

The Bridge

The newsletter for students of Civil and Environmental Engineering

Fall 2010

A note from CEE Department Head, Dr. Richard Palmer

Celebrating our Achievements

It is a pleasure to welcome back all of our Civil and Environmental Engineering (CEE) students to the University of Massachusetts for the Fall semester and to extend a warm welcome to the new graduate students and the undergraduates students considering CEE as their major. We have an extremely active department and there are many ways in which all of our students can become engaged. Our enrollment at both the undergraduate and graduate level is near record highs which (at the undergraduate level) was set almost 30 years ago.

In addition to encouraging all of you to apply yourself and to work hard in your upcoming classes, I want to suggest you start the semester by participating in one or more of our student organizations. We have a very active ASCE Student Chapter, with monthly meetings (including outside speakers and pizza). Our Institute of Transportation Engineers is an award winning group, having been named the outstanding student chapter for two years running (this year and last). For juniors and seniors, there is the opportunity to join Chi Epsilon, our Civil Engineering Honor Society. This organization recognizes outstanding scholarship, as well as leadership qualities, and welcomes about 1/3 of our undergraduates into its membership. Another active organization is our Chapter of Engineers Without Borders, which is entirely devoted to improving the living conditions of those living in developing countries, one community at a time. We have had two very active and worldly projects with EWB, one in Brazil and another in Kenya. Be on the lookout for a "fun run" in the fall and the opportunity to assist in developing a new international project for the organization.

The departments faculty were very busy last year and over the summer. In this newsletter you will find a partial listing of the exciting things they have been doing, as well as a partial listing of the research projects that have been recently funded by local, state, and federal agencies. We are very excited that we will be looking for two new faculty members this year and another next year. These new hires, unfortunately, do not represent a net growth in the department, as we have had 3 recent losses. Our ability to maintain a stable number of faculty, given the current economic situation, represents a real commitment by the College of Engineering and the University to the Civil and Environmental Engineering Department.

As I write you, it is appropriate to note that today (July 28th, 2010) marks the 100th day since the deadly explosion that killed eleven people (and injuring seventeen others) on the Deepwater Horizon drilling platform owned by BP. The extent of the environmental and social damage created by this disaster has yet to be measured and will never be known with certainty, but estimates are now progressing into the hundreds of billions of dollars. What is known now is that as much as 4 million barrels (170 million gallons) of oil was released, that the spill covered nearly 68,000 square miles early on, that there has been widespread damage to the fragile marsh ecosystem of the Gulf Coast, and that tens of thousands of water fowl have been killed.



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What is also known, is that safety devices that might have prevented the spill had not been included in the design and that safety alarms that would have indicated a problem in the flow, were partially disabled. What is hard to know and to appreciate, is the toll this accident inflicts on the individuals that live in the region, whether they earn their living in the fishing industry, the oil industry, the tourism industry, or some other industry that has been significantly impacted.

As we all know, Civil Engineering is a profession that designs, constructs, maintains, and rehabilitates the infrastructure upon which our modern life depends. We can be certain that civil engineers played an important role in the design of the offshore platform, in the conception of the safety features that should have prevented this event, and in the maintenance of the facility. Looking forward, we can be certain that Civil Engineers will be responsible for helping to answer the questions of what went wrong, how we can best revitalize the ecological and economic systems that have been damaged, and how to prevent such accidents in the future.

While I was a graduate student, I had the rare privilege of having an office across the hall from a distinguished gentleman by the name of Abel Wolman. Professor Wolman was 85 years old when I met him and had just recently been awarded the President's Medal of Science (one of the few engineers that had been awarded that honor). One of the many tasks he had taken on in his career was to serve on the original Atomic Energy Commission's Reactor Safeguard Committee in 1957. He was rumored to often be the singular voice insisting on environmental protection and emphasizing the importance of public safety in the siting of facilities, and in the handling of radioactive waste products. He constantly emphasized the need for state of the art design, careful siting of nuclear facilities away from population centers, and proper emergency planning. In conversations I had with him two decades later he was still emphasizing the need for engineers to carefully consider the full implications of their designs on the people that might be impacted. These comments were particularly insightful since shortly thereafter (in March of 1979) there was an emergency at the Three Mile Island nuclear power plant that resulted in the release of radioactive gas that exposed some 2.2 million people. Most fortunately, the emergency was brought under control and the exposure to the population at large was minimal.

