

# CEE OUTLOOK

University of Delaware

Fall 2006

## Department Holds First Kerr Lecture in Engineering Mechanics

Henry Petroski, well-known author and engineer, delivered the first Arnold D. Kerr Lecture in Engineering Mechanics on May 8, 2006. The lectureship was initiated following Kerr's retirement in 2004, when an endowment was established in his name. The series brings distinguished scientists and engineers to the University of Delaware to speak on topics in engineering mechanics and design.

Petroski is Aleksandar S. Vesic Professor of Civil Engineering and Professor of History at Duke University, where he also serves as chairman of the Department of Civil and Environmental Engineering.

As an author, Petroski has made his mark in not only the technical world but also the popular arena. The author of more than a dozen books, he has been called "America's poet laureate of technology." His most recent book, *Success Through Failure: The Paradox of Design*, was the topic of his lecture.

As Petroski points out in the book's preface, "The development of new artifacts and new technologies follows from the failure of existing ones to perform as promised or as well as can be hoped for or imagined. Frustration and disappointment associated with the use of a tool or the performance of a system puts a challenge on the table: Improve the thing."

Using the Titanic as an example, Petroski said ship design would have not been improved had the Titanic stayed afloat. "Imagine that the Titanic had not hit an iceberg," he said. "Imagine that

the Titanic had successfully reached New York. It would have been hailed as a tremendous success. What would have been the consequences of that?"

Similarly, while many suspension bridges were successfully designed and built between the late nineteenth and early twentieth centuries, the infamous collapse of the Tacoma Narrows Bridge in Seattle in 1940 was an example of how engineers needed to focus more on bridge failures in order to create successful designs. "This is one of the problems with studying successful models," he said. "You don't know their weaknesses."

While most bridges today have a number of elements that help confer stability in high winds, Petroski expressed concern with the designs of modern cable-stay bridges because engineers have yet to figure out how to stabilize the cables in the wind. "I have great concern that if cable-stay bridges continue to be built, we may see another Tacoma Narrows Bridge," he said.

Petroski received his bachelor's degree from Manhattan College in 1963 and his Ph.D. from the University of Illinois at Urbana-Champaign in 1968. Before joining the faculty at Duke in 1980, he taught at the University of Illinois and the University of Texas at Austin and was a group leader at Argonne National Laboratory, where he was responsible for research and development efforts in fracture mechanics. He is a professional engineer registered in Texas and a chartered engineer registered in Ireland.



▲ Henry Petroski speaks at the first Kerr Lecture in Engineering Mechanics.

His current research focuses on failure analysis and design theory. Ongoing projects include the use of case histories to understand the role of human error and failure in engineering design, as well as the development of models for invention and evolution in the engineering design process. Petroski's research has been sponsored by the Corps of Engineers, the National Science Foundation, the Alfred P. Sloan Foundation, and other organizations, and he has published over 70 refereed journal articles.

More than 250 faculty, students, staff, and members of the community attended the lecture. Petroski was also available for a book signing arranged by the University of Delaware Bookstore.

# Message from the Chair



▲ Michael J. Chajes

As I enter my second five-year term as Chair, my thoughts have begun to focus in particular on long-range plans for the Department as well as in general on the future of civil engineering.

In June of this year, I participated in the ASCE-sponsored “Summit on the Future of Civil Engineering.” The summit brought together a diverse group of people to articulate a vision for the future of civil engineering addressing all levels and facets of the CE community. In short, we met to map the profession’s future.

Among the issues and trends noted at the Summit was the need to more fully embrace sustainability. As articulated in the summit draft report, *The Vision for Civil Engineering in 2025*, “Civil engineers have helped raise global expectations for sustainability and for environmental stewardship. The profession has led world acceptance of green design and has been at the forefront in making environmental considerations part of life-cycle and cost-benefit analyses.”

