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Celebrating 25 years as the Charles E. Via, Jr., Department

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### Via Scholars

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In the structures engineering and materials program area, Cris Moen is developing new design methods for thin-walled cold-formed steel, an increasingly common construction material in low and mid-rise building construction. Structural members made from cold-formed steel are highly efficient and gain stiffness and strength through complex folded shapes. See more about his work on page 28.

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Department Head's Message

Celebrating 25 years as the Charles E. Via Jr., Department

Looking back, looking forward. We look back to learn from history and to make sure we fully appreciate where we’ve been and how we’ve come to be where we are. We look forward with great anticipation of where we might go next and work to make sure we build on our past to take us to even greater places.

To be more specific, I want to take you back to reflect a bit on the past 25 years. I want to do this because of the significance of this time period to our department. We are in the 25th year of our existence as the Charles E. Via, Jr., Department of Civil and Environmental Engineering! I feel incredibly fortunate because my career at Virginia Tech has coincided to the year with the change in name and major financial support provided by the Via family.

There are only six current faculty members and four current staff members who were in our department prior to 1987. I’m sure they, like I, feel fortunate to have been part of this journey from the beginning!

So what, besides time, has changed and how has our department been positively affected by the support of the Via family? I spent some time looking over copies of what is now known as the Via Report that date back to 1987 to help answer this question. These documents bring back great memories and make it clear that any success we’re having today is due to a solid foundation that was established by the leaders, faculty, and alumni during that period. They had collectively built a foundation for our department that prepared us to be able to take advantage of a key opportunity. That opportunity was of course provided by the Via family. Dr. Wayne Clough, who was head of the department in 1987, titled his comments in the first Via Report “A once-in-a-lifetime issue” because of this monumental opportunity.

The first group of Via Scholars included undergraduates Stephen Meininger, Randall Boe, and Charles Dietz and graduate students George Filz, Emmanuel Oppong, Kevin Collins, and Sudarshana Bhat. An interesting “coming full circle” note is that George Filz went on to receive his Ph.D., become a faculty member in the department, and now holds a Charles E. Via, Jr., Professorship!

The list of tangible and intangible benefits of the generosity of the Via family is significant. Tangible benefits include the literally hundreds of students that have been supported on undergraduate and graduate fellowships. With the current group of students, that list numbers over 300! The benefit to the Via Scholars is clear. The benefit to the profession and society at large from the research and development work with which these students and their faculty advisors have been involved is difficult to measure, but nevertheless has been a hallmark of our department.

Additionally, support that has been provided for student programs that impact the entire CEE student body, faculty professorships and general support of the department is, as I’ve said before, what sets us apart and makes this a special place to be. The intangible benefits include the rise in profile and stature that our department enjoys as a result of the Via endowment. The support provided to students and faculty continues to have a direct impact on us as it facilitates our being able to recruit high caliber students and faculty. I believe we have a fantastic student body and as great a faculty as any program in the nation. While we have built on a foundation of quality students, programs, and faculty, there is little doubt in my mind that we are who, and where, we are today because of the generosity and foresight of Mrs. Marion Via. Please take special note of the section highlighting the current and past Via Scholars.

One final note related to the Via support. We sincerely appreciate the skillful and committed work on the part of Mr. John Rocioch. He has been a diligent partner in our progress and growth as a department. While dutifully managing the endowment, he takes great pride in both the success of our students and the rise in reputation of our department.

Moving on - You’ll find a section on New Faculty within the pages that follow. As I mention above, I believe we have as great a faculty as any department in the country. During the first two years of my time as department head, I have been thrilled to welcome new colleagues as I believe they bring exceptional new talent to our department and indeed are a big part of our “looking forward.” There are brief bios for Dr. Jennifer Irish, Dr. Roberto Leon and Dr. John (JT) Taylor. I cannot imagine us having been able to hire a more talented group of faculty! I hope you have an opportunity to interact with each of them in the near future.

The ability to hire new faculty members is most often related to faculty retirements. Our new faculty members are coming to us as result of the retirements of Professors Cox, Vorster, and Weyers. Previous editions of the report have highlighted the careers of Professors Cox and Vorster. In the current issue, you’ll find an article on Professor Richard Weyers, who retired earlier this year. Richard has been a significant contributor to the department for the past 26 years. We will miss his daily presence but wish him the very best in his well deserved retirement.

You’ll also find excellent articles on several of the outstanding research projects that are in progress within the department. This work is not only supporting students in the department but serving the Commonwealth and society in general. And rest assured – these are but four of the many works in progress!

A note of thanks is in order as I conclude my remarks. There are a number of our staff and faculty that are responsible for pulling together various parts of the Via Report. I want to thank them for the work they do in helping bring this document to reality each year. As I’ve done before, I want to close by thanking Ms. Lynn Nystrom for the exceptional job she does each year as editor of what I believe is the finest publication that is produced at Virginia Tech!

With kind regards,

SAM EASTERLING
“In recent decades, population growth and scarcity of undeveloped metropolitan land have changed urban land use patterns and placed an increasing number of people and infrastructure in areas susceptible to topographic effects during earthquakes,” says Adrian Rodriguez-Marek, associate professor of civil and environmental engineering at Virginia Tech.

“A major impediment towards understanding and realistically modeling topographic effects has been the lack of a statistically significant number of seismic recordings from densely instrumented sites with topographic features,” Rodriguez-Marek adds.

New testing conducted in a steep, mountainous region of Utah, using mining induced events, is providing a new set of data necessary for better predictions.

The testing is part of a large National Science Foundation funded project involving five institutions across the United States, with Rodriguez-Marek of Virginia Tech serving as the principal investigator. This project focuses on increasing the understanding of the effects of surface topography on earthquake ground motions and seismic risk. The goal of the project is to develop design-ready tools to account for the effect of topography on ground motions.

In addition to Virginia Tech, the University of Washington, Georgia Tech, the University of Arkansas, and the University of North Carolina at Charlotte are also participants. The project uses the Network for Earthquake Engineering Simulation (NEES) equipment sites at the University of California at Davis and at the University of Texas at Austin.

The first recordings included more than 50 mining-induced seismic events. Researchers from the University of Arkansas and the University of Texas at Austin gathered this first data.

According to Rodriguez-Marek, when the study is completed, they will have the necessary information to “modify building codes and to improve safety in the building environment.”

Hillsides, ridges, and canyons are examples of sites where various types of topographic accidents occur and researchers do not have current reliable data to know how seismic shaking will be impacted by the ground features.

Although researchers have documented effects through observations of damage and the collapse of structures near the top of steep hills or ridges, “proper quantification of these effects” has not occurred because the areas did not have “densely-instrumented sites to record data,” Rodriguez-Marek explains.

The test site in Utah stood about 2000 feet above the long-wall mining activities of Deer Creek Coal Mine. The researchers placed 13, three-component sensors in a three-dimensional array over the ridge and hillside. Data was collected 24 hours a day for seven consecutive days. The 50 seismic events represented the first phase of a multi-phase project. Additional data will be gathered at the Utah site this summer, and
Extreme weather can result in a violent act of nature, and in the past year much attention has been paid to the disastrous impacts of flooding during the spring and summer. For example, residents of cities and agricultural farmland found themselves at odds when the Army Corps of Engineers wrestled with opening floodgates to channel water away from the metropolitan areas of New Orleans and Baton Rouge in May of 2011, and instead direct the floodwaters to small Louisiana towns and farms.

Water became the enemy but it might have been an unnecessary role.

Glenn Moglen, professor of civil and environmental engineering at Virginia Tech, says “the relationship between flood conditions and the spatial distribution of urban development has been poorly studied, often because of limitations on available data about stream flow or the common use of generic watershed models in urban hydrologic modeling.”

Moglen has spent years studying the issue of limiting impervious surfaces such as pavements that act as impenetrable materials to water. He has called for planners “to allow a safety margin when regulating land based on imperviousness, to steer development to already urbanized locations and away from relatively undisturbed locations, and to take advantage of situations that mitigate the deleterious effects of imperviousness on stream ecology.”

Moglen’s expertise garnered him an appointment as a special guest editor of an issue of the American Society of Civil Engineers’ Journal of Hydrologic Engineering. And he has current funding from the Federal Emergency Management Agency (FEMA) to calculate flood magnitudes as part of the agency’s efforts to modernize its maps.

In addition, Moglen and his former Ph.D. student, Alfonso I. Mejia, now graduated from the University of Maryland, have developed a number of distinct models of urbanization that show patterns of impact from both sprawl and clustered development that reduce impacts to water resources. Their work was published in the April 2009 Journal of Hydrologic Engineering.

Moglen said their approach differed from previous studies because they looked at distributed effects within a watershed and not the aggregate results at the watershed outlet. They also focused on impacts generated by the spatial forms of urban patterns.

In the article, they cast doubt on land management policies promoting a fixed See Flooding, page 7
A promise “to change bridge fabrication and inspection practices”

One size does not fit all.

By adding the word “not,” this now completely revised adage rings true for at least one civil engineer.

“The devil is in the details,” says William Wright, a scholar who was once named the Engineer of the Year by the Federal Highway Administration (FHWA). The agency cited him for his work on “high performance steel that led to reduced initial cost, lower maintenance and longer life for many new bridges nationwide,” according to the FHWA press release announcing his award.

Wright is concerned about size, especially when it relates to how materials will perform in structures where failures might lead to catastrophes. As today’s engineers investigate the rebuilding of much of the nation’s infrastructure, a lot of which was constructed in the 1950s, they are using much improved materials and analysis tools.

“These advances can be combined to greatly reduce the risk of failure of steel bridges by brittle fracture,” Wright says.

Based on his expertise in engineering and materials for bridge spans, the Virginia Tech civil engineer predicts his new work on a fracture control plan for steel bridges “promises to change bridge fabrication and inspection practices.”

Currently the FHWA requires more intensive inspection for structures that are at risk from fracture failure, a major cost factor for bridge maintenance budgets. The current fracture control plan was developed in the 1960s and has not kept up with advances in materials and computerized system analysis.

Wright is in the initial stages of this new study, funded by the Transportation Research Board, to identify critical members in steel bridges that need to be protected from failure by fracture. Working with him is Robert J. Conner of Purdue University’s Civil Engineering Department. Together, they received a $350,000 grant to develop an improved method to determine the structural consequence if brittle fracture occurs.

“Most bridge engineers now have the capability of performing a particular evaluation—a three-dimensional elastic finite element system of analysis of bridges. This is a powerful tool that provides a platform for studying internal load redistribution in damaged structures such as bridges. However, the problem remains that the ultimate strength of a structural system made of steel and concrete is a highly non-linear problem,” Wright says. There is limited information available about the ultimate strength of bridge systems.

See Promise, page 5
Wright refers to the problems as “non-linear” because they can involve combinations of steel yielding, steel buckling, concrete crushing, and connection failure. The elastic three-dimensional method of analysis “can greatly over estimate strength and reliability of a damaged bridge if all factors are not considered,” Wright explains.

So, Wright and Conner are working to create a more comprehensive approach. They want to develop an all-inclusive systems method that would reliably predict the fatigue and fracture limit states of steel, the ultimate strength of the connections in the structure, the stability of the system, the overall condition, and the value of having an in-service inspection.

They believe a significant cost savings could be achieved through their approach. If states will pay a modestly higher, up front cost for better materials, the financial burden of lifetime inspections can be reduced, Wright says.

“The bridges we build today present a much lower risk of fracture compared to those built prior to about 1980. The reasons are the higher quality standards for fracture critical member fabrication, greatly improved knowledge about fatigue design and detailing to prevent in-plane fatigue as well as distortion cracking issues, and improved material quality. However, there is little evidence that fatigue critical in-service inspection contributes significantly to this improvement,” Wright says.

Due to these advancements in engineering, new bridges should have less need for inspection for fatigue issues when compared to the older vintage bridges.

As Wright investigates this fracture critical analysis system for the Transportation Research Board, he is simultaneously working on a project with the Indiana Department of Transportation to develop improved fracture toughness specifications for structural steels used in critical members. His goal is to design and fabricate standards to eliminate fracture critical concerns in low redundancy structures, such as two-girder bridge systems.

Working with a host of partners including the Army Corps of Engineers and the Federal Highway Administration (FHWA), Wright suggests the results of this study “will be transformative for the steel bridge industry. For the first time, material selection, design, and inspection will be rationally integrated to eliminate fracture concerns. This can result in significant cost savings for medium and long-span bridges and facilitate the introduction of modular concepts for short-span bridges.”

The FHWA has the authority to allow the owners of bridges to forego fracture fatigue critical inspection for low-redundancy bridge structures on a case by case basis. However, this reprieve rarely occurs since there is little guidance to insure bridge safety.

“This project will establish guidance that provides a high level of bridge safety that can then form the basis for in-service inspection decisions,” Wright says.

Wright received his bachelor’s degree in civil engineering (CE) from the University of Maryland at College Park in 1986, his master’s degree in structural engineering, also from University of Maryland in 1988, and his Ph.D. in CE from Lehigh University in 2003.

Throughout his career, Wright’s primary research interests have involved development and experimental evaluation of new, innovative bridge systems that can meet three critical requirements: rapid construction, life cycle durability, and cost effectiveness. He has targeted this “Bridge of the Future” goal as the overriding principal guiding the FHWA research program. The current research on fracture critical bridge systems is an enabling technology for the “Bridge of the Future” when designers will have more ability to show initiative if they are not concerned with the possibility of a failure.

Among his honors, Wright received the 2008 Richard S. Fountain Award from the American Iron and Steel Institute and the AASHTO T-14 Steel Bridge Committee for his outstanding contributions to the steel bridge industry. In 2007, he received a U.S. Department of Transportation Gold Medal for his work on the Minnesota I-35W Bridge Response Team. In 2006, Wright earned the George S. Richardson Medal, presented by the Engineers Society of Western Pennsylvania and Roads and Bridges magazine for his development of the Load and Resistance Factor Design Unified Steel Design Code.

In 1997 the Civil Engineering Research Foundation of ASCE presented him with its Charles Pankow Award for Innovation for his work on the development of high performance steels for highway bridge applications.

From tests at a geotechnical centrifuge at the University of California at Davis.

“As real earthquakes are infrequent and unpredictable, the shallow and predictable seismic activity caused by the stress relief that results from long-wall mining provides a good source of seismic energy for this study,” Rodriguez-Marek says.

“Preliminary results clearly show higher ground motion intensity near the crest or peak of the slope,” he adds. The early data will be used to calibrate mathematical models of the effects and to design a second phase of testing.

This NSF study includes a new bridge to the Doctorate Program geared towards increased participation and education of Hispanic students in the field of earthquake engineering.

“We hope to use our approach and collaboration among universities to serve as a model for increasing diversity in large, collaborative science, engineering, and technology research projects. Students from the University of Puerto Rico at Mayaguez have participated in summer studies at the University of Arkansas, and one student is currently enrolled at the University of North Carolina at Charlotte,” Rodriguez-Marek says.
New study shows evacuation plans need to incorporate family’s perspectives

A recent study sponsored by the National Science Foundation found that most respondents felt the evacuation of New Orleans residents to the Superdome after Hurricane Katrina was a “failure” and this opinion has shaped their willingness to accept shelter if offered in an emergency evacuation.

This finding, as well as many others, was derived from interviews of residents in the Chicago metropolitan area, with particular focus in two areas where neighborhood evacuations are likely due to large amounts of toxic materials that are transported nearby – Logan Square and Blue Island, Ill. Logan Square is a predominantly Latino, low-income community with a high concentration of recent arrivals to this region from Mexico and Puerto Rico. By contrast, Blue Island is a mixed-race, predominantly low to middle-income community on Chicago’s south side.

Pamela Murray-Tuite, an assistant professor of civil and environmental engineering at Virginia Tech, led the study that she calls the first of its kind. “We took an integrated, interdisciplinary approach to evacuation study. This approach is absolutely critical to the development of transportation evacuation models, but in practice, it was virtually non-existent until our work,” she says.

In the past, officials have “made overly optimistic evacuation time predictions that could have potentially devastating consequences,” she adds.

Murray-Tuite’s study was unique because it integrated social science perspectives with transportation engineering. It used in-depth personal interviews to gather household decision-making data and to model household member interactions and decision-making when faced with an immediate, no-notice evacuation. The study also estimated the resulting effects on traffic and evacuation times, and considered the relocation of school children to sites within the communities to facilitate pick up.

Working with Murray Tuite was Lisa Schweitzer of the University of Southern California, an associate professor in its school of policy, planning and development. She has expertise in sustainable transportation and hazardous materials in urban environments.

The late Janice Metzger, a senior program manager at the Center for Neighborhood Technology (CNT) in Chicago, also served as a co-principal investigator on the NSF project. Henry Sullivan of CNT finished the study.

Schweitzer described one of the influencing factors their team found regarding emergency evacuations was that in the Logan Square area nearly 60 percent of the immigrant mothers were stay-at-home, whereas U.S. Bureau of Labor Statistics has put the average percentage of mothers outside of the paid workforce at a little less than 10 percent.

Anecdotal evidence suggested that the U.S. recession was responsible for this much higher than average number.

“Foreign born women who are engaged in traditional caregiving roles may be exceptionally vulnerable to events that disrupt their neighborhood. However, native-born women, though far more mobile due to their higher car usage and roles outside the home, are more mobile due to their higher car usage and roles outside the home.

See Evacuation, page 7
also have dimensions upon which they may be more vulnerable,” since they retain the primary role for securing their children, the researchers wrote in their report to NSF.

Some 300 households participated in the research project. Approximately 50 questions were posed in each of the interviews. Personal information about such issues as education level and income were answered separately and included in an anonymous sealed envelope.

The interviews covered topics from everyday commuting habits, child-transportation both before and after school, to thoughts about how they might handle short to long-term evacuations.

Murray-Tuite presented some initial findings at the Fourth International Conference on Women’s Issues in Transportation. Her doctoral student Sirui Liu of Falls Church, Va., presented the relocation model at the 90th Annual Meeting of the Transportation Research Board.

She and her colleagues are also publishing several technical papers on emergency evacuations that include emphasis on scenarios such as child pick-up from another location, as well as one on how the effect of spouses attempting to find each other impacts a hasty exit from a community.

“We know from our study that everyday travel behavior and neighborhood environments shape what people believe they would do when they envision disaster conditions,” Murray-Tuite says. “We now have a series of discrete choice analyses that we are working on to uncover systematic differences in everyday travel behavior in men and women, parents and non-parents, and how those systematic differences in everyday travel behavior affect how individuals view their disaster resources.”

threshold of impervious surfaces. They show that this can result in the unintended consequence of favoring sprawl-type development.

“Those within the planning community who espouse threshold-based controls on land development” should be concerned, they wrote.

In another study for the U.S. Geological Survey (USGS), Moglen and Dorianne Shivers, who also worked with Moglen when she was a student, used data from 78 urbanized stream gages across the U.S. for a study on urban flood frequency. They compared their models to previous results, and a key finding was a new method for estimating floods at ungaged sites using common, easily obtained data. This method eliminated the need to perform costly site visits in order to make urban flood estimates.”

Their USGS study also indicated which mathematical models on peak discharges of water were the best performing – an imperviousness distribution model and a population density distribution model.

“These models depend on three predictors each: rural discharge, imperviousness or population density, and imperviousness or population density uniformity. The imperviousness or population density predictor scales up the rural discharge, and the imperviousness or population density uniformity predictor scales down the discharge. This uniformity predictor quantifies the homogeneity of the development in a watershed,” they concluded.

Moglen, who holds a Ph.D. in civil engineering from the Massachusetts Institute of Technology, works in the University’s National Capital Region. He spent a year in the Office of Surface Water at the U.S. Geological Survey in Reston, Va., while on a sabbatical during the 2003-04 academic year. He also spent approximately one year as a visiting research scientist at the National Weather Service, NOAA, in Silver Spring, Md., during 1995-96.
Awards, Honors, and Achievements

Jesus de la Garza
- 2011 Peurifoy Construction Research Award from the American Society of Civil Engineers Construction Institute
- Inducted into National Academy of Construction

Marc Edwards

Mani Golparvar-Fard
- Best Poster Award, 10th Annual Construction Industry Institute Conference

Antoine Hobeika
- Outstanding Paper Award, 17th ITS World Congress Organizing Committee

Shinya Kikuchi
- Honorary Doctorate, Helsinki University of Technology (Aalto University)

John Little
- Invited keynote speaker for the 1st International Workshop on SVOCs in the Indoor Environment, Tsinghua University, Beijing, China

Estela Moen
- Alumni Teaching Excellence Award

Victoria Mouras
- 2011 G.V. Loganathan Faculty Achievement Award for dedication to teaching, advising, and the promotion of the Civil Engineering Profession
- Recognized as one of the 2011 Influential Women of Virginia by Virginia Lawyers Media

Pamela Murray-Tuite
- Virginia Tech Scholar of the Week

John Novak
- 2011 Pioneer Award from Water Environment Federation Disinfection and Stabilization Committee for contributions in Biosolids Research
- 2011 Frederick George Pohland Medal from the Association of Environmental Engineering Scientists and Professors (AEESP), the American Academy of Environmental Engineers and the Pohland family

Amy Pruden-Bagchi
- Virginia Tech Scholar of the Week

Clifford Randall
- 2011 Honorary Member of the American Academy of Environmental Engineers
- 2011 Inductee in The University of Kentucky College of Engineering Hall of Distinction

Mark Widdowson
- 2011 Samuel Arnold Greeley Award for journal paper “Stimulating in situ hydrogenotrophic denitrification with membrane-delivered hydrogen under passive and pumped groundwater conditions”
- 2011 College of Engineering Certificate of Teaching Excellence

William Wright
- International Association for Bridge Management and Safety (IABMAS), Junior Prize, 2010, for Outstanding Contributions to Bridge Safety
Jennifer Irish attended Lehigh University from 1988 to 1994 where she received her bachelor's and master's degrees in civil engineering. From 1994 until 2001, she assumed a research position at the U.S. Army Corps of Engineers Coastal and Hydraulics Laboratory (CHL), formerly the Coastal Engineering Research Center. She conducted research on topics including lidar technology for measuring bathymetry and ocean waves, navigation channel shoaling, wetlands restoration, shore protection, and coastal processes.

