The College of Engineering relies upon the philanthropic support of alumni, friends, and corporate partners to maintain the excellence of our educational and research programs.

Your contribution to the Department of Civil and Environmental Engineering will be put to work immediately providing the tools our students and faculty need to change the Commonwealth, the nation, and the world.

For more information on ways to give, please visit www.umass.edu/giving/.
LETTER FROM THE DEPARTMENT HEAD

Dear Students, Alumni, and Friends,

We are happy to introduce the 2nd of this year’s newsletters. Although many of you follow the department through electronic media (the departmental webpage - https://cee.umass.edu/ and student organization webpages), we felt it important to also provide a traditional newsletter of the department’s events.

This past year has been an outstanding one for the department. You will read in the pages that follow about some of the exceptional accomplishments of our faculty, students, and student organizations. You will also read about some of the outstanding special speakers that have come to campus to share their research results and insights with our students. In addition, you can read about the induction of new members into our Academy of Distinguished Alumni.

You will also meet our newest faculty, Dr. Chengbo Ai, as well as reading about the teaching and research of Drs. Eleni Christofa, Don DeGroot, Kara Peterman, and Guoping Zhang. In addition, you can read summaries of our student organizations and awards won by our students last year.

Our faculty now includes twenty-seven tenure-track faculty members. We have hired twelve new faculty since 2008. Our department has maintained its four programmatic areas: Environmental and Water Resources Engineering, Geotechnical Engineering, Structures and Mechanics Engineering, and Transportation Engineering. New hires have occurred in all of these areas. There continues to be a great deal of interactions between faculty in different programs, as well as faculty working with other departments, on this campus and across the country.

Our undergraduate program remains very strong, with more undergraduates enrolled this year than any time since the 1990s. Similarly, the number of graduate students in our department is larger than any other time in the past, with more than 69 Doctoral students and 53 Master’s students. The department’s research expenditures also recorded an all-time high, with more than $13.0 million in expenditures during the last fiscal year. This was more than any other department at the University of Massachusetts Amherst.

Our department continues to be a great deal of interactions between faculty in different programs, as well as faculty working with other departments, on this campus and across the country.

We hope that as you read this newsletter you will get a flavor of all of the exciting things that are happening on campus. We hope that you will remain in touch with us through whatever media you prefer. Feel free to share this newsletter with others interested in our department.

Sincerely,

Dr. Richard N. Palmer
Department Head
Civil and Environmental Engineering

IN THIS ISSUE

Feng Distinguished Lecture Series ........................................... 3
Academy of Distinguished Alumni ........................................ 4-5
History & Heritage Lecture ............................................... 6
Alumni News: Dr. Shawn Kelley .................................... 7
Faculty Recognition ............................................................. 8
Faculty Spotlight: Dr. Eleni Christofa .......................... 9
Faculty Spotlight: Dr. Don DeGroot ......................... 10
Faculty Spotlight: Dr. Kara Peterman .............. 11
Faculty Spotlight: Dr. Guoping Zhang ............ 12
Student Activities .............................................................. 13-15

CxEE ADVISORY BOARD

Richard Aquadro, Aquadro & Cerrutti, Inc.
Thomas Baillie, Bond Brothers
Richard Bedard, CH2M Hill, retired
Katelyn Biedron, Camp Dresser & McKee, Inc.
Ruth Bonsignore, Flink Consulting LLC
Tina Udden Colgan, CH2M Hill
Jon Dietrich, Fuss & O’Neill, Inc.
Jeffrey Diek, Vanasse & Associates, Inc.
Jennifer Jordan, ICR Underground, Inc.
Shawn Kelley, GeoDesign, Inc.
Tiffany Labrie, Tsig & Bond
Scott MacLeod, Skanska USA Building, Inc.
Theresa McGovern, VHB
Scott Michalak, US Army Corps of Engineers
Mark Pelletier, STV Incorporated
Anthony Punton, BETA Group, Inc.
Peter Quigley, Thorton Tomasetti
Heather Scarrton, Haley and Aldrich, Inc.
John Sullivan, Boston Water & Sewer
Matthias Valade, Hanet and Sawyer P.C.
Robert Weimar, Wright Pierce
Ellen White, Patrick Engineering

ElectroPure, a venture created by Ph.D. candidate Julie Bliss Mullen of the Civil and Environmental Engineering Department, won the $28,000 first prize in the finals of the University of Massachusetts Innovation Challenge on April 6, 2017. Mullen has developed a water treatment device at a competitive price and aimed at homes and small community systems such as schools to combat diverse water quality issues.