The concept of sustainability taps into many aspects of civil engineering, including management of the environmental impacts of processes and products, implementation of “green” building materials and practices, and development of sustainable energy sources and delivery systems.

While sustainability has been referred to as a new discipline, I see it more as an umbrella that covers all of the more traditional civil engineering disciplines, including structural, geotechnical, environmental, transportation, and coastal engineering. As such, it needs to be incorporated into everything we do as civil engineers—not

treated as a side issue but truly integrated into our planning, design, management, use, and disposal practices.

If sustainability is to be implemented at the practical level, it must also be integrated into the academic curriculum and considered in faculty hiring practices.

Our College of Engineering is currently exploring the idea of a College-wide minor in energy and sustainability. This program would be the first of its kind here at UD, and it would serve as a model for the integration of globally important concepts into all relevant areas across departmental lines.

In our department, we are in the initial stages of planning for a minor in construction engineering (described in more detail in our story about Skip Gardiner on page 7). As we develop courses in this area, we will incorporate elements of green construction such as those promulgated by LEED (Leadership in Energy and Environmental Design). Founded under the aegis of the U.S. Green Building Council, LEED emphasizes state-of-the-art strategies for sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

We also have a search underway for two new faculty members. As we consider candidates for these positions, we will be looking for people who bridge several areas and who can contribute to a cross-disciplinary area such as sustainable infrastructure and energy, risk and reliability, ecological and human health, advanced construction materials, or smart facilities. We are hopeful that we can attract faculty members who exemplify a balance between fundamental expertise in a traditional area and the vision to apply that knowledge to new problems that cross disciplinary lines.

As we strive to improve our academic offerings and strengthen our faculty to meet the unique challenges of civil engineering in the twenty-first century, we also realize that it’s important to recognize the accomplishments of our current faculty and students as well as our alumni. This newsletter is filled with information about awards, honors, contributions, and other achievements. Please don’t hesitate to contact us with your own success stories.

*Michael Chajes*

Dr. Michael J. Chajes  
CEE Department Chair

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## Faculty Highlights

**Herbert E. Allen**, Professor and Director of the Center for the Study of Metals in the Environment, recently joined seven other University of Delaware faculty members designated as Highly Cited Researchers by the Institute of Scientific Information (ISI). Allen is the second CEE faculty member to receive this designation; Dom DiToro, Edward C. Davis Professor, joined the ISI Highly Cited list in 2004. Allen and Di Toro are among a very exclusive group comprising less than one-half of one percent of all publishing researchers.

**Robert A. Dalrymple**, Professor Emeritus, has been elected to the National Academy of Engineering. Dalrymple retired from UD as Edward C. Davis Professor of Civil and Environmental Engineering in 2003, after 30 years of service. At that time, he joined the faculty at The Johns Hopkins University as Willard & Lillian Hackerman Professor of Civil Engineering. He was accorded emeritus status at Delaware in 2004.

**Ardeshir Faghri**, Professor, received a patent for “Computer-Implemented System and Method for Simulating Motor Vehicle, Bicycle, and Pedestrian Traffic” (USP No. 6,950,788).

**Victor N. Kaliakin**, Associate Professor, has been invited to serve on the editorial board of the journal *Geosynthetics International*.

**James T. Kirby**, Edward C. Davis Professor, has been appointed Editor-in-Chief of the *Journal of Geophysical Research - Oceans*. The appointment is effective immediately, and the term runs until December 31, 2008.

**Harry W. Shenton III**, Associate Professor, was awarded the 2006 Slocomb Excellence in Teaching Award by the University of Delaware College of Engineering.

## New Faculty in CEE

Three new faculty have joined the department since last fall: Professor Sue McNeil and Assistant Professors Jennifer Righman, McConnell and Christopher Meehan.