In 1997, Irish took a one-year sabbatical from her research position at CHL to begin work towards a Ph.D. at the University of Delaware. From 2001 until 2006, she was an engineering specialist at the U.S. Army Corps of Engineers New York District, where she led engineering and research on storm damage reduction, including numerical modeling and risk assessment of storm surge, waves, and morphological response.

Irish received her Ph.D. from the University of Delaware in 2005 in civil and environmental engineering. Following the award of her doctorate, Irish accepted the position of assistant professor of civil engineering at Texas A&M University in 2006. Her academic research is motivated by her professional experience in coastal and hydraulic engineering. Irish received her Ph.D. from the University of Delaware in 2005 in civil and environmental engineering. Following the award of her doctorate, Irish accepted the position of assistant professor of civil engineering at Texas A&M University in 2006. Her academic research is motivated by her professional experience in coastal and hydraulic engineering.
IRISH

the societal need to improve and protect coastal infrastructure, given the increasing relevance of global urban development, and she continues to research coastal hazards, to include: storm surge, tsunami, beach erosion, and sea level rise; vegetated flow dynamics; and coastal processes.

Since 2006, Irish has received research grants, as either the principal or co-principal investigator, totaling $2.4 million from agencies including the National Science Foundation, the Department of Energy, the U.S. Army Corps of Engineers, the National Commission on Energy Policy, the National Oceanic and Atmospheric Administration's Sea Grant Program, and the Texas General Land Office.

In 2008 Irish was elected secretary of the American Society of Civil Engineers Coasts, Oceans, Ports, and Rivers Institute Board of Governors. Most recently, Irish was recognized for her research accomplishments, receiving the Department of the Army Superior Civilian Service Award in 2008 and Texas A&M University’s Civil Engineering Excellence in Research Award in 2010. In 2006, she received three U.S. Army Corps of Engineers’ awards: the Department of Army Achievement Medal and the Department of the Army Superior Civilian Service Award in 2008 and Texas A&M University’s Department of the Army Superior Civilian Service Award in 2008 and Texas A&M University’s Department of the Army Superior Civilian Service Award in 2008 and Texas A&M University’s Department of the Army Superior Civilian Service Award in 2008 and Texas A&M University’s Department of the Army Superior Civilian Service Award in 2008 and Texas A&M University’s Department of the Army Superior Civilian Service Award in 2008.

Irish is a member of the American Society of Civil Engineers (ASCE), the ASCE Coasts, Oceans, Ports and Rivers Institute, and the American Shore and Beach Preservation Association.

LEON

(Bond and Development length) and 352 (Beam-Column Joints), the Provisions Update Committee of the Building Seismic Safety Council (BSSC/PUC), and the American Society of Civil Engineers’ (ASCE) Committee on Composite Construction. He is a registered professional engineer in Minnesota, the co-author of a book on composite construction, a non-technical book on bridges and tunnels, and is the author and co-author of over 80 articles in refereed journals.

He has developed instructional materials and taught construction materials, steel and reinforced concrete design, and capstone design course to undergraduates. At the graduate level, he has developed and taught steel and reinforced concrete behavior, plastic design, structural dynamics, and earthquake engineering courses.

His awards include the ASCE E. Friedman Young Engineer of the Year Award in 1988, the AISC T.R. Higgins Award in 1993, the ASCE State-of-the-Art Award in 1996 and again in 2000, and the ASCE Norman Medal in 2000.

He is on the editorial board of the Journal of Earthquake Engineering, Steel and Composite Structures, International Journal of Steel Structures, and Costruzioni Metalliche.

Leon received his civil engineering bachelor’s degree in 1978 from the University of Massachusetts at Amherst, his master’s in structural engineering from Stanford University in 1979, and his doctorate in civil engineering from the University of Texas at Austin in 1983.

After earning his doctorate he joined the civil and mineral engineering faculty at the University of Minnesota until he moved to Georgia Tech in 1995.

TAYLOR

Taylor currently has an NSF grant, “CyberGRID Networks,” to develop a research tool to study networks of engineers working in a virtual environment, and a Sloan Foundation Industry Studies Fellowship to examine knowledge system conflicts in global project networks.

Among his other awards, he recently received the 2010 Best Peer-Reviewed Journal Paper Award from the American Society of Civil Engineers’ (ASCE), Journal of Engineering in Project Management in Global Governance in Project Organizations and the 2008 Best Journal Paper Award from ASCE’s Journal of Construction Engineering and Management.

Taylor earned his bachelor’s and master’s degrees in civil and environmental engineering from Tulane University in 1991 and in 1996, respectively. In 1996, he was named a Fulbright Scholar and worked as a research assistant with the Swiss Federal Institute of Technology’s Logistics, Economics, and Management Group in Lausanne, Switzerland. At the institute, he earned a second master’s degree in management of logistical systems. He was also employed in 1998 at the International Road Union, working on a United Nations’ project, in Geneva, Switzerland.

When he returned to the U.S., he studied for his doctorate at Stanford University as a Gerald Lieberman Fellow in its civil and environmental engineering department. During his doctoral studies, he spent time as a visiting researcher at Trinity College of Dublin, Ireland in 2003 and at the Technical Research Center of Finland at Helsinki, Finland in 2005. He received in Ph.D. from Stanford in 2006, and soon moved into a tenure track position at the University of Texas at Austin. After one year Columbia University recruited him. He joins Virginia Tech as an associate professor with tenure.

Taylor is a member of ASCE, the Construction Industry Institute Academic Committee, the Engineering Project Organization Society, the Industry Studies Association, and the INFORMS Simulation Society.
Since 1985 and his arrival at Virginia Tech, Richard Weyers’ career as an expert on the repair and rehabilitation of bridges, concrete materials, and corrosion of reinforcing materials has soared.

Early on, he received a significant contract from the Strategic Highway Research Program, and the result was a several hundred-page field manual to better bridge maintenance.

He holds patents on how to stop the corrosion of steel in chloride contaminated concrete.

The state of Virginia had him team with the Virginia Transportation Research Council (VTRC) to estimate the service life of bridge decks in the Commonwealth. He worked with the VTRC, now called the Virginia Center for Transportation Innovation and Research, for some 18 years. “The primary result of that research is the Virginia Department of Transportation has moved from epoxy-coated reinforcing steel to corrosion resistant steels that will provide over 100 years of corrosion free service for bridge decks in Virginia,” Weyers says.

Long before politicians started calling for an increase in the pipeline of students with science, technology, engineering, and mathematics (STEM) degrees, Weyers started Virginia Tech’s Concrete for Kids program, directing it for five years in the early 1990s. Taught at local schools to fifth and sixth graders, Weyers’ work received a 1995 Excellence in Education Certificate of Recognition from Virginia Tech.

Weyers also started the department’s concrete canoe project in the late 1980s, and directed it for about six years. “The first two years, it was built in my garage, and the students would work on it all hours of the night, even scaring my wife Joanne one evening when she heard noises and opened the garage door at 1 a.m. and saw one of the students inside,” he recalls.

Despite the slightly alarming encounter, he credits Joanne with supporting his work throughout his career.

Both the Concrete for Kids and the con-
crete canoe projects continue today through the department.

And among his prestigious honors, he received the 2008 Robert E. Philleo Award from the American Concrete Institute for his outstanding concrete materials research in extending the service life of concrete structures. He is one of less than 20 people in the country to receive this honor, given for outstanding research in the concrete materials field, or for outstanding contributions to the advancement of concrete technology through application of the results of concrete materials research.

Also, the American Society of Civil Engineers selected Weyers to address the problems with bridge systems in the U.S. at the Chemical Engineering Roundtable of Rebuilding America’s Infrastructure, a meeting held at the turn of this century.

“Richard and I worked together on one project, which was to determine if it is possible to increase the damping in concrete using a ground rubber additive. I was amazed at Richard’s depth of knowledge in the area of concrete materials. This knowledge includes everything from concrete mixture designs, to the behavior of all of the components of uncured and cured concrete, and to the chemistry of additives, and how those additives affect the behavior of concrete,” says Finley Charney, one of his colleagues and a professor of civil and environmental engineering.

Another colleague, and former student of Weyers, receiving his doctorate in 2006, is David Makarem. “He has been my mentor ever since graduate school. I learned a great deal from him regarding engineering and life. He has not only continued to be my mentor; he has also become a very good friend as well...He has prepared me well for my engineering career and I can always count on him for sound advice,” Makarem, today a research associate in Virginia tech’s College of Engineering, says.

Weyers, who earned all three of his engineering degrees at Penn State, in 1972, in 1975, and in 1983, respectively, found that history helped to create his academic niche. When the U.S. was coming out of the depths of the Great Depression, one of the solutions for reducing unemployment was to create public work programs. Part of this 1930s effort included the expansion of the highway system. Later, in the late 1950s, construction began on the present interstate highway system with the 1930s construction serving as the backbone for the main transportation routes.

These highway systems were typically designed for a 50-year service life. The highways’ bridges typically need rehabilitation in 35.

Richard’s contributions to our college’s ascent to the top ten percent of all engineering colleges in terms of research expenditures was critical.”

~ Paul Torgersen, President Emeritus, Virginia Tech

With the new millennium, the time has more than come to replace the 1930s infrastructure and rehabilitate the 1950-60s interstate system. Unfortunately, to date, much of the replacement and rehabilitation has not even taken place.

Weyers has predicted in the past that the consequences could be “dismal.” With some half a million bridges in the federal highway system, not counting smaller structures of less than 20 feet or ones on back roads, the investment to rebuild or rehabilitate is much more than a trillion dollars, he says.

His accolades are abundant for a man who thought he would never be able to afford college. He grew up in a family of eight children, and learned about cabinet-making as a teenager so that he would have a skill to rely on when he graduated. But the military stepped in and drafted him during the Vietnam War era. The good news was the G.I. bill paid for him to finish his high school education at a private school in Pittsburgh, and then he went on to Penn State.

He used an assistantship to pursue his master’s degree, and after it was awarded, he went to work for Warzyn Engineering, a geotechnical engineering firm in Madison, Wisc. Part of his duties included running training programs for the company’s technicians, and he realized he was interested in an academic career. So he contacted his Penn State master’s adviser, Phil Cady, and went back to work with him while studying for his doctorate.

In April 1983, a Popular Mechanics article featured Cady and Weyers for their solution to the corrosion of bridges due to salt. According to the magazine, Cady and Weyers cut grooves into existing concrete decks and then filled them with liquid plastic. Then they ran an infrared heater over the deck to super harden the plastic. The process prevented new salt from getting in, and the salt already in the material was held in place, thus extending the life of the bridge deck.

“Phil Cady was one of the top ten people in the world in this field. I couldn’t have done any better than to work with him,” Weyers says.

He started his teaching career at Lafayette College, located in the town of Easton, Pa. Mostly a liberal arts college, Lafayette does offer four fields of engineering. While at Lafayette, he continued working with Cady, and in 1984 they presented the first theoretical model for the deterioration of concrete bridge decks in corrosive environments.

A year later he joined Virginia Tech’s College of Engineering, then under the leadership of Paul Torgersen, who was rapidly turning the college into one of the top research colleges of engineering in the country. Weyers was able to restart the materials program in the civil engineering department, eventually creating the Structures and Materials Research Laboratory. He introduced a number of new courses, and his legacy will be long remembered as he retired this year.

He worked with a number of academicians from outside of his department. Most no-
## Undergraduate Scholarships

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<td>Mark Herman, Eric Bruning, Damon Kinmond, Ryan Yauger, Matthew Hussak</td>
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<td>Alumni Golf Tournaments Scholarship</td>
<td>Jack Knapp</td>
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<td>American Infrastructure Scholarship</td>
<td>Carrie Deutsch (CEM), Aleksander Leckszas (CEM), Julia Hart (CEM)</td>
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<td>Kenneth R. Ayers ’80 Memorial Scholarship</td>
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<td>Kelso Baker Scholarship</td>
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<td>Michael Baker Corporation Engineering Scholarship</td>
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<td>Balzer &amp; Associates Scholarship</td>
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<td>Charles and Patricia Brown Scholarship</td>
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<td>Joseph and Jane Christenbury Memorial Scholarship</td>
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<td>Civil Engineering Class of ’58 Scholarship</td>
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<td>Warren F. Cline Scholarship</td>
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<td>Stanley &amp; Francis Cohen Scholarship</td>
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<td>John DeBell Civil Engineering Scholarship</td>
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<td>Dewberry Scholarship</td>
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<td>Walter &amp; Mary Ruth Duncan Scholarship</td>
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<td>Chelsey A. Godfrey Scholarship</td>
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<td>Ralph P. Hines ’59 Scholarship</td>
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<td>Charles S. Hughes Scholarship</td>
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<td>Williams A. Joyner Scholarship</td>
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<td>Lingerfelt Family Foundation Scholarship</td>
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<td>Hersie B. &amp; Ethel G. McCauley Scholarship</td>
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<td>John E. Pruitt, Jr. Scholarship</td>
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<td>Southern Ironworks, Inc. Scholarship in honor of Charles E. Spitzer, Class ’49</td>
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<td>Undergraduate George A. Stewart Scholars</td>
<td>Caitlin Proctor, Faizan Qureshi, Jamie Wonderly</td>
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<td>Stantec Award for Excellence in Engineering</td>
<td>Layton Schaeffer, Achmaa Vaajnilnorov, Jamie Wonderly</td>
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### Graduate Scholarships and Fellowships

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<td>Brian Bluhm Fellowship</td>
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<td>Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) Pathfinder Graduate Student Fellowship</td>
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<td>Dwight David Eisenhower Graduate Transportation Fellowship</td>
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<td>Fugro Fellow</td>
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<td>Fulbright Fellowships</td>
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The following doctoral degrees were awarded to CEE students between July 2010 and June 2011.

**Name: Ahmed Mohamed Mostafa Amer**
*Dissertation Title:* Statistical and Behavioral Modeling of Driver Behavior on Signalized Intersection Approaches
*Advisor:* Hesham Rakha

**Name: Alfredo Eduardo Arenas**
*Dissertation Title:* Comprehensive Numerical Analysis of Integral Abutment Bridges with MSE Walls
*Advisor:* George Filz

**Name: Adam Gregory Bowland**
*Dissertation Title:* Development of High Damping Concrete with Rubber, Carbonate, and Latex Additives
*Advisor:* Finley Charney

**Name: Martha Elizabeth Gross**
*Dissertation Title:* Aligning Public-Private Partnership Contracts with Public Objectives for Transportation Infrastructure
*Advisor:* Michael Garvin

**Name: Jong Min Kim**
*Dissertation Title:* A Study of Multi-Stage Sludge Digestion Systems
*Advisor:* John Novak

**Name: Laura Marie Kosoglu**
*Dissertation Title:* Modeling Macro-scale Clay Behavior at Micro-scale Clay Particle Interfaces
*Advisor:* George Filz

**Name: Sirui Liu**
*Dissertation Title:* Analysis and Evaluation of Household Pick-up and Gathering Behavior in No-Notice Evacuations
*Advisor:* Pamela Murray-Tuite

**Name: Alan Marshall Lytle**
*Dissertation Title:* A Framework for Object Recognition in Construction Using Building Information Modeling and High Frame Rate 3D Imaging
*Advisor:* Sunil Sinha

**Name: Soonkie Nam**
*Dissertation Title:* Effects of Reservoir Releases on Riverbank Stability and Erosion
*Advisor:* Panos Diplas

**Name: Caroline Kimmy Nguyen**
*Dissertation Title:* Galvanic Lead Corrosion in Potable Water: Mechanisms, Water Quality Impacts, and Practical Implications
*Advisor:* Marc Edwards

**Name: Emily Allyn Sarver**
*Dissertation Title:* New Practical Insights into Non-uniform Copper and Brass Corrosion in Potable Water Systems
*Advisor:* Marc Edwards

**Name: Ni Shen**
*Dissertation Title:* Modelling of Passengers and Airline Dynamics in the National Airspace System (NAS)
*Advisor:* Toni Trani

**Name: Hyun Shin**
*Dissertation Title:* Minimizing the Expected Life Cycle Cost of A Structure with Passive Damping Devices under Seismic Loading
*Advisor:* Raymond Plaut

**Name: Joel Andrew Sloan**
*Dissertation Title:* Column-Supported Embankments: Full-Scale Tests and Design Recommendations
*Advisor:* George Filz

**Name: Christopher Moore Strock**
*Dissertation Title:* Seeing Beyond Service: Redefining the Problem of Water and Sanitation Service Delivery in Resource-Limited Settings to Enable Effective Solutions
*Advisor:* Michael Garvin

**Name: Lashun King Thomas**
*Dissertation Title:* Sustainability of Reductive Dechlorination at Chlorinated Solvent Contaminated Sites: Metrics for Assessing Bioavailable Natural Organic Carbon in Aquifer Sediments
*Advisor:* Mark Widdowson

**Name: Manousos S. Valyrakis**
*Dissertation Title:* Initiation of Particle Movement in Turbulent Open Channel Flow
*Advisor:* Panos Diplas

**Name: Dong Wang**
*Dissertation Title:* A Micro-scale Method to Associate the Fatigue Properties of Asphalt Binder, Mastic and Mixture
*Advisor:* Linbing Wang

**Name: Guoqing Zhou**
*Dissertation Title:* Co-Location Decision Tree for Enhancing Decision-making of Pavement Maintenance and Rehabilitation
*Advisor:* Linbing Wang
Members of the 2011 Civil and Environmental Engineering Advisory Board, as well as a number of previous alumni who have served on this board, met at The Inn at Virginia Tech for the fall meeting.
Civil and Environmental Engineering Faculty by Program Area

Vecellio Construction Engineering and Management Program
• Jesus M. de la Garza, Vecellio Professor and Program Coordinator
• Michael J. Garvin, Associate Professor *
• Mani Golparvar-Fard, Assistant Professor
• Sunil K. Sinha, Associate Professor
• John E. Taylor, Associate Professor
• Michael C. Vorster, David Burrows Professor Emeritus
• Deborah E. Young-Corbett, Assistant Professor *

Environmental and Water Resources Engineering Program
• Gregory D. Boardman, Professor
• William Cox, Professor Emeritus
• Andrea M. Dietrich, Professor
• Panayiotis Diplas, Professor
• Randel Dymond, Associate Professor
• Marc A. Edwards, Charles Lunsford Professor
• Daniel L. Gallagher, Associate Professor
• Adil N. Godrej, Research Associate Professor (NCR)
• Thomas J. Grizzard, Jr., Professor (NCR)
• Erich T. Hester, Assistant Professor
• Robert Hoehn, Professor Emeritus
• Jennifer Irish, Associate Professor
• David F. Kibler, Professor Emeritus
• William Knocke, W. Curtis English Professor
• John C. Little, Professor and Program Coordinator
• Linsey C. Marr, Associate Professor
• Glenn E. Moglen, Professor (NCR)
• John T. Novak, Nick Prillaman Professor
• Amy J. Pruden, Associate Professor
• Clifford W. Randall, Professor Emeritus
• Robert Paolo Scardina, Assistant Professor of Practice
• Peter J. Vikesland, Associate Professor
• Mark Widdowson, Assistant Department Head and Professor

Structural Engineering and Materials Program
• Richard M. Barker, Professor Emeritus
• Finley A. Charney, Professor
• Thomas E. Cousins, Professor
• W. Samuel Easterling, Department Head and Montague-Betts Professor of Structural Steel Design
• Matthew Eatherton, Assistant Professor
• Donald A. Garst, Associate Professor Emeritus
• Siegfried M. Holzer, Professor Emeritus
• Roberto T. Leon, David H. Burrows Professor
• Cristopher D. Moen, Assistant Professor
• Victoria A. Mouras, Assistant Professor of Practice
• Thomas M. Murray, Structural Steel Design Professor Emeritus
• Raymond H. Plaut, Professor Emeritus
• Carin L. Roberts-Wollmann, Professor
• Kamal B. Rojiani, Associate Professor and Program Coordinator
• Richard E. Weyers, Charles E. Via, Jr. Professor Emeritus
• William J. Wright, Associate Professor

Transportation Infrastructure and Systems Engineering Program
• Montasir Abbas, Associate Professor
• Thomas A. Dingus, Newport News Shipbuilding / Tenneco Professor
• Gerardo W. Flintsch, Professor
• Kathleen L. Hancock, Associate Professor (NCR)
• Antoine G. Hobelka, Professor
• Shinya Kikuchi, Charles E. Via, Jr. Professor (NCR)
• Pamela Murray-Tuite, Assistant Professor (NCR)
• Hesham A. Rakha, Professor
• Antonio A. Trani, Professor and Program Coordinator
• Linbing Wang, Professor

Geotechnical Engineering Program
• Thomas L. Brandon, Associate Professor
• Joseph E. Dove, Research Assistant Professor
• J. Michael Duncan, Professor Emeritus
• George M. Filz, Assistant Department Head and Charles E. Via, Jr. Professor
• Russell Green, Associate Professor
• James R. Martin, II, Professor
• Matthew Mauldon, Associate Professor
• James K. Mitchell, Professor Emeritus
• Adrian Rodriguez-Marek, Associate Professor and Program Coordinator

* — Affiliated through the Myers-Lawson School of Construction
NCR — National Capital Region
The Vecellio Construction Engineering and Management Program (VCEMP) has had a fantastic year.

The highlights include: the faculty hire of John E. Taylor from Columbia University (see related article in the New Faculty section); the conferral of the American Society of Civil Engineers’ (ASCE) prestigious 2011 Peurifoy Construction Research Award to Jesus M. de la Garza; the 2011 Vecellio Distinguished Lecture presented by John R. Hillman (see sidebar story); the appointment of Jesus M. de la Garza as editor-in-chief for ASCE’s Journal of Construction Engineering and Management; the faculty appointment of Vickie Mouras as a Professor of Practice; and the appointment of Brian Kleiner from Virginia Tech’s Grado Department of Industrial and Systems Engineering as the new director of the allied Myers-Lawson School of Construction.

