with five first-place trophies in platoon regulation, squad exhibition, individual knockout, squad regulation and color guard, and the first in overall varsity rifles trophy.



Pictured from left are Jessie Mahn, Christopher Gunter, Jon Jordan, Michael Smith, Patrick Lowery, Derick Burgin, David McAlpine, Anthony Whavers, Marcus Anderson, Nagee Bagley, Jonathan Headley, Alan Johnson, Marjorie Lutz, Richard Moore, Katie Strathman.

CW DYK?

In 2010-11, every single incoming Clemson freshman from South Carolina received a scholarship — 99 percent funded through state lottery revenues. The real tuition cost to in-state freshmen is about 32 percent of the sticker price, an average \$3,462 as compared to the sticker price of \$10,848.

Clemson leads accessible voting project

THE U.S. ELECTION ASSISTANCE COMMISSION has chosen a Clemson research team to lead a national effort to make voting systems more accessible.

Juan Gilbert, an IDEaS professor and chairman of the Human-Centered Computing Division in Clemson's School of Computing, will direct a three-year, \$4.5 million project funded by the Election Assistance Commission to increase the accessibility of new, existing and emerging technological solutions in the design of voting systems.



Gilbert will coordinate commission research and training efforts nationally, as well as conduct research on voting technology in his Clemson lab. Gilbert is the developer of Prime III, an electronic voting system that combines the accessibility afforded by computer technology with old-fashioned simplicity, including a paper ballot for backup and verification.

“Our research team is extremely interdisciplinary,” says Gilbert. “We have individuals from the social sciences, engineering and computing. We have experts in accessibility. We also have experts who deal with administration: training election officials, training poll workers.”

For more details, go to clemson.edu/clemsonworld/accessible-voting.

Clemson, Tri-County program in medical lab science

BEGINNING this fall, Tri-County Technical College graduates with an associate degree in applied science in medical laboratory technology who



meet specific criteria can enroll as juniors at Clemson. Qualified students will be accepted into the bachelor's degree in microbiology program with a concentration in biomedicine.

With a bachelor's degree in microbiology and two years of work experience, graduates will be eligible to take the board exams for certification as a clinical laboratory scientist, the highest accreditation level. With this accreditation, they will be qualified for positions in hospitals, public health clinics, industry, research and forensics.

Medical laboratory scientists are an important part of the medical specialists' team that determines the presence, extent or absence of disease and that monitors treatment. Seventy-five percent of all medical decisions are based on the results of medical laboratory testing.

For more information, contact Polly Kay at pkay@tctc.edu or Tamara McNealy at tmcneal@clemson.edu.

Clemson goes to — brrrr — Moscow

CLEMSON STUDENTS participated in a joint program with English-speaking Russian and French students as well as students from LSU and Virginia Tech at Moscow State Agroengineering University. Biological sciences professor and director for the one-of-a-kind program Dale Layfield teaches the students in Moscow during the semester along with faculty from other universities. For more information, go to clemson.edu/agcom/rasa.



Clemson students Miles Atkinson (economics) and Katie Moore (history) stop in front of the largest monastery in Russia, Sergiev Posad, during a semester in Moscow.

CW DYK?

Clemson football coach Dabo Swinney ranks No. 1 nationally in Academic Progress Rate, according to a CBSSports.com study that measures progress of student athletes toward graduation. Clemson football's APR score for the 2009-10 cohort (four-year period 2006-07 through 2009-10) ranks third best among the top 25 public institutions according to *U.S. News & World Report's* Top 25 public institutions that play FBS level football.

Rifle club wins nationals again



THE CLEMSON UNIVERSITY AIR RIFLE CLUB TEAM won its second straight national championship at the National Rifle Association's 2011 Intercollegiate Rifle Club Championship hosted by Clemson at The Citadel in Charleston.

Team members are, from left, Kevin Tuten, Basil "Trey" Jordan, Dylan Smith, coach John Cummings, Eugene Diefenbach and Erin Gotterbarm.

CU-ICAR, Integral Solutions advance communication

CLEMSON HAS PARTNERED WITH A LEADING UPSTATE information technology company to incorporate state-of-the-art communication systems at the Center for Emerging Technologies. Integral Solutions Group will provide communication technology for resident partners.

Located at the heart of the Clemson University International Center for Automotive Research (CU-ICAR), the Center for Emerging Technologies provides office, administrative and laboratory space for the transportation and energy sectors.

Emerging or established companies are able to expand and develop technologies that complement research of Clemson faculty and students. The center is designed to complete the technology chain from laboratory to the consumer end-user.

Bob Geolas, CU-ICAR executive director and University associate vice president for economic development, says, "Our tenants are at the leading edge of technology in their fields. This partnership with Integral Solutions Group will provide the cutting-edge communications they require — and the technology they are entitled to expect in such a facility."



Crown Holdings Inc., 'Partner in Packaging'

CROWN HOLDINGS INC. HAS BECOME the first corporate "Partner in Packaging," a new initiative of the packaging science program at Clemson. Headquartered in Philadelphia, Crown has operations in 41 countries, more than 20,000 employees and net sales of \$8 billion.

Crown will donate a gift of cash for use as unrestricted program funds and gifts-in-kind of metal packaging fabrication equipment, faculty travel and participation of company personnel in support of education.

The equipment will give students hands-on experience with can manufacturing, testing and the production of physical prototypes for research purposes. Crown will send key personnel to Clemson each semester to lecture and mentor students on metal packaging innovations. And Crown will support faculty to attend Interpack, the leading international packaging trade show in Germany in 2011 and 2014.

The Partners in Packaging program was established to encourage companies to enhance the education and research missions of Clemson's packaging science program in their specific areas of expertise. For more information, contact Robert Kimmel at kimmel@clemson.edu.

CW • DYK?

The Graduate School received a record-breaking 6,082 applications for 2010-11. The current class includes nine Fulbright Scholars from seven countries and 10 National Science Foundation Fellows.



Engineering & Science honors leaders

THE THOMAS GREEN CLEMSON ACADEMY OF ENGINEERS AND SCIENTISTS at Clemson inducted four new members for 2011 — pictured from left with College of Engineering and Science Dean Esin Gulari — Jay Lathrop, Terry Gettys, Walter Jones and Jack Miley.

Mechanical engineering graduate **Terry K. Gettys '78, M '79** is director of research and development for the Michelin Group. Mechanical engineering graduate **Walter Fleming Jones '78, M '81, PhD '82** is the executive director of the Office of Naval Research, the highest-ranking civilian employee in the agency. **Jay W. Lathrop**, professor emeritus of electrical and computer engineering at Clemson, once held the entire world's supply of integrated circuits in his hands. Chemistry graduate **John W. "Jack" Miley '68** devoted a 37-year career to Milliken & Co. in Spartanburg, most recently as director of research, development and technology for Milliken's chemical division.

CES YOUNG ALUM

THE COLLEGE ALSO HONORED Outstanding Young Alumni **Hugh W. Hillhouse '95**, who holds the Rehnberg Chair in the University of Washington chemical engineering department, and **John M. Shea '93, M '95, PhD '98**, a leader in the field of wireless communication systems and networks and a faculty member at the University of Florida. Shea (left) and Hillhouse are pictured with Gulari.



Nation's top college dramaturg



PERFORMING ARTS STUDENT SUSANNE

Parker was named the nation's top college dramaturg for her work on the production of the Clemson Players' *These Shining Lives*. She won the 2011 Kennedy Center American College Theater Festival's Literary Managers and Dramaturg of the Americas Dramaturgy Award, and as a result, has spent the summer at the O'Neill Theater Center as dramaturg to new plays and musicals. Among other duties, dramaturgs collaborate with playwrights and directors providing historical, social, political and cultural expertise to productions.

STEPS wins international award



AN ARCHITECTURE CREATIVE INQUIRY PROJECT – STEPS TO CONNECTIVITY AND Accessibility – that focused on designs for the Clemson University Student Organic Farm was honored in an international design competition, Structures for Inclusion 2011. The competition was sponsored by SEED (Social Economic Environmental Design).

STEPS – a collaboration among the Creative Inquiry program, the Community Research and Design Center, Studio SOUTH and the Student Organic Farm – enables pedestrians to reach the farm more easily. The project focused on asset-based design and highlighted the importance of a sustainable community infrastructure, local food and economic impact. It also promotes community connectivity and accessibility.



Contemporary sculptor

MASTER OF FINE ARTS

student Thomas Schram won the international 2011 Outstanding Student Achievement in Contemporary Sculpture Award. His faculty mentor is David Detrich. Selected work from Schram and a spotlight on Clemson's sculpture program will be featured in the October 2011 issue of *Sculpture* magazine, as well as in the *Grounds for Sculpture* Fall/Winter exhibition catalog. His work will also be featured at www.sculpture.org.

Casio names Clemson, Center of Academic Training

CASIO AMERICA INC.'S EDUCATION DIVISION HAS NAMED CLEMSON TO BE THE company's Center of Academic Training. This partnership enables Casio to further organize its nationwide professional development program for math teachers.

Along with Casio's PRIZM graphing calculator, Clemson's instructional model called 4Ex2 will be used to frame lessons in this program. The model is based on ideas developed through the Inquiry in Motion Institute and Center of Excellence for Inquiry in Mathematics and Science (CEIMS), a statewide initiative hosted at Clemson.

"This partnership will enable us to help make mathematics meaningful for students," says Bob Horton, mathematics education professor and co-director of CEIMS. "With tools such as PRIZM, we can engage students in explorations that delve into important ideas and encourage critical thinking about content.