Prior to joining the UD Department of Civil and Environmental Engineering, McNeil was Director of the Urban Transportation Center and Professor in the College of Urban Planning and Public Affairs at the University of Illinois at Chicago. She was previously a member of the faculty at Carnegie-Mellon University, where she earned her M.S. and Ph.D. degrees in civil engineering. A native of Australia, she earned her bachelor's degree in mathematics at the University of Newcastle in New South Wales.

McNeil is one of the most prominent individuals in the United States in the area of asset management. Her work also encompasses life-cycle costing, application of advanced technologies, economic analysis, condition assessment and deterioration modeling, and decision support.

In 2003, she was selected to serve as the first Chair of the Transportation Research Board's new committee on asset management. In recent years,

she has applied her expertise in asset management to the area of brownfield development, an effort focused on transforming abandoned industrial properties to productive uses.

McConnell, who earned her Ph.D. at West Virginia University, is affiliated with the Department's Center for Innovative Bridge Engineering. Her Ph.D. dissertation focused on rotation-based moment redistribution design and rating specifications for highway bridges. She also holds bachelor's and master's degrees from WVU, with her master's thesis focusing on the development of an innovative connection for fiber-reinforced polymer (FRP) bridge decks to steel girders. Righman has published several papers on her work and given a number of presentations at conferences and symposia. Since joining the department last September, she has initiated a new research program in collaboration with colleagues in the Center for Composite Materials focusing on the use of advanced composites for blast resistance.

Meehan joined the Department after earning his Ph.D. at Virginia Tech and serving as a Visiting Researcher at the University of

## Funding Highlights

Prof. Paul Imhoff and Pei Chiu are leading a team of researchers in the development and demonstration of an intelligent bioreactor management information system (IBM-IS). The goal of the IBM-IS is to help control and optimize biological conditions in landfill waste to allow for more rapid and complete decomposition and minimize the release of methane by controlled injections of air and liquids. The \$600,000 award is part of a U.S. Department of Energy R&D initiative to bring improved engineering and technology to the nation's landfills, which produce significant quantities of greenhouse gases. The UD team is working with three partners—the Yolo County (Calif.) Planning and Public Works Department, the nonprofit Institute for Environmental Management based in Palo Alto, Calif., and the firm Hydro Geo Chem Inc., of Tucson, Ariz.

Prof. Nobu Kobayashi and James Kirby have received funding for three projects from the National Oceanic and Atmospheric Administration through the Delaware Sea Grant Program:

1. Kirby is collaborating with College of Marine Studies faculty to develop a model for “nowcasting” ocean surface waves. A well-developed wave-nowcasting capability that uses the real-time measurements currently available in Delaware Bay and along the adjacent Atlantic beaches could be used by local and federal entities in hazard evaluation, shoreline erosion management, and estuarine environmental studies.
2. Kirby is collaborating with scientists at The Johns Hopkins University to provide a tool that will lead to better predictions of when and where rip currents are likely to occur.
3. Kobayashi is developing a model to predict the morphological changes of tidal flats due to sea-level rise, tides, and wind-generated waves. Besides serving as a storm buffer, intertidal mudflats are important food sources for crabs, shorebirds, and other marine life.

California, Davis. Meehan is a geotechnical engineer whose research focuses on shear behavior of soils under static and dynamic loading conditions, including the development of soil and strength characterization methods that are practical, economical, and theoretically robust. As a graduate student, he was the recipient of a United States Society on Dams Scholarship and a Via Master's Fellowship Award Winner. He is a member of Chi Epsilon, the Civil Engineering Honor Society.



▲ L. to r.: Chris Meehan, Sue McNeil, and Jennifer McConnell.

# CEE Students Win Honors Day Awards

More than 50 CEE students received awards at Honors Day, May 5, 2006. "We're really proud of our students' academic accomplishments," says Chair Michael Chajes. "The University-wide Honors Day celebration is a great way to recognize those accomplishments."

The following lists awards conferred at Honors Day, with Department awards listed first, followed by College and University awards.