With these faculty appointments, VCEMP is finally fully staffed and more than ready to continue its role to make Virginia Tech a steady beacon of excellence in construction education, research, and service.

Six undergraduate Vecellio Scholarships were awarded to highly-qualified students who have demonstrated leadership potential and an interest in pursuing a career in the construction industry. These students who were formally recognized during the proceedings of the Vecellio Distinguished Lecture were: Erin Littleton, Kevin Pocta, Faizan Qureshi, Michael J. Simmons, Jacob Wirtz, and Joshua Zilke. To help bring all these initiatives to fruition, Sandy Simpkins continuous to provide unwavering, essential and extraordinary administrative support to our program, students and faculty.

VCEMP has now joined the social media; please visit us on Facebook at http://www.facebook.com/vcempatvt or follow us on twitter at http://twitter.com/#/vcempatvt/

As for news from the VCEMP faculty, the following paragraphs showcase some of their activities.

The citation for the Peurifoy Award for Jesus M. de la Garza, the Vecellio Professor in Construction Engineering and Management, reads: “For his pioneering research contributions in Information Technology, Construction Scheduling, and Highway Asset Management.” He will present his Peurifoy Lecture during ASCE’s Construction Congress in May of 2012. He is co-principal investigator in two new research projects funded by Virginia Tech’s Institute for Critical Technology and Applied Science (ICTAS) and the Construction Industry Institute (CCI), respectively. He also taught three courses: Construction Management, Construction Control Techniques, and Schedule Impact Analysis. In addition to serving on the National Research Council’s Board on Infrastructure and the Constructed Environment (BICE), he...
was appointed to NRC’s Standing Committee on Defense Materials, Manufacturing and Infrastructure. He has also been appointed as co-chair of the Construction Management Association (CMMA) of America’s College of Fellows Academic Council. He serves as the faculty advisor to CMMA’s student chapter in the Myers-Lawson School of Construction.

**Michael J. Garvin** continues to serve as the associate director of the Myers-Lawson School of Construction while remaining active in teaching, research, scholarship and service. He organized the first annual “Construction Futures Symposium,” where industry panelists discussed trends and challenges in the industry. He also participated in Virginia Tech’s Executive Development Institute, which is designed to prepare future leaders of the university. Garvin taught two graduate courses, Construction Research Topics and Facility Delivery & Financing Strategies, as well as the undergraduate course, Construction Management. He recently completed work on a project with the Virginia Department of Transportation that developed a financial analysis tool for Public Private Transportation Act highway projects. He co-authored two journal papers, two conference papers and a book chapter. He acts as the coordinator for the Americas for the Engineering Project Organization Society and serves on the editorial boards of the *Construction Project Organization Journal*, the *Journal of Infrastructure Systems and Public Works Management* & *Policy* while also acting as a specialty editor for the *Journal of Construction Engineering & Management*. He is currently a panelist for two National Cooperative Highway Research Program (NCHRP) projects.

**Mani Golparvar-Fard**’s research focused on how photo and video collections in addition to building information models can support model-based assessment of sustainable construction performance metrics. On a joint project with de la Garza, Golparvar-Fard received funding from the Institute for Critical Technology and Applied Science. He published five peer-reviewed journal publications, seven refereed conference publications, one book chapter, one patent disclosure, and presented seven research posters over the past year that resulted in the Best Poster Award from the CCI and a Paul E. Torgersen Research Excellence Award. He also joined the editorial board of the *IPMA Journal of Project Management*, and served on the technical advisory committee at the 11th International Conference on Construction Applications of Virtual Reality, 2011 ASCE Workshop on Computing in Civil Engineering, the 4th International Conference on Construction Engineering and Project Management, the FIATECH Intl. Technology Conference and Showcase, as well as the 27th International Conference on Applications of Information Technology in the AEC industry.

Golparvar-Fard also served as the chair of the Best Paper Committee of the ASCE TTCIT Data Sensing and Analysis (DSA) Committee and was elected as the new secretary for the DSA committee. He also taught two courses, Construction Management and Visual Sensing for Civil Infrastructure Engineering and Management. As the social media coordinator, Golparvar-Fard has also established the LinkedIn group, Facebook Page, and the Twitter account of the VCEMP group.

**Victoria Mouras** has focused her efforts this past year on undergraduate teaching and advising. In addition to teaching the Estimating, Production & Cost Engineering course, Mouras also teaches fundamental structural design courses in concrete and steel. As a Professor of Practice, she has been able to successfully incorporate her past professional experiences into these courses and her general interactions with students. These efforts resulted in Mouras being selected by the Student Chapter of the American Society of Civil Engineers to receive the 2011 G. V. Loganathan Faculty Achievement Award for Dedication to Teaching, Advising, and Promotion of the Civil Engineering Profession. In recognition of her general career accomplishments, she was also selected as one of the 2011 Influential Women of Virginia by the Virginia Lawyers Weekly.

**Sunil Sinha** had a very productive year in teaching, research, scholarship, and service. He taught graduate courses in Information Technology in Construction and Infrastructure Asset Management during the fall and spring, respectively. Sinha continued work on his NSF CAREER Award that supported research in the areas of Sustainable Water Infrastructure Management. He is also directing two research projects related to Condition Assessment and Renewal Engineering of Drinking Water and Wastewater Infrastructure Systems. The development of this research program stems from the Environmental Protection Agency’s Sustainable Water Infrastructure Initiative. Sinha co-chaired a workshop, Measuring Up To Sustainable Water, funded by the National Institute of Standards and Technology (NIST). His research group currently consists of one post-doctoral fellow, six Ph.D. students, and five M.S. students. Three papers were published in research journals and 15 papers were included in conference proceedings. Sinha continues to serve as the North American Society for Trenchless Technology (NASTT) Student Chapter advisor.

**John E. Taylor** recently joined Virginia Tech and is off to a very productive start. He was recently selected to receive the CII’s 2011 Outstanding Instructor Award to be presented at the CII Annual Conference in Chicago. This award recognizes Taylor’s continuing efforts to work with students and industry to understand and navigate the challenges of construction industry globalization. This award follows a recently completed CII research project in which Taylor and his team developed a globalizing self-assessment tool for use by industry. Taylor was recently awarded two additional grants relating to industry globalization; a CII research grant on managing best practice deployment in developing countries (together with de la Garza).
Garza), and a NSF grant on creating global knowledge-sharing communities of practice. Taylor is otherwise busy launching his NSF CAREER Award project at Virginia Tech, preparing new courses, and serving on several journal editorial boards. (See related article, page 9.)

Michael C. Vorster is very busy with his writing, publishing and consulting business in his retirement. But, he is Orange and Maroon all the way. This is a direct quote, “I do miss you folk and the students.”

Deborah Young-Corbett continues to develop research, scholarship, and instructional programs emphasizing the control of health hazards arising from construction processes and inherent to the built environment. Her research team is performing the work of three projects, sponsored by the National Institute for Occupational Safety and Health (NIOSH) and NSF. Recently, she and two collaborators were awarded a training grant from NIOSH to provide assistantship funding for graduate students interested in receiving advanced training in occupational safety and health. The scholarship of Young-Corbett’s research group has begun to see some notable impacts. The Occupational Safety and Health Administration cited some of Young-Corbett’s published work in its advisory document regarding the control of silica in construction operations. Environment Canada cited her work in a recent draft regulation on quartz. Additionally, she was asked to join a NIOSH advisory committee concerning the development of Prevention through Design (PtD) initiatives and is an invited speaker at the annual NIOSH conference on PtD.

2011 Vecellio Distinguished Lecture was presented by John R. Hillman, P.E., S.E.

John Hillman was Engineering News Record’s Award of Excellence Winner as a result of his patented Hybrid Composite Beam, a structural beam consisting of a corrosion-resistant fiberglass box containing self-consolidating concrete, steel strands, foam, and a pink and frilly-looking inflatable plastic bag.

As the Vecellio lecturer, he spoke about the crucial role of innovation and entrepreneurship to find economical, durable and fast rehabilitation solutions in an era of chronically underfunded and deteriorating American infrastructure.
The Environmental and Water Resources Program

The Environmental and Water Resources (EWR) Program jumped three notches in its standings, now ranking seventh in the nation, according to the U.S. News and World Report’s annual ranking of graduate programs in environmental engineering. The dedicated, continuously working, and forward thinking faculty, staff, and students share recognition for this excellence in teaching, research, and outreach related to interdisciplinary environmental engineering and science. To attest to this excellence, the EWR Student Design Team took first place in the Virginia Water Environment Association’s (VWEA) 2011 Design Competition.

The EWR staff supports nearly 20 faculty, 110 graduate students, and many undergraduate students. The Blacksburg staff, Beth Lucas, Merry-Gayle Moeller, Julie Petruska, Jody Smiley, and Betty Wingate, and National Capital Region staff member, Jeny Beausoliel, are all doing well as they assist extensive teaching and research efforts in Durham, Hancock, ICTAS I and II, Norris, and Patton Halls, and the Northern Virginia Center located at Falls Church, Va. The Occoquan Watershed Lab in Manassas recently entered renovated modern laboratories and became the first National Environmental Laboratory Accreditation Conference (NELAC) certified university lab in Virginia. Lab manager Dongmei Wang led the lab certification effort. The research staff, Katherine Chacon, Curt Eskridge, Mike Gaal, Doug Holladay, Mark Lucas (awarded a pin for 20 years of service), Harry Post, Phil Spellberg, George “Woody” Underwood, Dongmei Wang, and Joan Wirt, all actively assess water quality through the NOVA region while Barb Angelotti and Alicia Tingen provide administrative support. Office manager Barb Angelotti was awarded the 2011 NRC Outstanding Staff Award for her “consistent exceptional service to the university.”

EWR emeritus faculty, William Cox, Robert Hoehn, David Kibler, and Clifford Randall, all continue to visit and contribute to the program. Jennifer Irish joined the EWR faculty as described in the “New Faculty” section on page 9. Accomplishments of individual and favorite faculty are detailed below.

Gregory Boardman is organizing a session for the World Aquaculture Society Conference in 2012.

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Greg Boardman and his graduate students worked on research projects in four areas: the treatment of aquacultural waste by means of pretreatments and subsurface wetlands; the possible use of denatured alcohol for the removal of nitrogen in wastewater; the biological treatment of a chemical wastewater; and the minimization of disinfection by-products at a water plant. Two undergraduates earned research credits for their efforts in two of the projects. Regarding outreach, Boardman worked with Continuing and Professional Education to offer 11 short courses and a series of televised lectures related to the treatment and management of water/wastewater facilities. He is also organizing a session for the World Aquaculture Society conference in Las Vegas in Feb., 2012, and presented a paper at an International Water Association conference in Scotland last August. In the spring of 2011, he was elected to serve three years on the board of directors for the Aquacultural Engineering Society.

Andrea M. Dietrich led an innovative cross-campus “Water for Health” seminar, taught with colleagues from two other Virginia Tech colleges. In the seminar, students and faculty integrated water quality, treatment, palatability, and nutrition to develop an appreciation of the complexity and value of water. This seminar is a core course in a new $1 million Interdisciplinary Graduate Education Program for which Dietrich is core faculty. Her research...
team, which links water quality to consumers, published eight articles and two major reports last year, including research on age-related differences in the human ability to detect and reject potentially toxic water contaminants. Professionally, she was re-appointed to the editorial board for the *Journal of the American Water Works Association* and active in international invited-speaker activities through the International Water Association. For those who remember her young sons running through the hallways, she now has two six-foot engineers, one a recent U.Va. graduate and one an entering Virginia Tech freshman.

**Panos Diplas** continued his teaching and research activities in the areas of environmental, fluvial, and infrastructure hydraulics. His research, centered around the Baker Environmental Hydraulics Laboratory (www.behl.cee.vt.edu), focused on: numerical modeling of river flows for stream restoration; scour around bridge foundations; role of in-stream structures on infrastructure protection; sediment transport dynamics; nanomechanical approach to bank erosion; effect of fluctuating dam releases on the lower Roanoke River bank stability; and fate of contaminants released from a containment structure into a riverine system. These activities were supported by NSF, U.S. Army Corps of Engineers, Department of Defense, National Cooperative Highway Research Program, Office of Naval Research, Dominion Power, and Virginia Uranium. He advised 16 graduate students, eight Ph.D.s, and eight master’s students. Together with his students, he made 15 conference presentations and published six journal papers. Diplas served as guest editor for the *Journal of Hydraulic Engineering*’s special issue “River Flow Hydrodynamics: Physical and Ecological Aspects” published in December 2010. He is a member of the editorial board of four journals and the scientific advisory committee of four international conferences.

**Randy Dymond** has been very active in both teaching and research efforts in the areas of land development, floodplain mapping, urban stormwater, hazard mitigation, and geospatial information technology. Five of Dymond’s 10 graduate students finished this year with projects on: emergency management; 3D building routing, using geospatial modeling; temperature mitigation; bioretention cells for urban stormwater; and sustainable land development. Dymond taught the new CEE 3274 Introduction to Land Development course this year and is continuing to evolve the course with help from practitioners affiliated with the Land Development Design Initiative (LDDI). More information is available at www.lddi.cee.vt.edu. He continues to serve as the American Society of Civil Engineers’ (ASCE) student chapter advisor and will be busy helping Virginia Tech host the ASCE Virginias Conference next spring. In addition to having five research papers published during the past year, Dymond gave an invited presentation at the American Society for Engineering Education annual conference’s Global Pavilion about the department’s new CEE curriculum.

**Marc Edwards’** research group graduated four members including master’s students Meredith Raetz and Roger Arnold and doctoral candidates Emily Sarver and Carolyn Nguyen. Sarver is now an assistant professor in the Mining and Minerals Engineering Department at Virginia Tech and Nguyen is an engineer in Maryland. The group’s work on lead in drinking water resulted in a new law signed by President Obama in early 2011, formation of an Environmental Protection Agency (EPA) Science Advisory Board on the dangers of partial lead pipe replacements, and several high profile national stories/investigations by the Associated Press, Government Accountability Office, National Public Radio, and other groups. Simoni Triantafyllidou won “Outstanding Ph.D. Student” in the College of Engineering, and former group member Laurie McNeill garnered two honors: a Carnegie Foundation Outstanding Professor award and the Virginia Tech Outstanding Young Alumna award. The group published 13 peer reviewed papers and made over 30 national presentations during the year on topics including sustainable water; pathogens in water heaters, and plumbing materials corrosion.

**Daniel Gallagher** taught CEE-3804 - Computer Applications for CEE, and CEE 5724 - Environmental Sampling and Monitoring; both courses teach CEE and EWR students key computer skills to succeed in the profession. He and his graduate and undergraduate students continue to develop predictive models for food-safety applications and protection of public health. His U.S. Department of Agriculture project focuses on deli food safety and requires significant trips to the Washington D.C. area for interactions with regulatory and industry personnel. Gallagher also continues to perform research related to drinking water. He was an invited speaker to the International Water Association’s World Water Congress where he spoke on statistical methods for harnessing information from water quality-based consumer complaints. He and his students published modeling articles that predict exposure to water contaminants that volatilize during showering and contaminant transport into water distribution materials.

**Adil Godrej** is looking forward to two Ph.D. students of his (one of whom he is the committee co-chair) graduating in the coming year. A new Ph.D. student, Justin Barlett, is replacing Yingmei Liu, who expected to graduate at the end of summer 2011, on the Occoquan Model project. Saurav Kumar, the other student, has worked with Tom Grizzard and Godrej on a variety of things, many of them related to developing an Environmental Decision Support System (EDSS) based on extending the Occoquan model for direct stakeholder use via a web interface, and expects to graduate in fall 2011. While Godrej continued to serve on various regional and local committees related to environmental issues, he has completed his seventh year of reading graduates’ names at the Northern Virginia commencement, a task that definitely exercises his ability to get his speech around the names of many international students and a task that gives him quite a bit of pleasure, even though it is a small duty.

**Tom Grizzard** continues to direct the Occoquan Laboratory in Manassas. Along with his colleagues, he is busy putting the newly-renovated facilities to good use. Thanks to an effort led by Dongmei Wang, the facility has the distinction of becoming the only certified environmental lab among Virginia universities. The lab is actively engaged in research associated with the unique stresses on the water cycle in urban systems, including water reclamation and reuse, urban stormwater management, and the management of surface waters to support a variety of human uses. The research enterprise at the lab continues to maintain annual funding.
near the $2 million mark. Together with his colleagues and students, research results were presented at European and Asian conferences. Grizzard remains active in service assignments, including serving on a Virginia advisory panel on water reuse, and advising the government of Singapore on a variety of water quality/resource issues.

**Erich Hester**’s research group continued to gain momentum this year. One new Ph.D. and one new master’s student joined the group while another master’s student graduated. Their research focused on urban streams, including migration and mitigation of nutrients as well as urban impacts to surface water-groundwater exchange. Additional research was conducted by an undergraduate student in the area of urban stormwater best management practices. Two new publications came out in print and a third was submitted in the areas of stream restoration and thermal pollution of waterways. Hester was awarded funding from Jeffress Memorial Trust, Consortium of Universities for the Advancement of Hydrologic Science, Inc., and the Institute of Critical Technology and Applied Science (ICTAS) to pursue research in the areas of preferential flow and restoration of surface water-groundwater exchange in streams and rivers. Hester taught CEE 4334 Hydraulic Structures for the first time spring 2011. David Kibler previously taught this course, and he continued to provide advice and several guest lectures.

**Bill Knocke** completed his first year as associate vice president for research programs at Virginia Tech. This is a three-year, 80 percent appointment in the Office of the Vice President for Research. With his remaining time, Knocke continues to teach within the EWR graduate program and to advise graduate students who are primarily focused on manganese control issues in drinking water treatment. He also remains active with students in the department in his role as faculty advisor to the Chi Epsilon Honor Society as well as in seeking to enhance the involvement of undergraduate CEE students in research activities.

**John Little** received two new National Science Foundation projects. “Phthalate Plasticizers: Temperature Dependence of Material/ Air Equilibria and Consequences for Emissions, Exposure and Risk” will be carried out with experts from the University of Texas at Austin, U.S. Environmental Protection Agency (EPA), Denmark, and Tsinghua University in China. “Managing Oxygen Demand in Lakes and Reservoirs - A Competition between Natural and Artificial Forcing” will be carried out with experts from Texas A&M University, Eawag in Switzerland, and the University of Granada in Spain. Little was appointed chair of the International Society for Indoor Air Quality and Climate’s Scientific and Technical Committee on Sources, Monitoring and Evaluation. He served as the lead co-chair of a Workshop on Semivolatile Organic Compounds (SVOCs) in the Indoor Environment that was held at EPA and featured 22 invited international experts. He gave a keynote speech at the First International Workshop on SVOCs in the Indoor Environment that was held at Tsinghua University.

**Linsey Marr**’s research group consists of four Ph.D. students who are investigating: sources, transformation, and fate of nanomaterials in the atmosphere; quantification of air pollutant emissions in urban areas; and transmission of flu viruses through the aerosol route. Marr and Amy Pruden received a new grant from the EPA to investigate the fate of nanomaterials during incineration and wastewater treatment. A publication on airborne flu viruses measured in a health clinic, a day care center, and on airplanes received attention from the popular media. Marr was invited to participate in an NSF workshop on the environmental impacts of nanomaterials. In May, a master’s student successfully defended his thesis on the sources and cross-border transport of black carbon at the U.S.-Mexico border. Students won poster awards at the American Association for Aerosol Research conference, the Virginia Tech Graduate Student Association Research Symposium, and the CEE Research Day Poster Session.

**Glenn Moglen** taught “CEE 4324/5984: Open Channel Flow” for the first time as a distance taught course between Blacksburg, Falls Church, and Richmond. Students taking this course at the graduate level contributed a set of articles on various aspects of open channel flow to Wikipedia. Moglen also taught “CEE 5734 - Urban Hydrology and Stormwater Management” as a Commonwealth Graduate Engineering Program course, ultimately taken at eight sites across Virginia. Through support from ICTAS, Moglen continued his research on the consequences of joint climate change and urbanization on water supply in the Washington D.C. metropolitan area. Moglen is producing flood estimates for the FEMA map modernization program in Maryland and is developing a web site to allow tailored analyses of flooding and nutrient loading behavior for future land use change on the DelMarVa Peninsula. Moglen completed his term as chair of the ASCE Watershed Management technical committee and his service as an associate editor for ASCE’s *Journal of Hydrologic Engineering*. Finally, he also completed terms serving as president of the Virginia Tech National Capital Region Faculty Association and as the Engineering Faculty Organization’s NCR representative.

**John Novak** continued his research program with projects supported by DC WATER, the Water Environment Research Foundation, and Hampton Roads Sanitation District. In addition, several projects were supported by private companies including Waste Management, Inc. He and his students presented four papers at the recent Water Environment Federation Biosolids Conference (WEFTEC) in Sacramento, Calif., two papers at WEFTEC in Chicago and at a solid waste conference in San Antonio. He and his students also published six journal papers over the past year. Recently, he and Mark Widdowson taught a course on water management in the Dominican Republic. This course used the area around Punta Cana as a case study to investigate the sustainability of the local water resource to provide an adequate supply for both the resorts and the local community. Novak served as a keynote speaker for the Australian Biosolids Association in Sydney, Australia. He received the Pioneer Award from the Water Environment Federation for his career work in sludge management and also was made a Fellow of WEF.