"Students will gain not only the skills they need for success in tomorrow's world, but they will have a much deeper understanding of the power, the beauty and the connections that math has to offer." For more information, go to clemson.edu/iim.

Calling Calhoun Honors College alums

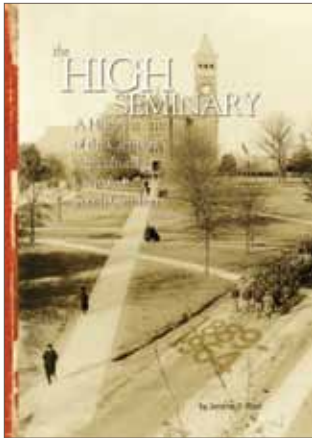
CLEMSON'S CALHOUN HONORS College will celebrate its 50th anniversary beginning in 2012. To make sure you're included, go to cualumni.clemson.edu/honors and update your record.

You can also support current Honors College students' success by hosting an intern, participating in mock interviews, providing advice about your career or in other ways. Contact James Williams at jamwill@clemson.edu for more information.



CW DYK?

Clemson has been named to the President's Higher Education Community Service Honor Roll, the highest federal recognition a college or university can receive for its commitment to volunteering, service-learning and civic engagement. This is the fourth consecutive year that Clemson has received the honor.



High Seminary, a must-read

HISTORIAN AND PROFESSOR EMERITUS JEROME REEL HAS SHAPED A WEALTH of information into *The High Seminary: A History of the Clemson Agricultural College of South Carolina, Volume 1, 1889-1964*.

The High Seminary looks at the changing social, cultural, economic and political climates between 1889 and 1964 and how the changes affected the University. The stories are historic, beneficial, at times humorous. Most importantly, they demonstrate the determined spirit of the early Clemson leaders.

The book's 620 pages include 250 images of photographs, maps and charts. Published by the Clemson University Digital Press, the book is available through the Alumni Association at hearusroarstore.com.

Impressive Tigers!



REX BROWN

Great golfing — Mills wins BIG as amateur

SOCIOLOGY MAJOR CORBIN Mills won the 2011 U.S. Amateur Public Links Championship at the Old Macdonald Course at Bandon Dunes Golf Resort in Bandon, Ore., and the 2011 Belfair Players Amateur at Hilton Head.



REX BROWN

Baseball's best — Miller named Shortstop of the Year

MARKETING MAJOR BRAD MILLER received the 2011 Brooks Wallace Shortstop-of-the-Year Award during College Baseball's Night of Champions in Lubbock, Texas. Miller was also the 2011 ACC Player of the Year.

Legendary Clemson baseball coach — the late Bill Wilhelm — was inducted into the National College Baseball Hall of Fame during the same ceremony.



CHRIS DONAHUE

Leaping Tigers — Mamona takes NCAA Triple Jump Crown

HEALTH SCIENCE GRADUATE Patricia Mamona concluded her collegiate career in grand style, as she won her second consecutive NCAA triple jump crown at the 2011 outdoor national meet in June in Des Moines, Iowa.

CASH students lend their 'Hands and Hearts'

CLEMSON'S CIVICS AND SERVICE HOUSE (CASH) HAS BEEN honored with the Helping Hands and Hearts Award for its support of Home Works, a service organization that volunteers to repair houses for the elderly and disabled.

The Civics and Service House is a living-learning community and organization for students, regardless of major, who want to engage in service and civic involvement. The program offers students an opportunity to

take part in service projects, explore public service career options, investigate social problems, become more involved in the Clemson-area community and develop friendships with other civic-minded students in an enhanced learning environment.

Clemson's living-learning communities — from Women in Animal and Veterinary Science to Air Force ROTC to Clemson Business Experience — provide a holistic approach to student development and learning through academic partnerships, service-learning opportunities and research initiatives. Each community, currently 16, is uniquely designed to facilitate connections among students, faculty and staff. To learn more, go to clemson.edu/campus-life/housing/living-learning.html.



CW DYK?

The University is a 2011 Laureate in the Computerworld Honors Program, an annual award program that recognizes organizations and individuals who use information technology for social, economic and educational advances. Clemson's project, led by Clemson Computing and Information Technology, is creating a data management and visual display system for use in responding to emergencies.

CW DYK?

Clemson's undergraduate business program is 29th among U.S. public colleges, according to *Bloomberg Businessweek* magazine's 2011 ranking of "The Best Undergraduate Business Schools."

MISTER in Belgium



SPECIAL EDUCATION major and Call Me MISTER™ student Craig Pate Jr. made a weekend trip to Amsterdam during a study-abroad experience in Belgium earlier this year. The Call Me MISTER (Mentors Instructing Students Toward Effective Role Models) Initiative is increasing the pool of teachers from a more diverse background particularly among South Carolina's

lowest performing elementary schools. Nearly 25 percent of eligible graduates have received Teacher-of-the-Year honors, and the program has become a model for other states. For more information, go to www.callmemister.clemson.edu.

Driving simulator for rehab

CLEMSON RESEARCHERS, WORKING WITH SIMULATION technology company DriveSafety, have developed a new driving simulator designed for patient rehabilitation that now is being used at 11 Army, Navy and Veterans Affairs facilities. The program recently expanded to Europe with the addition of a driving simulator at Charité Hospital in Berlin, Germany.

Driving simulators provide patients with engaging treatment sessions in a safe environment, including practicing realistic driving skills. Therapists can work with patients on treatment areas including cognitive, perceptual and physical skills.

"Our ultimate goal is to enable drivers to maximize their independence," says assistant psychology professor and lead researcher Johnell Brooks, a goal that can be best accomplished through public and private partnerships between universities, health care facilities and industry.



Grad student Yubin Xi tries new driving simulator at CU-ICAR with Paul Venhovens.

The rehabilitation simulator and associated tools first were developed and tested in Clemson's psychology department and at the CU-ICAR. The partnership allows for the study of new engineering applications, including the use of devices for drivers who can't operate a vehicle using their feet. The engineering research is led by Paul Venhovens, the BMW Endowed Chair in Automotive Systems Integration.



Master of Fine Arts

Graduate student thesis exhibitions in the Lee Gallery
9 a.m. - 4:30 p.m. Monday through Friday.

October 31 – November 11

Function and Fragments, functional ceramic work by Ernst Meyer and prints by Kristina Falotico.

November 14 – 30

Touchy Feely, prints by Andrew Daly and mixed media sculpture by Todd Stewart.

December 5 – 16

Spatially Considered, multimedia works by Zane Logan and Tom Schram.

All exhibitions in the Lee Gallery are free.

Pictured left: *Stacked Glass*, plastic cups, tempered glass, wood, plexiglass, fluorescent lights, dimensions variable, by Tom Schram 2010. Schram's work will be featured in the October issue of *Sculpture* magazine.

Brooks
Center
for
the
Performing
Arts

The ARTS at CLEMSON UNIVERSITY

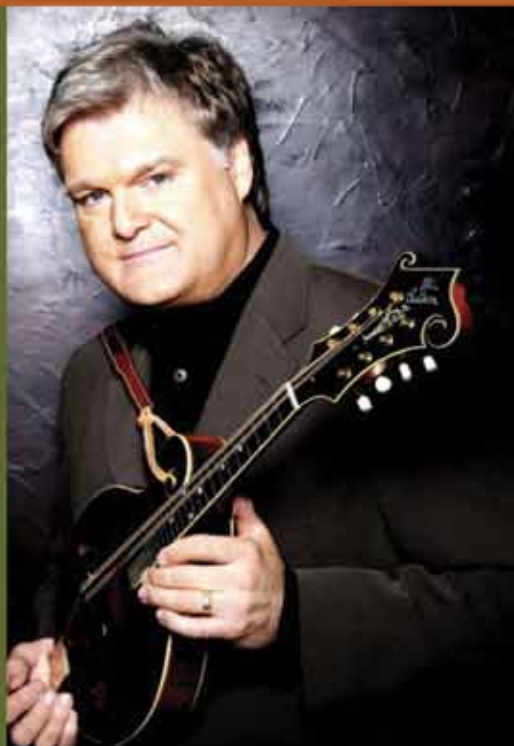
More than 800 works of art and 75 performances this year. Make your picks, find your seats, and follow us online at clemson.edu/brooks and clemson.edu/cva. Or connect with us on Facebook: look for the Brooks Center for the Performing Arts and the Center for Visual Arts at Clemson.

Brooks
Center
for
the
Performing
Arts

Ricky Skaggs Family Christmas

Monday, November 28, 8 p.m.
\$35 adults/\$20 students

Virtuoso multi-instrumentalist Ricky Skaggs and the celebrated musical clan, The Whites, and their families perform Christmas classics as well as new holiday gems. Now in its fifth year, the Skaggs Family Christmas tour offers a single statement of love, friendship and faith for the entire family to enjoy.



Teaching at its *best*



Construction science and management student Amey Satam consults with professor Christine Piper.

Clemson's faculty development center focuses on Teaching with a capital T.

by Liz Newall

We all know about Clemson's drive to become a top-20 public research university. But you may not realize that **Clemson is already ranked at No. 12 among national doctoral universities — public *and* private — in its commitment to undergraduate teaching.**

That ranking by *U.S. News & World Report* (2011 guide to "America's Best Colleges") is backed by findings from the National Survey of Student Engagement (NSSE).

The annual survey — given to freshmen and seniors — has five benchmarks of effective educational practice.

Over the past few years Clemson has outscored its competition, both regional public university peers and those classified as Carnegie peers, in nearly every benchmark comparison on the survey.



Performing arts professor Mark Charney and students review script in the Bellamy Theatre.