## CEE DEPARTMENT AWARDS

### CIVIL & ENVIRONMENTAL ENGINEERING DAVIS AWARD

Presented to a Senior selected by the Faculty of the Department of Civil & Environmental Engineering on the basis of outstanding scholarly achievement and professional development. The award consists of a certificate and \$200.

*Ryan C. Burk*

### URS CORPORATION AWARD

Presented to a Senior in Civil & Environmental Engineering showing professional promise, leadership, and service. The award consists of a certificate and \$150.

*Michael D. Rakowski*

### CIVIL & ENVIRONMENTAL ENGINEERING ALUMNI AWARD

Presented to the Senior student in Civil & Environmental Engineering who has demonstrated outstanding scholarship. The award consists of a certificate and \$100.

*Casey D. Hanner*

### DELAWARE SECTION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS SENIOR AWARD

Presented to a Senior selected by the Faculty of the Department of Civil & Environmental Engineering on the basis of outstanding scholarly and extracurricular achievement. The award consists of a certificate, \$150, and recognition on the permanent plaque in P.S. DuPont Hall.

*Matthew A. Millner*

### DELAWARE SECTION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS JUNIOR AWARD

Presented to a Junior selected by the Faculty of the Department of Civil & Environmental Engineering on the basis of outstanding scholarship. The award consists of a certificate, \$100, and recognition on the permanent plaque in P.S. DuPont Hall.

*Joseph L. Challburg*

### DUFFIELD ASSOCIATES AWARD

An award of a certificate and \$200 to a senior Civil & Environmental Engineering major who has shown special promise in Geotechnical Engineering.

*Brian J. DePan*

### TETRA TECH, INC. SOPHOMORE AWARD

Presented by Tetra Tech, Inc. to a Sophomore in the Department of Civil & Environmental Engineering in recognition of outstanding scholarship. The award consists of a certificate and \$250.

*Jason L. McClafferty*

### VAN DEMARK & LYNCH SOPHOMORE AWARD

An award of a certificate and \$500 to a Civil & Environmental Engineering sophomore on the basis of scholarship, leadership, and personality.

*Scott B. Pendergrass*

### KCI TECHNOLOGIES, INC. AWARD

An award of \$500 to a Junior or Senior Civil & Environmental Engineering major who has demonstrated outstanding ability and interest in urban planning/civil engineering.

*Ross A. Bickhart*

### FRANCIS E. GARDINER, JR. SCHOLARSHIP

Two scholarships of \$1000 awarded to distinguished civil and environmental engineering junior-year students. Selection is on the basis of academic achievement.

*Daniel H. Wanger  
Houston A. Brown*

### WASHINGTON AREA RAILWAY ENGINEERS SCHOLARSHIP

Two scholarships of \$1500 awarded undergraduate students enrolled at the University of Delaware, who has a demonstrated interest in Railroad Engineering, on the basis of academic merit, and without regard to financial need. Will provide assistance to said student who is enrolled in the Department of Civil & Environmental Engineering in the College of Engineering.

*Elizabeth J. Fuller  
Dennis J. Helmstetter*

### FIRST STATE SECTION OF AMERICAN SOCIETY OF HIGHWAY ENGINEERS SCHOLARSHIP

A scholarship to a current University of Delaware Sophomore, presently enrolled in the Department of Civil & Environmental Engineering, focusing in the area of Transportation Engineering and maintaining a minimum grade point average of 3.0.

*Nicole Achtermann Walsh  
Timothy Croy Gay  
TiAwna Brittany Moffatt  
Jordan Denise Morrison*

### BANGALORE T. LAKSHMAN CIVIL & ENVIRONMENTAL ENGINEERING MINORITY SCHOLARSHIP

A scholarship of \$1000 is awarded to a Civil & Environmental Engineering minority student on the basis of outstanding scholarship; financial need is also a consideration.