**Amy Pruden** taught two sections of CEE 3104 Introduction to Environmental Engineering this year, along with CEE 2804 Introduction to Civil Engineering, and CEE 5194 Environmental Engineering Microbiology. Pruden has focused on building an integrated research program centered on water sustainability, with major themes of emerging contaminants, emerging pathogens, and bioremediation. A
new NSF grant was awarded with Edwards to investigate the interplay between water and plumbing characteristics and the microbial ecology of opportunistic pathogens. A new EPA grant was awarded, along with Marr, to determine the fate and effects of nanowaste during wastewater treatment. Pruden and Widdowson were awarded an NSF RAPID grant, which enabled them to travel to the Gulf Coast following the Deepwater Horizon oil spill and work on improving the understanding of bacterial communities driving biodegradation and help better guide bioremediation efforts.

Cliff Randall was inducted into the Hall of Distinction of the University of Kentucky College of Engineering on April 15, 2011, and was made an honorary member of the American Academy of Environmental Engineers at its annual meeting in Washington, D.C., on May 4, 2011. He was one of four senior advisors for the U.S. EPA Nutrient Control Design Manual published in August 2010. The Clifford W. Randall Lecture Series was inaugurated in October 15, 2010, with a lecture by James Barnard, the “Father of Biological Nutrient Removal Wastewater Treatment.” The lecture series was developed and organized by Knocke and Novak. The first lecture was well attended by CEE faculty and staff, present and former students, and professional colleagues.

Paolo Scardina actively instructed many of the core civil and environmental engineering classes at a level above the normal university requirement. Additionally, he helped a local industrial plant optimize its wastewater treatment process to improve biological removal of their waste constituents. Scardina continued assisting those communities who experienced adverse corrosion and premature leaks in residential plumbing systems. His other activities related to natural gas drilling, which has intensified through the Marcellus shale region of the United States.

Peter Vikesland and his research group have had another highly productive year with a number of research and review papers published in respected peer reviewed journals and invited presentations given at national and international meetings in San Diego, Calif., Anaheim, Calif., and Switzerland. A special highlight this past year was publication of a co-authored paper by Via Ph.D. candidate Rebecca Halvorson in Environmental Science and Technology that was featured as the cover of the journal. During the past year, three of Vikesland’s current students received national awards: undergraduate researcher Jason Jones was awarded an American Chemical Society (ACS) Division of Environmental Chemistry Undergraduate Student Award, Ph.D. candidate Matthew Hull was awarded both the ACS Division of Environmental Chemistry Graduate Student and Ellen P. Gonter Graduate Student Paper Awards, and Via Ph.D. candidate Rebecca Halvorson was awarded the Abel Wolman doctoral fellowship by the American Water Works Association.

Mark Widdowson was instrumental in organizing a faculty-led study abroad program at the Virginia Tech Caribbean Center for Education and Research. Participants included 13 rising senior CEE students and three graduate students. Widdowson and Novak taught a five-week course titled “Water Management in the Dominican Republic” with a focus on...
The Geotechnical Engineering Program continues to excel in teaching, research, and service, and is continuing to grow. Tom Brandon, who manages the graduate applications and admissions for the group, reports that the program is seeing its largest number of graduate applications and matriculated students since the inception of the program, breaking last year’s previous record. This is likely a result of an increasingly active and vibrant faculty combined with continual enhancement of the teaching and research facilities. Brief descriptions of each faculty member’s activities over the past year are presented below.

Thomas Brandon continued his work with the U.S. Army Corps of Engineers. His research with the New Orleans District, the Mississippi Valley Division, and the Engineering Research and Development Center (ERDC) focused on interpretation of cone penetration tests, use of soil correlations in lower Mississippi Valley soils, characterization of the undrained shear strength for design purposes, and development of seepage models for the load test that was conducted on the London Avenue canal. His consulting projects paralleled his research efforts, with Brandon working on technical reviews of the analyses of the outfall canals in New Orleans, an assessment of the use of lime and fly ash admixtures in levees, and other levee-related projects. He also performed seepage and stability analyses of Yacambu Dam in Venezuela with Mike Duncan.

Brandon was active in short courses and workshops during the past year. He taught a short course for the Memphis District of the Corps of Engineers regarding practical use of the cone penetration test in November, 2010. Duncan and Brandon taught a short course in shear strength and laboratory test interpretation in Charlotte for S&ME, an engineering and environmental services firm, in July 2011, and they held a Center for Geotechnical Practice and Research (CGPR) workshop regarding design strength values for highly plastic clays in August 2011.

Brandon will be turning over the management of the graduate student application process for the geotechnical engineering group to Russell Green for the upcoming year, after 25 years of reviewing applications.

Joe Dove continued his collaboration with Patricia Dove, a chaired professor of geosciences at Virginia Tech and CEE graduate students in developing novel, biologically inspired methods to improve the engineering behavior of soils. This project is supported by the National Science Foundation. Dove is also working with a software engineer to further develop the software package geotechnical Visualization Tools (gVT). This program allows extraction of engineering data from terrestrial light detection and ranging scans, and it is finding applications in geotechnical engineering and the geosciences. Other areas of active research include the application of advanced sensing techniques for site investigation, infrastructure assessment and hazard detection; engineering for sustainable sites; and, bio-inspired materials. Dove served the department as one of the academic advisors for undergraduate majors, and as chair of the curriculum committee.

Mike Duncan, now retired from full-time teaching, works with George Filz as co-director of the CGPR and supervises research projects. During the past year he co-authored three CGPR reports on dam failures, stress-strain behavior of soils, and erosion and piping in levees. He also gave a lecture on flood wall stability to the St. Louis Section of the American Society of Civil Engineers (ASCE), and, with Brandon, organized a CGPR workshop on the shear strength of highly plastic clays that drew about 50 participants from around the U.S.

Among the projects George Filz is working on is the improvement of the mobility and stability of rocket transporters under 30 million pound loads at the Kennedy Space Center.

Among the projects George Filz is working on is the improvement of the mobility and stability of rocket transporters under 30 million pound loads at the Kennedy Space Center.
Most of Duncan’s consulting during the past year has been involved with dams, including consulting boards for Ashton Dam in Idaho, Echo Dam in Utah, Wolf Creek Dam in Kentucky, Linnville Dam in North Carolina, Merrill Creek Dam in New Jersey, and Mormon Island Auxiliary Dam in California. He also served as a consultant on methods of stabilizing a massive landslide in Taiwan that resulted in 11 deaths.

**George Filz**’s research projects (and sponsors) include: developing an accessible knowledge base for soil improvement technologies for transportation infrastructure renewal (SHRP2); improving the mobility and stability of rocket transporters under 30 million pound loads at Kennedy Space Center (NASA); developing data bases and design methodologies for deep mixing (USACE and CGPR); and improving bridge abutment foundation support using piling and mechanically stabilized earth systems (VCTIR/VDOT). Filz and his students made research presentations in Guaruja, Brazil; Dallas, Texas; New Orleans, Louisiana; Corvallis, Oregon; Asheville, North Carolina; Charleston, South Carolina; and Hershey, Pennsylvania. Filz serves as assistant CEE department head, director of VT’s Center for Geotechnical Practice and Research (CGPR), faculty advisor of VT’s Geotechnical Student Organization, member of VDOT’s Geotechnical Research Advisory Committee, member of the ASCE Geo-Institute Soil Improvement Committee, and consultant on geotechnical design and construction projects.

**Russell Green** has been actively working on several continuing research projects, as well as a few new ones. Most notably, Green was a member and headed NSF-sponsored teams that went to New Zealand following both the September 2010, M=7.0 Darfield earthquake and the February 2011, M=6.1 Christchurch earthquake. The goal of the trips was to collect perishable data that could be used to advance the profession’s knowledge of earthquake engineering. He subsequently returned to New Zealand in July 2011 for three more weeks to collect additional information on sites that experienced repeated liquefaction.

Additionally, Green has continued work on three NSF sponsored projects related to the determination of the seismic hazard of the midwest using paleo liquefaction data; damage detection of buried pipelines after earthquakes; and the development of an energy-based liquefaction evaluation procedure in collaboration with Adrian Rodriguez-Marek. Green has also been involved in developing a short course on geotechnical earthquake engineering for the CGPR, which will be presented in December 2011.

During the past academic year, **James R. (Jimmy) Martin** has been very active in teaching, research, and professional service related to conventional civil engineering as well as broader areas as director of the Institute for Disaster Risk Management at Virginia Tech (DRM@VT), a university research center.

A primary research thrust has been sustainable energy technology using energy foundations, or energy piles. These deep foundation systems utilize the geothermal energy stored in the ground for heating and cooling purposes via loops embedded in the piles similar to a geothermal heat pump system. This technology leads to cost savings of up to 80 percent for heating and cooling of typical buildings. Including 50 percent in-kind support, he and his colleague, Guneys Olgun, have received nearly $2.5 million in new funding during 2011 for work on energy piles. This work involves close partnerships with researchers from Cambridge University in the United Kingdom, EPFL in Switzerland, Texas A&M University, Lehigh University, the University of Colorado at Boulder, Cairo University in Egypt, and many industrial partners. Field work is being performed at four sites across the U.S., along with sites in Europe, Switzerland, Turkey, and Egypt.

On behalf of ASCE, Martin joined a field reconnaissance team to investigate the effects of the March 11, 2011 Great Tohoku Earthquake in Japan (M=9). His team focused on the seismic performance of waterfront structures and ancillary port facilities along with improved-soil sites. They investigated reclaimed islands, major industrial facilities, major airports, container terminals, bulk cargo handling facilities, marine oil terminals, and major fisheries ports. The team benefited tremendously from partnerships with the Ports and Airport Reach Institute (PARI) in Japan. The study area reached from Tokyo to north of Sendai where the tsunami effects were devastating. The field study took about two weeks and the follow-up analyses are ongoing. Martin made numerous other international trips for disaster-related research in Chile, Romania, Switzerland, and Italy.

Martin served on the National Geospatial Intelligence Agency’s East’s Participatory Peer Review Committee which is charged with technical oversight of new research findings being developed to establish a new generation of baseline earthquake motions in eastern North America to be used in the design of lifelines and constructed facilities in the U.S. Nuclear power plants are a key focus.

**Matthew Mauldon** serves on the ASCE Rock Mechanics Committee and also on the ASCE Committee on Engineering Geology and Site Characterization. He is on the editorial boards of *Rock Mechanics and Rock Engineering* and the Korean Society of Civil Engineers’ *Journal of Civil Engineering*. Current research initiatives include work on fluvial rock erosion, ground response to human locomotion and disaster response and management.

Emeritus Professor **Jim Mitchell** continues to serve in an advisory capacity as a member of the research team for the Transportation Research Board’s Strategic Highway Research Program 2 project on geotechnical solutions for soil improvement, rapid embankment construction, and stabilization of the pavement working platform. He is a member of the recently appointed National Academies/National Research Council study committee on Induced Seismic Potential in Energy Technologies which is assessing the nature and significance of seismic activity caused by enhanced geothermal systems, carbon capture and storage, and enhanced oil recovery.

Mitchell was the keynote speaker for the 2011 ASCE Geo-Institute New York Metropolitan Group Annual Seminar, this year’s topic being ground improvement. Mitchell’s current consulting activities include advisory panels on seismic remediation studies for three embankment dams in California, participation on the design review board for a large copper tailings storage facility in Utah, the board of consultants for embankment seismic improvement of the Bridgewater hydroelectric project dams in North Carolina, and service on the technical advisory panel for the Elliott Bay Seawall Replacement project in Seattle.

**Adrian Rodriguez-Marek** has several active research projects. He leads a team of five universities in an NSF sponsored project
The Structures Engineering and Material Program

Carin Roberts-Wollman was one of the faculty who led a group of students on a tour of Switzerland to see a number of interesting structural sites.

The highlights of the Structures Engineering and Material program for the past year include: the appointment of one new faculty, Roberto Leon, beginning in the spring semester (see related story in the new faculty section); the funding of several new research projects; faculty members Tommy Cousins, Carin Roberts-Wollmann, Cris Moen, and Richard Weyers are continuing work on a five year, multi-million research program known as the Long Term Bridge Performance program that is funded by the Federal Highway Administration (FHWA); William Wright received funding for two National Cooperative Highway Research Program (NCHRP) projects and a FHWA pooled fund study; Matt Eatherton and Finley Charney are developing new, optimized structural systems to improve building performance during earthquakes; as an assistant professor-of-practice Vickie Mouras focuses her attention on teaching the introductory structural design courses; and the SEM program continues its tradition of excellence in teaching. These accomplishments could not have been achieved without the support and efforts of numerous graduate students and staff members.

Finley Charney devoted most of his research efforts over the past year to two research projects, one supported by the National Institute for Standards and Technology, and the other supported by the American Institute of Steel Construction. Both seek to develop new structural systems that inherently perform well across a broad spectrum of seismic demands. An additional project, supported by the Applied Technology Council, is dedicated to the development of a comprehensive computational environment that may be used to assess the seismic collapse probability of structures.

In the first part of 2011, Charney travelled to Chile and India to visit universities for the purpose of establishing formal research and teaching relationships. As a result of these trips, faculty from the Catholic University in Santiago, Chile, and the Indian Institutes of Technology in Roorkee and Kanpur will serve as members of the Ph.D. committee for several of Charney’s students. Likewise, Charney will serve on Ph.D. committees in Chile and India. In the future, these relationships will be broadened to include student exchanges, faculty exchanges, and dual degree programs.

Tommy Cousins continues to offer pre-stressed concrete and bridge design courses and to focus his research efforts on challenges associated with bridge performance and longevity. He has concentrated his research efforts on the projects described below which are all related to the development and use of high performance materials in bridges.

Cousins will be involved in two Virginia Department of Transportation (VDOT) sponsored bridge innovation implementation projects during the next two years. For the first he is partnering with Carin Roberts-Wollmann and two graduate students to help VDOT bridge engineers develop and implement inverted T beams topped with a cast-in-place deck on a bridge near Richmond, Va. This style bridge is an alternative to the traditional adjacent box beam bridges used in short spans. The inverted T bridge system should minimize or eliminate the reflective cracking commonly found in adjacent box beam bridges.

The second project will use a variation of the Hillman hybrid composite beam (HCB) on a river crossing near Fredericksburg, Va. His co-principal investigators are Roberts-Wollmann and Cris Moen. The Hillman HCB combines fiber-reinforced polymers, concrete, and reinforcement in a shallow tied arch system that gives a light weight, pre-fabricated girder. The HCB is an excellent alternative when
In a $25 million project, the FHWA has contracted with researchers at the Center for Advanced Infrastructure & Transportation at Rutgers University to undertake a five-year project to investigate the long-term performance of bridges. The program is known as the Long Term Bridge Performance (LTBP) Program. This program will be the basis for future bridge condition assessment and asset management programs that will be used to assist managers of the nation’s highway infrastructure in making better decisions in the stewardship of highway assets. Researchers from the Virginia Transportation Research Council (VTRC) and Virginia Tech are subcontractors to Rutgers for this project. The Virginia Tech research team is led by Roberts-Wollmann with Cousins, Weyers, and Moen serving as co-investigators. The third year of the project has been completed. The main accomplishment of the third year was conducting condition assessment testing of bridges in New York, Florida, and Minnesota. Virginia Tech, along with partner researchers from VTRC and Utah State University, are presently planning the cluster bridge phase of the project. This phase of the project will encompass condition assessment and testing of clusters of bridges in four states during the next two years.

Matthew Eatherton and his research group are active in developing new structural systems to improve building performance during earthquakes. For example, they have developed a resilient self-centering truss moment frame that can bring a building back to plumb after an earthquake motion ceases and concentrates structural damage in replaceable components. They have also developed steel plate shear walls with specially designed perforations that allow the system response characteristics such as strength, stiffness, ductility, and energy dissipation to be independently tuned to allow optimal performance when subjected to lateral loads. Using wavelet transforms, the group investigated and decoupled some of the complex interactions between structural response and ground motion. This past year, Eatherton also obtained and upgraded an instructional shake table which has since been used for several outreach activities and incorporated into his structural dynamics courses to allow students to experience the effects of earthquakes first hand.

Cris Moen’s research group continues to find its primary focus in thin-walled structures, and specifically cold-formed steel. After more than three years of patient effort, Moen’s design method for cold-formed steel members with pre-punched holes was approved for incorporation into the American Iron and Steel Institute’s (AISI) North American Specification. Moen and his colleague Eatherton were recently awarded a seismic engineering project from the AISI to quantify energy dissipation of cold-formed steel studs and joists in low and midrise steel framed construction. Moen’s team is working closely with the metal building industry on several projects to develop mechanics-based design methods for roof and wall systems susceptible to high loads and snow loadings. Moen was recently appointed chair of the ASCE SEI Committee on Cold-Formed Members.

Moen is finding opportunities to apply his expertise in thin-walled structures to aerospace engineering. He and his students are collaborating with NASA-Langley and the aerospace industry on the development of elliptical carbon-fiber composite fuselage and wing structural components in blended wing military and commercial aircraft. His team also recently completed a conceptual truss-braced wing study for the National Institute of Aerospace, and is starting a new project with the NIA to map, quantify, and simulate random initial imperfections in thin-walled cylinders.

Moen’s background as a bridge engineer is keeping him active in infrastructure engineering research. He and his colleagues are using advanced finite element and statistical techniques to identify structural indicators of bridge deck degradation for the FHWA. Moen was also recently tasked with developing a bridge deck design strategy for Virginia that incorporates a new class of corrosion-resistant reinforcing steel made up of high chromium stainless steels and austenitic steel microcomposites. In the area of structural stability, Moen received the 2011 Precast/Prestressed Institute’s Richard P. Jenny Research Fellowship to study precast girder instabilities during lifting, transportation, and erection.

Victoria Mouras focused her efforts this past year on undergraduate teaching and advising. In addition to teaching the introductory steel and concrete design courses, Mouras also teaches Estimating, Production and Cost Engineering. As a professor of practice, she has been able to successfully incorporate her past profession.
Carin Roberts-Wollmann collaborated with Moen, Weyers, William Wright, Rojiani and Cousins on a number of projects. She has many new and ongoing bridge related research projects funded by such agencies as NCHRP, FHWA and ViCTIR. She is working on a new project to develop an inverted T-beam system for rapid construction of durable short span bridges in Virginia. She continues to participate in committee activities of the American Concrete Institute, where she is chair of a sub-committee developing a new guideline for prestress loss calculations and she was appointed to a sub-committee of Committee 318 that writes the building code and commentary for reinforced concrete. In June, she and Cousins led a group of students and faculty on a tour of Switzerland visiting bridges, tunnels, structural engineering laboratories, and other interesting sites.

Kamal Rojiani’s research interests include structural safety and reliability, risk analysis, code calibration, computer applications in civil and structural engineering, programming methodologies, and software development. His primary activities last year were in the area of teaching and service. He taught undergraduate courses in structural analysis, concrete design, and computer applications; and graduate courses in structural reliability, finite element analysis, and the SEM graduate seminar. He is currently working on several books on programming and numerical analysis. Rojiani continues to perform numerous service activities on behalf of the CEE department. He served as coordinator of the SEM program. He is one of the CEE department advisors with responsibility for advising over 100 undergraduate students. He is also a member of the CEE department curriculum committee.

Environmental (continued from page 24)

water resources management in the Punta Cana region. The program also involved testing of local water wells and community outreach through the Peace Corps and Save the Children. He and Pruden continue their work on the bioremediation of petroleum hydrocarbons associated with the 2010 Gulf of Mexico oil spill. Widdowson and colleagues presented papers at the International Symposium on Bioremediation and Sustainable Environmental Technologies held in Reno, Nevada, and the Partners in Environmental Technology Technical Symposium & Workshop held in Washington, D.C. In addition, he continued administrative duties as assistant department head, including efforts to expand international programs in CEE.
The Transportation Infrastructure and Systems Engineering Program

Geraldo Flintsch is working with the Department of Transportation on pavement friction management programs to reduce traffic accidents.

The Transportation Infrastructure and Systems Engineering Program (TISE) had a very productive academic year 2010-2011. The group includes seven faculty members in Blacksburg and four in the National Capital Region. More than 35 graduate students are now engaged in research activities, as the program continues to grow.

The Alliance of Transportation Engineering Students (ATES) continued multiple activities this year. The group organized a trip for 20 graduate students to attend the Transportation Research Board Meeting in Washington, D.C. in January 2011. ATES also organized technical events in Blacksburg as well as social events such as a welcome dinner for prospective graduate students.

The following paragraphs illustrate salient accomplishments by faculty, research staff, and students in the TISE group.

Montasir Abbas, associate professor, continued to work on the Federal Highway Administration Exploratory and Advanced Research Program (FHWA EARP) cooperative agreement. The objective of the FHWA EARP is to “research and develop projects that could lead to transformational changes and truly revolutionary advances in highway engineering and intermodal surface transportation in the United States.” The award funds multi-disciplinary research with a novel plan for simulation and prototype modeling of driver behavior. The research team includes: the Virginia Tech Transportation Institute (VTI); PTV, a private company; and the Virginia Transportation Research Council (VTRC). Abbas has also successfully completed a VTRC-funded research project on traffic responsive control. The developed guidelines received high praise from the research council and selected for implementation. In the past year, Abbas has published several research papers in journals.

Thomas Dingus, Newport News Shipbuilding Professor and human factors and safety transportation researcher, directs the VTTI, comprised of six transportation research centers. VTTI continues to be the largest university-level research center at Virginia Tech with over $22 million in total expenditures. VTII has grown to almost 300 faculty, staff, and students. This year represents the fourth year that VTTI conducted research as the National Surface Transportation Safety Center for Excellence (NSTSCE), tasked with using research to improve driver safety in both rural and urban communities. This year, new NSTSCE projects, such as a study on Roadway Lighting Design and Safety and Naturalistic Observation of Motorcycle Riders, are underway. VTTI continues to be recognized as a world leader for offering a “one-stop shop” for transportation-related research and testing both on Virginia’s Smart Road as well as in the growing field of naturalistic driving research. A recent award to the Institute is the world’s first large-scale, naturalistic motorcycle riding study. The study will employ small video recorders and instrumentation mounted on numerous bikes for six to 18 months, and it will combine unobtrusive, continuous data collection with post-incident interviews to create a comprehensive picture of many factors contributing to both crashes and near-crashes.