- help instructors select the most effective teaching approaches for their students' learning outcomes, and
- ensure valid and reliable assessments of teaching and learning.

A tall order for sure. But since it was established in 1998, that's exactly what it has done. Easy to believe once you meet the founder and director, Linda Nilson, a whirlwind of enthusiasm, experience and expertise. When Clemson administrators set out to establish a center for faculty to get teaching and other professional support more than a decade ago, they went after the best person possible to lead the effort. Lucky for Clemson, they found Linda Nilson, a leader in higher education teaching.

The Clemson edge

The NSSE benchmarks of effective educational practice are straight to the heart of what higher education should be: academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences and supportive campus environment.

Why do Clemson students rank the University high in these key academic areas?

The simple answer is Clemson faculty.

Of course, there's nothing simple about being an outstanding teacher. Technology is always advancing; psychology is opening new ways of thinking; society and culture are constantly creating new trends and needs. And the students themselves are a varied and subtly shifting audience.

Not only are faculty charged with staying up on the latest in their individual fields, they are challenged to present the subject matter to students in a way that engages them and makes them partners in their education.

What gives Clemson faculty their edge? Another simple answer: the University's unwavering commitment to undergraduate teaching. A strong background and continuing development in their specific fields are givens for faculty. But Clemson's Office of Teaching Effectiveness and Innovation helps them become the best teachers they can be.

The Office of Teaching Effectiveness and Innovation (OTEI) provides leadership to

- keep Clemson on the cutting edge of teaching excellence and innovation,
- foster communication, understanding and a sense of community between teachers and learners,

Nilson is author of several must-reads for college faculty — *Teaching at Its Best: A Research-Based Resource for College Instructors*, now in its third edition, and *The Graphic Syllabus and the Outcomes Map: Communicating Your Course*. She has written many more publications on university-level teaching and is a frequent presenter at national and international conferences on teaching skills and faculty support in higher education.

Through her guidance, Clemson's OTEI serves entire academic units through consultation and providing faculty and teaching assistants with tailored workshops on a variety of teaching issues and skills in their areas. Individual faculty and graduate students can get similar services — workshops; consultations; class interviews, observations and videotape reviews; and assessments.

"Few faculty in the U.S. ever received any training in teaching while they were in graduate school," Nilson explains. "Faculty development centers like Clemson's OTEI not only make up for that lack, but also draw on the latest research on college-level teaching and learning to sharpen and constantly update the faculty's repertoire of strategies.

"This research has increased exponentially in the past few decades. There's plenty of new knowledge to share. And Clemson faculty want it and use it. It's not surprising that we rank so high in commitment to undergraduate teaching." Nilson adds, "I design new services and programs to meet whatever professional needs the faculty may have. I'm gratified that they feel free to request them."

Student-centered, learning-focused

Last semester, the office offered approximately 50 workshops, panels, discussions and presentations. They ranged from "Finding Teaching Gems on the Web" to "Active Learning Techniques" to "New Faculty: You've Survived. Now Thrive!"

Nilson leads many of the workshops herself but also recruits outside experts as well as seasoned Clemson faculty, who credit much of their teaching success to OTEI.

Mary Ann Prater, Clemson alumna, accounting professor and this year's recipient of the Alumni Master Teacher Award, says, "Linda Nilson at OTEI works diligently to provide the faculty with resources to challenge us to become better at our craft. She's relentless in her pursuit of excellence in the classroom. I know that her guidance and OTEI resources helped me become a better teacher."

Fran McGuire, parks, recreation and tourism management professor, agrees. "OTEI, through the efforts of Dr. Nilson and the many faculty who have led workshops, has been in the forefront of keeping teaching a priority at Clemson." McGuire is an Alumni Distinguished Professor, Class of 1939 Award for Excellence in Teaching recipient, former Faculty Senate president and co-founder of the Osher Lifelong Learning Institute at Clemson.

"When I arrived at Clemson, I would come into a class, open my notes and lecture for 50 minutes, rarely making eye contact with the students and seldom succeeding in engaging them in their own learning," he recalls.

"Attending OTEI workshops changed not only my style of teaching but also my philosophy of teaching. My approach became student-centered and learning-focused, much to the



OTEI director Linda Nilson leads teaching workshops for new and seasoned faculty.

benefit of the hundreds of students who have attended my classes."

This approach shows up consistently throughout the Clemson experience. The same *U.S. News* report that recognized the University for its commitment to undergraduate teaching also identified Clemson as a top school in Writing in the Disciplines, Learning Communities and Up-and-Coming National University categories.

"Clemson faculty are committed to teaching," says Nilson. "They're savvy and open, and they're willing to change in order to engage their students. The students — the reason we're all here — are the real benefactors."

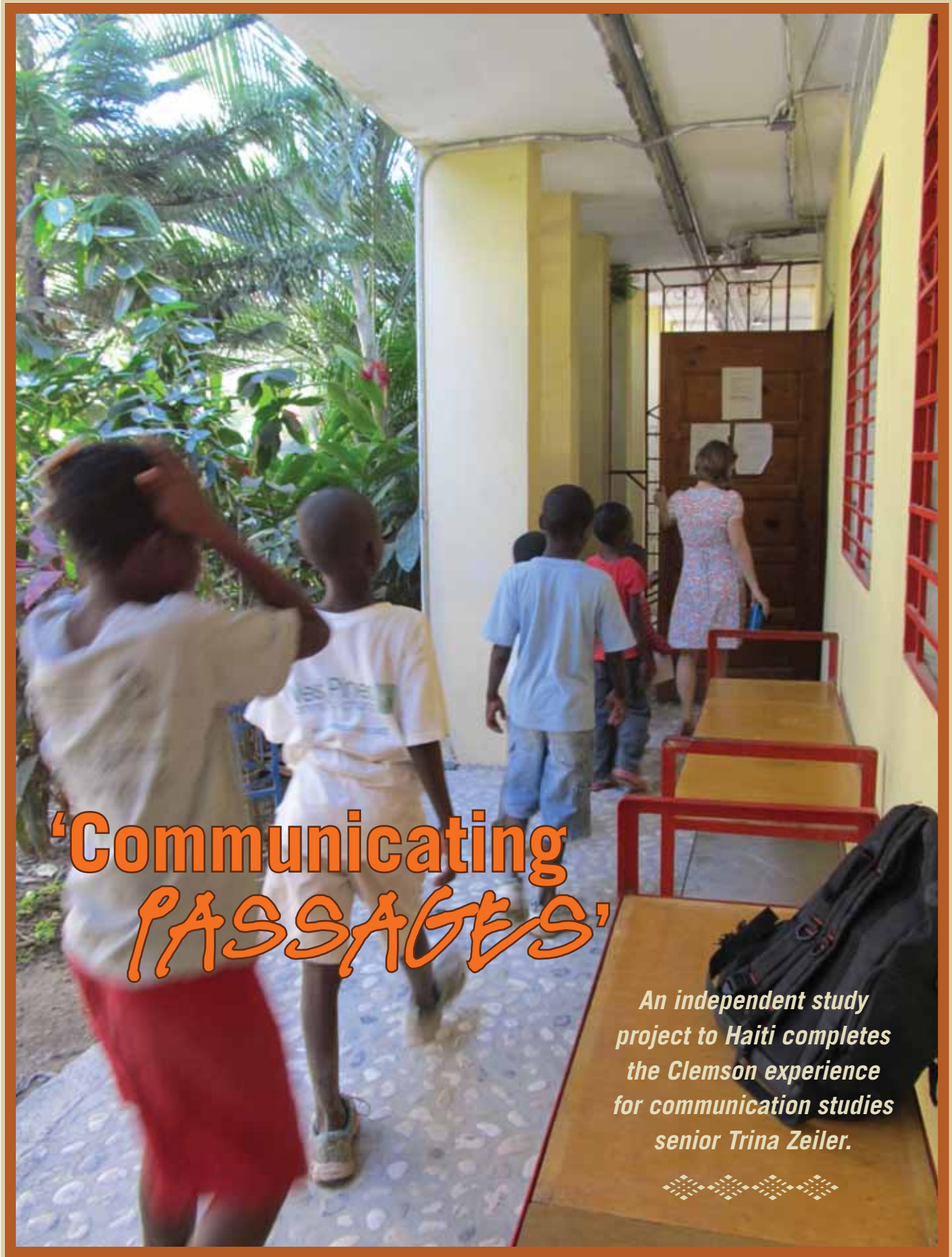
In addition to promoting teaching excellence, OTEI provides a safe haven for the Clemson teaching community to discuss issues related to career development and faculty review preparation. It also offers services to facilitate funding activities, research, scholarly writing, publishing and the overall career success of the faculty and graduate students. For more information, go to clemson.edu/OTEI.



PRTM professor Fran McGuire and students engage in small-group discussions.

The Will to Lead campaign supports faculty!

The Will to Lead: A Campaign for Clemson is an effort to raise more than \$600 million in support of Clemson students and faculty by July 2012. Students and faculty are at the heart of everything we do at Clemson. Our support for them is vital. Every day, bold thinking turns into breakthroughs thanks to our students and faculty, whose innovations improve our quality of life and drive our economy. To learn how you can be a part of the Will to Lead campaign, go to clemson.edu/giving. Or see the insert in this issue.



'Communicating PASSAGES'

*An independent study
project to Haiti completes
the Clemson experience
for communication studies
senior Trina Zeiler.*



W

hen students and faculty collaborate, sometimes it's like the chicken and the egg; it's hard to know where the best ideas first come from. But the results are what set apart the Clemson experience.