*Robert E. Suarez*

### MARGARET AND HYLAND P. GEORGE AWARD

Civil & Environmental Engineering scholarship awarded to a Delaware resident on the basis of academic performance and financial need.

*Jaime J. Orensky*

### MALCOLM PIRNIE, INC. OUTSTANDING ENVIRONMENTAL ENGINEERING GRADUATE STUDENT AWARD

An award of \$250 to an outstanding graduate student in the Environmental Engineering program selected on the basis of academic excellence, participation in University and professional groups and activities, and community involvement.

*Derya Dursun*

### MALCOLM PIRNIE, INC. OUTSTANDING ENVIRONMENTAL ENGINEERING UNDERGRADUATE STUDENT AWARD

An award of \$250 to an outstanding undergraduate student in the Environmental Engineering program selected on the basis of academic excellence, participation in University and professional groups and activities, and community involvement.

*Lindsey R. Kling*

### E.C. DAVIS SCHOLARSHIP AWARD

An award offered to outstanding Delaware residents who choose Civil & Environmental Engineering as a major, are at or near the top of their high school graduating class, and have SAT scores in the upper range of the applicant pool.

<i>Jacquelyn D. Allmond</i>	<i>Betsy S. Hicks</i>
<i>Ross A. Bickhart</i>	<i>Brian P. Jones</i>
<i>Thomas M. Boland, Jr.</i>	<i>Christina A. Lindemer</i>
<i>Francis J. Bonkowski, III</i>	<i>Jason L. McClafferty</i>
<i>Kristen M. Cannatelli</i>	<i>Dana L. Rathfon</i>
<i>Karen E. Cardinal</i>	<i>Jeffrey V. Rockwell</i>
<i>Thomas J. Cotter</i>	<i>Laura B. Sewell</i>
<i>Meredith K. Davies</i>	<i>Timothy P. Studd</i>
<i>Joseph Wilson C. Farie</i>	<i>Robert B. Tetrick</i>
<i>Daniel G. Gregory</i>	<i>Jamie C. Wallace</i>

### ROBERTSON-SELINKOFF SCHOLARSHIP AWARD

An award offered to outstanding applicants who choose Civil & Environmental Engineering as a major; are at or near the top of their high school graduating class, and have SAT scores in the upper range of the applicant pool.

<i>Ryan C. Burk</i>	<i>Jared P. Marchand</i>
<i>John P. Connelly</i>	<i>Kimberly M. Gravatt</i>
<i>Brent D. Cooper</i>	<i>Monica J. Peiffer</i>
<i>James R. Eriksen</i>	<i>Phillip J. Castellano</i>
<i>Michael R. Galvin</i>	<i>Steven K. Marshall</i>
<i>Dennis M. Giuliano</i>	<i>Kristen A. Mogavero</i>
<i>Casey D. Hanner</i>	<i>Dominik Schneider</i>
<i>Matthew B. Hayes</i>	<i>Nicole S. Sharp</i>
<i>Katie M. Keller</i>	<i>Julie M. Trick</i>
<i>Anthony F. Manzella</i>	

### WALTER L. AND DAVID P. HERNSON CIVIL ENGINEERING SCHOLARSHIP

A scholarship awarded to undergraduate student(s) majoring in civil engineering on the basis of academic merit and financial need.

*Kimberly M. Gravatt  
Monica J. Peiffer  
Phillip J. Castellano  
Steven K. Marshall*

## COLLEGE AND UNIVERSITY AWARDS

### BANGALORE LAKSHMAN SCHOLARSHIP

*TiAwna B. Moffatt*

### LISTON HOUSTON

*Nicole A. Walsh  
Matthew C. Hockenbury*

### Lillian Sincoskie Scholarship

*Nathan S. Kiracofe*

## Dursun Honored at International Conference



▲ Derya Dursun

*Note: This article is adapted from an article by Sue Moncure that originally appeared in UDaily on September 5, 2006.*

**D**erya Dursun, a Ph.D. candidate in environmental engineering, won the Best Paper Award at the third International Young Researchers Conference, sponsored by the International Water Association (IWA). The conference was held in May, at Nanyang Technological University in Singapore.

