



Steinbrenner Institute Celebrates the 10th Anniversary of Environmental Media Fellowships

Carnegie Mellon University's Steinbrenner Institute for Environmental Education and Research hosted 10 top environmental journalists for the 10th anniversary of the highly successful Steinbrenner Institute Environmental Media Fellowships program. From June 10 through June 12 the journalists were immersed in the Carnegie Mellon campus community and exposed to faculty, staff and students who are working on complex issues involving transportation, carrying capacity, life cycle analysis, hydraulic fracturing, alternative energies and many other hot button environmental issues.

Media Fellows included; David Abel, a reporter with The Boston Globe; Daniel Stone, a senior reporter with Newsweek Magazine; Dean Scott, *continues on page 2...*

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2012 Steinbrenner Institute Media Fellows with Steinbrenner Faculty Director, Dave Dzombak and Deborah Lange, Director of Special Environmental Projects. *Photo courtesy of Larry Rippel

10th Anniversary of Media Fellowships

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a senior reporter for climate change at Bloomberg; Pamela Hunter McFarland, a reporter with Engineering News Record; Benjamin N. Dooley, an assistant correspondent with Kyodo News Service; Anne Paine, a freelance environmental reporter; Olga Belogolova, a reporter with the National Journal; Margaret Kriz Hobson, a reporter with Greenwire/Energy Wire; Perry Beeman, a reporter with The Des Moines Register, and Ricci Shryock, a reporter with Voice of America.

“The fellowship enables leading environmental science, technology and policy journalists to broaden and deepen their knowledge of environmental issues. It also provides a unique opportunity for Carnegie Mellon faculty members to share their research findings with, and learn about communication skills and strategies from a group of top reporters and editors,” said David A.

Dzombak, faculty director for the Steinbrenner Institute and the Walter J. Blenko Sr. Professor of Environmental Engineering. Deborah Lange, Steinbrenner Institute Director of Special Environmental Projects and head of the Western Pennsylvania Brownfields Center, said the fellowship program has successfully attracted more than 60 media participants in the past decade, “I think we have learned from one another in this dynamic program, and we have also helped inform national media representatives about environmental innovation and progress in the Pittsburgh region”.

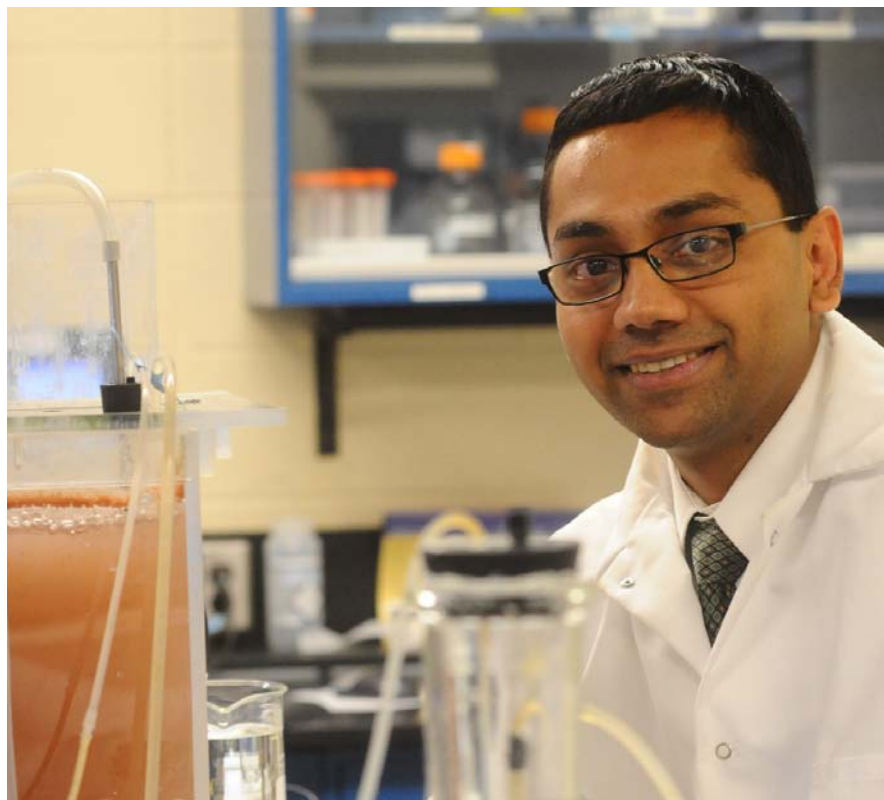
The fellowship is co-sponsored by the university’s College of Engineering and the Steinbrenner Institute.