For example, Katrina "Trina" Zeiler, a 2011 communication studies graduate, wanted to culminate her senior year with an independent project that would bring together her studies, personal interests and something near to her heart. She collaborated with communication studies faculty Cheryl Lossie. And somewhere along the way came the idea for Zeiler to travel to Haiti during spring break and volunteer with The Haitian Project at their Louverture Cleary School alongside her sister Kristen, a 2009 Clemson elementary education graduate. Of course, making it happen took a bit more work.

Both the faculty member (Lossie) and student (Zeiler) briefly describe the experience from their own points of view.

Cheryl Lossie — the academic process

An independent study allows a student to explore "special interests or projects in communication studies outside the scope of existing courses." **Trina, a student I'd had in my communication and conflict management class, approached me about an independent study. She wanted to finish her senior year by digging into something that was personally meaningful to her and bring the concepts of communication studies to life.**

We spent several months, even prior to the semester, determining what the learning experience and application might look like. We decided she would explore the various aspects of the Haitian culture through the eyes of communication studies, with the focus on the children and their culture, particularly at Louverture Cleary School, where her sister Kristen was teaching as a volunteer.

Trina actually hit the ground running with the academic side of the project the first week of the semester. We became aware of a funding opportunity to help support her travel and her service work while she was there during spring break. She quickly learned how to write a funding proposal and the various aspects of organizational communication involved in such an endeavor. Of course, when her request was not funded, she learned that not all funding proposals are, which means finding other sources to support our projects. While planning for the trip, she saw the various facets of intercultural communication, along with a wider range of organizational communication.

While in Haiti she had an opportunity to interview those responsible for the school, which gave her

firsthand insight into leadership communication. And, from her story, you can see that she learned about family communication, especially through the eyes of another culture. Finally, while Trina wrote about her experience for this story, she gained a new respect for and awareness of public relations.

One of the things I have always loved about my field of study is the meaning and the root of the word "communication." It is taken from the Latin "communicare," which means "to make common to many." Stanley Deetz, a well-known scholar in communication studies, made an important point about that when he said: "The notion of communication as 'to make common' has all too often been used as to make alike, rather than to understand the productivity of mutually holding our differences in relation to each other."

And, the one definition I have always appreciated the most is one taken from an old dictionary my mom gave me years ago, which defines communication as "forming connecting passages."

I believe that is the most important aspect of Trina's independent study. She wanted to know how the learning experience might change her and reshape her worldview. She wanted to know how the pictures and words in a text stood next to the real world they described. By creating those connections — forming the connecting passages and holding the differences she experienced — with faculty here at Clemson, in her readings about Haiti, in all of the details involved in organizing such a trip, her conversations with the school leaders and volunteers, her interactions with the children, she came to see the simple gifts of the presence of a child and the presence of those who choose to make service their life.

Trina's story — the experience

It's one thing to see a picture of a hungry child — hungry for food, education, a better way of life — in an appeal for help. But it's quite another to see the children face-to-face and to witness their lives.

My sister Kristen Zeiler experiences this firsthand while volunteering with The Haitian Project at their secondary boarding school, Louverture Cleary School (LCS).

Kristen volunteers in Croix de Bouquet, outside of Port-au-Prince, as a teacher. She uses her elementary education training from Clemson as well as her own passion for continual innovation in student learning. She primarily works with the Timoun Program ("timoun" is Kreyol for "children"), a daylong child development program for children ages 3 and up from the school's local neighborhood. It's one response to the devastating earthquake of 2010 when so many parents were giving over their children to the elements or to orphanages because, sadly, they felt unable to care for them in the midst of the turmoil.

The Haitian Project, which supports and operates LCS, is a Catholic mission providing tuition-free education, room and board for 350 qualified and disadvantaged students of Haiti who are dedicated to giving back to their country. The inspiration for the Timoun Program sprang from the school's emphasis on community and service, a reflection of their motto, "What you receive as a gift you must give as [a] gift." In this spirit, the LCS students volunteer regularly with the Timoun.

I was first captivated by the stories my sister shared of LCS before the earthquake and the ripples of positive influence the school was having in the country. That semester before the devastation, Kristin had begun teaching English to seventh- and eighth-graders. Versed in four languages (French, Kreyol, English and Spanish), most of the high school graduates go on to pursue college then professional jobs in Haiti. They pledge to use their education as a way to help rebuild their country. Most recently, the Timoun children have also benefited from the volunteer service of the older, educated counterparts of the high school. It's an enterprise that works to build lives and futures.

After months of planning my independent study with communication studies professor Cheryl Lossie, I left for Haiti during Clemson's spring break and arrived in a world apart from my own. Outside the airport in Port-Au-Prince there was true poverty. Garbage littered the streets. Homes were made out of nothing more than sheet metal, tarps and wire. There was little clean water, substandard food, and little of any of the modern conveniences I was so accustomed to in the States.

When I arrived at the school, however, I found an amazing opportunity to witness the academy of bright, albeit underprivileged Haitian students, all ready and eager to learn. Louverture Cleary School is situated on a two-acre campus in the neighborhood of Santo 5, a 20-minute drive from downtown Port-Au-Prince.

LCS is an educational haven for the 10- to 21-year-old boarding school students. I began to understand what Kristen meant by open-air classrooms, the mango tree canopy of the campus, the worn bench in the Palais (the school's administration building) where many a tired volunteer found rest. I finally met the enthusiastic students, and saw for myself the adorable Timoun children from the neighborhood standing proudly in front as the older LCS students held their morning assembly.

I learned and then taught the children a song in their native Kreyol. We created name bracelets and crafted musical instruments. And during quiet time, I held them and they melted in my arms. Seeing the children smile and celebrate my simple presence combined for an experience that has changed my life.



Trina Zeiler (far right) and Kristen Zeiler (first row, far left) with students and teachers at LCS.

The Timoun Program originally began as a way to provide needed support in caring for children in the LCS neighborhood. Christina Moynihan — with her husband, Patrick, and children — has committed the past 15 years to life with The Haitian Project and has continuously maintained communication between herself and the surrounding neighborhood outside the walls of LCS.

Families and working Haitians occupy the streets oftentimes as vendors of *fritai* (fried foods), sugar cane and bottled soda — the Haitian equivalent of a fast food market. Children occupy the streets often unsupervised. Moynihan would invite the children in this neighborhood to eat and play in the confines of LCS in the afternoons. Because public education is not free in Haiti, this was the only opportunity for these children to use a formal playground. As word has spread and as the program has evolved, the tiny group of Timoun children, aged 2 through 13, has grown to 60, a testament to the need of this development center.

I was once told that a single day at Louverture Cleary can change any visitor for the better, and my visit over this past spring break affirmed that.

Under the guidance and support of Dr. Lossie and the communication studies department, my journey through this experience culminating my four years of college has changed my worldview. My gratitude also goes to the generous invitation of The Haitian Project that made the trip to Louverture Cleary School possible. 🌍

For more on *The Haitian Project*, go to haitianproject.org.

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Students' CI project to save lives in developing world

by Karl Hill





Clemson students embrace projects with life-changing impact.

In developing countries, advanced medical technology might not be what the doctor ordered. Sometimes it's better to have a simpler device that works — and that can be made and repaired locally.

A team of Clemson students has engineered a low-cost alternative to neonatal incubators to help bring down high infant mortality rates in Tanzania and other countries where high technology and economic realities are at odds.

“They do have some incubators that have been donated, but typically they are older models, and they aren’t being used because they have broken,” says Britton McCaskill, one of three bioengineering seniors who traveled to Tanzania in January for firsthand research. “Once an incubator breaks, they can’t fix it because the parts aren’t available.”

That was the challenge the students took on, first as a project in an instrumentation class taught by Delphine Dean, bioengineering professor. It grew into an honors thesis and then into a continuing Creative Inquiry (CI) project that has broadened to explore other opportunities for engineering biomedical devices that are affordable and effective for the developing world.

From classroom concept to foreign hospital

The students designed and built a temperature sensor device coupled with a warming blanket to keep a premature baby at the right temperature. It has three LED indicators — for too cold, too hot and OK — a thermostat that will turn the blanket off when the temperature gets too high, and an alarm that sounds when the baby is too cold.

“It’s a very basic analog system,” McCaskill says. “The inspiration was to design something they can produce there, from locally available parts.”

The infant mortality rate in Tanzania is 10 times the U.S. rate. Without working incubators, the hospitals heat the Neonatal Intensive Care Unit (NICU) itself to about 40 degrees Celsius, over 100 degrees Fahrenheit.

“It’s hot and humid and really conducive to growing bacteria,” says Dean. “It’s a small room and the babies are close together, so when one baby gets sick they all get sick. The urban hospital we visited in Tanzania lost 30 of the 36 premature infants in its NICU during one week last year.”

Students witnessed conditions firsthand and talked with leaders in urban and rural hospitals in Tanzania during their visit. The trip was in collaboration with a Medical University of South Carolina team led by Dilantha Ellegala, a neurosurgeon who founded the Madaktari Africa Program to train physicians in Africa.

“It was serendipity,” Dean says. “They contacted me about the need for instruments designed for the conditions there in Africa, and it happened that I had these students already working on this device.”

The results are devices designed by Clemson students that will provide a healthy alternative and one that the hospital’s nurses and the babies’ mothers can easily learn to use.

Back at home

Of course, the Clemson students' lives are changed too.

The experience helped McCaskill, who is now working on a master's degree in bioengineering at Clemson, discover a passion for "designing and building devices" that help people — "the engineering part of bioengineering, more than the biological, cell research part."

Teammate Lauren Sosdian will be in graduate school at Oxford University in England this fall, studying management and biomedical engineering. Marci Elpers, another participant, expects to be at the Hospital for Special Surgery in New York, working on the implant retrieval system in the biomechanics department.