In fact, two of the seven finalists in the Innovation Challenge were from the College of Environmental Engineering. This year-long series of entrepreneurial competitions climaxed in the Campus Center Amherst Room, where the seven teams competed for $65,000 in funding to support their ventures.

The other College of Engineering finalist was ARBioDesign, created by Rune Percy and Alex Smith of the Mechanical and Industrial Engineering Department. ARBioDesign is developing a device that can quickly, easily, and inexpensively analyze a drop of blood to improve current, outdated dialysis treatment.

Ph.D. candidates Felipe Navarrete, Pablo Viscanti, Ana Maria Salcines, and George Martin won the $20,000 second prize with StarSperm, a product that addresses male fertilization issues.

Ag Rowe Intelligence, proposed by Paul O’Connor and Levi Lively, won $19,000. Ag Rowe Intelligence makes automated data collection and analysis systems for agricultural research, production greenhouses, and golf courses.

The Innovation Challenge is a series of competitions designed to help and reward UMass students and young alumni who want to pursue novel business ideas and develop them into marketable products. The Berthiaume Center, which sponsors the Innovation Challenge, received 25 competitive applications for the recent semi-final held on March 1, out of which the top seven teams of entrepreneurs on campus were selected to compete in the final.

Academy of Distinguished Alumni

The Academy of Distinguished Alumni is an organization formed to honor outstanding Civil & Environmental Engineering, Computational Engineering, Computer Science, Veterinary and Animal Sciences, and Chemistry.

The Bridge

The Bridge will be published in the Fall and Spring semesters by the Civil and Environmental Engineering Department at the University of Massachusetts Amherst.

Student Spotlight, Brian Vizaretti

What UMass Amherst student organizations are you involved in?

As a new member of the ASCE student chapter, it has been great to see my classmates participate in nationwide competitions as well as hold informative panels for other students. Also, last semester has been an experiment with joining a computer programming club on campus where students can collaborate to make ideas come to life.

What are your plans after graduation?

After my summer internship in Virtual Design and Construction at Suffolk, I genuinely love developing information models that can be implemented to “build smart.” Experimenting with Revit’s new plug in’s such as Dynamo and new software that has been changing the way people design complex structures makes every day interesting.

Are you involved in research or experiential learning?

This fall semester I am conducting an independent study to explore the use of innovative technology to disrupt the construction industry. I’ve worked with developers to produce holograms of building mockups that contain scheduling and cost information. Clash detection between MEP, Architecture, and engineer plans have been critical in saving money in the preconstruction phase.

What CEE elective did you enjoy the most?

Even though my primary focus is towards the structural development route, Public Transportation Systems was interesting because the subject involved something we use daily. Learning about public transport will be extremely important in the future as cities progress away from personal cars, and more dependent on train or bus.

How was your experience at UMass CEE been?

My experience has been memorable to say the least. Merging with engineers in other fields, the sky is the limit to what can be built.

What do you value the most from your UMass experience?

Meeting creative and motivated individuals that try to change the way things are looked at. Amongst the civil engineers, there are so many individuals who are interested in building differently. A student’s interest can be to build with strictly renewable resources or a student’s interest can be to conquer the feat of building taller than the Burj Khalifa. The department is full of challenge seekers.

According to the Berthiaume Center, the audience at the Innovation Challenge Final heard history from the greatest variety of ventures we have seen thus far that take their roots in departments all over campus. The finalists include six Ph.D. candidates, one Master’s student, and 20 undergraduate students in Plant, Soil and Insect Sciences, Management, Mechanical and Industrial Engineering, Civil and Environmental Engineering, Computer Science, Veterinary and Animal Sciences, and Chemistry.
Academy of Distinguished Alumni

Seven of the eight 2017 recipients of the CEE Academy of Distinguished Alumni (left to right): James Malley, David Gaboury, Robert Ratay, Gillian Gregory, Anatoly Darov, Michael Hornbrook, and Thomas Baillie. Not included in the photograph: James Chaney.