I am hopeful that the current environmental crisis associated with the BP spill will result in careful considerations of the benefits and risks of our nation's energy policy in general and deep, off-shore drilling in particular, and that individuals of the stature of Dr. Wolman will come forward once again to champion the importance of proper design, construction, maintenance, and rehabilitation of our energy production. During this coming year, in all of your classes, I encourage you to think about the responsibilities that we as civil engineers have to society at large and to help maintain an ethic that will decrease the possibilities of such disasters in the future.

2010 Graduates



1st Row: Mario Lopez Toro, Majid Al-Zaben, Samuel Oponj, Shenj Wu, William Bonnett, Jacob Haidak, Meghan Krupka, Rebecca Freed, Chengyan Zhang, Nicole Potter, Elaine Maniscalchi, Zachary Wright, Morgan Welch, Mark Mariano, Manel Pires, and Matthew Viens.

2nd Row: Amen Fioklow, Dave Samuel, Joe Tyros, Mike Lawlor, Daniel Scanlon, Nick Lyford, Stephen McLaughlin, James Ries, Garrett Postema, Matthew Ross, and Erik Jensen.

3rd Row: Andrew Iaccarino, Tom Renaud, Joshua Soares, Corey Chalmers, Tyler De Ruitter, Kelly Shanahan, Justin Bourbeau, Daniel Posfai, Matthew Hart, Benjamin Brandt, and Brian Eastman.

4th Row: Marco Adorno, Yues Paul, Nick Langluis, Justin Seltzer, Ryan Pothering, John Briant, Omar Swei, Allen Sit, Matthew Styckiewicz, Joseph Ford, and Tom Zelem.

Not Pictured: Matthew Kusek, David Fortin, Jason Williams, Chris Stoddard, Michael Murphy, Eric Feeley, Matthew Berg, Nathan Davis, Patricia Fox, Walter De La Cruz, Donika Hajrizaj, Jeffrey Sabelli, Robert Wrzesinski, Andres Paroline, Chinedu Kamalu, James Henager, Jonathan Hedlund, and Jason Lavelly.

News



A web-based teaching game developed by two Northeastern University faculty members in collaboration with Assistant Professor of Transportation Engineering **Dr. Song Gao** has won a 21st Century Learning **Lab Award of \$150,000 from the MacArthur Foundation**. The game, **NOx NO MORE**, uses GPS data to teach students about the environmental impact of their family's transportation choices. The game was one of 10 projects chosen for awards out of more than 800 international submissions to the innovative digital media and learning projects competition. The concept behind **NOx NO MORE** is grounded in research indicating that people are more likely to change behaviors and make environmentally friendly choices when learning is linked to their own personal experience. Players upload GPS-gathered personal travel data and attempt to reduce carbon emissions and air pollution in game play and real life through use of alternative fuel vehicles, public transportation, consolidation of trips, and walking or biking. The pilot phase of the game project will be launched this fall. In 2011, members of the Northeastern University student Husky Energy Action Team will bring a beta version of the game to middle school students as part of an environmental science curriculum. (May 2010)



Dr. Michael Knodler commented in the *Metro West Daily News*, saying Massachusetts is behind many other states in seat belt use, but the number of drivers who use them is still increasing each year. Dr. Knodler is the director of the UMass Traffic Safety Research Program, or UMassSafe, which has performed seat belt studies for the state for most of the past nine years. According to the article, 18 deaths and some 600 injuries could have been prevented in one year if victims had been wearing seatbelts when they crashed. . Dr. Knodler was wrongly identified in the article as "Mark" Knodler.

"We are behind [in seatbelt use], but the number last year was the highest ever reported in Massachusetts," the article quoted Knodler. The research at UMassSafe has noted many trends in Massachusetts. Men typically buckle up less than women, for example, while people in pickup trucks tend to use seat belts less than other vehicles, Knodler said. He also said he can see common misconceptions amid the numbers. "The statistics show people are less likely to wear their belts on lower level, local roads than on the highways," Knodler says. "The majority of fatalities occur on roadways where the posted speed limit is less than 55." (June 2010)



Dr. Richard Palmer traveled to Providence, Rhode Island for the period of May 16-May 20th for the American Society of Civil Engineer's World Environment and Water Resources Congress-2010. The theme of the Congress was "The Challenges of Change." Dr. Palmer served as the Technical Chairman of the Congress, organizing the technical content of the three and a half day technical program that included over 600 technical presentations/papers and 850 participants.