In the meantime, Dean is planning and seeking funding for a return trip to Tanzania with her CI students. "We are working on a production prototype, and we hope to have about 100 to take with us," she says.

Although some students who initiated the project have graduated, other students have joined the CI team and continue to improve the device — they're creating a version with sensors to monitor heart rate and blood oxygen levels, for instance — and exploring other ways of designing medical devices for developing countries. They are also working on a handmade cervical collar, a brace used to stabilize the neck.

Creative Inquiry — hallmark of the Clemson experience

The Tanzanian project, which Dean co-mentors with bioengineering faculty member John DesJardins, is one of four CI teams that she directs or co-directs.

Another is re-engineering of medical training simulators. Like the Tanzanian project, this is a collaboration with the Medical University of South Carolina. The student team, mentored by Dean and bioengineering colleague Jiro Nagatomi, is working to reverse-engineer and improve commercially available simulators used in training medical students and interns to do specific procedures.

And other, very different, but equally ambitious CI projects abound. In the humanities, a project led by English professor Susanna Ashton to collect and publish slave narratives of South Carolina resulted in the publication of *I Belong to South Carolina: South Carolina Slave Narratives*, selected by *Choice* magazine as an Outstanding Academic Title for 2010.

In a computer science CI project, students led by computer science professor Roy Pargas developed Clemson's campus tour iPhone application, which offers visitors and prospective students an interactive way to learn more about buildings and landmarks on Clemson's campus, watch video clips and get directions through GPS navigation.

As the result of a performing arts CI project, Clemson's resident playwright and director of theater Mark Charney received a national playwright award given by the Kennedy Center American College Theatre Festival, the Association for Theatre in Higher Education and Dramatic Publishing Co. in recognition of his drama *The Power Behind the Palette*, which featured Clemson students.

The CI initiative covers all majors and engages small teams of undergraduate students in research and problem-solving projects of all sorts, which typically span several semesters. The projects are student-driven, and team members often find themselves presenting their work at national conferences or in a foreign country.

They take ownership of their projects as thinkers, leaders and entrepreneurs. In the process, they gain real-world experience, make professional connections and often find a lifelong calling. 🌐

To learn more about Creative Inquiry, go to clemson.edu/ci.



Supporting Creative Inquiry

Phil and Mary Bradley made the first major gift to the Creative Inquiry Initiative several years ago — the Phil and Mary Bradley Award for Mentoring in Creative Inquiry.

The award has since supported the CI work of five outstanding Clemson faculty: Delphine Dean in bioengineering in 2011, June Pilcher in psychology in 2010, Karen Kemper in public health sciences in 2009, Susanna Ashton in English in 2008 and Mark Charney in performing arts in 2007. And the Bradleys have given much additional support to the initiative, making an impact on many more Clemson CI students and all who benefit from their work.

Learn how you can support Creative Inquiry by going to clemson.edu/ci and clicking on "giving" or call program director Barbara Speziale at 864-656-1550.



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Biofuels research

— *cooking up new technologies*



Clemson scientists are hot on the trail of greener, better biofuels.

by Peter Kent

When it comes to technology and science, many of us are like diners in a gourmet restaurant. We enjoy what's on our plates but are nearly clueless about the cooking the chefs do in the kitchen.

One of the essential ingredients for technology is oil – and it is running out. We need to find substitutes. Otherwise the dishes on the technology menu are going to cost more and be far fewer than we need.

At Clemson the search for oil substitutes is, well, energetic. Researchers are cooking up a storm. Let's look in the kitchen.



Peach power and other Clemson-grown fuels

What do rotten peaches smell like? Money.

Biosystems engineer Caye Drapcho is working on converting tons of culled peaches into hydrogen gas, a biofuel for powering a post-petroleum world.

“South Carolina produces about 200 million pounds of peaches each year, but 10 percent of that crop, about 20 million pounds, is wasted,” says Drapcho. “So, by using bacterial cultures, we can convert that waste resource into energy and deliver added value to the growers.”

The nation is going to need a number of alternative energy sources to move past our dependence on oil.

South Carolina uses nearly 2.5 times more energy than it produces, according to U.S. Energy Information Administration 2008-09 data. While the state does not have oil, natural gas or coal resources, Clemson researchers are working on “growing” other fuels.

Biofuels are renewable energy, many of which are liquids produced from plants and animal fats. The two most well-known biofuels are ethanol and biodiesel.

Ethanol is a clear alcohol used primarily as an additive to gasoline. Biodiesel is manufactured from vegetable oils, animal fats or recycled restaurant grease. Blends of 20 percent biodiesel with 80 percent petroleum diesel (B20) are used in many diesel engines. Biodiesel can also be used in pure form (B100) but may require engine modifications.

Clemson agronomist Jim Frederick is outstanding in his field. Acres of switchgrass grow at the Pee Dee Research and Education Center in Florence where Frederick studies the native, perennial, drought-tolerant plant that produces a high yield and is inexpensive to manage.

“Switchgrass is proving to be a well-adapted crop to the dry soils of South Carolina and one for which there appears to be a rapidly growing green-energy market,” says Frederick.

Pee Dee researchers have teamed with a Charleston company to supply switchgrass to European power plants as a substitute for coal to generate electricity. The company expects to initially ship more than 100,000 tons of switchgrass a year beginning in 2012. The estimated value of the sale is more than \$10 million a year to S.C. farmers.

In addition, the Pee Dee scientists are studying other crops as potential biofuels, including Miscanthus perennial grass, corn stalks and trees.

Sorghum is another crop that has more uses than just making the dusky, sweet syrup.

Genomicist Alex Feltus (pictured left) is analyzing 400 varieties of sorghum — also a grass — to identify the ones most easily converted into fuels. His research includes sorghum plant breeding and helping bioenergy producers improve the sugar-to-fuel conversion process.

Fast-growing poplar trees also hold potential as a fuel-stock but require costly pretreatment prior to processing into ethanol. A sticky material in the cell walls, called lignin, impedes processing, but Clemson geneticist Haiying Liang is working to breed poplars with less lignin so they can be processed more easily.

Right tools, catalysts and know-how

Every year, four million tons of green energy go unused in the Upstate. **Clemson Extension forestry researchers are part of the Western Piedmont Woody Biomass Marketing Committee helping 11 Upstate counties find ways to use woody biomass to generate steam, heat and electricity.** This would turn waste materials from timber harvests and sawmills into renewable energy.

Biosystems engineer Terry Walker is leading research on biofuels processing using a state-of-the-art mobile processing unit. “The processing plant not only gives us a valuable research tool for working with plants, microbes and waste oils but also can demonstrate biofuels production for local producers, bioenergy industrial partners and the public,” says Walker.

If you get a vague whiff of French fries or fried chicken from the diesel truck ahead of you, it may be from biodiesel. Oils used to cook many fast-food menu items can be recycled to diesel fuel, but the production process has drawbacks.

Chemical engineer Jim Goodwin Jr. leads a team to find a more efficient catalyst to improve production and decrease costs.



“Clemson targets both research into new energy technologies and deployment in the real world.”



The process of converting vegetable oils or animal fats to diesel fuel is not new, says Goodwin. "Biodiesel fuel has been produced and tested for years as an alternative to petroleum-based diesel fuel. We are looking for a better catalyst for the process."

A catalyst speeds up a chemical reaction that would occur naturally, but at a much slower rate.

The biodiesel process now primarily uses a liquid catalyst — sodium hydroxide or lye — that can be corrosive to equipment and forms soap as a byproduct, requiring more expensive separation. Goodwin's research team is focused on developing solid catalysts.

"Solid catalysts do not need to be removed because they do not mix with the biodiesel product," says Goodwin, adding that materials being researched are not corrosive, thus reducing wear and tear on production equipment.

Fill'er up with green

In labs across South Carolina, scientists are teaming up to find ways to create a new fuel to replace gasoline in cars and light trucks.

Some components boggle the imagination: living microbes that, when stimulated with electricity, turn carbon dioxide into an alcohol-based fuel called butanol. Clemson chemist Stephen Creager and microbiologist Mike Henson are part of a statewide research team working on this project.

Ethanol is currently being used as such a fuel. However, the scientists have higher hopes for butanol, which they say could meet the needs of current passenger and other light vehicles.

"Our research focuses on the bench scale and will provide insight into how to produce it at the commercial level," says Creager, chemistry department chairman.

In June, Clemson signed a Memorandum of Understanding to conduct biofuel research with the University of Queensland in Australia. The collaboration will develop strategies to support energy independence, economic development, fuel production and agricultural revenues in South Carolina and Queensland.

Another interdisciplinary project, funded by the U.S. Department of Energy, created the S.C. BioEthanol Collaborative. The research team brings together scientists from the Savannah River National Laboratory with Clemson biosystems engineer Terry Walker, microbiologist Mike Henson and bioengineer Sarah Harcum to investigate methods to convert switchgrass, sorghum, loblolly pine and other biomass to ethanol.

"We're on the right track," says John Kelly, Clemson vice president for economic development. "To move forward we must bring research from the laboratory to the market.

"Technologies tend to rise in performance and fall in cost when they are commercialized. **Clemson targets both research into new energy technologies and deployment in the real world. It's the interplay between scientists and entrepreneurs that drives innovation, creates new jobs and builds our economy.**"

That's a recipe for success. 🌍

For more on biofuels research at Clemson, go to clemson.edu/public, click on "Search PSA" and enter "biofuel" in search box.



Agronomist Jim Frederick (center) in a switchgrass field with entomologist Francis Reay-Jones (left) and technician T.J. Savereno at the Pee Dee Research and Education Center.