Annual Banquet

The 2nd Annual Banquet recognizing the 2017 inductees to the UMass Amherst Department of Civil and Environmental Engineering Academy of Distinguished Alumni was held the evening of September 29th, 2017 at the Marriott Center in the Campus Center.

These awards recognize the outstanding contribution of the inductees to the engineering profession, as judged by the Civil and Environmental Engineering Advisory Council and reviewed by current Civil and Environmental Engineering faculty. The inductees were joined by family, friends, retired faculty, and active faculty in the department, as well as the Dean of Engineering and undergraduate and graduate students. Each inductee was given the opportunity to speak about their experience at UMass, their career, and their plans for the future.

ASCE Northeast Regional Steel Bridge Competition, Fourth Place!

Congratulations to the UMass American Society of Civil Engineering (ASCE) student chapter Steel Bridge Team, who placed fourth overall at the ASCE Northeast Regional Competition hosted by the University of Connecticut on April 8th, 2017! Their design was one of only five of 15 competitors to successfully hold the competition load of 2500 lbs. The team designed a 249 lb, 20½ ft truss bridge with a cantilever and was awarded first place in Stiffness, second place in Aesthetics, and was the lightest truss design before infractions were added to their score. The team built the bridge in 22 minutes and 38 seconds using launched construction to span the “river,” receiving creativity and safety thumbs-up from the judges.

The team would like to thank Scott Civjan, Faculty Advisor, and UMass CEE alumni, Peter Quigley, for their advice and support. The team would also like to recognize Fastenal for donating nuts and bolts, and Gary Vicenti and Republic Iron Works for donating welding services.

EWB, Student Chapter

In January, the Engineers Without Borders (EWB) Kenya team traveled to the village of Nguluni to set up a rain water catchment system at the Primary School and installed an electric pump into the previously drilled borehole. They established a water distribution system from the borehole to service both the Primary and Secondary schools in addition to the general community with a controlled pump house. This Fall, the team hopes to continue working with the community to expand upon the distribution system and investigate other potential projects, such as hand washing stations at the schools to aid with proper sanitation.

The EWB Ghana team traveled to the Savie-Dema in August to build a rain water catchment system at the Junior High School and Kindergarten. To plan for future trips, the team performed a survey to understand the ideal type of water treatment system for the community. The team also met with a borehole driller who specializes in hydrofracking. In the upcoming year, the plans are to implement household based water filters and hydrofrack two existing boreholes.
**Student Awards**

**MAHYAR AMIRGHOLY**  
Milton Pekarsky Award for Outstanding Dissertation in Science and Technology

**CYNTHIA CASTRO**  
Perrell Research Scholarship  
UMass Dept. of Civil & Environmental Engineering

**LEIGHANN D’ANDREA**  
Senior Leadership Award

**AIKATERINI DELIALI**  
UMass Graduate School Fellowship (2016)

**NICHOLAS FOURNIER**  
Dwight D. Eisenhower Graduate Fellowship (2016);  
Safety Research using Simulation (SAFER-Sim)

**ITE, Student Chapter**

This spring, the UMass Institute of Transportation Engineers (ITE) student chapter attended and hosted a variety of events, allowing students to present their research, network with professionals, and gain insight into the field of transportation. From the Student Symposium and Traffic Bowl at NYU, to hosting their own Annual Technical Day, UMass ITE had another successful semester.

**Chi Epsilon Honor Society**

Chi Epsilon welcomed 11 new members in the spring of 2017; these students were recognized for their academic achievements, assisting in ongoing research in the department, and volunteering for many organizations around campus. Reviews for the Fundamentals of Engineering Exam were organized by Chi Epsilon and hosted a resume and career fair preparation. This exam is the first step towards becoming a professional licensed engineer, thus the reviews help to prepare students interested in achieving this title.

**AGC, Student Chapter**

During spring semester, the Associated General Contractors (AGC) student chapter hosted several events. Prior to the Civil & Environmental Engineering Career Fair in February, AGC hosted a resume and career fair preparation session with Kyle Murphy, Project Manager at Baltazar Contractors, Inc. and a former UMass AGC member. In addition, they held their annual OSHA 10-HR Training Course with the Associated General Contractors of Massachusetts, which was completely full, 30 students received their OSHA Safety Certifications.