U.S. Environmental Sustainability Fellow Rachel Hoesly fields a question during a presentation for the 2012 Steinbrenner Media Fellows.

2012-2013 Distinguished Lecture Series in Environmental Science, Technology, and Policy

The University's Distinguished Lecture Series in Environmental Science, Technology, and Policy, coordinated through a partnership between the Office of the Vice Provost for Education, the Division of Student Affairs and the Steinbrenner Institute kicked off the 2012-2013 academic year with a lecture by Professor Kartik Chandran. The DLS topic for this year is "Environment and Health" inspired by the ongoing "Imperfect Health" exhibit on display at Carnegie Mellon's Miller Gallery.



Professor Kartik Chandran

Professor Chandran is an Environmental Engineer and an Associate Professor of Earth and Environmental Engineering at Columbia University, where he leads the Biomolecular Environmental Science program and the Wastewater Treatment and Climate Change program. His talk on October 8th entitled "Re-thinking water quality, policy and health- An elemental approach" discussed the current paradigm of wastewater treatment both in the United States and abroad, with a focus on how policies and procedures for wastewater treatment, recovery and water infrastructure can be improved upon using a systems approach. Professor Chandran is keenly interested in developing novel models for sustainable sanitation and wastewater treatment, with a specific focus on managing the global nitrogen cycle and linking it to the carbon cycle, the water cycle and the energy cycle. His talk proposed some interesting and innovative models for water treatment and recovery. If you would like to explore the talk further, visit the University Lecture Series website (<http://www.cmu.edu/uls/2012-2013/october/chandran.html>) for video and audio of Professor Chandran's lecture.

Additional Distinguished Lecture Series talks are scheduled for Thursday, March 7, 2013 featuring Dr. C. Arden Pope, III, Mary Lou Fulton Professor of Economics, Brigham Young University; and Thursday, March 21, 2013, featuring Dr. Irva Hertz- Picciotto, Professor and Chief, Division of Environmental and Occupational Health, Department of Public Health Sciences, University of California Davis.

All Distinguished Lecture Series talks take place at 4:30pm in Porter Hall 100 and are open to the public.

Campus Conversation: “Climate Change and the Campus”

On September 29, 2012, students from six universities gathered at Carnegie Mellon University to deliberate about how to respond to the challenges and opportunities related to climate change. In the deliberations, students were asked to consider three questions (What can we do for our campus?, What can we do for our community?, What can we do for ourselves?) in discussions that focused on four areas: practical matters of energy production and consumption; research and teaching; community outreach programs; and individual choices, in terms of involvement with sustainability initiatives or choosing a major/career related to sustainability. Participants included students from Carlow University, Carnegie Mellon University, Community College Of Allegheny County, Duquesne University, Robert Morris University, and the University of Pittsburgh.



**Photos courtesy of Ken Andreyo*

The Campus Conversation was developed and led by Professor Robert Cavalier of the Department of Philosophy. It involved completion of an initial survey, review of a discussion guide providing balanced information about the topic, and participation in small-group discussions facilitated by trained moderators. Students also developed questions that were addressed by a resource panel of experts, and then completed a post-deliberation survey.

After deliberating, participants were asked to provide feedback about what contributions the Campus Conversation made to their knowledge and understanding of climate change and its effects. Most participants indicated that they had at least some engagement with arguments that they had not considered before, and many also indicated that the deliberations broadened their understanding of the effects of climate change very much or somewhat with a small percentage indicating that it did not all.

As the selected comments below indicate, participants identified engaging new or different perspectives as a key value of the Campus Conversation. Some participants thought that the event had provided them with resources they could use in other contexts (e.g., teaching).

“I quite enjoy the format; I like hearing different perspectives. They help with questions and lead me to reconsider my own views which is...important”

“I felt it exposed me to issues I otherwise would not have had the incentive to learn about”

“I enjoyed hearing the opinions of others, the potential solutions that they brought up, and the diversity of experience and knowledge.”

To read the full report and for additional information on the Campus Conversation program, visit: <http://caae.phil.cmu.edu/cc/>.