Gerardo Flintsch, professor and director of the Center for Sustainable Transportation Infrastructure (CSTI) at VTTI, has continued to seek innovative solutions for improving the efficiency, reliability and sustainability of the transportation infrastructure systems. This year, he has initiated a federally-supported project to reduce highway crashes and related fatalities by helping state Department of Transportation offices develop Pavement Friction Management Programs, and is working with the Virginia DOT to develop pavement structural capacity requirements for innovative pavement decision-making and contracting, and to optimize pavement preservation practices within the Commonwealth. He has also continued to build collaborative graduate programs with the University of the Nottingham, Politecnico di Milano, and Universidad Católica de Chile.

Flintsch, with his students and research associates, has published nine journal papers, seven peer-reviewed conference papers, four other conference papers, and two research reports. He has delivered 18 presentations at national and international conferences, including three keynote/invited presentations in Arizona, Colombia, and Philippines. He was elected as vice-chairman of the American Society for Testing and Materials (ASTM) committee E17 on Vehicle-Pavement Systems Vehicle-Pavement Systems, hosted and chaired the Pavement Evaluation 2010 conference in Roanoke, Va., and is chairing the organization of the on the 7th Symposium on Pavement Surface Characteristic2s of the World Road Association in Norfolk, Va.

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Kathleen Hancock has done research in geospatial analysis with applications to freight planning and operations, response planning for hazardous materials incidents, urban micro-simulation of traffic, and transportation right-of-way information management. She is co-director for the Center for Geospatial Information Technology in the National Capital Region that is expanding into Geospatial Intelligence and Health GIT (geospatial information technology). Hancock is initiating a new master of engineering degree in the National Capital Region focused on geospatial engineering. She is active on the Transportation Research Board (TRB) and is on the Research Advisory Council for the American Transportation Research Institute. She is also active with the United States Geospatial Intelligence Foundation (US-GIF), Homeland Infrastructure Foundation-Level Data Working Group (HIFLD), and University Consortium for Geographic Information Sciences (UCGIS).

Antoine Hobeika has continued his work in testing and improving the FHWA transportation planning software TRANSIMS. He taught classes on transportation planning and land use and intelligent transportation systems (ITS).

Bryan Katz, an adjunct professor, continues serving the CEE faculty through teaching undergraduate courses and working with students interested in undergraduate research in transportation. This academic year, Katz taught two sections of the course Introduction to Transportation Engineering while continuing to teach Geometric Design of Highways. He continues this role with the department while working for Science Applications International Corporation (SAIC) as a transportation researcher in Blacksburg. He continues to lead the SAIC Transportation Research Fellow program where two TISE students are selected each year by Hesham Rakha and Gerardo Flintsch to conduct cutting-edge transportation research both in transportation systems and transportation infrastructure. This spring, he was selected to be the project manager of FHWA’s Transportation Operations Laboratory housed at Turner-Fairbank Highway Research Center where he is leading a team of researchers and technical experts on three innovative research testbeds.

Shinya Kikuchi, the Charles E. Via Professor of Civil and Environmental Engineering, serves as the program director in the National Capital Region where he is located. Kikuchi’s interest is in urban transportation systems planning, public transportation, and uncertainty treatment in planning process. His research project in the past year was path search for unmanned vehicles in various terrains. He has also developed an agent-based multi-objective optimization algorithm and applied it to the problems of conflict resolution, and calibration of subjective probabilities. Kikuchi chairs the TRB’s Artificial Intelligence and Advanced Computing Application Committee. He has co-organized the Helsinki Summer School of Transportation last four years.

Pamela Murray-Tuite, an assistant professor, has expanded her work in evacuation, traffic incident effects, transportation resilience, risk, and network analysis. She has received funding from the National Science Foundation, the VTRC, NSF/Advance-VT, the Mid-Atlantic University Transportation Center/VTTI, and the Institute for Critical Technology and Applied Science at Virginia Tech. In the past year, she and her students have developed a dynamic traffic assignment model to understand the relationships among transportation network link states, explored resilience in the context of flooding, and developed optimization models related to picking up dependents in an evacuation. On-going work includes integrating household decision making and behavior with transportation simulation models for both no-notice and hurricane events and developing transportation related information tools for cellular phones. Her work has been presented at conferences and published in journals and conference proceedings. She is the chair of the Transportation Research Board’s Subcommittee on Critical Transport System Protection Analysis, Integration and Operations Planning and Management. She is also on the executive editorial board for the Journal of Transportation Security and continues to review papers for multiple journals and conferences.

Hesham Rakha, professor, is director of the Center for Sustainable Mobility (CSM). He worked on various national-level projects sponsored by the FHWA, the Research and Innovative Technology Administration, the National Highway Traffic Safety Association, NAVTEQ Inc., VDOT, the National Academies, SAIC, and Cambridge Systematics, Inc.

In collaboration with the CSM research faculty and students, Rakha published 10 peer-reviewed journal publications, published 16 peer-reviewed conference publications, two FHWA reports, and one VDOT report over the past year. Rakha also served as an associate editor for the IEEE Transactions on ITS, the Journal of ITS, and is a member of the editorial board of the Transportation Letters: The International Journal of Transportation Research. He is a member of the TRB committee on Traffic Flow Theory and Characteristics. Rakha was one of five co-chairs for the 13th International IEEE Conference on Intelligent Transportation Systems that was held in Madeira Island in Portugal in September 2010. Rakha also taught a new course on a comparative analysis of transportation issues between the Dominican Republic and the U.S. at Virginia Tech’s Punta Cana campus.

Samuel C. Tignor, adjunct professor at NVC, is working with the TRB Highway Safety Performance Committee to plan and develop a workshop on the joint use of the recently published Highway Safety Manual and the Human Factors Guideline for Road Systems, HFG. Each of these safety manuals is useful to highway designers and traffic engineers in designing and improving roadway systems for road users. The initial workshop planned for the annual Transportation Research Board will be held in January 2012. Tignor is a member of NCHRP Panel 41-47 which is guiding the development of the HFG and a co-chair of The TRB Joint Subcommittee on International Human Factors Guideline for Road Systems AND10(2).

Antonio Trani, professor, co-authored a
National Academy of Sciences Panel report to assess the validity and usability of Air Traffic Control workload models by the Federal Aviation Administration (FAA). Trani and Hinze (CEE) have continued the development of the Transportation Systems Model (TSAM). NASA and the FAA use TSAM to study the impacts of high-speed rail technologies in the demand for commercial air transportation nationwide. Trani, Hinze, and Swingle completed modeling work to help the Air Force understand the training airspace impacts of deploying 59 Joint Strike Fighters (JSF) at Eglin Air Force Base in Florida. He serves as associate editor of the journal *Air Traffic Control Quarterly*.

Trani, Kikuchi, Tom Murray, emeritus CEE faculty, and Hanif Sherali of industrial and systems engineering are part of a multi-university team that successfully won the FAA Center of Excellence for Aviation Operations Research (NEXTOR II). This FAA center could provide up to $60 million over seven years to eight universities including Virginia Tech, MIT, University of Maryland, University of California at Berkeley, Georgia Tech, Purdue, George Mason, and Ohio State.

Linbing Wang established a Task Committee on Mechanics of Pavements in the Engineering Mechanics Institute of ASCE. He was appointed as the chair of this committee. He continues doing research work in the mechanistic properties of pavement materials.

studying the effects of surface topography on strong ground motions. Damages due to surface topography effects have been documented in many earthquakes (most recently in the devastating M 7.0 Haiti earthquake); however, current codes do not account for these effects. The objective of this research is to advance the understanding of topographic effects to permit their inclusion into building codes. The research includes field testing in a region of coal-mine induced seismicity in Utah, centrifuge testing, and extensive numerical analysis.

Additionally, Rodriguez-Marek is working on a USGS sponsored project geared towards improving the characterization of ground motion uncertainty. An adequate characterization of this uncertainty is necessary to manage earthquake risk. Other active projects include an NSF sponsored project with Green on energy based liquefaction assessment, and a CGPR project on the design of coal ash disposal facilities.

Tom Dingus, director of the Virginia Tech Transportation Institute, has garnered the world’s first large-scale naturalistic motorcycle riding study.
The following pages highlight some of the country’s most exceptional students and alumni, the Via Scholars.

The motivation and aspirations of this group reflect a profound curiosity and desire to improve the quality of life around the world — from helping municipalities manage growth, to the aesthetics of structures, the quality of water, and international development.

The Via scholarships are made possible through the generosity of the late Mrs. Marion Bradley Via of Roanoke, Va., and her family. In 1987, Mrs. Via contributed $5 million each to the Departments of Electrical and Computer Engineering and Civil and Environmental Engineering. Virginia Tech’s Board of Visitors subsequently named the ECE department in honor of Mrs. Via’s deceased father, Harry Lynde Bradley, and the CEE department in honor of her late husband, Charles E. Via, Jr. Mrs. Via died in 1993.

Both departments use a portion of the endowment to award scholarships to qualifying students. These scholarships are among the most competitive in the country. Since the Via endowment was created in 1987, the department has awarded more than $16 million in scholarships and fellowships.
Shainur Ahsan
Hometown: Mt. Olive, Ala.
Location of Undergraduate Studies: Auburn University
Awards/Recognitions: Graduated Summa Cum Laude; Civil Engineering Department Outstanding Student Award (2009); 2010 Southeast ASCE Conference co-chairman; Chi Epsilon; Honor’s College; Cupola engineering ambassadors; Phi Kappa Phi Freshman Achievement Award
Primary Area of Interest: Structures
Outside Work Experience: North Carolina Department of Transportation – summer engineer’s assistant; NSF REU Program at University of Houston in structures
Career Goals: After obtaining my master’s, I hope to join a structural design firm and work on large-scale projects. I will also plan to obtain my PE license to become a professional engineer.

David Azinheira
Hometown: Dartmouth, Mass.
Location of Undergraduate Studies: University of Massachusetts Amherst
Awards/Recognitions: Graduated Summa Cum Laude with departmental honors in civil engineering; member of Commonwealth Honors College, Chi Epsilon, and Alpha Lambda Delta Honor Society; recipient of 2010-2011 NEWEA Student Scholarship; 2011 Selig Scholarship; 2010 APWA Timothy J. O’Leary Scholarship; 2009 NEWWA Watters Scholarship; and 2009 MCAP Scholarship.
Primary Area of Interest: Environmental and Water Resources
Outside Work Experience: Summer internships at CDM (Water Resources Group); Woodard and Curran (Land Development and Hydrology); VHB (structural and transportation engineering); Town of Dartmouth Engineering Department
Career Goals: Following the completion of my master’s degree I hope to attain a position at a consulting firm focusing on water resources. I am particularly interested in working with flood mapping, river flow modeling, and/or groundwater modeling.

Sasha Bajzek
Hometown: Tinley Park, Ill.
Location of Undergraduate Studies: Illinois Institute of Technology
Awards/Recognitions: Graduated Summa Cum Laude; Dean’s List all semesters; Tau Beta Pi member; 2009 ASCE IL Structural Group Scholarship; 1st Place 2005 International Bridge Building Competition; Camras Scholarship
Primary Area of Interest: Structures
Outside Work Experience: Structural/Civil Engineering Intern at Teng & Associates
Career Goals: My goal is to design bridges that are elegant, efficient, and structurally sound. Upon completing my master’s degree, my goal is to work for an innovative engineering firm that strives to incorporate new, sustainable technology in their design projects.
James M. Bryce
Hometown: Springfield, Mo.
Location of Undergraduate Studies: University of Missouri - Columbia
Awards/Recognitions: graduated Magna Cum Laude and Honors Scholar; member of Tau Beta Pi and Chi Epsilon Honors Societies. Selected as a WISE Intern in 2008 and published as an undergraduate in three countries in two languages.
Primary Area of Interest: Transportation & Infrastructure Systems
Outside Work Experience: Midwest Environmental Consultants Intern; WISE Intern working with policy makers in the field of sustainable transportation infrastructure; Mettemeyer Engineering LLC as a structural engineer on small to midsize structures (hospitals, retail, etc.)
Career Goals: Beyond my master’s degree, I wish to continue on for a Ph.D. in order to prepare for an academic position at a respected university. I desire to help teach and nurture the next generation of engineers, and hopefully endow them with the same desire to learn that brought me to Virginia Tech.

Brandi Clark
Hometown: Westervelt, Ill.
Location of Undergraduate Studies: Missouri University of Science and Technology
Awards/Recognitions: NSF Graduate Research Fellowship, EPA GRO Fellow; Barry M. Goldwater Scholar; EWRI Undergraduate Technical Paper Contest – 1st place; American Chemical Society (ACS) Student Affiliates Leadership Award; OURE Fellow; Missouri S&T Writing Contest – 1st place, technical writing, 1st place, research paper; Missouri S&T Excellence Scholarship; Missouri S&T Excellence Scholarship II; Alumni Scholarship; Missouri S&T Grant; Robert C. Byrd Scholarship; Missouri S&T Chemistry Department Scholarship; Outstanding Freshman, Sophomore, Junior, Senior Chemistry Student; Dean’s List; Academic Scholars.
Primary Area of Interest: Environmental and Water Resources
Outside Work Experience: EPA GRO Fellowship; EPA Internship at Andrew W. Breidenbach Environmental Research Center in Cincinnati, Ohio (NRMRL/WSWRD); Missouri S&T OURE Fellows Program; Virginia Tech laboratory assistant; Missouri S&T Opportunities for Undergraduate Research Experience (OURE) Program; Research Experience for Undergraduates (REU) in Watershed Sciences at Virginia Tech; Missouri S&T Undergraduate teaching assistant; intern at Caterpillar, Inc. – Mining and Construction Equipment Division.
Career Goals: My ultimate career goal is to work for a major research university, teaching and conducting environmentally relevant research.

Luke T. Cronin
Hometown: Anchorage, Alaska
Location of Undergraduate Studies: University of Kansas
Awards/Recognitions: Member of Chi Epsilon
Primary Area of Interest: Structures
Outside Work Experience: Construction materials technician, testing various materials such as concrete, and asphalt, and performing minor inspections.
Career Goals: I plan to become a successful and innovative structural engineer.
Via Scholars: Master’s Students

Adam DePoy
Hometown: Grand Rapids, Mich.
Location of Undergraduate Studies: Trine University
Awards/Recognitions: Kunti and Satish Goyal Outstanding Civil Engineering Award; President’s List for eight semesters; Graduated Summa Cum Laude with 4.0 GPA
Primary Area of Interest: Geotechnical
Outside Work Experience: EKG technician
Career Goals: I plan to obtain my master’s degree and LEED certification.

William John Kingston
Hometown: Dover Plains, N.Y.
Location of Undergraduate Studies: Lafayette College
Awards/Recognitions: Tau Beta Pi Engineering Honor Society; Lafayette Trustee Scholar (Lafayette’s second most prestigious student scholarship award); Charles A. Dana Scholar, Dean’s List: Fall 2006-Spring 2010; Carroll Phillip-Bassett Prize (awarded to Lafayette’s most prestigious civil engineers); Engineer-In-Training (E.I.T.) Certification; Lafayette EXCEL Research Scholar; graduated Summa Cum Laude; high school valedictorian
Primary Area of Interest: Environmental and Water Resources
Career Goals: I hope to obtain a Professional Engineering license and pursue a career in the field of water resources engineering. I also hope to work on projects involving riparian ecology, environmental stream restoration, and naturalized waterway design.

Andrew Kost
Hometown: Aloha, Ore.
Location of Undergraduate Studies: University of Portland
Awards/Recognitions: Outstanding Civil Engineering Student, graduated Maxima Cum Laude, member of Tau Beta Pi, President’s Scholarship, National Alumni Board Scholarship
Primary Area of Interest: Geotechnical
Outside Work Experience: Laboratory technician with Professional Service Industries, Inc. (PSI), and intern with Cornforth Consultants, Inc., a small firm specializing in landslides and rock slides
Career Goals: Following completion of my master’s degree, I will pursue my P.E. and a consulting job with a geotechnical engineering firm, perhaps in my native Northwest. I also would look for an opportunity to assist in providing engineering services to developing nations.
Maria W. Lang
Hometown: Murrysville, Pa.
Location of Undergraduate Studies: Virginia Tech
Awards/Recognitions: Graduated Summa Cum Laude; Dean's List with distinction all semesters; Chi Epsilon; Gamma Beta Phi; EMLC Scholarship; Balzar & Associates Scholarship; Civil Engineering Class of '58 Scholarship
Primary Area of Interest: Structures
Outside Work Experience: Pennsylvania Department of Transportation as an engineering, science, and technology intern; L.R. Kimball & Associates as a summer intern in the bridges group.
Career Goals: After obtaining my master’s degree, I plan on working in designing structures and obtain my PE. After years of design work, I want my career to head in the direction of becoming a project manager.

Michael Nolden
Location of Undergraduate Studies: University of Massachusetts at Amherst
Awards/Recognitions: Chi Epsilon, president; graduated Summa Cum Laude; James M. Smith ’67 Scholarship; Departmental Honors
Primary Area of Interest: Geotechnical
Outside Work Experience: Pennsylvania Department of Transportation, summer intern
Career Goals: After receiving my master’s degree, I plan to pursue a career as a professional engineer. I hope to use my experience and education to play a role in the rehabilitation of the nation’s infrastructure and to contribute to projects focused on the development sustainable energy sources.

Francis Pesce
Hometown: Fairfax, Va.
Location of Undergraduate Studies: Virginia Tech
Awards/Recognitions: graduated Summa Cum Laude; member of Chi Epsilon and Phi Kappa Phi; Dean's List with Distinction; Virginia Concrete Foundation Inc. Scholarship; Byron M & Helen S. Brumback Scholarship
Primary Area of Interest: Construction
Outside Work Experience: Dewberry – intern in Site/Civil Department, Fairfax, Va.; Ulliman Schutte Construction - intern at North River WWTF Expansion and ENR Upgrade, Harrisonburg, Va.; intern at Noman M. Cole Jr., PCP - MBBR & Related Modifications, Lorton, Va.; American Infrastructure – intern for site development in Northern Virginia
Career Goals: I wish to obtain a position in the construction of water and wastewater treatment plants while working towards my P.E. license. It is my goal to combine my engineering education with practical construction experience to development a career in construction management.
Via Scholars: Master’s Students

Elias A. Rivera
Hometown: Orlando, Fl.
Location of Undergraduate Studies: University of Florida
Awards/Recognitions: UF President’s Honor Roll; UF College of Engineering Dean’s List; graduated Summa Cum Laude; Outstanding Gator Engineering Transfer Scholar; Wire Reinforcement Institute Scholarship; Ing. Jose A Vila Scholarship; UF College of Engineering Scholarship; Florida Department of Transportation Plans Reading Certification; Tau Beta Pi member and officer; ASCE and Chi Epsilon member
Primary Area of Interest: Structures
Outside Work Experience: Research assistantship; teaching assistantship; O&H&M Structural Engineers; Kimley Horn and Associates; sixth grade teacher in Palau, Micronesia.
Career Goals: Upon completing graduate school, I want to work for a structural design firm that seeks improved and innovative ways to meet the clients’ needs. After attaining my P.E. license, I hope to become a project manager and be involved in major company decisions.

Frank Smith
Hometown: Poplar Bluff, Mo.
Location of Undergraduate Studies: Missouri University of Science and Technology
Awards/Recognitions: Chi Epsilon; Tau Beta Pi; Summa Cum Laude; Missouri S&T Chancellor’s Scholarship
Primary Area of Interest: Structures
Career Goals: I would like to work in a consulting firm that streamlines the building design process and focuses on building system integration and sustainable design. I plan on obtaining my P.E. license and LEED AP credential.

Justin St. Clair
Hometown: Catawba, Va.
Location of Undergraduate Studies: Virginia Tech
Awards/Recognitions: Graduated Summa Cum Laude; Civil and Environmental Engineering Department Valedictorian; Dean’s List with Distinction, all semesters; Harry & Patsy Williams Scholarship; Byron & Helen Brumback Scholarship; Steven Robertson Memorial Scholarship
Primary Area of Interest: Environmental and Water Resources
Career Goals: Upon receiving my master’s degree, I plan to work for an environmental consulting firm developing innovative and sustainable solutions while gaining experience toward becoming a professional engineer. After building a breadth of knowledge and experience, I would like to start my own consulting firm.
Bradley Toellner
Hometown: Sedalia, Mo.
Location of Undergraduate Studies: Texas A&M University
Awards/Recognitions: Graduated Summa Cum Laude; #1 Outstanding Junior, Dwight Look College of Engineering; Dean’s List, all semesters; President’s Endowed Scholar, all semesters
Primary Area of Interest: Structures
Outside Work Experience: Four-time co-op at NASA Johnson Space Center: capsule reentry analyst, Space Shuttle & Space Station flight schedule planner (two summers), EVA systems instructor; intern at A. Zahner Company, specializing in architectural metal design and fabrication
Career Goals: I want to bridge the gap between engineering and architecture. I would like to place myself in a role where I can contribute to the practical design of a structure while acknowledging the aesthetic aspects of the overall project.

Christopher Tomlinson
Hometown: Bellmawr, N.J.
Location of Undergraduate Studies: Rowan University
Awards/Recognitions: NJAPA Michael Manno Scholarship, Undergraduate Research Award, Rowan University Top Civil Engineer, Tau Beta Pi member, graduated Magna Cum Laude in civil engineering, Rowan Scholars Program, Trustee Scholarship, Dean’s List every semester at Rowan University
Primary Area of Interest: Transportation and Infrastructure Systems
Outside Work Experience: Rowan University undergraduate research assistant – worked on a variety of projects for the NJDOT and FAA in addition to being part of a team that helped survey the city of Camden. During the school year I was a laboratory/teacher’s assistant.
Career Goals: Upon completion of my master’s degree, I plan on immediately pursuing my Ph.D. in transportation engineering. After obtaining a Ph.D., I will then become a professor at a university where I would be able to inspire the future generations of engineers.