**FARNOUSH KHALIGHI**  
WTS Boston Chapter Claire Barrett Memorial Graduate Scholarship (2016)

**MAHOUR RAHIMI**  
Dissertation Scholarship  
UMass Amherst Graduate School

**JOSHUA WOLFGRAM**  
Dwight D. Eisenhower Graduate Fellowship (2016)

---

**29th Annual Tsuan Hua Feng Distinguished Lecture Series**

**Collaborative Research with Drinking Water Utilities to Address the Emerging Issues of Harmful Algal Blooms**

Presented by Dr. Michèle Prévost, Ph.D.  
Polytechnique Montréal

October 3, 2017, Dr. Prévost presented a model of collaborative industrial research that has been a great success across Canada. Industrial research chairs were created by NSERC (Natural Science and Engineering Council of Canada) to foster durable partnerships and produce research outcomes that support the needs of the industrial partners, while ensuring the production of high-quality scientific results. Harmful algal blooms (HABs) are a rising concern across the world as climate change is increasing the risks of toxic cyanobacterial blooms at water intakes of drinking water plants. As an example of collaborative research, Dr. Prévost provided an overview of the research activities on the detection of toxic cyanobacteria in source water, the management of cyanobacteria and toxins within drinking water treatment plants, and the development of innovative treatment solutions for water and sludge to prevent the accumulation and breakthrough of toxins in drinking water. Regulatory and operational implications of research outcomes were also discussed.

Dr. Prévost has more than 25 years of experience in research and technology (removal of disinfection, pharmaceuticals and cyanotoxins) and various aspects of distribution systems (biostability, pathogen growth, integrity & intrusion, Legionella control, hydraulic and quality modeling). She led several multi university Canadian Water Network initiatives (lead in drinking water, distribution system integrity).

Dr. Prévost has authored over 155 refereed publications, is the editor of a reference book on Biodegradable Organic Matter and has given over 350 talks in regional, national and international conferences. She was a member of the Walkerton Commission, an advisor to the Hong Kong Inquiry on Excess Lead and is the co-Chair of the NSERC Industry University CUG committee of NSERC. She was the 2016 recipient of the A. P. Black award of the American Water Works Association (AWWA) for outstanding research contributions to water science and water supply rendered over an appreciable period of time.

---

**Dr. Tsuan Hua Feng**  
February 17, 1918 - Sept. 4, 1986

The Tsuan Hua Feng Distinguished Lecture Series was established to honor the memory of “Tom” Feng, who served on the faculty at the University of Massachusetts for 31 years. Professor Feng joined the faculty in 1951 after receiving his B.S. in Civil Engineering in 1940 M.S. and Ph.D. degrees from the University of Wisconsin in 1946 and 1950. Dr. Feng was appointed as the first Sanitary Engineering professor at the University. In 1965 he established the Sanitary Engineering Program, which was later renamed the Environmental Engineering Program, and served as Director until 1974. Upon his retirement in 1982, Tom was appointed Emeritus Professor.
Managing Risks to Infrastructure with Real-Time Monitoring of Performance

Presented by Dr. W. Allen Marr
Founder and CEO of Geocomp

Dr. Marr founded and leads Geocomp, one of the US foremost providers of real-time, web-based performance monitoring of civil engineering structures, including dams, levees, deep excavations, tunnels, bridges, buildings and utilities. Dr. Marr and his Geocomp colleagues developed and use the concept of Active Risk Management to help clients identify and proactively manage risks associated with construction and operation of infrastructure facilities; interact across industries, working on such subjects as “experimental seismic behavior of cold-formed steel structures,” “experimental seismic behavior of cold-formed steel structures,” “Experimental response of thermal break systems in steel building systems,” “Experimental seismic behavior of CFS-NEES building system: level performance of a full-scale two-story light steel framed building,” and “Stability of sheathed cold-formed steel studs under axial load and bending.” These and other papers were submitted to the American Composites Manufacturers Association, American Institute of Steel Construction, International Specialty Conference on Cold-Formed Steel Structures, National Conference on Earthquake Engineering, Structural Stability Research Council Annual Stability Conference, where she was the winner of the Vinnakota Award for best student paper.