IWA, whose membership is drawn from 130 countries, received more than 200 abstract submissions from young researchers in 45 countries, with 60 chosen for the conference.

Dursun's research involves using new enzyme methods in characterizing and treating waste residuals from domestic wastewater treatment. Her winning paper was entitled "Enhancement of Dewaterability with Specific Enzyme Pretreatment: Role of Proteins and Carbohydrates."

The conference was a rewarding experience, Dursun said, interacting with people from all over the world and learning from workshops and meetings with CEOs and professionals in the field.

A native of Turkey, Dursun received her bachelor's and master's degrees from Dokuz Eylül University in environmental engineering. She knew of the work being done by Prof. Steve Dentel and contacted him about coming to the University of Delaware as a graduate student, arriving four years ago.

The environment is an important concern for her, Dursun said, and water treatment is a major environmental issue.

Most of her research on biosolids is carried out in the lab, although she has been involved in a pilot project with Wilmington's wastewater treatment facility.

This semester, Dursun's research is taking her to France, where she will study wastewater methods at the Polytechnic Institute of Lorraine. She will then return to UD to complete her dissertation on "Gel-Like Behavior of Biosolids in Conditioning and Dewatering Processes."

"Derya is a talented researcher and professional who deserves this global recognition," Dentel said. "This also further UD's international reputation in the field of environmental engineering."

## STUDENT HIGHLIGHTS

**Geoff Burrell**, a second-year master's candidate in structural engineering, received a fellowship from the American Institute of Steel Construction (AISC). Burrell, who is advised by Dr. Jennifer Righman McConnell, is conducting research on distortional buckling of steel I-girders.

**Derya Dursun**, a Ph.D. candidate in environmental engineering advised by Prof. Steve Dentel, received the Malcolm Pirnie Outstanding Graduate Student Award in May 2006. She was also the recipient of an Air Pollution Educational and Research Grant (APERG) from the Air & Waste Management Association in April 2006. In addition, Dursun won the Best Paper Award at the Young Researchers Conference in Singapore in May 2006 (see story, above).

**Byunghyun Han**, a Ph.D. candidate in environmental engineering, was awarded an APERG from the Air & Waste Management Association for the second year in a row. Han, who is advised by Dr. Paul Imhoff, received the fellowship for his work on an intelligent bioreactor management information system (IBM-IS) for mitigation of greenhouse gas emission and carbon sequestration.

**Bo Hu**, who completed a Ph.D. in structural engineering under the advisement of Dr. Harry W. (Tripp) Shenton, received the R. L. McCullough Scholars Award from the University's Center for Composite Materials. The award is bestowed on the student author of a paper accepted for publication in a refereed journal. Hu was honored for his work on bio-based composite materials for residential construction.

**David Metzler**, a Ph.D. candidate advised by Prof. C. P. Huang, won 2nd place in the graduate student poster competition at the Spring meeting of the Hudson-Delaware Chapter of the Society of Environmental Toxicologists and Chemistry (HDC-SETAC), held May 4-5, 2006. Metzler's poster was entitled "The Size Effect of Photocatalytic Nano-TiO<sub>2</sub> Particles on Algae Exemplified by *Selenastrum capricornutum*."

**Renee Robert**, a second-year master's student in structural engineering, received a scholarship from the Concrete Reinforcing Steel Institute (CRSI). A graduate of Widener University, Robert also won a CRSI scholarship as an undergraduate. Advised by Prof. Jennifer Righman McConnell, Robert is conducting research on blast protection for bridge applications.

Cross-country runner **Kyle Schmid**, a senior, captured his first career meet title at the Delaware Invitational #1 on September 16, 2006, at White Clay Creek State Park. Schmid covered the eight-kilometer course in 26:12.98. The Hens, with the top five individual finishers, won the meet. The following week, Schmid was named Colonial Athletic Association Runner of the Week.