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1. Colombia

*Herb '61 and *Kathie Rowland at the Plaza Santo Domingo, Cartagena



2. Ecuador

*Bo '61 and *Lillian Strickland with a giant tortoise on the Galapagos Islands



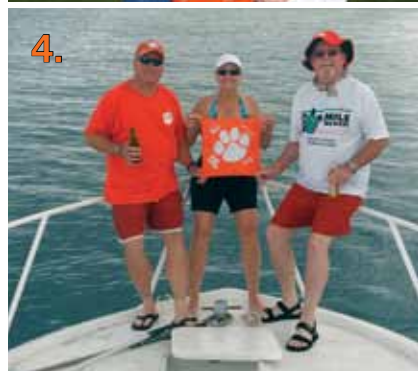
3. England

Paul '69 and Ginger Stith at Stonehenge



4. Aruba

*Larry '74 and *Cindy Sloan, and *Ed Evans '72 on a scuba diving vacation



5. Panama

*Michael H. Davis '74, M '76 and *Debra Bernier-Davis at Volcan Baru



6. Afghanistan

Sgt. Kimberly Dixon '00, Sgt. Maj. Michael Hall '74, Lt. *Frank Rice '87 and 1st Lt. Jon Oliver '97, S.C. Afghan Agri-business Development Team of S.C. Army National Guard, on their way home!



7. Italy

*Jon Craig Hovermale '75 and son, Clemson freshman *Thomas, with their Tiger Rag in Rome



8. Spain

Will '01, Zeke '75 and *Adam '04 Zamorski at the summit of the Peñon de Ifach, Calpe



9. Cayman Islands

*Wanda Heffelfinger '76 with a stingray!



10. Honduras

Steve Hunt '77 on a mission trip to install water filtration systems for Water Missions International



11. China

Mark Robnett '79 and Barbara Robnett Gallion '83 show Tiger pride in China.



12. Afghanistan

Capt. Justin Mastrangelo '06, Col. *Lewis Jordan Jr. '85 and Capt. Whit Nanna '06, all with the U.S. Air Force, outside the Pat Tillman USO

For more Clemson World Travelers ...

If you sent in a Clemson World Travelers photo earlier this year, but haven't seen it in print, go to the online version at clemsun.edu/ClemsonWorld/travelers.

You can post your own Travelers photos on the Clemson World Magazine Facebook site at [facebook.com/clemsonworld](https://www.facebook.com/clemsonworld). Or send them, with a brief description, directly to Sallie Culbertson at sleigh@clemsun.edu.



14.



18.



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21.



24.

13. Brazil
*James M '90, PhD '94 and *Lynn Bailey '89, M '94 Klett at the Christ Redeemer Statue, Rio De Janeiro

14. Colorado
Evan Cohen '09 and Mark J. '92 and Ava Nyland in Vail where Evan, by chance, was Ava's ski instructor

15. Mexico
Bruce L. Anneaux '93, M '00, PhD '06 diving with the whale sharks near Isla Contoy

16. New York
Nicole Torielli '98, Chad Malkus '94, Erik Yost '93, Joe Torielli '97, Matt Carmody '98 and their families aboard the USS Intrepid Aircraft Carrier Museum in front of the Tiger Jet

17. Jamaica
Adam McFarlane '03, Matthew Garvin '02 and student Jay Hastings display the Tiger Rag at The Pelican Bar

18. Africa
Lauren Coggins '04 on a mission trip in Kenya

19. Italy
*Trey '04 and *Ashley '04 Landis at the Coliseum, Rome

20. Belize
Stephanie Smith '04 and *Tom '05 Raspet on their honeymoon in San Pedro

21. Brazil
Billy Koll '05 in Paraty

22. California
*Jessica Barron Martin '07, M '09 and Peter Barton '08 on a biking trip over the Golden Gate Bridge to Sausalito

23. Missouri
Changhong Zhang PhD '08 and Siqiang Zhu PhD '07 met by chance in Joplin helping tornado survivors.

24. India
Rena Hasegawa '08 at the Taj Mahal in Agra

*Active Clemson Fund donor for 2011 Fiscal Year (July 1, 2010 – June 30, 2011) through May 31, 2011. For more information, call Annual Giving at 864-656-5896.

CW Travelers

25. Africa

Julie Gerdes '09, a Peace Corps volunteer in Namibia



26. Arizona

Kelli Resler '10 and **Caitlin Stein '09** hiking Camelback Mountain, Phoenix



27. Nicaragua

Brittany Elise Carson '10 with fellow Clemson family members on a medical mission trip



28. Africa

***Jamie Coker '10**, with lion rehabilitation program ALERT and a new friend in the African Savanna



29. Glacier National Park

Zac Eagan '10 at the summit of Mount Cleveland



30. South Africa

Heather Nelson '10 on a mission trip in Masealama



31. Florida

***Joshua Lopes '11** and student **Lindsay Thomas** at Disney World



32. Texas

Duff Duffield, student, and ***Rich Saunders**, history professor, at Solis on the Rio Grande, Big Bend National Park



33. Rome

Andra Tisdale and **Vandy Hall '02** at the Arch of Constantine near the Coliseum



34. China

Tanju Karanfil, professor and department chair of environmental engineering and earth sciences, at the Great Wall of China



35. Texas

Eva Stalnaker, former Clemson professor, and son, **Gunter Ben**, with George W. and Laura Bush in Dallas





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With 62 Clemson Clubs across the U.S., you're never far from fellow Tigers. To find the club nearest you, go to clemson.edu/alumni and click on "Clemson Clubs" under "Groups." Or to start a Clemson Club in your area, contact Reed Cole at 864-656-2345 or rcole@clemson.edu. Special note to Savannah-area alumni, we're updating and recharging the Savannah Clemson Club. Contact us for the latest on your club.

Clemson, a click away

Get the new **Alumni App** for your smartphone at clemson.edu/alumni/app. It fits platforms for iPhone, Blackberry and Android phones and has a Web browser version, too.

Take advantage of the **Alumni "Tracking Tigers" Dashboard** and follow Tiger numbers by college, decade, location and more. Find it at clemson.edu/alumni/dashboard.

Get **Alumni RSS Feeds** for up-to-the-minute alumni news and event opportunities. Subscribe to the three recently launched RSS-feeds for Alumni News, Alumni Events and *The Echo* from the Alumni homepage.

Update **Your Network** today. Take a moment to log in, or register for the first time, on our website (clemson.edu/alumni) and update your Employer Information in your alumni profile. This will allow you to connect with other alums within your company or field of work.



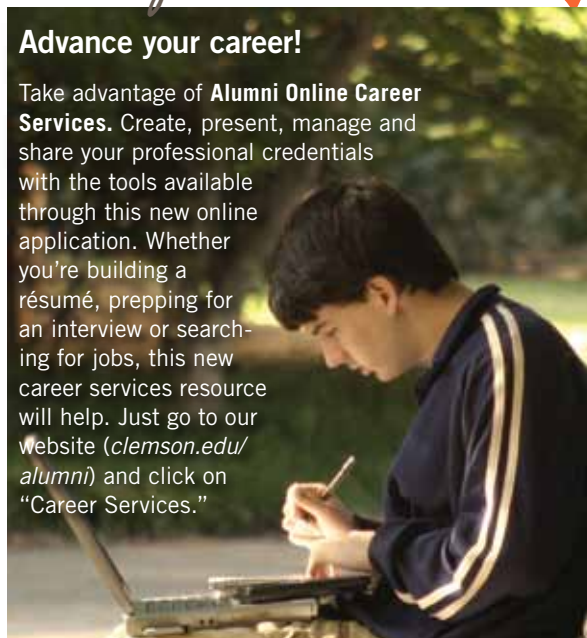
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Do business with Clemson alumni and friends

Your Alumni Association is offering a great new online business directory service — The Clemson Pages — a Web-based service that helps the Clemson Family find, support and promote businesses of other Clemson Family members.



The Clemson Pages features quick searches by ZIP code, by city/metro area, by county, by category, by name A-Z and by newest members. It spotlights various businesses and encourages all to advertise on the very site that Clemson people are searching!

For more information, go directly to the site at www.theclemsonpages.com or contact the Alumni Center at 864-656-2345.



Visit our Hear Us Roar Store for the latest in Clemson gifts and goodies at hearusroarstore.com.

Meet your new directors



New Alumni Board members from left are Larry Sloan, Sonya Ables, Wayne Bell, Thompson Smith, Todd Ballew and Tigie Garick.

New directors on board

The Clemson University Alumni Association Board of Directors welcomes six new members. The board has 22 members and is the governing body for the Clemson Alumni Association.

Sonya Ables of Greenville, a 1979 graduate in English and Spanish, is an at-large member of the Clemson Alumni Council and an IPTAY Life Member. She's a past president of the Women's Alumni Council, past chairperson of the Greenville Women's Alumni Council chapter and past member of the Alumni National Council.

Todd Ballew of Buford, Ga., a 1991 marketing graduate, works in business development for Heery International in Atlanta. He's vice president for the Atlanta Clemson Club and regional IPTAY representative chairman. He's a Clemson Library Ambassador, member of the Legacy Society and Leadership Circle, and member of the Tiger Letterwinner's Association.

Wayne Bell of Greenwood, a 1968 industrial management graduate, is an active community volunteer since retiring from IKON Office Solutions. He's a member of the Alumni Council, an alumnus of Numeral Society Fraternity, IPTAY chairman for Greenwood County and past president of his Clemson Club. Bell played for Coach Frank Howard on the 1965 and 1966 ACC Championship football teams.