In addition, Peterman has made such presentations as “The Enlightened Structure: reducing material-based carbon emissions” at the Northeast Sustainable Energy Association in Boston in 2016, “Experimental performance of full-scale cold-formed steel buildings under seismic excitations” at the Quake Summit at Reno, Nevada, in 2013; “Predicting seismic performance of cold-formed steel shear walls” at the Quake Summit in Boston in 2012.

As a postdoctoral research associate at Northeastern University working under her advisor Professor Jerome Hajjar, Dr. Peterman did experimental research in thermal break strategies for cladding systems in steel buildings; interacted across industries, working to formal recommendations; developed 3D thermal models of mitigated cladding systems, and was responsible for material procurement, sensor plan design and implementation, specimen and test rig fabrication, and data analysis leading to design recommendations.

Peterman was also a teaching assistant at the Johns Hopkins University, teaching Statics and Strength of Materials and Perspectives on the Evolution of Structures. At Johns Hopkins, she won several awards and honors, including twice receiving the Departmental Service Award for outstanding service to the Civil Engineering Department, and she also garnered a Creel Family Fellowship and a Robert S. Pond Sr. Fellowship. Before that, Peterman had been a teaching assistant at Swarthmore College, covering courses in Statics and Dynamics and Mechanics of Materials.

Peterman received her B.S. from Swarthmore College and her M.S. and Ph.D. from Johns Hopkins. Her Ph.D. dissertation was on the “Behavior of full-scale cold-formed steel (CSS) buildings under seismic excitations.” The goal of this research was to generate the knowledge needed to increase the seismic safety of buildings that use lightweight CSS for the primary beams and columns and enable engineers to account for complete building performance in predicting the response of these buildings to earthquakes.

Peterman has also served as a reviewer for the ASCE Journal of Structural Engineering, Thin-Walled Structures, the Journal of Constructional Steel Research, and the Journal of Earthquake Engineering Structures.
Dr. Guoping Zhang, Professor, Geotechnical


Among many other honors, Zhang was a Special Visiting Professor at Shanghai Jiao Tong University (China) in 2013. While at LSU, he was awarded the Overseas Collaborative Research Award from the National Natural Science Foundation of China in 2012. Zhang also earned the 2011 Chevron Innovative Research Support Award, a 2010 Research Achievement Award, and a 2008 Faculty Achievement Award, all presented to Zhang by the LSU College of Engineering. In addition, he received a Summer Faculty Research Fellowship from the Office of Naval Research in 2010.

Besides serving on the faculties at UMass Amherst and LSU, Zhang was a Visiting Scholar at Massachusetts Institute of Technology in Cambridge for the summer of 2004. He was also a lecturer at the University of Nottingham in the United Kingdom from 2002 through 2005, and he was a research engineer at the Chinese Academy of Building Research in China from 1994 to 1996.

Zhang earned his Ph.D. in Geotechnical & Geoenvironmental Engineering at M.I.T. in 2002. Earlier he received his M.S. in Geotechnical Engineering (1994), his B.Eng. in Hydraulic Engineering (1991), and his B.Eng. in Mechanical Engineering (1991) from Tsinghua University in China.

The CEE department is fortunate to have a respected academic with Professor Zhang’s credentials teaching, researching, and mentoring on its faculty and bringing his widespread geotechnical expertise to the College of Engineering.

Research Interests: Overview

Above and below, technical slides prepared for current presentations

What are clays? Why clays?

- Nature of natural materials
- Clay as a mineral family
- Clay properties
- Clay size
- Clay behavior
- Clay-shale associations
- Clay-mineral interactions
- Clay-biopolymer flocs
- Interactions
- Suspended clay flocs in rivers/oceans
- Sedimentation
- Erosion & transport

The CEE Geotechnical Professor Dr. Guoping (Gregg) Zhang has accumulated a broad and deep record of international academic accomplishments, including some 40 journal articles, two book chapters, two U.S. patents, and more than 14 prestigious honors and awards. Zhang, who came to UMass Amherst in 2013 after nine years as an assistant professor and associate professor at Louisiana State University (LSU), is a distinguished expert in geotechnical engineering.