Dr. Palmer is shown here accepting a citation of merit for his efforts by the President of the Environmental and Water Resources Institute, Udai Singh. In addition to Dr. Palmer, Drs. Ahlfeld, Brown, Polebitski and Tobiason attend this national conference, along with graduate students Kelcy Adamec; Brian Pitta, Scott Steinschneider, all of whom presented papers at the congress.



Dr. David Reckhow will be presenting two talks at the American Water Works Association Annual Conference in Chicago June 18-24th. The first talk entitled, "Modeling DBP's in the New York City System with Free Chlorine or Chloramines as Residual Disinfectants", was selected from a competition. It is a summary of work Reckhow has been doing with his graduate student, Amanda Keyes on the NYC drinking water. The objective of this work is to help them manage their system to improve water quality across the 5 boroughs. The second talk entitled, "Temporal and Spatial Variability of Regulated and Non-regulated

DBP's in a Massachusetts Drinking Water System" concerns work that is being done by Boning Liu and others on the role of home water heaters on the quality of domestic water.



Dr. Casey Brown attended the 2010 ASCE Environmental and Water Resources Institute Congress (EWRI) held on May 16-20, 2010, in Providence, RI. This year's Congress focused on the theme "Challenges of Change". Dr. Brown presented the recently launched Climate Risk Adaptation framework he is leading for the International Upper Great Lakes Study which focuses on the development of a new regulation plan for Lake Superior. The framework will be employed to identify climate risks and include a decision analytic approach to adaptive management of climate variability and change on the lakes. Dr. Brown also convened the first meeting of the Task Committee on Water Systems Planning under Climate Change which he chairs.



June 12-June 21st, **Dr. Sanjay Arwade** attended the International Conference on Computational Stochastic Mechanics in Rhodes, Greece where he delivered a talk, "Variability response functions for effective elastic properties.", regarding work he is doing with Professor George Deodatis of Columbia University. The conference is a quadrennial meeting of experts in the computational solution of problems in engineering mechanics in which there are significant sources of uncertainty. The meeting attracts substantial participation from the US and Canada as well as France, Denmark, Norway, Greece, and Japan. While in Italy, Arwade will be delivering a lecture to the Department of Civil and

Environmental Engineering at the University of Perugia entitled, "Pattern recognition techniques in stochastic solid mechanics". He was invited to present this lecture by Professor Massimiliano Gioffre of the University of Perugia.



Brian Post, an undergraduate student in the CEE Department, was the recipient of the 2010 Steve L. and Pamela C. Massie Undergraduate Scholarship through the Associated General Contractors of America (AGC). Post, who will be a senior in the fall, was one of only two students from Massachusetts who received an award from the AGC Education and Research Foundation. Scholarships were awarded to 120 students from across the country enrolled in civil engineering or construction management programs. Post has served as both the treasurer and president of the UMass Amherst Chapter of AGC, reestablished as a student organization in 2008. As an officer, he has scheduled meetings with guest speakers from the construction industry, organized OSHA 10-hour safety courses, secured donations for the chapter, and planned tours of construction sites. He will continue in his current position as president during the 2010-11 academic year.



The University of Massachusetts Amherst and the U.S. Fish and Wildlife Service (USFWS) have announced an upcoming graduate engineering degree option in ecohydrology – the first in the nation. The collaboration between the USFWS and the CEE Department begins with a \$50,000 research grant to support a graduate student and other research activities. The PIs on the research contract are **Dr. David Ahlfeld and Dr. Richard Palmer**. Through a cooperative agreement signed on June 15, USFWS will provide financial support to the CEE department and will also provide instructors to teach graduate-level courses in fish passage engineering. Students enrolled in the program will pursue coursework in engineering, resource conservation, and biology, plus hydraulics and hydrology. Michael Malone, vice chancellor for research and engagement at UMass Amherst, said, "The Department of Civil and Environmental Engineering is very excited to initiate this cross-disciplinary program with the U.S. Fish and Wildlife Service. The ecohydrology program will provide graduate students with the engineering and science skills necessary to make our streams and rivers more sustainable in the future and provide for improved aquatic habitat."



Dr. Palmer traveled to the Environmental Protection Agency in San Francisco, CA on June 7th to participate in a workshop on "Resilient Water Management Strategies for a Changing Climate: Developing Decision-Support Tools for Local Communities" which was held June 8- June 10th, 2010. This was a unique workshop in that it was held in two EPA regional offices (Boston and San Francisco) and broadcasted as a webinar, with live audiences and participants in each regional office. The title of the talk was "Translating Climate Change Science into Action: Tools and Processes for Integrating Stakeholders Involvement and Decision-Making."