Stephen Van Nosdall
Hometown: Howell, N.J.
Location of Undergraduate Studies: Bucknell University
Awards/Recognitions: Jai B. Kim Prize in Civil and Environmental Engineering, 2011; graduated Summa Cum Laude; Engineering Dean’s List every semester; Dean’s Scholarship; member of Chi Epsilon and Tau Beta Pi
Primary Area of Interest: Structures
Outside Work Experience: Worked for NIOSH to help create academic materials for incorporating prevention through design topics into structures courses; co-authored technical paper on transportation engineering methods for calculating permitted left turn capacity at signalized intersections; ride manager at Six Flags Great Adventure theme park
Career Goals: I would like to become a licensed PE working for a roller coaster design firm. Ultimately, I’d like to be able to ride a roller coaster that I helped design, and see other people enjoying it as well.
Via Scholars: Master’s Students

Katherine Lourene Weidner
Hometown: Simpsonville, S.C.
Location of Undergraduate Studies: Clemson University
Awards/Recognitions: Hydro Research Foundation Fellow; Summa Cum Laude; Faculty Scholarship Award (given for maintaining a 4.0 overall GPR at Clemson); Calhoun College Honors; general and departmental honors; E.L. Clark Award for Senior in Civil Engineering; Presidential Scholarship; Palmetto Fellow Scholarship; National Merit Scholarship; Clemson Nominee for the British Marshall Scholarship
Primary Area of Interest: Environmental and Water Resources
Career Goals: After earning my master’s degree, I plan to work for a large engineering consultant firm where I can gain experience toward obtaining my P.E. license.

Victoria Wheaton
Location of Undergraduate Studies: West Virginia University
Awards and Recognitions: 2009-2010 Outstanding Senior, WVU Civil Engineering; member of Tau Beta Pi and Chi Epsilon
Primary Area of Interest: Environmental and Water Resources
Outside Work Experience: Environmental projects and engineering intern for Dominion; research assistant for West Virginia University Department of Plant and Soil Sciences
Career Goals: Following graduation, I would like to practice environmental engineering either through research, consulting, or governmental work. I plan to obtain my P.E. and possibly pursue a Ph.D. in the future.

Claire McKenzie White
Hometown: Midlothian, Va.
Location of Undergraduate Studies: Virginia Tech
Awards and Recognitions: Graduated Summa Cum Laude; member of Chi Epsilon and Phi Kappa Phi; Cumberland District Chi Epsilon Scholarship; ASCE Thompson Award for Virginia Tech; VT Relay For Life Executive Committee Member of the Year; Via Undergraduate Scholar; Dean’s List with Distinction
Primary Area of Interest: Environmental and Water Resources
Outside Work Experience: Dewberry - water resources and land development; Timmons Group - economic development
Career Goals: Having grown up in a rapidly expanding suburban community near Richmond, my goal is to design sustainable developments that are more environmentally conscious through their site layout and stormwater management.
Zaeinulabddin M. Adam  
**Hometown:** Khartoum, Sudan  
**Location of Undergraduate Studies:** University of Khartoum, Sudan  
**Location of Master’s Studies:** Utah State University  
**Awards and Recognitions:** Dean’s Lists  
**Primary Area of Interest:** Transportation and Infrastructure Systems  
**Outside Work Experience:** Project engineer, George Butler Associates, Inc. Kansas City, Kansas; project manager, Engineering Airwaves, Khartoum, Sudan.  
**Career Goals:** I plan to pursue a career in academia besides doing consulting in the area of infrastructures and transport engineering.

William Norfleet Collins  
**Hometown:** Chesterfield, Va.  
**Location of Undergraduate Studies:** Virginia Tech  
**Location of Master’s Studies:** Virginia Tech  
**Awards and Recognitions:** James R. Reeves Scholarship; Civil Engineering Alumni Advisory Board Scholarship; William A. Caruthers, Jr. Scholarship; Big East Academic All Star Team; Virginia Tech Track and Field Coach’s Award; Virginia Tech Athletic Director’s Honor Roll  
**Primary Area of Interest:** Structures  
**Outside Work Experience:** Construction superintendent, Prospect Homes of Richmond; construction management, James River Construction, LLC; timber framer, Blue Ridge Timberwrights  
**Career Goals:** I plan to become a professor in civil engineering, involved in teaching, research, and community outreach. I hope to educate and inspire students, teaching them the importance of structural engineering and the great responsibility they will undertake in this profession. Through my research I intend to promote safety, longevity, and economy of civil structures. I hope to have a positive impact on those around me by organizing and being involved with community outreach and service projects.

Benjamin T. Cross  
**Hometown:** Hamilton, Va.  
**Location of Undergraduate Studies:** University of Delaware  
**Location of Master’s Studies:** University of Delaware  
**Awards and Recognitions:** E.C. Davis Scholar Award (UD Graduate School); full football athletic scholarship (UD undergraduate); Dean’s List every enrolled semester at UD; four varsity football letters at UD; 2004 CoSida 1st Team and 2003 CoSida 2nd Team Football Academic All-American; 2003 Atlantic 10 Football Scholar Athlete of the Year; 2002 and 2004 UD Civil Engineering Scholar Athlete of the Year; Member of 2003 I-AA National Championship Football Team as well as 2003 and 2004 Atlantic 10 Champions  
**Primary Area of Interest:** Structures  
**Outside Work Experience:** University of Delaware Center for Composite Materials Internship; Delaware Engineering and Design Corporation Internship  
**Career Goals:** I would like to obtain an advanced research position either at a university or in the structural engineering industry.
Kacie C. D’Alessandro  
**Hometown:** Easley, S.C  
**Location of Undergraduate Studies:** Clemson University  
**Location of Master’s Studies:** Clemson University  
**Awards and Recognitions:** Precast/Prestressed Concrete Institute Daniel P. Jenny Research Fellowship; American Society of Civil Engineers S.C. Section Scholarship; W.M. Thames Jr. Engineering Scholarship; General Electric Women’s Networking Scholarship; Legislative Incentive for Future Excellence Scholarship; Chi Epsilon; Tau Beta Pi; Calhoun Honors College, Clemson University  
**Primary Area of Interest:** Structures  
**Outside Work Experience:** Wind Engineering and Structures Laboratory research assistant, Clemson, S.C.; Florence & Hutcheson, Inc. internship, Columbia, S.C.  
**Career Goals:** After completing my doctoral degree, I plan to enter academia and become a professor at a research university. I want to teach future engineers along their path to success by motivating and guiding them throughout their academic journey. Additionally, I want to become a leading researcher with the capability of combining my interests in both concrete materials and structures.

Christina C. Davis  
**Hometown:** Rocky Mount, Va.  
**Location of Undergraduate Studies:** Virginia Tech  
**Location of Master’s Studies:** Virginia Tech  
**Awards and Recognitions:** Registered Professional Engineer; EPA Science to Achieve Results (STAR) Fellowship; AWWA LARS and Thomas R. Camp scholarships; NWRI Fellowship; VWRRC William R. Walker Graduate Fellowship; WPI Graduate Fellowship; AEESP Outstanding M.S. Thesis Award; ASCE Thompson Award for Outstanding Undergraduate; Tau Beta Pi; Chi Epsilon.  
**Primary Area of Interest:** Environmental and Water Resources  
**Outside Work Experience:**  
**Career Goals:** I would like to contribute to the field of environmental engineering through teaching, research, and consulting.

Rimas Gulbinas  
**Hometown:** Winfield, Ill.  
**Location of Undergraduate Studies:** University of Illinois - Urbana  
**Location of Master’s Studies:** Columbia University - NYC  
**Awards/Recognitions:** Graduated Univ. of Illinois-Urbana with highest honors; Accenture Outstanding Junior Award; Shell Scholarship; campus honors program  
**Primary Area of Interest:** Environmental and Water Resources  
**Outside Work Experience:** Worked as a software and mechanical design engineer at ARPAC; as a part-time consultant for Overseas Strategies; and finally as my own boss for an online marketing software company. In between school and work, I also managed to trek through Africa for five months and many other ‘off the beaten track’ places — experiences that I highly value and that have contributed to my growth as an individual  
**Career Goals:** My ultimate goal is to create a more proactive society regarding energy and resource conservation. We must connect the dots between awareness and action and instill a sense of responsibility among us all. I plan to approach this through studies of various consumption feedback mechanisms enabled by extensive sensor networks.
Kathryn A. Gunberg
Location of Undergraduate Studies: University of Michigan
Location of Master’s Studies: University of Michigan
Awards and Recognitions: Chi Epsilon, F.E. Richart Fellowship, UM; Greene Fellowship, UM
Primary Area of Interest: Geotechnical
Outside Work Experience: Soils & Structures, Inc.; City of Ann Arbor
Career Goals: Whether in academia or industry, I hope to teach others about geotechnical engineering and to continue to broaden my knowledge and experience in the field.

Rebecca A. Halvorson
Hometown: Whitewater, Wisc.
Location of Undergraduate Studies: University of Wisconsin-La Crosse
Awards and Recognitions: EPA STAR; EAPSI Fellowship; Ray Heath Scholarship in Chemistry; UW-La Crosse Undergraduate Research Grant
Primary Area of Interest: Environmental and Water Resources
Outside Work Experience: REU summer intern, Mercury research lab at UW-La Crosse
Career Goals: Following graduation from Virginia Tech, I will seek out a position at a research institution, a consulting firm, or possibly an international service organization. Whether as a career or an annual summer vacation, I also hope to use my understanding of water quality engineering in developing nations to improve their basic quality of life through their source of water.

Andrew B. Hardyniec
Hometown: Bringhurst, Ind.
Location of Undergraduate Studies: Michigan Technological University
Location of Master’s Studies: Virginia Tech
Awards and Recognitions: Summa Cum Laude; Michigan Tech Civil and Environmental Engineering Outstanding Achievement Award; MTU Alumni Legacy Award; Class of ’49 Endowed Scholarship; Presidential Excellence Scholarship; Dean’s List for all semesters at Michigan Tech; MTU Research Scholar; valedictorian of high school class
Primary Area of Interest: Structures
Outside Work Experience: Federal Highway Administration, California Division, investigated soil retaining structures built in response to landslides and presented my work at the 1st North American Landslide Conference in Vail, Co.; California Department of Transportation, investigated bridge support structures and was involved in bridge inspections; resident assistant, three years; research assistant at Michigan Tech
Career Goals: I hope to work for a consulting firm, preferably working on unique structures, or obtain a research position. I foresee myself teaching one day so I can share my knowledge of engineering with others.
Jordan A. Jarrett
Hometown: Littleton, Colo.
Location of Undergraduate Studies: Colorado State University
Location of Master's Studies: Colorado State University
Awards/Recognitions: Chi Epsilon Secretary; Colorado State University CEE Structural Engineering Scholarship; Colorado Distinguished Scholars Award
Primary Area of Interest: Structures
Outside Work Experience: Structural intern at S.A. Miro, Inc. in Denver, Co.; research and teaching assistantships at Colorado State University
Career Goals: After hopefully gaining more experience as a practicing structural engineer, I would like to end up in academia as a professor, teaching and leading research projects.

Johnn P. Judd
Hometown: Watsonville, Cal.
Location of Undergraduate Studies: Brigham Young University
Location of Master's Studies: Brigham Young University
Awards/Recognitions: Research published in Journal of Structural Engineering, Journal of Composites for Construction, and Forest Products Journal; Brigham Young University Research Presentation Award; Civil and Environmental Engineering Department Scholarship; Lee and Connie Wimmer Scholarship; College of Engineering and Technology Scholarship; Office of Research & Creative Activities Undergraduate Mentoring Grant; and B.S. Cum Laude
Primary Area of Interest: Structures
Career Goals: My goal is to perform meaningful research that advances the way we construct and protect our built environment. I find it rewarding to apply academic concepts in real-life situations. I also enjoy teaching students and helping them to develop forward-thinking skills. These are driving forces behind my desire for a lifework of discovery and service in structural engineering.

Ronald D. Kent
Hometown: Omaha, Neb.
Location of Undergraduate Studies: Brigham Young University
Location of Master's Studies: Virginia Tech
Awards/Recognitions: Member of Tau Beta Pi; Edwin S. Hinckley Scholar; recipient of Brigham Young Scholarship three years in a row; graduated Magna Cum Laude
Primary Area of Interest: Environmental and Water Resources
Outside Work Experience: Aquaveo, LLC, provided technical support for users of the Watershed Modeling System (WMS), Groundwater Modeling System (GMS), and Surface Water Modeling System (SMS); Brigham Young University, worked as a research assistant on a water quality study of Deer Creek Reservoir in Utah
Career Goals: After I graduate, I am going to obtain my PE license and work for a consulting firm in the water/wastewater industry.
Samuel Lasley  
**Hometown:** Chillicothe, Iowa  
**Location of Undergraduate Studies:** Brigham Young University, Provo, Utah  
**Location of Master’s Studies:** Virginia Tech  
**Awards/Recognitions:** BYU Heritage Scholar, Tau Beta Pi, BYU Cum Laude  
**Primary Area of Interest:** Geotechnical  
**Outside Work Experience:** Internship with Terracon Consultants, Inc.  
**Career Goals:** I plan to practice sound engineering, serve the greater good, contribute to the knowledge in my field, be an inspiring mentor for younger engineers, become a trusted and valuable source of advice for my colleagues, and have an office I rarely inhabit.

Randi Lieberman  
**Hometown:** Parkland, FL  
**Location of Undergraduate Studies:** University of Florida  
**Location of Master’s Studies:** University of Florida  
**Awards and Recognitions:** Association of Drilled Shaft Contractors (ADSC) National Scholar; Chi Epsilon; Cum Laude graduate; Golden Key Honor Society; Honors College undergraduate student; Florida Blue Key Leadership Honor Society; Dean’s List (8 semesters); Ilene Silverstein Scholarship for Sisterhood (Delta Phi Epsilon)  
**Primary Area of Interest:** Environmental and Water Resources  
**Outside Work Experience:** Civil engineering analyst, Kimley-Horn and Associates; graduate assistant for the Center for Leadership and Service, University of Florida; geotechnical engineering intern, ESP; undergraduate student teaching assistant, University of Florida  
**Career Goals:** After obtaining my Ph.D., I hope to continue in academia enabling others to realize their goals through education. I would like to focus on continuing education and research in the field of sustainability and environmental engineering. In addition to traditional academic environments, I am passionate about education through experience, and I aspire to travel to developing countries in an effort of international cooperation to achieve common goals of sustainability.

Marc J. Maguire  
**Hometown:** Lincoln, Neb.  
**Location of Undergraduate Studies:** University of Nebraska — Lincoln  
**Location of Master’s Studies:** University of Nebraska — Lincoln  
**Awards/Recognitions:** Virginia Tech College of Engineering Dean’s Teaching Fellow; University of Nebraska — Lincoln Milton E. Moore Graduate Fellowship; R. & L. Harris Civil Undergraduate Engineering Scholarship  
**Primary Area of Interest:** Structures  
**Outside Work Experience:** Nebraska Department of Roads, Bridge Division, research and rating team – worked on bridge rating and design, as well as a number of research projects. Midwest Roadside Safety Facility, Lincoln, Neb., undergraduate research assistant – test setup and analysis of full scale vehicular crash testing  
**Career Goals:** Following graduation, I plan to attain professional licensure and hope to acquire a research position in either industry or academia focusing on concrete structures.
Brett W. Maurer
Hometown: Geneva, N.Y.
Location of Undergraduate Studies: Syracuse University
Location of Master’s Studies: Syracuse University
Awards/Recognitions: International Association of Foundation Drilling (ADSC) Industry Advancement Scholar; Outstanding Teaching Assistant Award; Most Outstanding Graduate Student in Civil and Environmental Engineering; SU Chancellors Scholar; 1st Place Poster, Nunan Poster Symposium; Summa Cum Laude graduate; SU Golden Transit Award; Chi Epsilon president; Tau Beta Pi
Primary Area of Interest: Geotechnical
Outside Work Experience: Staff Engineer, Passero Associates, Rochester N.Y.; teaching assistant, research assistant, and lecturer, Syracuse University
Career Goals: I would like to continue to be active in academia as a researcher, educator, and mentor. I am particularly interested in addressing geotechnical issues pertaining to energy, emerging materials, and the environment.

Michael P. McGuire
Hometown: Blacksburg, Va.
Location of Undergraduate Studies: University of Pennsylvania
Location of Master’s Studies: Virginia Tech
Awards and Recognitions: Geosynthetics Institute Fellowship; Geo-Institute Student Presidential Group; GAANN Fellowship; IREE grant; Tau Beta Pi; registered Professional Engineer in Virginia
Primary Area of Interest: Geotechnical
Outside Work Experience: Senior staff engineer, Schnabel Engineering, Inc.
Career Goals: I’d like to teach at the college level or return to consulting.

Jennifer H. Miller
Location of Undergraduate Studies: Bucknell University
Location of Master’s Studies: University of Arizona
Awards and Recognitions: Licensed Professional Engineer (State of Arizona)
Primary Area of Interest: Environmental and Water Resources
Career Goals: I envision that an academic career will offer the opportunity to generate interest and aid in the development of future industry professionals, pursue my own research and professional development, and influence and contribute to applied projects in the public or private water/wastewater sectors. Upon completion of the Ph.D. degree, my preliminary thoughts are that I would like to continue in academics (research and teaching in a faculty position) and consult within my research area.
John E. Petrie
Hometown: Richmond, Va.
Location of Undergraduate Studies: Virginia Tech, New England Conservatory
Location of Master's Studies: Virginia Tech
Awards and Recognitions: Brian Roy Bluhm Memorial Graduate Fellowship; Hydro Research Foundation Fellowship; G.V. Loganathan Fellowship; William R. Walker Graduate Research Fellow Award; Edna Bailey Sussman Fund Environmental Internship; VCUQ Faculty Development Grant; VCUQ Faculty Research Grant; Paul E. Torgersen Excellence in Research Award; Waste Policy Institute Summer Graduate Fellowship.
Primary Area of Interest: Environmental and Water Resources
Outside Work Experience: Assistant professor of mathematics and physics, Virginia Commonwealth University in Qatar.
Career Goals: I want to continue to be active as a researcher and educator.

Alexander Reeb
Hometown: North Wales, Pa.
Location of Undergraduate Studies: University of Rhode Island
Location of Master's Studies: Virginia Tech
Awards/Recognitions: Graduated Summa Cum Laude with BS in civil engineering and BA in German from the International Engineering Program, minor in mathematics; DAAD Scholar; Nelson C. White Award; member of Chi Epsilon and Tau Beta Pi
Primary Area of Interest: Geotechnical
Outside Work Experience: Ed. Züblin AG, Stuttgart, Germany; Institute für Grund und Bodenmechanik (Geotechnical Research Institute), Technical University of Braunschweig, Germany; Schnabel Engineering, West Chester, Pa.; U.S. Army Evaluation Center, APG, Md.
Career Goals: I plan to obtain my PE. I would like to work for an international firm on cutting edge geotechnical projects worldwide.

William Joseph Rhoads
Hometown: Joplin, Mo.
Location of Undergraduate Studies: Purdue University
Awards/Recognitions: Undergraduate University Honors; undergraduate civil engineering honors; Dean's List - all semesters at Purdue; merit-based scholarships through the civil engineering department at Purdue
Primary Area of Interest: Environmental and Water Resources
Outside Work Experience: Undergraduate research on green roofs; intern at Olsson Associates; Civil Engineering Ambassador at Purdue University
Career Goals: Directly after graduating from Virginia Tech, I hope to work in industry at a research facility or in consulting in the field of water or wastewater treatment. Ultimately, I would like to be a professor at a large research university with teaching and research responsibilities.
James H. Stagge  
**Hometown:** Timonium, Md.  
**Location of Undergraduate Studies:** University of Maryland, College Park  
**Location of Master’s Studies:** University of Maryland, College Park  
**Awards/Recognitions:** Robert Morris Award for Environmental Leadership; Undergraduate Honors Research Project honorable mention; undergraduate engineering honors; undergraduate University Honors  
**Primary Area of Interest:** Environmental and Water Resources  
**Outside Work Experience:** Staff engineer, Roux Associates; civil/hydraulic engineer, The Bioengineering Group; environmental lab assistant, USDA Agricultural Research Center; surveyor, Johnson, Mirmiran, and Thompson (JMT) Engineering  
**Career Goals:** I hope to pursue a position as a professor or researcher focused on hydraulic modeling of natural systems and their use as sustainable stormwater alternatives.

Melissa Stewart  
**Hometown:** Gainesville, Fl.  
**Location of Undergraduate Studies:** University of Florida  
**Location of Master’s Studies:** University of Florida  
**Awards/Recognitions:** NSF IGERT Fellowship at Virginia Tech; Florida Alumni Fellow at University of Florida (Masters); GAANN Fellow at University of Florida (Masters); National Merit Scholarship winner (undergraduate); member of Tau Beta Pi  
**Primary Area of Interest:** Environmental and Water Resources  
**Outside Work Experience:** Water/waste-water engineering intern at Gainesville Regional Utilities in Gainesville, Fl., during masters degree studies; summer internship at Water Missions International in Charleston, S.C.; research lab assistant at the University of Florida in the biological and environmental engineering departments; teaching assistant at the University of Florida in the environmental engineering department  
**Career Goals:** I look forward to obtaining my doctorate and hope to obtain professional licensure as well. I would like to pursue a career as a professor, teaching and doing research that interacts with the professional engineering community.