Professor Zhang’s research specialties deal with: nano/micro mechanics of low-dimensional geosystems (including clays and shales, clay-exopolymer micro flocs, and “marine snow”) for energy and marine ecosystem sustainability; bioinspired/bioengineered soil stabilization for coastal and wetland sustainability; novel geopolymers for infrastructure, environment, and energy sustainability; and the behavior of soft marine and/or wetland clays and residual soil.

Zhang’s two U.S. patents deal, first, with a system and method for testing of micro-sized materials and, second, a pending patent on preparation and synthesis of a cementitious geopolymeric product using industrial wastes, red mud, and fly ash.

New Faculty Fall 2017

Chengbo Ai
Assistant Professor, Transportation

Dr. Chengbo Ai joined the department in September of 2017. He received a B.S. in Electrical and Computing Engineering from Peking University in China and a Ph.D. in Civil and Environmental Engineering from Georgia Institute of Technology. For the past three years before joining UMass, he was a research engineer at Georgia Institute of Technology where he conducted research on improving the efficiency and cost-effectiveness of transportation asset management practices in state and local transportation agencies.

With a background in both electrical engineering and civil engineering, Dr. Ai’s interdisciplinary research focuses on developing computational models, automated algorithms and hardware systems as they are applied in the fields of transportation asset management, geometry design and roadway safety, pavement preservation and maintenance, and many other critical transportation applications. He aims his continuous effort towards establishing a comprehensive, spatially-enabled transportation infrastructure and asset data platform through employing the emerging sensing technologies (e.g., light detection and ranging (LiDAR), computer vision, continuous scanning laser, etc.), and developing computational data analysis techniques (e.g., image processing algorithm, geographic information system (GIS) spatial analysis, etc.).

Dr. Eleni Christofa, Assistant Professor, Transportation

CEE Transportation Assistant Professor Eleni Christofa’s research on person-based signal control is already widely cited and recognized worldwide, even though her career in transportation engineering is little more than a decade old. She has published more than 40 refereed journal articles and conference publications, and she has put together a vibrant research group consisting of three Ph.D. and two M.S. students who have received multiple awards for their research. Her research group has already been supported by three key funding sources: the U.S. Department of Energy; the U.S. Department of Transportation through the New England University Transportation Center; and the Massachusetts Department of Transportation. Meanwhile, during the past 10 years, Dr. Christofa has received more than 11 significant honors.

Christofa has been a member of the CEE faculty at UMass Amherst since 2012. Her research focuses on the development of sustainable management strategies for urban multimodal transportation systems with the use of innovative technologies. In addition to developing real-time signal control systems that improve person mobility and air quality, she is working on assessing the impact of alternative geometric designs (including roundabouts and continuous flow intersections) on emissions and safety. She also studies bicycle infrastructure treatments on driver behavior and bicycle safety.

Among other awards and honors, she has received the 2017 Outstanding Young Member Award from the Transportation Research Board (TRB) of the National Academies of Sciences, Engineering, and Medicine; a 2017 Student- Centered Teaching & Learning Fellowship, a 2016 Innovate@ Symposium Grant, a 2014 Open Education Initiative Grant, and a 2014 Sustainability Curriculum Initiative Grant, all from UMass Amherst; a 2014 ASCEESCEEd Fellowship from the American Society of Civil Engineers; a 2011 University of California Transportation Center Award, a 2009-2011 Dwight David Eisenhower Transportation Fellowship, and a 2007 Gordon F. Newell Memorial Fellowship from U.C. Berkeley.

Christofa recently received her 2017 Outstanding Young Member Award for her exceptional service to TRB and achievements in transportation research, policy, or practice. The award consists of a plaque and a $2,500 cash award. The award committee particularly noted Dr. Christofa’s clear passion and commitment to the Transportation Research Board and its mission, including her contributions to multiple standing committees and subcommittees. The TRB committee also applauded her work ethic, professionalism, and mentorship of students and young professionals.

In addition to teaching undergraduate and graduate course in Transportation, Public Transportation, and Traffic Flow Theory and Simulation, Christofa has also developed and introduced a senior/graduate course on Transportation Sustainability to the curriculum. Her commitment to exceptional teaching is evident through the four UMass awards she has received to improve her courses and teaching.