Dr. Casey Brown also participated in the event from New York City Regional Office of EPA. His talk was entitled "Decision-Scaling: A Decision Analytic Approach to Using Climate Information." The session in which both papers were presented was called, "Water Resource Management Decision-Support Tools- What Tools are Available, and How Can We Use Them to Foster Action."



The Associated Press interviewed **Dr. Casey Brown** for an international story about a new Dutch study, which shows that shrinking glaciers in the Himalayas could lead to food shortages and crop failures in Asia. The Himalayas are the source for most of the major rivers in China and South Asia. Dr. Brown observed that climate variability in that region has the potential to make a serious impact on the lives of millions of people. "The paper teaches us there's lot of uncertainty in the future water supply of Asia, and within the realm of plausibility are scenarios that may give us concern," he said. The AP article was circulated widely and published throughout Asia, the United States, India, Africa, Australia, and elsewhere.

As Brown went on to say in the article: "At present, we know that water concerns are already a certainty - the large and growing populations and high dependence on irrigated agriculture which make the region vulnerable to present climate variability. This paper is additional motivation to address these present concerns through wise investments in better management of water resources in the region, which for me means forecasts, incentives, efficiency." (June 2010)



"Transportation" is the name of the game at the fourth annual Summer Transportation Institute, held on campus for middle and high school students from July 6 through July 30. The program, held Monday through Friday from 9:30 a.m. to 4:30 p.m., is run by the Civil and Environmental Engineering Department. CEE faculty, staff, and graduate students provide lectures and lead discussions throughout the program on all modes of transportation, sustainability in transportation, and careers in transportation. The program covers topics such as water, air, and land transportation, as well as intermodalism and safety. They participate in preparing project presentations in teams, learning about transportation concepts through hands-on activities, and exploring the transportation discipline with fun and engaging field trips. The Summer Transportation Institute is a full scholarship program with no out-of-pocket costs for participants. Scholarships cover all program costs, including workshops, handouts, facility usage, equipment, supplies, field trips, laboratory fees, speakers, lunch, and snacks. The program is sponsored by the

Federal Highway Administration, the Massachusetts Department of Transportation, and local communities and organizations. The non-residential program encourages all applications, especially those from women, minority students, and students with disabilities. (July 2010) *From the College of Engineering website, 7/10*



Dr. David Reckhow of the Civil and Environmental Engineering Department will receive the 2010 Lester Gaynor Award at the Boston Society of Civil Engineers Section of the American Society of Civil Engineers awards dinner on September 16. This award is "presented to a BSCES member or registered Professional Engineer for his or her part-time elected or appointed service as a city or town official, whose reimbursement for service has not been more than an honorarium." The award specifically recognizes Dr. Reckhow's "15 years of distinguished service as a member of the Northampton [Massachusetts] Board of Public Works."



Funded Research

Stochastic Fundamental Diagram for Probabilistic Traffic Flow Modeling

Principle Investigators: Drs. Daiheng Ni, John Collura, and Qian-Yong Chen

Sponsor: Massachusetts Institute of Technology

Advanced traffic signal control systems, innovative traveler information systems, and other intelligent system applications are designed in part to address disruptive changes in our transportation system. Central to the successful deployment of such intelligent systems is the need to employ traffic flow principles and models that capture the random nature of traffic flow. Research proposes to develop a new fundamental diagram which represents the probabilistic relationship between traffic speed and density as a stochastic process. This proposed research is designed to respond to the U.S. Department of Transportation's objectives concerning congestion mitigation and the New England University Transportation Center's theme to improve strategic management in response to disruptive changes in the transportation system. The products of this research will contribute a new way to think about and to understand the complex interrelationships among traffic flow characteristics and will provide a basis to advance traffic flow modeling to a new level.

.UTC Fellowships Year 22

Principle Investigators: Dr. John Collura

Sponsor: Massachusetts Institute of Technology

Each year U.S. Department of Transportation awards Graduate Fellowship funding to UMass/Amherst to provide support for M.S. and Ph.D. students in the Transportation Engineering Program in the Department of Civil and Environmental Engineering. These students engage in literature syntheses, field work, collection and analysis of data, writing of technical reports, and the execution of laboratory exercises pertaining to current and future transportation-related research topics and issues. An underlying aim of this fellowship program is to encourage those studying transportation engineering to consider professional opportunities in the field. UMass/Amherst receives approximately \$200,000 each year from this program.