Daniel R. Vanden Berge  
**Hometowns:** Ada, Michigan; Wickliffe, Ohio  
**Location of Undergraduate Studies:** Michigan Technological University  
**Location of Master’s Studies:** Michigan Technological University  
**Awards and Recognitions:** Summa Cum Laude at MTU; Dean’s list all semesters at MTU; Outstanding Achievement Award from MTU CEE department; member ASTM and ASCE; registered Professional Engineer – Ohio and Pennsylvania  
**Primary Area of Interest:** Geotechnical  
**Outside work Experience:** Project engineer, EDP Consultants, Inc., Kirtland, Ohio; part-time faculty, Lakeland Community College, Kirtland, Ohio; graduate teaching assistant, Michigan Technological University  
**Career Goals:** After completing my doctoral degree, I hope to teach at a research university and share my love and knowledge of geotechnical engineering with the next generation of civil engineers. I plan to carry out research in the fields of slope stability and shear strength and also pursue applications of geotechnical engineering and geohazard mitigation in the developing world.
Via Scholars: Doctoral Students

Michael Woodworth
Hometown: Rocky River, Ohio
Location of Undergraduate Studies: University of Cincinnati
Location of Master's Studies: Virginia Tech
Awards and Recognitions: American Society of Civil Engineers; University Honors; Cincinnatus Scholar; Chi Epsilon; engineering ambassadors
Primary Area of Interest: Structures
Outside Work Experience: VSL, Australia; GOP Limited; BBN Technologies
Career Goals: I plan to obtain a Ph.D. and find employment in industry or academia with a research component. I eventually wish to teach at the University level.

Retirement (continued from page 12)

...tably, he recalls needing the expertise of other faculty in chemistry such as John Dillard and Judy Riffle, as well as Jack Lesko in engineering science and mechanics. “I realized you can’t solve problems alone,” he says.

His varied accomplishments led to his appointment at the Via Professor of Civil and Environmental Engineering (CEE).

“The most fun I had,” Weyers says, “was watching students grow in both knowledge and self-confidence.”

In addition to his work with youngsters and college undergraduates, he advised 36 master’s students and 12 Ph.D. candidates to completion of their degrees.

One of these students, Jerzy Z. Zemajtis, who earned his doctorate with Weyers and is now an engineer with the American Concrete Institute, says Weyers “practical knowledge and easiness of engaging students in the class activities were outstanding. He helped me and other students in our laboratory research not only by providing technical guidance, but also by encouraging us to make our own decisions. He promoted free and creative thinking, tolerated making mistakes (to learn from) and has always been available to discuss any issues related to our studies, research, or personal lives.”

Another former student, Michael C. Brown, associate director of structural, pavement, and geotechnical engineering, Virginia Center for Transportation Innovation and Research, adds, “Clearly he was a strong mentor, and I am grateful for both his guidance and his friendship. Since I finished graduate school, we have continued to collaborate on research for the Virginia Department of Transportation.”

One of Weyers’ colleagues, Tom Murray, reports, “I am indebted to Richard for his help in planning and supporting the development of the original Structures and Materials Laboratory. He helped with the design and with securing donations that allowed us to build the first phase in the late 80’s-early 90’s. We borrowed the money from the Foundation and repaid it from indirect cost recovery. He paid far more than his share because of his significant research funding at the time and I am most appreciative.”

Murray is professor emeritus of CEE and a member of the National Academy of Engineering.

As Torgersen recalls, “Richard’s contributions to our college’s ascent to the top ten percent of all engineering colleges in terms of research expenditures was critical. His work on the nation’s infrastructure was transferred to the classroom where he educated thousands of students over his career to the importance of materials in structures.”
Via Alumni

Where are they now?

UNDERGRADUATES

Suzanne Ayres Angelo
Year Graduated: 2003; Master’s 2006,
Virginia Tech
Employer: Unknown

Doran J. Bosso
Year Graduated: 2006; Master’s 2008,
Virginia Tech

Chris English
Year Graduated: 1994; Master’s 1996,
University of Illinois, Urbana
Employer: CH2M Hill, St. Louis, Mo.

Brian P. Felker
Year Graduated: 2001
Current Status: Unknown

Kathryn Firich
Year Graduated: 2007

R. Andrew Goodwin
Year Graduated: 1996
Current Status: U.S. Army Engineer R&D Center, Portland, Ore.

Chris Kaldahl
Year Graduated: 1995
Employer: Appalachian Mountain Club, Gorham, N.H.

Claire N. McKenzie
Year Graduated: 2010
Employer: Currently pursuing a M.S. degree in Civil & Environmental Engineering at Virginia Tech

Stephen O. Meininger
Year Graduated: 1991
Employer: CH2M Hill - OMI, Clarksville, Md.

Joshua Mouras
Year Graduated: 2006

Joseph Schmitt
Year Graduated: 2001
Current Status: Unknown

Paul Taylor
Year Graduated: 2004
Current Status: ExxonMobil, Houston, Texas

Henry J. Theiss
Year Graduated: 1994
Employer: Unknown

Jennifer Verwest
Year Graduated: 2001
Current Status: Currently pursuing a graduate degree at Texas A&M University, College Station, Texas

Elliott Robert Wheeler
Year Graduated: 1996

Ryan Willey
Year Graduated: 2000
Employer: Unknown

The following students also received their undergraduate degrees while on a Via Scholarship and elected to pursue their master’s degrees at Virginia Tech, also as Via Scholarship recipients. Their complete listings can be found in the alumni student section of this publication. These students are: Randall Boe, William Scott Dewhurst, II, Charles M. Dietz, Jr., Greg Hensley, Peter D. Kauffmann, Jeffrey Kuttesch, Matthew Moore, John D. Riley, John Stephen Siczka, Jeffrey Snow, and Marcia Votour Prowell.

GRADUATES

CONSTRUCTION

Frank Arcuri
Year Graduated: 2007
Degree Awarded: Master’s
Employer: Fluor Corporation, New York, N.Y.

Mary Jane Contos Bartlett
Year Graduated: 1992
Degree Awarded: Master’s
Employer: O’Brien & Gere Engineering, Morrisville, N.C.

Janet Sparks Chandler
Year Graduated: 2000
Degree Awarded: Master’s
Employer: Full-time mother

Allan D. Chasey
Year Graduated: 1995
Degree Awarded: Ph.D.
Employer: Del E. Webb School of Construction, Arizona State University, Tempe, Ariz.

Kirsten Davis
Year Graduated: 2004
Degree Awarded: Ph.D.
Employer: Boise State University, Boise, Idaho

Martha Gross
Year Graduated: 2010
Degree Awarded: Ph.D.
Employer: Arup Transaction Advice, Washington, D.C.

Shannon P. Hapuarachy
Year Graduated: 2009
Degree Awarded: Master’s

Benjamin Hays
Year Graduated: 2002
Degree Awarded: Master’s
Employer: L.A. Dept. of Public Works, Los Angeles, Calif.

John Hildreth
Year Graduated: 2003
Degree Awarded: Ph.D.
Employer: University of North Carolina, Charlotte, N.C.

Angel Ho
Year Graduated: 1993
Degree Awarded: Master’s
Employer: Norfolk Naval Shipyard, Portsmouth, Va.

Jennifer Firman McConnell
Year Graduated: 2002
Degree Awarded: Master’s
Employer: Schoor DePalma, Kulpsville, Pa.

Joshua P. Middleton
Year Graduated: 2004
Degree Awarded: Master’s

Juan C. Piñero
Year Graduated: 2004
Degree Awarded: Ph.D.
Employer: Barrett Hale & Alamo, Consulting Engineers, San Juan, Puerto Rico
Jeffrey Snow  
Years Graduated: 2000 and 2002  
Degrees Awarded: Undergraduate and Master’s  

Robert C. Williams  
Year Graduated: 2006 and 2008  
Degree Awarded: Master’s and Ph.D.  

Terry L. Williams  
Year Graduated: 1998  
Degree Awarded: Master’s  
Employer: Alan A. Meyers, Inc.

ENVIRONMENTAL AND WATER RESOURCES

Nancy Lade Anderson  
Year Graduated: 1999  
Degree Awarded: Master’s  
Employer: Full-time mother

Jason L. Beck  
Year Graduated: 2008  
Degree Awarded: Master’s  
Employer: Camp Dresser and McKee (CDM), Charlotte, N.C.

Randall Boe  
Years Graduated: 1991 and 1993  
Degrees Awarded: Undergraduate and Master’s  
Employer: CH2M Hill, Gainesville, Fl.

Elizabeth Claire Booth  
Year Graduated: 2005  
Degree Awarded: Master’s  
Employer: Arcadis, Lakewood, Colo.

Charles B. Bott  
Year Graduated: 2001  
Degree Awarded: Ph.D.  
Employer: Hampton Roads Sanitation District, Virginia Beach, Va.; and adjunct professor, Civil & Environmental Engineering, Virginia Tech

J. Steven Brauner  
Year Graduated: 2000  
Degree Awarded: Ph.D.  
Employer: Parsons Engineering, Denver, Colo.

Lee Davis Bryant  
Year Graduated: 2010  
Degree Awarded: Ph.D.  
Employer: Post-doctoral researcher, Duke University, Durham, N.C.

Suzanne Ciavola  
Year Graduated: 2011  
Degree Awarded: Master’s  
Employer: Advanced Geoservices, West Chester, Pa.

Bradley M. Coffey  
Year Graduated: 1990  
Degree Awarded: Master’s  
Employer: Metropolitan Water District of Southern California, Water Quality Division

Joel Cohn  
Year Graduated: 1993  
Degree Awarded: Master’s  
Employer: Malcolm Pirnie, Norfolk, Va.

Cynthia Crane  
Year Graduated: 1999  
Degree Awarded: Ph.D.  
Employer: Hydro Geologic, Herndon, Va.

Andrea Crowe Hargette  
Year Graduated: 1997  
Degree Awarded: Master’s  
Employer: Black & Veatch, Inc., Greenville, S.C.

Christina Clarkson Davis  
Year Graduated: 2000  
Degree Awarded: Master’s  
Employer: Ph.D. student, Virginia Tech, Northern Virginia Campus

Jason Davis  
Year Graduated: 2000  
Degree Awarded: Master’s  
Employer: Carollo, Eagle, Idaho

William Scott Dewhirst, II  
Years Graduated: 1993 and 1997  
Degrees Awarded: Undergraduate and Master’s  

Charles (Chuck) Dietz, Jr.  
Years Graduated: 1989 and 1993  
Degrees Awarded: Undergraduate and Master’s  

Daniel Dorsel  
Year Graduated: 1998  
Degree Awarded: Master’s, ENE  
Employer: Cardinal Newman School, Columbia, S.C.

Mark Dougherty  
Year Graduated: 2004  
Degree Awarded: Ph.D.  
Employer: Auburn University, Auburn, Ala.

Laura Duncan  
Year Graduated: 2007  
Degree Awarded: Master’s  
Employer: Arcadis, Knoxville, Tenn.

Mary Facciolo  
Year Graduated: 1994  
Degree Awarded: Master’s  
Employer: Raleigh, N.C., consulting firm

Ryan M. Fedak  
Year Graduated: 1999  
Degree Awarded: Master’s  
Employer: AECOM, Roanoke, Va.

Jamie Fettig  
Year Graduated: 1998  
Degree Awarded: Master’s, ENE  
Employer: Parson Engr. Sci., N.Y.

Scott A. Forsling  
Year Graduated: 1994  
Degree Awarded: Master’s  
Employer: Brown, Collins and Associates, Draper, Utah

John Fripp  
Year Graduated: 1991  
Degree Awarded: Master’s  
Employer: U.S. Dept. of Agriculture, National Resources Conservation Service, Ft. Worth, Texas

Wesley Geertsema  
Year Graduated: 1992  
Degree Awarded: Master’s  
Employer: Unknown

Kevin R. Gilmore  
Year Graduated: 2008  
Degree Awarded: Ph.D.  
Employer: Bucknell University, Lewisburg, Pa.

Aimee E. Greyschock  
Year Graduated: 2004  
Degree Awarded: Master’s  
Via Alumni: Where Are They Now? (continued from page 51)

Matthew Gwaltney
Year Graduated: 2007 (posthumously)
Degree Awarded: Master’s
Deceased

Orrick (Rick) Haney
Year Graduated: 1994
Degree Awarded: Master’s

Edward Brian Houston
Year Graduated: 2006
Degree Awarded: Master’s
Employer: Black & Veatch, Gaithersburg, Md.

Matthew C. Moore
Year Graduated: 1992 and 1994
Degree Awarded: Undergraduate and Master’s

David Holbrook
Year Graduated: 2003
Degree Awarded: Ph.D.
Employer: National Institute of Standards and Technology, Gaithersburg, Md.

Christopher D. Muller
Year Graduated: 2006
Degree Awarded: Ph.D.
Employer: Brown and Caldwell, Seattle, Wash.

Kari Husovitz Foy
Year Graduated: 1999
Degree Awarded: Master’s

Jocelyn Fraga Muller
Year Graduated: 2005 and 2010
Degree Awarded: Master’s and Ph.D.
Employer: Unknown

Angela Iatrou Simon
Year Graduated: 1991
Degree Awarded: Master’s
Employer: Tutor Perini, Framingham, Mass.

Julia Novak
Year Graduated: 2005
Degree Awarded: Master’s
Deceased

Joshua A. Joseph, Jr.
Year Graduated: 2008
Degree Awarded: Ph.D.
Employer: CH2M Hill, Atlanta, Ga.

Jeff Parks
Year Graduated: 2005
Degree Awarded: Ph.D.

Edward Brian Houston
Year Graduated: 2006
Degree Awarded: Master’s

Orrick (Rick) Haney
Year Graduated: 1994
Degree Awarded: Master’s

Donna McArthur Leitch
Year Graduated: 1998
Degree Awarded: Master’s
Employer: Merck & Co., Inc., West Point, Pa.

Kristina Perri
Year Graduated: 1997
Degree Awarded: Master’s
Employer: CH2M Hill, Atlanta, Ga.

Colleen McCloskey Rossmeisl
Year Graduated: 1995
Degree Awarded: Master’s
Employer: Companion Animal Clinic, Blacksburg, Va.

Carrie Adam Phipps
Year Graduated: 2001
Degree Awarded: Master’s
Employer: Full-time mother

Matthew Gwaltney
Year Graduated: 2007 (posthumously)
Degree Awarded: Master’s
Deceased

Erika Lubkowitz Bailey
Year Graduated: 1996
Degree Awarded: Master’s

Laurie S. McNeil
Year Graduated: 2000
Degree Awarded: Ph.D.
Employer: Utah State University, Logan, Utah

Noreen Poor
Year Graduated: 1996
Degree Awarded: Ph.D.
Employer: Public Health Engineering, University of South Florida

Matthew C. Moore
Year Graduated: 1992 and 1994
Degree Awarded: Undergraduate and Master’s

Donald C. Marikovich
Year Graduated: 1990
Degree Awarded: Master’s

Rebecca Lattyak
Year Graduated: 2007
Degree Awarded: Master’s
Employer: Malcolm Pirnie, West Lafayette, Ind.

Erika Lubkowitz Bailey
Year Graduated: 1996
Degree Awarded: Master’s

Eduardo Mendez, Ill
Year Graduated: 2008
Degree Awarded: Ph.D.
Employer: U.S. Army

Becky Marshall Rosenfeldt
Year Graduated: 2004
Degree Awarded: Master’s
Employer: Hazen & Sawyer, Fairfax, Va.

Caroline Nguyen
Years Graduated: 2005 and 2010
Degree Awarded: Master’s and Ph.D.
Employer: Unknown

Katherine McArthur Leitch
Year Graduated: 1998
Degree Awarded: Master’s
Employer: Merck & Co., Inc., West Point, Pa.

Katherine Lineras
Year Graduated: 2004
Degree Awarded: Master’s

Julia Novak
Year Graduated: 2005
Degree Awarded: Master’s
Deceased

Richard T. Kelly, II
Year Graduated: 2005
Degree Awarded: Ph.D.

Kari Husovitz Foy
Year Graduated: 1999
Degree Awarded: Master’s

Joshua A. Joseph, Jr.
Year Graduated: 2008
Degree Awarded: Ph.D.
Employer: CH2M Hill, Atlanta, Ga.

Wendell O. Khunjar
Year Graduated: 2009
Degree Awarded: Ph.D.
Employer: Post-Doctoral Researcher, Department of Earth and Environmental Engineering, Columbia University, New York, N.Y.

Heather Veith Rectanus
Year Graduated: 2006
Degree Awarded: Ph.D.
Employer: Battelle, San Diego, Calif.

Eduardo Mendez, Ill
Year Graduated: 2008
Degree Awarded: Ph.D.
Employer: U.S. Army

Lashun K. King Thomas
Year Graduated: 2009
Degree Awarded: Master’s
Employer: Department of Public Works, Allegany County, Md.

Brian McCormick
Year Graduated: 2003
Degree Awarded: Master’s

Laurie S. McNeil
Year Graduated: 2000
Degree Awarded: Ph.D.
Employer: Utah State University, Logan, Utah

Brian McCormick
Year Graduated: 2003
Degree Awarded: Master’s
Employer: Department of Public Works, Allegany County, Md.

Rebecca Lattyak
Year Graduated: 2007
Degree Awarded: Master’s
Employer: Malcolm Pirnie, West Lafayette, Ind.

Jeff Parks
Year Graduated: 2005
Degree Awarded: Ph.D.

Caroline Nguyen
Years Graduated: 2005 and 2010
Degree Awarded: Master’s and Ph.D.
Employer: Unknown

Matthew C. Moore
Year Graduated: 1992 and 1994
Degree Awarded: Undergraduate and Master’s

Colleen McCloskey Rossmeisl
Year Graduated: 1995
Degree Awarded: Master’s
Employer: Companion Animal Clinic, Blacksburg, Va.

Kristina Perri
Year Graduated: 1997
Degree Awarded: Master’s
Employer: CH2M Hill, Atlanta, Ga.

Carrie Adam Phipps
Year Graduated: 2001
Degree Awarded: Master’s
Employer: Full-time mother

Noreen Poor
Year Graduated: 1996
Degree Awarded: Ph.D.
Employer: Public Health Engineering, University of South Florida

Peter B. Merkle
Year Graduated: 1995
Degree Awarded: Ph.D.
Employer: Sandia National Labs, Albuquerque, N.M.
Sandra Robinson
Year Graduated: 2001
Degree Awarded: Master’s
Employer: CH2M Hill, Redding, Calif.

Jason Rushing
Year Graduated: 2002
Degree Awarded: Master’s
Employer: Malcolm Pirnie, Fairfax, Va.

Mary Rust Sadler
Year Graduated: 1998
Degree Awarded: Master’s
Employer: Arcadis, Raleigh, N.C.

Emily A. Sarver
Year Graduated: 2010
Degree Awarded: Ph.D.

Paolo Scardina
Year Graduated: 2004
Degree Awarded: Ph.D.

Dipankar Sen
Year Graduated: 1995
Degree Awarded: Ph.D.
Employer: Santa Clara Valley Water District, San Jose, Calif.

Vickie L. Singleton
Year Graduated: 2008
Degree Awarded: Ph.D.
Employer: Full-time mother, New Bern, N.C.

Brad Shearer
Year Graduated: 2001
Degree Awarded: Master’s
Employer: CH2M Hill, Redding, Calif.

Holly Shorney
Year Graduated: February 1992
Degree Awarded: Master’s
Employer: Black & Veatch, Inc., Kansas City, Mo.

John S. Siczka
Years Graduated: 1994 and 1997
Degrees Awarded: Undergraduate and Master’s
Employer: CH2M Hill, Brown Deer, Wis.

Aaron B. Small
Year Graduated: 1993
Degree Awarded: Master’s

Sheryl D. Smith
Year Graduated: 2001
Degree Awarded: Master’s
Employer: Camp, Dresser and McKee, Raleigh, N.C.

Jeffrey A. Sparks
Year Graduated: 2008
Degree Awarded: Master’s
Employer: Hampton Roads Sanitation District, Virginia Beach, Va.

Jonathan Stathis
Year Graduated: 1998
Degree Awarded: Master’s
Employer: Cedar City Corp., Cedar City, Utah

Amanda E. Strickhouser
Year Graduated: 2008
Degree Awarded: Master’s

Chris Tadanier
Year Graduated: 1997
Degree Awarded: Ph.D.
Employer: Black & Veatch, Denver, Colo.

Dan Waddill
Year Graduated: 1998
Degree Awarded: Ph.D.
Employer: Dept. of the Navy, Norfolk, Va.

Diane Waters
Year Graduated: 2002
Degree Awarded: Master’s
Employer: City of Miami, Public Works Dept., Miami, Fl.

Edwin W. Watkins
Year Graduated: 1993
Degree Awarded: Master’s
Employer: Ogden Environmental and Energy Services, Nashville, Tenn.

David Whichard
Year Graduated: 2001
Degree Awarded: Master’s
Employer: International Paper, S.C.

Krista Rule Wigginton
Year Graduated: 2008
Degree Awarded: Ph.D.
Employer: University of Maryland, College Park, Md.

Christopher A. Wilson
Year Graduated: 2009
Degree Awarded: Ph.D.
Employer: Shaw Stone & Webster, Inc., Denver, Colo.

Christopher Wolfe
Year Graduated: 1993
Degree Awarded: Master’s
Employer: Semcor, Washington, D.C.

Jennifer Wright
Year Graduated: 2006
Degree Awarded: Master’s
Employer: Department of Environmental Quality (DEQ), Richmond, Va.

Kevin D. Young
Year Graduated: 2006
Degree Awarded: Master’s

Anna Zaklikowski
Year Graduated: 2006
Degree Awarded: Master’s
Employer: HDR Engineering, Portland, Ore.

Lauren Zuravnsky
Year Graduated: 2006
Degree Awarded: Master’s
Employer: Greeley and Hansen, Richmond, Va.

**GEOTECHNICAL**

Tiffany E. Adams
Year Graduated: Pending December 2011 Graduation
Degree to be Awarded: Ph.D.
Employer: URS Corp., Denver, Colo.

Amanda Barngrover
Year Graduated: 2010
Degree Awarded: Master’s
Employer: URS Corp., Denver, Colo.

William Bassett
Year Graduated: 1990
Employer: Federal Highway Administration, Washington, D.C.