AASHE Conference 2012: Investing in the Future

The 2012 Association for the Advancement of Sustainability in Higher Education conference was held October 14-17 in Los Angeles, California. Carnegie Mellon representatives included M. Shernell Smith, of the Division of Student Affairs, Erika Ninos, of the Steinbrenner Institute, and student representative Marielle Saums, a senior Global Studies major. We asked Marielle to reflect upon her experience during the AASHE Student Summit and to give us a student perspective on how the lessons learned during AASHE can assist Carnegie Mellon in our quest towards becoming a more sustainable institution.



*Steinbrenner Institute Environmental Coordinator, Erika Ninos participates in the UCLA sustainability tour during AASHE 2012.
Photo courtesy of Nurit Katz.

My AASHE Experience

By Marielle Saums, Senior, Global Studies, Dietrich College of Humanities and Social Sciences

This past October I attended the Student Summit at the Association for the Advancement of Sustainability in Higher Education (AASHE) Conference in Los Angeles, California. Panels were presented entirely by undergraduate students from across the country and provided invaluable strategies for sustaining student involvement with campus environment organizations.

As a representative of Carnegie Mellon, my goal was to network with other students and learn about leadership strategies for implementing environmental and sustainability initiatives on campus. I have been involved with the CMU community garden and I wanted to find specific advice that pertains to our upcoming off-campus expansion.

I attended a variety of panel discussions that addressed how to engage students and create a culture of sustainability that includes people from all academic backgrounds and interests. In order to create this environment, organizations need to present sustainability in ways that overcome its reputation as a niche and burdensome interest. Most people associate green environmental practices with a specific personality and culture, which can deter organizations and social groups from engaging with sustainability.

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AASHE Conference 2012: Investing in the Future

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Once common principles are established, students then need motivation, especially at an institution like CMU which leaves students with limited and precious free time. One way is to create academic benefits, which can take form as a research credit, a paid internship or work-study, or a course requirement. Student organizations can also be a great way for students to create personal connections, so prioritizing socialization within a student group is important to maintaining morale and dedication.

Student Government and Student Activities can also prioritize green practices so organizations are more concerned about sustainability. Groups applying for JFC funding could be required to demonstrate how they will reduce resource consumption in order to obtain school funding. Another option is the creation of a “Green Certification” system, in which organizations can apply for special promotional and funding privileges if they demonstrate the use of green practices like low waste events.

Student activities would also benefit from intermediary groups and intercollegiate events that focus on sustainability. Santa Clara University presented “SCOOPS”, a monthly event where representatives from any organization can attend to eat food, network, and learn how their group can strengthen their green practices strategy. The University of Oregon hosts an annual Earth Week, which involves all types of student groups to hold a variety of environmentally-themed workshops, talks, films and concerts.

Student organizations need to be better trained to document their yearly initiatives, fundraisers, and projects. This enables groups to learn from past successes and mistakes, and to refine their yearly timelines. Student groups would also benefit from strategic utilization of social media and social connections, balancing word-of-mouth communication with social apps to promote their message. While these are sensible approaches, many student organizations lack basic documentation or promotion strategies, which are critical to environmental groups that need to appeal across multiple social groups.

My broader conclusions from the AASHE conference are that Carnegie Mellon has a unique problem not found at most other universities: faculty and administration are highly receptive to environmental initiatives, but the students show comparatively less interest or commitment. Carnegie Mellon students are highly driven and efficient, but many direct these intense efforts only towards specific career or research paths. The Carnegie Mellon community has to recognize that service and sustainability help develop critical work, academic, and social skills, and the AASHE conference provided many ways that Carnegie Mellon can relay this important message.

Steinbrenner Institute Announces 2012-2013 Graduate Fellows

A new group of Steinbrenner Institute graduate fellows began their fellowships in the fall of 2012. The students represent three distinct fellowship programs: the Steinbrenner Institute Graduate Research Fellows, the Jared and Maureen Cohon Graduate Fellowship, and the U.S. Environmental Sustainability Fellows.

The new Steinbrenner Institute Graduate Research Fellows are: Adam Ahern, a PhD student in the Mellon College of Science, Department of Chemistry, advised by Professor Ryan Sullivan and Professor Neil Donahue; Matthew Mills a PhD student in the Mellon College of Science, Department of Chem-

istry, advised by Professor Terry Collins; Shalini Ramesh, a PhD student in the School of Architecture, advised by Professor Khee Poh Lam, and Yuxin Wang, a PhD student in the Department of Civil and Environmental Engineering, advised by Professor Jeanne VanBriesen, and Professor Mitchell Small.

Raul Figueroa, a PhD student in Engineering and Public Policy, advised by Professor Granger Morgan, and Professor Paul Fischbeck, is the Steinbrenner Institute Robert W. Dunlap Graduate Research Fellow.