In addition, Christofa has participated in multiple outreach efforts, including co-organizing the 2016 UMass Amherst Summer Transportation Institute, a four-week program funded by the Federal Highway Administration to encourage high-school students to pursue careers in transportation. She has also lectured in the Summer Engineering Institute at UMass Amherst (2013 and 2014) and participated in mentoring activities with the UMass Women in Transportation Seminar student group and the Graduate Women in STEM (GWiST) UMass student group.

Christofa received her Ph.D. and M.S. in Transportation Engineering from U.C. Berkeley and, before that, attended the National Technical University of Athens in Civil Engineering with a specialization in Transportation Engineering.
Dr. Don DeGroot, Professor, Geotechnical
Department of Transportation, the National
three important sources: the Massachusetts
research and has maintained funding from
or co-PI on approximately $21.5 million in
national and international Keyno-
Canadian Geotechnical Society. He has delive-
materials, Institute of Civil Engineers, and the
published by the American Society of Civil
soil behavior. DeGroot’s research has focused
neering of his expertise in the assessment of
encentral flow of M.S. and Ph.D. students,” said
“Since 2007, he has graduated four
Ph.D. students, 10 M.S. students, and has six
current Ph.D. students.”
DeGroot is a member of a wide range of
professional organizations and served on the
editorial boards of the Journal of Geotechnical
and Geoscientific Engineering and the
Geotechnical Testing Journal.
DeGroot was also the program coordinator
of CEE’s Geotechnical Program for many years
and has served on CEE’s Department Person-
nel Committee. Professor Grooping (Gregg)
Zhang noted that “As a mentor and colleague,
Dr. DeGroot has been a role model of faculty
to me, as well as many other junior faculty in
and beyond our department. Without his con-
tinuous effort, leadership, and passion, the pro-
gram would not have evolved to achieve a high
reputation in New England and the nation for
the graduate education and research.”
Professor David Ostendorf has worked with
DeGroot for many years. He noted that, “Dr.
DeGroot has become a geotechnical engineer of
international stature, an interdisciplinary
mentor to tenured and tenure track researchers
in other UMass colleges and CEE departmen-
ts, a coauthor and co-PI with his CEE collea-
gues, and a leader and PI within his program.”
DeGroot has received several UMass Amherst outstanding teaching and research
awards. Other awards include the American Society of Civil Engineers NY Section GZA
Laboratory Lecture Award (2015); Sowers State-of-the-Art Lecture Award, Georgia Tech (2006); Gleeden
Visiting Senior Fellowship, University of Wes-
tern Australia (2005), and the Research Coun-
cil of Norway Guest Researcher Fellowship
(1997). DeGroot received his Sc.D. from MIT
in 1989, his M.S. from MIT in 1985, and a B.S.
from Concordia University in 1983.

The College of Engineering has chosen
Professor Don DeGroot of the Civil and Envi-
ronmental Engineering (CEE) Department as the
2017 Outstanding Senior Faculty Award winner. He was recognized at the Senior
Recognition Celebration held on Saturday,
May 13, 2017.
Regarding Dr. DeGroot, the selection
committee noted the depth and breadth of
his record in teaching, research, and service
during his 28 years at UMass and the interna-
tional recognition within geotechnical engi-
nering of his expertise in the assessment of
soil behavior. DeGroot’s research has focused on
soil characterization, including drilling and
sampling of soils, in situ testing, laboratory
measurement of soil behavior, and selection of
soil design parameters.
According to CEE Department Head
Richard Palmer, DeGroot has published his
research in many of the major geotechni-
cal engineering journals, including those
published by the American Society of Civil
Engineers, American Society for Testing and
Materials, Institute of Civil Engineers, and the
Canadian Geotechnical Society. He has deliv-
ered invited national and international Keyno-
te, State-of-the-Art, and State-of-the-Practice
papers and presentations on site characteriza-
tion and soil behavior.
Since 2007, Dr. DeGroot has been the PI
or co-PI on approximately $21.5 million in
research and has maintained funding from
three important sources: the Massachusetts
Department of Transportation, the National
Science Foundation (NSF), and the MA Clean
Energy Center. “These prestigious research
awards have allowed him to support a conti-
nuous flow of M.S. and Ph.D. students,” said
Palmer. “Since 2007, he has graduated four
Ph.D. students, 10 M.S. students, and has six
current Ph.D. students.”