Tigie Garick of Birmingham, Ala., a 2003 marketing graduate, works for the James M. Pleasants Co. in the commercial HVAC industry. He's president of Clemson Young Alumni Council and mentor for the CBBS Tiger Ties Program. He's past president of the Greenville YA Club, past YA representative for the Western N.C. Clemson Club and a board member of the Birmingham Clemson Club.

Larry Sloan of Clemson, a 1974 mechanical engineering graduate, is retired chief executive officer of Electrical Power Products. A Clemson Distinguished Service Award recipient, he's founder and board member of CUTBA (Tiger Band Association) and videographer and chaperone for Tiger Band. He's a past president of the Greenville Clemson Club, IPTAY Life Member and a college chair in the Will to Lead campaign.

Thompson Smith of Pelzer, a 1975 agricultural education graduate, is district director for the S.C. Farm Bureau. He's a member of Alumni Council, past president of the College of Agriculture, Forestry and Life Sciences alumni board and past chair of its golf tournament. He was a special appointee to the Alumni Task Force where he served on the Honors and Awards Committee.

The 2011-12 Clemson Alumni Association Board

James A. "Jimmy" Kimbell III '87, president, Anderson, jimmy.kimbell@bankanderson.com

Ann W. Hunter '80, M '82, president-elect, Greenwood, ann.hunter@alumni.clemson.edu

Leslie D. Callison '81, past president, Lexington, lescal59@aol.com

Sonya Ables '79, Greenville, ables1998@aol.com

Todd Ballew '91, Buford, Ga., tballew@heery.com

Wayne Bell '68, Greenwood, wbell89@gmail.com

Janine A. Bowen '89, Stone Mountain, Ga., jbowen@jack-law.com

Teresa S. Coles '84, Lexington, riggsadvertising.com

Charles Dalton '64, IPTAY, Greenville, charles.dalton@blueridge.coop

Sandy Edge '72, Clemson, sedge@clemson.edu

Tigie Garick '03, Birmingham, Ala., tigie.garrick@alumni.clemson.edu

Danny E. Gregg '77, Clemson, dgregg48@gmail.com

Jessie R. Hood '94, Atlanta, Ga., jessierichardson@alumni.clemson.edu

Andrea MacMeccan '99, M '00, Greer, amacmec@alumni.clemson.edu

Harry G. Moore Jr. '70, Richmond, Va., harry.moore@alumni.clemson.edu

Larry Sloan '74, Clemson, larrysloan@elecprodsales.com

Thompson Smith '75, Pelzer, stonebroo@aol.com

Jane S. Sosebee '78, Clemson, jane.sosebee@att.com

Evan Vutsinas '79, Old Hickory, Tenn., evtiger@comcast.net

Lynn West '84, Charleston, west84@alumni.clemson.edu

Ex-Officio members include:
Leon J. "Bill" Hendrix '63, Clemson Board of Trustees
Kiawah Island

Wil Brasington '00, Alumni Relations senior director
Clemson, wil@clemson.edu

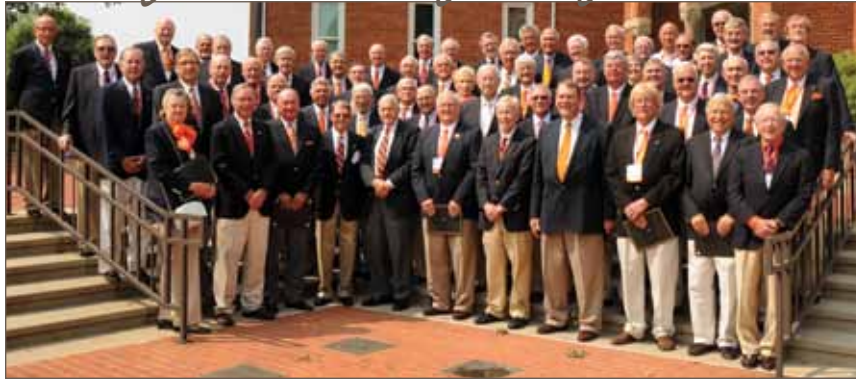
Brian O'Rourke '83, M '85, Development and Alumni Relations executive director
Clemson, orourke@clemson.edu

Call for nominations

We need your help in selecting outstanding alumni for the Clemson Alumni Association Board of Directors and Alumni Council as seats become open. We're looking for candidates with exceptional judgment, strong work ethic, leadership qualities and the vision to advance the goals and objectives of the Alumni Association. To nominate a candidate, go to cualumni.clemson.edu/boardnominations.



Having fun and getting it done



Class of '61 — Golden!

The Class of 1961 celebrated its golden anniversary during 2011 Reunion Weekend in June. For more on the class's generosity and impact on the University, see p. 46. To see photos from the many reunion events, go to clemsont.edu/alumni/reunion.

SAC selects Alumni Master Teacher

The latest Alumni Master Teacher — Mary Ann Prater — fits the title in more ways than one. Prater is a senior lecturer in Clemson's School of Accountancy and Finance in the College of Business and Behavioral Science, and she's a 1978 alumna! The Alumni Master Teacher Award for outstanding undergraduate classroom instruction is presented to a faculty member nominated by the student body and selected by the Student Alumni Council (SAC).

Prater teaches intermediate accounting and is a career and an academic adviser. She recently was named the first recipient of the Extraordinary Educator Award presented by the Nu Chapter of Delta Alpha Pi honor society for students with disabilities. Earlier this year she received the Blue Key Honor Society Outstanding Advisor Award. She's a member of Tiger Brotherhood and is past chairwoman of the Women's Alumni Council.



Students Phillip Westbrook and Lanie Hudson congratulate Mary Ann Prater.



D.C. breakfast

The **Baltimore/Washington Clemson Club** Board of Directors recently had breakfast with S.C. Congressman **Jeff Duncan '88**. To learn more about this club or the one nearest you, go to clemsont.edu/alumni and click on "Clemson Clubs" under "Groups."



It's a girl thing

Women's Alumni Council hosted another successful Bring Your Daughter to Clemson Weekend on campus in May with more than 200 participants who learned about college life in Tigertown and had a Solid Orange weekend of fun.

Alumni weekend of service

Clemson alumni clubs and groups across the country took part in community service projects as part of the National Weekend of Service last spring. **Nineteen clubs conducted service projects that supported organizations such as The Ronald McDonald House, a therapeutic camp for children, Habitat for Humanity, food banks, American Cancer Society and many more.** Alumni decked-out in Clemson orange gave numerous hours of service to these groups as part of a coordinated effort in its third year. This year, more than twice as many clubs participated than prior years.



Treasure Coast and South Florida Clemson Clubs make tigers for Children's Hospital.



Upper Pee Dee students get send off.

Tigertown Bound

The **Clemson Board of Visitors** and **Clemson Clubs** around the state hosted receptions and send-offs for graduating high school students headed for Clemson.

Senior Platoon continues legacy

The Senior Platoon alumni group's annual meeting held in April featured a visit from James Nampushi, a Maasai warrior studying at Clemson. For more information about the Senior Platoon, contact Sanford Smith at snsmiths@bellsouth.net or 864-585-1340.



Bill Bellamy '54 compares Clemson military days with Army ROTC cadet Wil Cutler.



CBAC honors Gantt scholars

Clemson Black Alumni Council (CBAC) hosted a reception for former and current Gantt Scholars earlier this year. Among other projects and fun events, CBAC raises funds in support of the Harvey B. Gantt Scholarship Endowment Fund. For more on CBAC, go to clemsont.edu/alumni and click on "Black Alumni" under "Groups."

Mark your calendar

Clemson Meal Clubs

Whether you live in the Upstate, Lowcountry or in between, the Alumni Association has a Meal Club for you. The Greenville Luncheon Club, Clemson in the Lowcountry (Charleston) and Second Century Society (Columbia area) meet four to five times each year for a fun meal and a Clemson-connected speaker. There's a one-time fee at the beginning of the year to cover meal costs, and planning is under way for upcoming meal gatherings from September through May. For more information, contact Reed Cole at 864-656-2345 or rcole@clemson.edu.

ARTREACH — Sept. 16

Clemson's Center for Visual Arts and the Clemson Advancement Foundation for Design and Building are hosting ARTREACH — Sept. 16, 8 p.m., Wyche Pavilion in downtown Greenville — to celebrate the artistic connections between Clemson and Greenville. It will feature a stunning light display, interactive digital art and more. For details, go to clemson.edu/cva or contact Kevin Human at human3@clemson.edu.



CBBS Family Weekend Reception — Sept. 23



The College of Business and Behavioral Science is hosting its Family Weekend Reception on Sept. 23, the Friday before the Florida State game, on the lawn outside of Sistine from 3 to 5 p.m. for students, families, alumni and faculty. For details, contact Kenna Sawdey at kenna@clemson.edu or 864-656-3626.

Fall Ring Ceremony — Sept. 29

During the spring 2011 Ring Ceremony, sponsored by the Student Alumni Association, 138 students received their Clemson rings at the Owen Pavilion. Any student who has earned 90 credit hours at Clemson is eligible to participate in the ceremony. Parents and friends are welcome to share the moment. For more information about the next ceremony, scheduled for Sept. 29, 2011, contact Stewart Summers at ssummer@clemson.edu or 864-656-5653.



Tigerama & Homecoming — Oct. 7-8

Plan to attend the 55th annual Tigerama Homecoming pep rally at Littlejohn Coliseum, sponsored by Blue Key, on Oct. 7 and enjoy the colorful student display competition on Bowman Field, sponsored by the Alumni Association. And, of course, cheer on the Tigers as they take on Boston College. See clemson.edu/alumni for the latest in game-day plans.