Characterizing Traffic Under Uncertain Disruptions: An Experimental Approach

Principle Investigators: Dr. Song Gao

Sponsor: Massachusetts Institute of Technology

The objective of the research is to study long-term traffic patterns under uncertain disruptions using data collected from human subjects who simultaneously make route choices in controlled PC-based laboratory experiments. In a New England UTC Year 21 project, we developed an individual behavioral model of route choice in an uncertain network with real-time traveler information. This project builds on the behavioral model and considers the collective congestion effects of many individual drivers' route choices.



Assessment of Hydroclimatological Risks to the Niger and Congo River Basin Development Plans

Principle Investigators: Dr. Casey Brown
Sponsor: World Bank

Niger Basin: This proposal conduct a hydro-climatologic risk analysis of investments planned for the Niger River Basin. The Niger River Basin (NRB) is shared among nine countries, and the present population is estimated at 110 million (64% rural), with an average growth rate of 3.2 percent per year and an average annual GDP of US\$ 350/capita. Thus, by 2025 between 150 and 180 million people will be dependent in some way on the Niger River. Hydrological and river basin models are being implemented which will in due time enable a better understanding of the impacts of some of these factors on the Niger Basin's water resources. At the recent Heads of State Summit held in Niamey (April 2008), a 20-year Investment Program worth approximately US\$ 8 billion was approved, for implementation in four 5-year phases. A tentative review of these activities has shown that potential impacts of climate change and variability have not adequately been taken into account.

Collaborative Research: Reconfiguring Steel Structures: Energy Dissipation and Buckling Mitigation through the Use of Steel Foams

Principle Investigators: Dr. Sanjay Arwade
Sponsor: National Science Foundation

The research objectives of this award are to characterize the mechanical properties of novel steel foams and determine whether this new class of materials presents opportunities for transformative improvement of the performance of civil structures.

The research program consists of experiments to characterize the structure and mechanical properties of the material and simulations to establish proof-of-concept applications of steel foams to civil structures. The target applications are energy dissipating devices to improve seismic performance of building systems and selective application of steel foam to improve the strength and ductility of thin-walled steel structural members. If successful, this research program will spur increased research and development work leading to low-cost mass production of steel foams, and will have identified methods for improving the performance of civil structures during extreme loading events. The potential benefits accrue to society through improved structural performance and incentive for the steel industry to develop new manufacturing capabilities.



Evaluation of Adaptive Management of Lake Superior Amid Climate Variability and Change

Principle Investigators: Dr. Casey Brown

Sponsor: Geological Survey

International Upper Great Lakes Study: In this proposal we will employ a climate risk management framework to evaluate the potential for robust management to improve the performance of Lake Superior regulation plans under climate change. The first step is characterizing the response of the Upper Great Lake System to changing climate conditions for a given regulation plan. The next step is to use decision-scaled output from GCM to explicitly model the uncertainty associated with GCM projections. The final step is to use the information generated in the previous steps to identify optimal plans and optimal combination of plans that can be managed adaptively. A systematic adaptive management strategy for selecting and switching between plans will be developed through the identification of climate thresholds where the optimal plan “switches” occur.

Baystate Roads Program (LTAP - Local Technical Assistance Program)

Principle Investigators: Dr. Chris Ahmadjian

Sponsor: MA Exec Off of Trans & Public Works

The Baystate Roads Program is the Massachusetts Local Technical Assistance Program (LTAP). The Program works to make available to municipal highway employees the knowledge and skills they need to efficiently manage and improve their municipal assets. The Program further acts as an efficient conduit that MassDOT uses to inform cities and towns of new policies and engineering standards. Baystate Roads has provided continuous service to local departments of public works and highway departments throughout the Commonwealth since August 1986. Housed at the University of Massachusetts Transportation Center, the Baystate Roads Program is one of 58 LTAP centers nationwide.