## CEE Alums Capture Delaware Engineer of the Year and Young Engineer of the Year Awards

Jeffrey M. Bross (69BCE) has been named Delaware Engineer of the Year for 2006, and Ted F. Januszka (93BCE, 95MCE) has been named Delaware Young Engineer of the Year.

The recipients of both awards are chosen by the Delaware Engineering Society (DES) based on contributions to the engineering profession and service to the community. DES is the Delaware affiliate of the 50,000-member National Society of Professional Engineers.

"It's great to see Jeff and Ted selected for these awards," said CEE Department Chair Michael Chajes. "They have been valuable assets to our Senior Design program, and they have made significant contributions to the field—Jeff over the past 30 years and Ted more recently."

Bross is President of Duffield Associates, Inc., a geoscience consulting firm headquartered in Wilmington, Delaware. The author of numerous technical articles and papers, he is a featured national speaker on environmental and construction issues. He is a registered Professional Engineer in Delaware, Maryland, New Jersey, Pennsylvania, and Nebraska.

When Bross joined Duffield 25 years ago as Vice President, the firm employed five people. He became President in 1996, when the firm's founder, James Duffield, became Chairman of the Board. The company now has more than 110 employees in three offices. Under his leadership, the firm has expanded its services from geotechnical engineering to include environmental services, water resources, coastal and waterfront engineering, geographic information systems, construction services, and structural engineering.

In addition to his work for Duffield, Bross has played leadership roles in dozens of professional and non-profit organizations over the past three decades.

Januszka is the Regional Transportation Manager for the Wilmington, Delaware, office of Pennoni Associates Inc., a consulting engineering firm headquartered in Philadelphia. A Pennoni employee for the past 11 years, Januszka has extensive experience with the design and management of transportation, highway, bridge, and infrastructure improvement projects in Delaware, Pennsylvania, New Jersey, and Maryland.



▲ Gov. Minner presents awards to Ted Januszka (left) and Jeffrey Bross (right).

"Ted is a fantastic technical engineer who gets to know his clients personally so that he can best serve their needs," said C.R. "Chuck" Pennoni, PE, Founder and Chairman of the company. "At the same time he is a shining star in his community who devotes much of his personal time to helping others. I am proud to have him representing the firm and the Delaware engineering community as the 2006 Young Engineer of the Year."

Januszka is a member of several industry organizations, and he serves as the Secretary and Membership Committee Chair for the American Council of Engineering

### ALUMNI HIGHLIGHTS

**Alison Conway** (BCE02), a former member of UD's women's rowing team, helped her team, the Austin (Texas) Rowing Club, capture two national rowing titles at the U.S. Rowing Masters National Championships, held August 11-13 in Seattle. Conway is a doctoral candidate in the transportation engineering program at the University of Texas in Austin.

**Philip A. Horsey** (BCE97) has been promoted to manager of the Transportation Division of Pennoni Associates Inc.'s Wilmington office. Horsey has been with Pennoni for four years and most recently served as project engineer. In his new role, he will be responsible for the day-to-day operations of the division.

**Alyson Radel Lester** (BCE98) was named 2006 Young Civil Engineer of the Year by the Philadelphia Section of the American Society of Civil Engineers. Lester is an engineer/task manager for Urban Engineers in Philadelphia.

**John J. Pietrobono III** (BCE82) has been promoted to vice president of Urban Engineers, Inc.'s New Castle, Del., office. Pietrobono joined Urban in 1999 and became assistant branch manager of the firm's New Castle office in 2004. He is a registered Professional Engineer in Delaware, Maryland, and Pennsylvania.