Dr. Don DeGroot, Professor, Geotechnical

Alumnus Dr. Shawn P. Kelley Named Vermont’s 2017 Engineer of the Year

A civil engineer specializing in geotechni-
cal engineering, Dr. Kelley is a shareholder
and member of the Board of Directors of
GeoDesign based in Middlebury, VT. He
works in the Windsor and South Burlington,
VT offices. Dr. Kelley received his bachelor’s,
master’s, and Ph.D. degrees from the Univer-
sity of Massachusetts Amherst, where he was
inducted into Chi Epsilon, the civil engineer-
ing honor society and has received the Colle-
ge of Engineering Outstanding Junior Alumni
Award. He is the author of over twenty-five
technical publications, reports, and presenta-
tions. Dr. Kelley is a registered Professional
Engineer in the State of Vermont.
Dr. Kelley serves as a senior associate in-
-charge for engineering projects throughout
the state of Vermont for GeoDesign. He also
manages the Vermont’s office geotechnical la-
boratory. Dr. Kelley’s professional experience
has included the Cross Street Bridge project
in Middlebury, complex rail bridge replacements
in Chester and Cavendish following Tropical
Storm Irene, and novel geotechnical solutions
in road repair in Weybridge.
He is active in the Vermont section of the
American Society of Civil Engineers (ASCE),
A civil engineer specializing in geotechni-
cal engineering, Dr. Kelley is a shareholder
and member of the Board of Directors of
GeoDesign based in Middlebury, CT. He
works in the Windsor and South Burlington,
VT offices. Dr. Kelley received his bachelor’s,
master’s, and Ph.D. degrees from the Univer-
sity of Massachusetts Amherst, where he was
inducted into Chi Epsilon, the civil engineer-
ing honor society and has received the Colle-
ge of Engineering Outstanding Junior Alumni
Award. He is the author of over twenty-five
technical publications, reports, and presenta-
tions. Dr. Kelley is a registered Professional
Engineer in the State of Vermont.
Dr. Kelley serves as a senior associate in-
-charge for engineering projects throughout
the state of Vermont for GeoDesign. He also
manages the Vermont’s office geotechnical la-
boratory. Dr. Kelley’s professional experience
has included the Cross Street Bridge project
in Middlebury, complex rail bridge replacements
in Chester and Cavendish following Tropical
Storm Irene, and novel geotechnical solutions
in road repair in Weybridge.
He is active in the Vermont section of the
American Society of Civil Engineers (ASCE),
having served as the section’s president,
among other offices; he is a member of the
American Council of Engineering Companies
(ACEC), and he is a member of the Vermont
Society of Engineers. On a regional level,
Dr. Kelley served as ASCE Region 1 Gover-
nor representing Civil Engineers from New
England, New York, New Jersey, and Puerto
Rico. Currently he is serving as a member
on the ASCE national Leadership Training
Committee, a group that develops training
programs for leaders within the organization
across the U.S.
Dr. Kelley is a board member of the Con-
servation Commission for the Town of
Hartford and has served as vice chair of the
Hartford Solid Waste Committee. He as also
volunteered his time with COVER, a home re-
pair service for local folks in need. Dr. Kelley
lives in Quechee, VT with his wife and son.
He was recognized for his accomplishments
at the annual Engineers Week banquet held
at the Doubletree Inn in South Burlington on
February 24, 2017.

Shawn P. Kelley, Ph.D., P.E.
Senior Associate
GeoDesign, Vermont

Upper left: Collecting seabed soil samples off the US Atlantic continental slope on the NSF research
Vessel R/V Oceanus for research on submarine landslides. Upper right: Field examination of mountain
up rock outcrops in the French Alps. Lower left: Collecting block samples of Lake Champlain sensitive
clay with graduate student Travis Mitchell, Ottawa, Canada, for research on sample disturbance in
clays. Lower right: Setting up triaxial test in ELabII with graduate student Shreeya Pandey for research
on undrained shear behavior of intermediate soils.

Upper left, Shawn is making some construction observations notes at a site in Vermont; lower left,
Shawn with his wife Beth and son Graham in Truckee, CA, above, Shawn is installing geotechnical
instrumentation for a large construction project in Valhalla, NY for NYCDEP.