CAFLS Tailgate — Oct. 8

The College of Agriculture, Forestry and Life Sciences annual tailgate is also set for Homecoming. For details, contact Sennah Honea at schonea@clemson.edu or 864-656-8998.



English Tailgate — Oct. 8

Clemson's Department of English and English Majors Organization are hosting a Homecoming tailgate, too, in the breezeway between Daniel Hall and Strode Tower.



Tiger at the High Museum — this fall

Renowned wildlife sculptor and Clemson alumnus Grainger McKoy's art will be on exhibit this fall at Atlanta's High Museum of Art. Featuring more than 30 sculptures and drawings, the exhibit will run through Jan. 8, 2012. McKoy's "Recovery Stroke," dedicated to the late conservationist Jay D. Hair '67, M '69, is on display in Clemson's Madren Center.

Travel with Tigers — this fall and all year



Clemson PASSPORT Travel group cruises the Mediterranean during a trip to Italy.

Whether it's to cheer on the Tigers or to have a little R&R, **Alumni Travel Programs** will make arrangements for you. For away games this fall, check out **Clemson Sports Travel** at clemson sportstravel.com. For exciting international travel throughout the year, see what **PASSPORT Travel** adventures are in store. Go to clemson.edu/alumni and click on "Alumni Travel" to see dates and destinations.

Clemson Centennial Oak — steadfast in the midst of change

by Sallie Culbertson

Clemson and its trees form an innate connection for alumni and friends who have walked the campus for generations. Tree-lined sidewalks and roads, isolated giants edging Bowman Field and favorite quiet spots on campus have always offered strength, beauty and longevity to people drawn to Clemson University.

One tree in particular has witnessed it all.

The Clemson Centennial Oak is the largest tree on campus. This giant tree was named the Centennial Oak when Clemson celebrated 100 years of existence in 1989. It is believed to have been a sapling when Thomas Green Clemson in 1886 willed his land for a college. Its massive branches and 16-foot circumference make it the largest bur oak — *Quercus macrocarpa* — in South Carolina.

Located next to the parking lot at Hendrix Student Center, across from Newman Hall, Redfern Health Center and the Biosystems Research Complex, the Centennial Oak has been protected over the years by the campus landscape services department. In 2009, it was selected the South Carolina Heritage Tree by Trees SC.

What stories this champion guardian could tell!

The Centennial Oak has seen students arrive in horse-drawn wagons to driving their own cars. It has watched young men drill in uniforms and leave for war. The architecture of the buildings around it has changed with the times. Women became students, and civil rights corrected some wrongs. More and more students rushed by it to class and paused to reflect in its shade. Decades of picnickers, tailgaters and countless Clemson ice-cream lovers have been sheltered under its amazing canopy.

But changes cannot impact what the Centennial Oak has steadfastly represented about Clemson — a place of strength, beauty and longevity. 🌳



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Homecoming in June — Class of '61



THE CLEMSON CLASS OF 1961 CELEBRATED ITS GOLDEN ANNIVERSARY by presenting the University with a check for \$2.2 million during a special Homecoming in June event at Fort Hill.

The symbolic check represents the many scholarships that have been established over the years from the philanthropic efforts of the Class of 1961.

Class members' generosity and forethought touch every aspect of student life — from scholarships to athletics to Clemson's proud military heritage. Some highlights are the Class of 1961 Unrestricted Scholarship Endowment, the Class of 1961 Clemson Corps Endowment, the Duckworth Family Tennis Endowment, the Kennedy and Usher Memorial Endowment, and the Carolyn Willis Creel Endowed Grants-in-Aid for Clemson University Marching Band Majorettes.

"Though we have made a big impact on Clemson's campus, we are not ready to stop," says Buddy Lewis, Class of 1961 Golden Anniversary project chairman. "Our class will continue the tradition of giving back and making our annual gift to Clemson each year for years to come."

Class of '61 supports Special Collections

THE CLASS OF 1961 ALSO PROVIDED FUNDING THAT ALLOWED

Clemson Libraries' Special Collections to hire history graduate Cody Willis '11 as the first Class of 1961 Clemson University Library Heritage Student Assistant. Willis, who had previously been a volunteer intern for University Archivist Dennis Taylor, worked on organizing the papers of President Barker. University Historian Jerry Reel is using those papers as he researches the second volume of his history of Clemson — *The High Seminary, Vol. 2*. Willis is pictured with Michael Kohl, head of Special Collections, (left) and Reel (right).



Lee Hall gift honors alumna

A SEMINAR ROOM IN THE new part of Lee Hall will be named for **Deborah K. McNair '89**, an alumna who died suddenly last year while training for a triathlon competition near her home in Fort Mill. The naming is made possible by a \$50,000 gift from a friend who wishes to remain anonymous.



Philip McNair '87, married to Deborah for 20 years, says he was touched to learn about the gift. "She loved Clemson. It's where we met, and we never got very far from it. It means a lot to our family to know she will be remembered in this way."

Deborah McNair had become a triathlon participant in 2009 and quickly became accomplished in the sport. She was ranked high in the S.C. Triathlon Series in the women's Masters age group.

A financial management graduate, she worked for Bank of America and was recognized as an early adopter of the company's flex policies that enable parents to work from home. She was a senior vice president for private lending with a reputation for caring for and mentoring others.



Duckenfield Scholars

These Calhoun Honors College students — Virginia McCuen, Taylor Reeves and Kevin Niehaus — are among the latest to experience summer study in England through the Christopher J. Duckenfield Scholars Program. They spent five weeks attending St. Peter's College at the University of Oxford.

Each year Calhoun Honors College students are selected for the scholarship based on talent, motivation, commitment and ability to adapt to the tutorial style of learning that exemplifies university education at Oxford.

Family and friends of the late Chris Duckenfield, an alumnus of Oxford who served Clemson as vice provost for computing and information technology, established the program.



Knowlton and Jillian Johnson made a timberlands gift to Clemson to establish a sustainable forest and enhanced wildlife habitat for study and demonstration of innovative forest management and environmental practices.

Timberlands Legacy Program

THE NEW CLEMSON TIMBERLANDS Legacy Program offers landowners a way to give their valued woodland to generate revenue for Clemson. The University will use the timberland as a living classroom and benefit from timber harvests profits. The gift of land can create wildlife habitats, recreational opportunities, outdoor classrooms and places to conduct research.

Donors can choose how the revenue from their land gifts will be used for scholarships and fellowships, to recruit top faculty or to fund initiatives that make the Clemson education exceptional, build a knowledge-based economy and drive innovation. To learn more, go to clemson.edu/giving/how/types-gifts. Because the program is designed primarily to manage timberland and not as property to be sold for gain, programs will be funded as harvests are realized.

THANKS Abney Foundation!

FOR 36 YEARS, THE ABNEY Foundation has supported Clemson students through the Abney Scholars Program. Earlier this year, the foundation's trustees added \$100,000 to the program. Since 1975, Clemson has awarded 2,973 Abney Foundation Scholarships totaling \$4,062,130 in much-needed assistance.

Last year alone, more than \$149,902 in scholarships was awarded to 85 students, all S.C. residents.

"The Abney Foundation is proud to partner with Clemson University, providing scholarships to students throughout South Carolina," says David C. King, executive director. "The compounding value of this investment impacts communities worldwide."

Provide for your loved ones.
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No one should have to choose between family and university. We all want to leave a legacy that ensures a brighter future for others. Now you can leave a legacy for your family and help Clemson stay strong in the future. There are many, many ways to do this, such as designating a retirement plan, leaving a life insurance policy or making a gift in your will. These gifts can both help your family and ensure the future greatness of Clemson.

Find out how you can leave your legacy. Contact Jovanna King at 864-656-0663 or jovanna@clemson.edu.

The Will to
LEAD
A CAMPAIGN FOR CLEMSON

People with doctoral degrees used to terrify me.

They appeared cold and stoic, possessing more knowledge in their discerning eyes than I ever held within the confines of my entire brain. I was scared of what appeared to be the capacity for criticism and scrutiny.



Cohen Simpson

But the truth is, that fear is unwarranted. Now that I look back, I think my terror was due to a desire to be one of those academics. After presenting my honors thesis at my first scholarly conference, I now think academics are some of the coolest people on earth – mainly because I had finally run into a few that seemed a lot like me.

In May [2011], I earned a Clemson degree in communication studies. The previous year, I had the pleasure of presenting my honors thesis – “A Networked Democracy: Facebook and Political Information” – at the 20th Theodore Clevenger Undergraduate Honors Conference held in conjunction with the 80th meeting of the Southern States Communication Association (SSCA).

My research investigates online social networks and what they mean for the flow of news and political information. Going to SSCA presented a forum for this discussion, enabling me to meet multiple scholars from all over the Southeast who had an interest in my topic.

My participation in undergraduate research defined my Clemson experience, an endeavor made possible by the generous funding and thoughtful guidance of the Department of Communication Studies and the Calhoun Honors College. By affording me an opportunity to mingle with and learn from those who love Internet research as much as myself, Clemson allowed me to find brotherhood in a sandbox of thought.

This fall marks the beginning of my journey to the professoriate. As I make preparation to start graduate study at the University of Oxford, I’m reminded of my constant desire to ask novel questions about the world around me – a desire discovered at and nurtured by “dear old Clemson.”

I'm Cohen Simpson and this is my Clemson.

Cohen Simpson from Laurens is one of just 100 (worldwide) new Clarendon Scholarship recipients at the University of Oxford, awarded for academic excellence and potential to their fields of study. This fall he'll study within the Oxford Internet Institute.

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