The Jared and Maureen Cohon Graduate Fellow for 2012-2013 is Civil and Environmental Engineering PhD student, Aniela Burant. Burant is advised by Professors Thanasis Karamalidis and Greg Lowry. Her work is part of a project funded by the U.S. Department of Energy through the National Energy Technology Laboratory.

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*2012-2013 Steinbrenner Institute Graduate Research Fellows
Matthew Mills, Yuxin Wang, and Raul Figueroa*

**Photo courtesy of Larry Rippel*

2012-2013 Graduate Fellows Announced



2011-2012 and 2012-2013 US Environmental Sustainability Fellows (L-R) Daniel Posen, Russell Meyer, Rachel Hosely, Michelle Tom, Sam Markolf and Negin Ashoori.

**Photo courtesy of Larry Rippel*

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The Steinbrenner Institute U.S. Environmental Sustainability Fellowship, supported by the Colcom Foundation, offers competitive three-year awards to PhD students for the study of interdisciplinary topics related to U.S. environmental sustainability. The 2012-2013 fellows join 2011-2012 fellows Rachel Hosely, Hui Wang and Russell Meyer.

The 2012-2013 fellows are: Negin Ashoori, a PhD student in Civil and Environmental Engineering, advised by Professors David Dzombak and Mitchell Small; Sam Markolf, a PhD student in Civil and Environmental Engineering, advised by Professors Scott Matthews, and Chris Hendrickson; Daniel Posen, Engineering and Public Policy, advised by Professors Ines Azevedo, Paulina Jaramillo and Scott Matthews; and Michelle Tom, advised by Professors Scott Matthews and Chris Hendrickson.

Alumni Profile: Donna Riley

DONNA RILEY, ASSOCIATE PROFESSOR, SMITH COLLEGE

In this issue of the Steinbrenner Institute newsletter we shine the alumni spotlight on Donna Riley, an Associate Professor in the Picker Engineering Program at Smith College. Riley received her B.S.E. in Chemical Engineering from Princeton University in 1993 and her Ph.D. from Carnegie Mellon's department of Engineering and Public Policy in 1998. We recently put some questions to Professor Riley about her experiences at Carnegie Mellon and her current career.

What brought you to Carnegie Mellon University to study?

I had developed an interest in technology and policy through taking a class from Frank von Hippel at Princeton and later by doing research with Valerie Thomas, who had done a postdoc in Engineering and Public Policy at Carnegie Mellon. I applied to several graduate programs that combined engineering and policy but chose CMU for three main reasons; EPP's faculty shared my interests in multiple areas and were engaged in world class research; EPP's administrative standing as a fully resourced department within Carnegie Mellon compared well against other joint programs that seemed cobbled together with fewer institutional resources; and I received frank answers during my visit regarding how women were treated at CMU, and several people noted the positive presence of Indira Nair in EPP.



Professor Donna Riley

**Photo courtesy of Judith Roberge*

What was your career path and how has your Carnegie Mellon University training helped to make your career rich and fulfilling?

I came to Carnegie Mellon directly from my undergraduate career at Princeton, where I studied chemical engineering and environmental studies, and pursued interests in other disciplines including gender studies and religion. CMU has some of the lowest disciplinary boundaries of any academic institution and I was thrilled that I was able to integrate mechanical, environmental, and chemical engineering with psychology and public policy as a graduate student. My dissertation combined indoor air quality modeling and psychological approaches to characterize risk perception and develop better risk communication strategies for users of chemical consumer products. I took a course on engineering ethics with Indira Nair, integrating philosophy and engineering, and pursued this interest further at a national workshop and by teaching research ethics to undergraduate researchers at CMU. I was able to pursue my interests in education and pedagogy through teaching EPP's community-based project course and through the Center for Teaching and Learning. Through all these experiences I learned a number of skills and strategies for inter- and cross-disciplinary research that continue to serve me well in my career.

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Alumni Profile: Donna Riley

DONNA RILEY, ASSOCIATE PROFESSOR, SMITH COLLEGE

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After CMU, I returned to Princeton for a postdoctoral fellowship in Industrial Ecology. Initially focused on a mercury inventory for the state of New Jersey, I carved out a project that integrated indoor air quality modeling and measurement with cultural as well as psychological approaches to risk. The project sought to characterize risk from uses of mercury in Latino and Caribbean communities, drawing additionally on Latin American Studies and studies of African diasporic religions. I collaborated with a Latin Americanist and sociologist and an Afro-Cuban *santero*.