Diane Yamane Baxter
Year Graduated: 2000
Degree Awarded: Ph.D.
Employer: GZA GeoEnvironmental Inc., Providence, R.I.

Craig Benedict
Year Graduated: 1997
Degree Awarded: Master’s

David Bentler
Year Graduated: 1993 and 1998
Degrees Awarded: Master’s and Ph.D.
Employer: Shaw Stone & Webster, Inc., Denver, Colo.
Kyle Blakley  
Year Graduated: 2009  
Degree Awarded: Master's  
Employer: Stantec Consulting, Cincinnati, Ohio

Jeremy Britton  
Year Graduated: 2001  
Degree Awarded: Ph.D.  

Pete Chenevey  
Year Graduated: 1994  
Degree Awarded: Master's  
Employer: Dames & Moore, Cincinnati, Ohio

Jaime Colby  
Year Graduated: 2006  
Degree Awarded: Master's  

Megan Cole  
Year Graduated: 2001  
Degree Awarded: Master's  

Jeremy Bruyn Decker  
Year Graduated: 2007  
Degree Awarded: Ph.D.  
Employer: Kewit Construction Co., Pacifica, Calif.

Patricia (Trish) M. Gallagher  
Year Graduated: December 2000  
Degree Awarded: Ph.D.  
Employer: Drexel University, Philadelphia, Pa.

Russell Green  
Year Graduated: 2001  
Degree Awarded: Ph.D.  

George Filz  
Year Graduated: 1992  
Degree Awarded: Ph.D.  

Rachel T. Finch  
Year Graduated: 2009  
Degree Awarded: Master's  
Employer: S&ME, Huntsville, Ala.

Brendan Fitzpatrick  
Year Graduated: 2001  
Degree Awarded: Master's  
Employer: GEOPIER Foundation Co., Inc., Mooresville, N.C.

Laura Henry  
Year Graduated: 1999  
Degree Awarded: Master's  
Employer: Haley & Aldrich, N.J.

Wayne Herring  
Year Graduated: 2000  
Degree Awarded: Master's  
Employer: ARM Group, Hershey, Pa.

Randall Hickman  
Year Graduated: 2004  
Degree Awarded: Ph.D.  
Employer: BP American, Inc., Houston, Texas

Michelle Hoy  
Year Graduated: 1997  
Degree Awarded: Master's  
Employer: Oregon Dept. of Environmental Quality, Portland, Ore.

Kenneth A. Huber  
Year Graduated: 1997  
Degree Awarded: Master's  
Employer: Senior Pastor at Calvary Baptist Church, Riverhead, N.Y.

Laura M. Kosoglu  
Year Graduated: 2011  
Degree Awarded: Ph.D.  
Employer: George Mason University, Fairfax, Va.

Samuel Lasley  
Year Graduated: 2010  
Degree Awarded: Master's  
Employer: Ph.D. candidate, Virginia Tech

Scott Mackey  
Year Graduated: 1993  
Degree Awarded: Master's  
Employer: Central Connecticut State University, New Britain, Conn.

Jessica R. Marshall  
Year Graduated: 1990  
Degree Awarded: Master's  
Employer: Colorado Public Works Authority

Christopher L. Meehan  
Year Graduated: 2006  
Degree Awarded: Ph.D.  
Employer: University of Delaware, Newark, Del.

Clark Morrison  
Year Graduated: 1995  
Degree Awarded: Ph.D.  
Employer: North Carolina Dept. of Transportation, Raleigh, N.C.

Bob Mokwa  
Year Graduated: 1999  
Degree Awarded: Ph.D.  
Employer: Montana State University, Bozeman, Mont.

Michael Navin  
Year Graduated: 2005  
Degree Awarded: Master's  
Employer: U.S. Army Corps of Engineers, St. Louis, Mo.

David Nevius  
Year Graduated: 2001  
Degree Awarded: Master's  
Employer: Terra Costa Consulting, San Diego, Calif.

James Parkes  
Year Graduated: 1999  
Degree Awarded: Master's  
Employer: Gannett Fleming, Harrisburg, Pa.

Maysill G. Pascal  
Year Graduated: 2003  
Degree Awarded: Master's  
Employer: Haley and Aldrich Inc., Parsippany, N.J.

Craig Petranka  
Year Graduated: 1997  
Degree Awarded: Master's  
Employer: Unknown

Michael Pockoski  
Year Graduated: 2001  
Degree Awarded: Master's  
Employer: Geopier Foundation Company, Inc., Mooresville, N.C.

Jonathan Porter  
Year Graduated: 1991 and 1998  
Degree Awarded: Master's and Ph.D.  

Marcia Votour Prowell  
Years Graduated: 1992 and 1993  
Degrees Awarded: Undergraduate and Master's  
Employer: Virginia Geotechnical Services, PC, Richmond, Va.

Susan Rafalko  
Year Graduated: 2006  
Degree Awarded: Master's  
<table>
<thead>
<tr>
<th>Name</th>
<th>Year Graduated</th>
<th>Degree Awarded</th>
<th>Employer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan Rauch</td>
<td>1997</td>
<td>Ph.D.</td>
<td>Fuller, Mossbarger, Scott and May Engineers, Inc., Lexington, Ky.</td>
</tr>
<tr>
<td>Alexander Reeb</td>
<td>2011</td>
<td>Master’s</td>
<td></td>
</tr>
<tr>
<td>Nathan Reeves</td>
<td>2000</td>
<td>Master’s</td>
<td></td>
</tr>
<tr>
<td>John D. Rice</td>
<td>2008</td>
<td>Ph.D.</td>
<td>Utah State University, Logan, Utah</td>
</tr>
<tr>
<td>Jennifer A. Schaeffer</td>
<td>1997</td>
<td>Master’s</td>
<td></td>
</tr>
<tr>
<td>Kurt J. Schimpke</td>
<td>2009</td>
<td>Master’s</td>
<td>Braun Intertec Corp., Minneapolis, Minn.</td>
</tr>
<tr>
<td>Craig M. Shillaber</td>
<td>2009</td>
<td>Master’s</td>
<td>Parsons Brinckerhoff, New York, N.Y.</td>
</tr>
<tr>
<td>Matthew Sleep</td>
<td>2006</td>
<td>Master’s</td>
<td></td>
</tr>
<tr>
<td>Joel A. Sloan</td>
<td>2011</td>
<td>Ph.D.</td>
<td>U.S. Air Force, Kunsan Air Base, Republic of Korea</td>
</tr>
<tr>
<td>Edward R. Ware III</td>
<td>2007</td>
<td>Master’s</td>
<td>Wurster Engineering, Greenville, S.C.</td>
</tr>
<tr>
<td>Mary Sue Mouchka Abel</td>
<td>1993</td>
<td>Master’s</td>
<td>EMCS Design Group, Milwaukee, Wis.</td>
</tr>
<tr>
<td>Nick Amico</td>
<td>2005</td>
<td>Master’s</td>
<td>Figg Engineering, Tallahassee, Fla.</td>
</tr>
<tr>
<td>Kirsten A. Baldwin Metzger</td>
<td>2006</td>
<td>Master’s</td>
<td>Laurene &amp; Rickher, P.C., Charlotte, N.C.</td>
</tr>
<tr>
<td>Susan Bowers</td>
<td>2007</td>
<td>Master’s</td>
<td>Whitman, Requardt &amp; Associates, Baltimore, Md.</td>
</tr>
<tr>
<td>J. Christopher Carroll</td>
<td>2009</td>
<td>Ph.D.</td>
<td>University of Louisiana at Lafayette, Lafayette, La.</td>
</tr>
<tr>
<td>Kevin R. Collins</td>
<td>1989</td>
<td>Master’s</td>
<td>Lawrence Technological University, Southfield, Mich.</td>
</tr>
<tr>
<td>D. Brad Davis</td>
<td>2008</td>
<td>Ph.D.</td>
<td>University of Kentucky, Lexington, Ky.</td>
</tr>
<tr>
<td>Kyle Richard Dominisse</td>
<td>2004</td>
<td>Master’s</td>
<td>Walter P. Moore, Kansas City, Mo.</td>
</tr>
<tr>
<td>Richard Drumm</td>
<td>1993</td>
<td>Master’s</td>
<td>FHWA</td>
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<tr>
<td>Keith Grubb</td>
<td>1995</td>
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<tr>
<td>Linda Morley Hanagan</td>
<td>1995</td>
<td>Ph.D.</td>
<td>Penn State University, State College, Pa.</td>
</tr>
<tr>
<td>Matthew D. Harlan</td>
<td>2004</td>
<td>Master’s</td>
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</table>
Via Alumni: Where Are They Now? (continued from page 55)

Greg Hensley
Years Graduated: 2004 and 2005
Degrees Awarded: Undergraduate and Master’s

Anne Himebaugh
Year Graduated: 2006
Degree Awarded: Master’s

Hunter Hodges
Year Graduated: 2006
Degree Awarded: Master’s
Employer: Lane Bishop York and Delahaye, Inc., Birmingham, Ala.

William P. Jacobs, V
Year Graduated: 2002
Degree Awarded: Master’s
Employer: Stan Lindsey and Associates, Atlanta, Ga.

Jared B. Jamison
Year Graduated: 1998
Degree Awarded: Master’s

Bernard L. Kassner
Year Graduated: 2004
Degree Awarded: Master’s
Employer: Ph.D. Candidate, Virginia Tech and Research Scientist, Virginia Transportation Research Council, Charlottesville, Va.

Ann E. Jeffers
Year Graduated: 2009
Degree Awarded: Ph.D.
Employer: University of Michigan, Ann Arbor, Mich.

Stephanie A. Koch
Year Graduated: 2008
Degree Awarded: Master’s
Employer: Parsons Brinckerhoff-Ohio Inc, Columbus, Ohio

Adam R. Lease
Year Graduated: 2005
Degree Awarded: Master’s

Bryan J. Loflin
Year Graduated: 2008
Degree Awarded: Master’s
Employer: Parsons Brinckerhoff, Raleigh, N.C.

Justin D. Marshall
Year Graduated: 2008
Degree Awarded: Ph.D.
Employer: Auburn University, Auburn, Ala.

James David Martin
Year Graduated: 2005
Degree Awarded: Master’s
Employer: Walter P. Moore, Tampa, Fl.

Timothy W. Mays
Years Graduated: 1997 and 2000
Employer: The Citadel, Charleston, S.C.

Laurie Mazursky
Year Graduated: 2006
Degree Awarded: Master’s
Employer: Sutton-Kennerly and Assoc., Asheville, N.C.

David McGowan
Year Graduated: 1991
Degree Awarded: Master’s
Employer: Dominion Generation, Glen Allen, Va.

Sean Molloy
Year Graduated: 1998
Degree Awarded: Master’s
Employer: Redwine Reizian Structural Engineers, Avon, Colo.

Michael Motley
Year Graduated: 2004
Degree Awarded: Master’s
Employer: The LPA Group, Inc., Tallahassee, Fla.

Michael C. Neubert
Year Graduated: 1999
Degree Awarded: Master’s
Employer: King Guinn Associates, Charlotte, N.C.

Charles (Chuck) Newhouse
Year Graduated: 1994 and 2005
Degree Awarded: Master’s and Ph.D.
Employer: Virginia Military Institute, Lexington, Va.

Patricia Seay O’Neil
Year Graduated: 1998
Degree Awarded: Master’s
Employer: Bechtel, Frederick, Md.

Jason D. Perry
Year Graduated: December 2003
Degree Awarded: Master’s

Jason Piotter
Year Graduated: 2001
Degree Awarded: Master’s; Ph.D. pending
Employer: Nuclear Regulatory Commission

Robert T. Prince
Year Graduated: 1998
Degree Awarded: Master’s

Bruce Queen
Year Graduated: 1991
Degree Awarded: Master’s
Employer: President, QED Inc., Raleigh, N.C.

Michelle Rambo-Rodenberry
Year Graduated: 2002
Degree Awarded: Ph.D.
Employer: FAMU-FSU College of Engineering, Tallahassee, Fla.

Nicholas Redmond
Year Graduated: 2007
Degree Awarded: Master’s

Clint Rex
Year Graduated: 1997
Degree Awarded: Ph.D.
Employer: Stanley D. Lindsey and Associates, Atlanta, Ga.

Cheryl Rottman
Year Graduated: 1996
Degree Awarded: Master’s
Employer: Frontenac Engineering, St. Louis, Mo.

John C. Ryan, Jr.
Year Graduated: 2006
Degree Awarded: Ph.D.
Employer: StructurTech Construction Systems, Charleston, S.C.

Richard A. Saunders
Year Graduated: 2004
Degree Awarded: Master’s
Employer: KSI Structural Engineers, Atlanta, Ga.

Donald P. Scholz
Year Graduated: 2004
Degree Awarded: Master’s

Michael W. Seek
Year Graduated: 2007
Degree Awarded: Ph.D.
Employer: East Tennessee State University, Johnson City, Tenn.
Bruce Shue  
Year Graduated: 1995  
Degree Awarded: Master’s  
Employer: Smislova, Kehnemui & Assoc., Rockville, Md.

Michael Sladki  
Year Graduated: 2000  
Degree Awarded: Master’s  
Employer: Cates Engineering, Centreville, Va.

Paul Spears  
Year Graduated: 2004  
Degree Awarded: Master’s  
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Michael Sladki  
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Bruce Shue  
Year Graduated: 1995  
Degree Awarded: Master’s  
Employer: Smislova, Kehnemui & Assoc., Rockville, Md.
Donors to the CEE Department for 2010-2011

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CEE Alumni who contributed in 2010-2011

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Aden</td>
<td>1967</td>
</tr>
<tr>
<td>Chad C. Anderland</td>
<td>1996</td>
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<tr>
<td>Michael A. Alto</td>
<td>1983</td>
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<tr>
<td>Robert W. Angelotti</td>
<td>1983</td>
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<tr>
<td>C. Howard Arnold, IV</td>
<td>1980</td>
</tr>
<tr>
<td>Walter F. Bailey</td>
<td>1972</td>
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<tr>
<td>Kelso Baker</td>
<td>1951</td>
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<td>Gary Ball</td>
<td>1958</td>
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<tr>
<td>Donald J. Balzer, Jr.</td>
<td>1977</td>
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<tr>
<td>Sandra G. Bartley</td>
<td>1970/1973</td>
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<tr>
<td>Bruce R. Bates</td>
<td>1979</td>
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<td>Steven S. Baum</td>
<td>1995</td>
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<tr>
<td>Courtney A. Beamon</td>
<td>1995</td>
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<td>Phillip S. Beasley</td>
<td>1992</td>
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<td>Ronald L. Beck</td>
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<tr>
<td>Julian B. Bell</td>
<td>1962</td>
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<td>Larry D. Benefield</td>
<td>1975</td>
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<td>Danelle M. Bernard</td>
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<tr>
<td>Alok Bhandari</td>
<td>1975</td>
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<tr>
<td>Michael N. Biscotte</td>
<td>1980</td>
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<td>Randall W. Boe</td>
<td>1991</td>
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<tr>
<td>Charles P. Boepple</td>
<td>1979</td>
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<tr>
<td>Harold W. Bohannon, Jr.</td>
<td>1968</td>
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<tr>
<td>Michelle E. Bolding</td>
<td>2005</td>
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<tr>
<td>Steven R. Bonham, Jr.</td>
<td>1973</td>
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<tr>
<td>James R. Bowles</td>
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<tr>
<td>Dana M. Boyadjian</td>
<td>1976</td>
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<td>Jerry D. Brammer</td>
<td>1968</td>
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<tr>
<td>Kenneth P. Brannan</td>
<td>1986</td>
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<tr>
<td>Robert L. Briggs, Jr.</td>
<td>1988</td>
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<tr>
<td>William F. Brittle, Jr.</td>
<td>1969</td>
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<tr>
<td>Roger L. Brockenbrough</td>
<td>1954</td>
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<tr>
<td>Thomas W. Brockenbrough</td>
<td>1942/1946</td>
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<tr>
<td>Craig S. Bryant</td>
<td>1971</td>
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<tr>
<td>W. Barry Bryant</td>
<td>1970/1971</td>
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<tr>
<td>Amy L. Buehler</td>
<td>1994</td>
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<tr>
<td>Guy W. Buford</td>
<td>1952</td>
</tr>
<tr>
<td>John B. Burchnall</td>
<td>1975</td>
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<tr>
<td>David M. Burke</td>
<td>1974</td>
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<td>Douglas Burks</td>
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<tr>
<td>Raymond F. Burmester</td>
<td>1956</td>
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<tr>
<td>David G. Buth</td>
<td>1982</td>
</tr>
<tr>
<td>H.D. Campbell, Jr.</td>
<td>1969</td>
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<tr>
<td>Steven T. Capito</td>
<td>1995</td>
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<tr>
<td>Valerie L. Carpenter-Ho</td>
<td>1999</td>
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<tr>
<td>Lisann A. Carriker</td>
<td>1985</td>
</tr>
<tr>
<td>James N. Carter, Jr.</td>
<td>1974</td>
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<tr>
<td>William A. Caruthers, Jr.</td>
<td>1964</td>
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<tr>
<td>Barrett T. Catlett</td>
<td>2009</td>
</tr>
<tr>
<td>Derrick B. Cave</td>
<td>1987</td>
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<tr>
<td>Yuri J. Chandler</td>
<td>1973</td>
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<tr>
<td>Ben H. Chen</td>
<td>1973</td>
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<tr>
<td>R. Bradley Cheuning</td>
<td>1964/1970</td>
</tr>
<tr>
<td>Trenton M. Clark</td>
<td>1993</td>
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<tr>
<td>Alfred R. Cline</td>
<td>1958</td>
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<tr>
<td>Kevin R. Collins</td>
<td>1989</td>
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<tr>
<td>Steven E. Conner</td>
<td>1983</td>
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<tr>
<td>Robert H. Connock, Jr.</td>
<td>1962</td>
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<td>Donald S. Copley</td>
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<td>Tania C. Courson</td>
<td>1992</td>
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<td>Thomas H. Cox</td>
<td>1991</td>
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<td>Donnie R. Crandell</td>
<td>1969</td>
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<td>Kenneth A. Crawford</td>
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<td>Raymond G. Curry, Jr.</td>
<td>1954</td>
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<td>E. Stokes Daniels, Jr.</td>
<td>1957</td>
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<td>Shari E. Day</td>
<td>1982</td>
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<tr>
<td>Sarah R. Deck</td>
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<td>Thomas E. Decker</td>
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<td>Robert E. Dick</td>
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<td>Charles M. Dietz, Jr.</td>
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<td>Richard M. DiSalvo, Jr.</td>
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<td>Vernon M. Duncan</td>
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<td>Walter T. Duncan</td>
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<td>Barry T. Dunkley</td>
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<td>Jeffrey S. Dykstra</td>
<td>2009</td>
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<td>1959</td>
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<td>Edward L. Janney</td>
<td>1973</td>
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<td>Robert F. Jansen</td>
<td>1980</td>
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<td>Jimmie D. Jenkins</td>
<td>1970</td>
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Via Donors (continued from page 58)

Katharine P. Jenkins ......................... 1977
James R. Jones ................................ 1970
John H. Jones .................................. 1973
Paul A. Jordan .................................. 1979
Williams A. Joyner ............................ 1965
Dennis Kamber ................................. 1963
Jeffrey P. Kapinos ............................ 1986/1992
Susan E. Keck-Truman ......................... 1980
Charles Kestner ................................ 1950
Herbert G. Kipp ................................ 1967
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Kenneth M. Krupa ............................. 1976
Glenda P. La Rue ............................... 1991/1993
Charles Lamb .................................... 1981
James R. Land, Jr. ............................. 1957
Kevin T. Lapatos ............................... 1988
Eric LaRoque ................................... 2004, 2007
Steven R. Lavinder ............................ 1984
Jerry C. Lester .................................. 1959
Milton J. Lewis, Jr. ......................... 1981
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Chung H. Lin .................................... 1967
James R. Link ................................... 1958
Paul C. Liu ...................................... 1961
Charles J. Logan ............................... 1985
Jon O. Loker .................................... 1958
James F. Loudon ............................... 1960
James K. Lowe, Jr. .............................. 1978
Richard B. Lucas .............................. 1972
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Francis D. McCready, Jr. .................... 1967
Garland H. McKenzie, Sr. .................... 1981
Howard C. Melton .............................. 1961
Ronald L. Meng .................................. 1996
Ann B. Miller .................................... 1984
Robert S. Miller, III. .......................... 1967
Jeremy M. Mocny .............................. 1997
Franklin C. Moore ............................. 1959
Paula J. Moore ................................... 1996
Anthony J. Moraco ............................. 1982
Ayman A. Morad ................................. 1990
Herbert W. Morgan ............................. 1974
Joe M. Morgan ................................... 1968
Laura J. Morillo ................................ 1984
Denise M. Mosca ............................... 1995
Michelle E. Motchos ........................... 1996
Michael P. Mozingo ........................... 1965
J.R. Ubejd Mujagic ............................. 2004
Joseph S. Mullins .............................. 2007
Kenneth H. Murray ............................ 1965
A. Ross Myers ................................... 1972
David R. Myzie ................................. 1986
William D. Neely, Jr. ......................... 1998
Albert L. Nichols, Jr. .......................... 1962
Richard Noakes ............................... 1958
Kerry A. Nothnagel ............................ 1965/1968
Kenneth R. Nuttall ............................ 1980/1986
Raymond J. O’Donnell, III ................. 1980
Morris B. Oliver ............................... 1987
Robert A. Painter ............................... 1948
Carrie H. Pendleton ........................... 2000
Gerald O. Peters, Jr. ......................... 1975
Daniel M. Phillips ............................ 1958
Daniel H. Phlegar .............................. 1970
Matthew C. Pillow ............................. 2009
David B. Powers ............................... 2000
Stephen C. Powers ............................. 1987
Carl W. Pugh, Jr. ............................... 1985
Michael Quillen ............................... 1970
Brian L. Ramale ...
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