## Donor Profile: Skip Gardiner

Francis E. "Skip" Gardiner Jr. (BCE62) currently is President of Gardiner Realty and Development Company, a sister company to Gardiner and Gardiner, Inc., General Contractors, of which he was president from 1974 to 2000, when it was sold to his oldest son. Gardiner and Gardiner, Inc. has received many awards for excellence in construction and involvement in the community. Gardiner Realty and Development develops, leases, and manages commercial properties in Southern Maryland.

"Not only is Skip an accomplished alumnus," says Chair Michael Chajes, "he has also been a generous friend to the Department over the past three years. In addition, he has given of his time by serving as a member of our External Advisory Council."

Gardiner's gifts have been earmarked for scholarships as well as new academic initiatives. Two donations enabled the establishment of undergraduate scholarships, while a third gift is targeted to the establishment of a Construction Engineering and Management Program within the Department.

"When Skip donated the money for the first scholarship," Chajes says, "he told us that his son had received similar support in recognition of his achievements and that it had really inspired and motivated him. Skip wanted to do the same for other students, and soon after making the original donation, he gave additional money to fund a second scholarship."

Growing up in the construction business motivated Gardiner's third gift—support for a minor in Construction Engineering and Management. "Skip has provided us with critical seed money for this initiative," Chajes says. "We can now move forward with developing a curriculum and course materials. Our hope is that other companies will lend their support to the program as it develops."

Recipients of the Gardiner scholarship awards include Christopher Mase (2004), Ross Bickhart and Michael Rakowski (2005), and Daniel Wanger and Houston Brown (2006).



▲ Skip Gardiner

*If you would like to make a tax-deductible donation to the Department, please send a check to:*

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING  
301 DU PONT HALL  
UNIVERSITY OF DELAWARE  
NEWARK, DE 19716

*Checks should be made payable to the University of Delaware. We appreciate your support.*

## Contributions Support Department Mission

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Dr. & Mrs. Herbert Allen  
Dr. Francis Atuahene  
Mr. Robert Baden  
Mr. & Mrs. James Boll, Jr.  
Mr. & Mrs. Thomas Brockenbrough  
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KCI Technologies, Inc.  
Malcolm Pirnie, Inc.  
Tetra-Tech, Inc.  
URS Corporation  
VanDemark & Lynch

## Wicks Named Transportation Secretary



Photo by Tim O'Brien

▲ Carolann D. Wicks

Carolann D. Wicks, BCE82, has been named Secretary of Transportation for the State of Delaware, following nomination by Gov. Ruthann Minner and confirmation by the State Senate.

“Carolann has spent more than 20 years with our Department of Transportation, holding a variety of leadership positions,” Minner said in nominating Wicks. “Her vast knowledge of the department and its operations makes her uniquely qualified to lead this agency as we tackle the

financial challenges ahead and deliver an efficient, high-quality transportation system to the residents of Delaware.”

Wicks is the state’s eighth Transportation Secretary. “Public service is a very noble profession, and I am proud to serve with you as your new Secretary,” she said to her colleagues and members of the community at the swearing-in ceremony on February 1, 2006.

In 2002, Wicks became the first female chief engineer/director for DelDOT. During her 23 years with the agency, she has been in charge of some of the state’s most complex and challenging transportation projects. Wicks pointed out in her swearing-in

speech that DelDOT is different from most other states in being responsible for almost every aspect of transportation throughout the state, including traffic management, snow plowing, bus service, bridges and roadways, and protection of environmental resources.

Wicks is a member of the American Association of State Highway Transportation Officials (AASHTO) Standing Committee on Highways and the AASHTO Transportation and Education Management Institute Steering Committee.

In 2004, she was one of seven distinguished alumni to receive the University of Delaware’s Presidential Citation for Outstanding Achievement. The awards are given to UD graduates of the past 20 years who “exhibit great promise in their professional and public service activities.”



Photo by Tim O'Brien

▲ Governor Ruthann Minner swears in Carolann Wicks as the new Transportation Secretary



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