Fate of Non-Regulated DBP's in Distribution Systems

Principle Investigator: Dr. David A Reckhow Co-PI's: William Mitch and Chul Park

Sponsor: Water Research Foundation

The objective of this study is to investigate the formation and degradation (both chemical and biological) of key non-regulated disinfection byproducts of human health concern. This study will develop a fundamental and comprehensive understanding of the behavior of some key groups of non-regulated disinfection byproducts (DBPs) under conditions typical of drinking water distribution systems. Kinetic models will be developed for each of the target DBPs that are the focus of this research. Results from this work will help inform utilities on the impacts proposed changes will have on health-related DBPs. They will also help utilities make decisions that can lower risks to drinking water consumers.

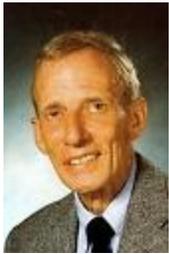
Upcoming Events



CEE Freshman Orientation

September 14, 2010, 5:00 p.m.

Gunness Student Center, Marcus Hall



2010 Tsuan Huan Feng Lecture, presented by Daniel Loucks

Thursday, October 7th, 3:00 pm

Amherst Room, Campus Center

Reception to follow

Professor Daniel Loucks lecture title will be "Water Management in a Changing and Uncertain World". Professor Loucks obtained a B.S. from Pennsylvania State University, 1954; M.F. from Yale University, 1955; Ph.D. from Cornell University, 1965. Since 1965 he has been on the faculty of the School of Civil and Environmental Engineering, Cornell University. In 1976 he was appointed Professor of Environmental Engineering in the School where he teaches and directs research in the development and application of economics, ecology and systems analysis methods to the solution of environmental and regional water resources problems. He has authored articles and book chapters in these subject areas. He served as Chair of his Department from 1974 to 1980, and as Associate Dean for Research and Graduate Studies in the College of Engineering from 1980 to 1981.

He received Distinguished Lecture Awards by the National Research Council of Taiwan in 1990 and 1999, an EDU-COM Award for software development in 1991, the Senior U.S. Scientist Research Award from the German Alexander von Humboldt Foundation in 1992, the Warren A. Hall Medal from the Universities Council on Water Resources in 2000, the Grand Prix International de Cannes, de l'Eau in 2005 and the Biennial Medal of the International Environmental Modeling and Software Society in 2008.

For more information please visit the following websites: <http://cee.umass.edu/cee/feng-series>.



CEE Fall Career Fair

Thursday, October 14th, 10:00 am - 3:00 pm

Gunness Student Center, Marcus Hall

The Civil and Environmental Engineering Department hosts a biannual career fair each October and February. All Civil and Environmental Engineering students are encouraged to attend the next CEE Career Fair on Thursday, October 14th from 10:00 am-3:00 pm in the Gunness Student Center in Marcus Hall. Companies attending the fair are filling positions for summer internships, COOP opportunities, and full-time permanent positions. The Department has hosted the Career Fair for over five years and, due to popularity, now schedules the event twice a year.



Upcoming Events

College of Engineering Alumni Awards

Saturday, October 16th, 12:00 pm - 2:00 pm

Campus Center Room 1009

The College of Engineering will hold its first annual Outstanding Alumni Awards Luncheon during Homecoming Weekend, on Saturday, October 16, 2010.



David C. Jeanes will be one of the recipients of the College of Engineering 2010 Outstanding Senior Alumni Award. This award is given for an alumni that has brought recognition and honor to the College of Engineering through their professional achievements, leadership, and service to the profession, university, and society. Jeanes received his education at UMass Amherst in civil engineering (1973/cum laude), the Wentworth Institute of Technology in architectural engineering, and the Virginia Polytechnic Institute and State University in engineering administration. MS '01, Civil and Environmental Engineering.



Prabhjeet Raj Singh will be one of the recipients of the College of Engineering 2010 Outstanding Junior Alumni Awards. The recipients are worthy ambassadors for the UMass Amherst College of Engineering and have shown extraordinary effort and notable success in their early careers. Prabhjeet Singh graduated with a Bachelor of Technology in Civil Engineering from the Indian Institute of Technology in New Delhi, India, and received his M.S. (2001) in Civil Engineering from UMass Amherst.



CEE Pre-registration

Tuesday, November 9th, 4:00 pm

Gunness Student Center, Marcus Hall

Name That Bridge!



This steel suspension bridge is a marvel of Civil Engineering and it still stands today, as it is used by pedestrians everyday.

If you can identify this bridge, email venskowski@ecs.umass.edu. The first person to answer correctly will receive a Civil & Environmental Engineering draw-string backpack filled with goodies!

Do you have news for our website or newsletter?

Please contact venskowski@ecs.umass.edu

and let us know!