While a post-doc at Princeton, Barbara Lazarus forwarded me the job announcement for the new Picker Engineering Program at Smith College, the first engineering program at a US women's college. It was without a doubt my dream job. The application involved writing my vision for integrating engineering and the liberal arts, and I was able to bring all the pieces of my interests together - in education, in engineering ethics, in gender studies, in technology and policy, in technical, cultural and psychological approaches to risk. At Smith, I pursued a dual research track in risk and in engineering education. The engineering education work has proven to be the more fruitful avenue in large part because of my unusual location at a liberal arts college.

What interesting projects are you currently working on?

My main project for the past decade has been the application of critical pedagogies in engineering education. Based on this work I recently published a collection of learning modules that can be used in thermodynamics courses to address the social and policy contexts of engineering, engineering ethics, lifelong learning, and other key elements in engineering education that are often given short shrift in technical courses. The pedagogy work also led to my involvement in the Engineering, Social Justice, and Peace Network.

I published a book on *Engineering and Social Justice* in 2008 and followed up with an edited volume that came out this year. Currently I'm working on a book for the Engineering Studies series at MIT Press on the history of engineering at Smith before the establishment of the Picker Program in 1999. It is my hope that this history will add to our knowledge of how gender and class shape the boundaries of engineering in particular times and places.

What advice would you give to current Carnegie Mellon students?

Do what you love and what matters to you. If interdisciplinary work interests you, take advantage of the low disciplinary boundaries at Carnegie Mellon and learn to collaborate with others now. Don't let current job prospects kill your dreams. The dream job I landed two years out of my PhD didn't exist when I entered (nor when I graduated from) Carnegie Mellon, but I was well prepared when it came along because I had pursued what mattered to me.

Global Climate Coalition Student Workshop

By Christopher Conte, Senior Business Administration and Statistics, Tepper School of Business

Thanks to the generosity and support of the Steinbrenner Institute, I spent several days in Rio de Janeiro last summer for the Global Climate Coalition Student Workshop. The workshop was held on June 19, 2012 during the United Nations Conference on Sustainable Development. The event offered teams of university students from around the world the opportunity to idea-share and collaborate on how to tackle sustainability issues on their campuses. I had the opportunity to meet a number of environmental activist, college students and discuss various campus initiatives. I was particularly impressed with two student projects that focused on home furnishings. The projects involved redistributing home furnishings from graduating students to incoming students. The impact was obvious and tremendous, and the projects seemed easy enough to replicate at CMU.

Not wanting to compete or overlap with similar efforts by the Habitat for Humanity ReStore or Construction Junction, we have decided to partner with the Habitat ReStore. I've designed a Facebook page (facebook.com/CMUusestheReStore) outlining a plan to involve students in discarding and purchasing furniture through the ReStore. Working with the ReStore, we will offer free transportation to and from the ReStore as well as free pick up for discarded furniture. We have put up posters about the ReStore, and we will try some other methods to get the word out as well.



The CMU ReStore Project Facebook page.

While in Rio, I presented information about Carnegie Mellon and our project to implement post-consumer composting in all dining locations. The project has made enormous progress. In fact, starting after winter break, Tazza D'Oro will offer post-consumer composting. Working on the project has been extremely time consuming, and I have been very fortunate to have the support of Housing and Dining, Student Life, the Steinbrenner Institute, and seven dedicated team mates from Sustainable Earth. Tazza D'Oro is the pilot and test location for post-consumer composting. If everything goes well, we will be implementing the system in more dining locations. 2 down, 9 to go!

Steinbrenner Institute Community and Campus News

It has been a busy summer season and fall semester on the Carnegie Mellon campus, with workshops, forums and events! Here is a snapshot of what the Steinbrenner Institute and our campus partners have been up to over the past few months.

The U.S. Environmental Sustainability Fellows Forum

The first annual Forum for the Steinbrenner Institute U.S. Environmental Sustainability Fellowship Program was held on Monday, June 4th in the Singleton Room on the Carnegie Mellon campus. The Forum featured presentations from each of the 1st year U.S. Environmental Sustainability Fellows; Rachel Hoesly, Hui Wang, and Russell Meyer. The fellows provided an

overview of their current activities. Chris Hendrickson of the Green Design Institute and Ines Azevedo of the Center for Climate and Energy Decision Making provided a review of their current research activities focused on U.S. environmental sustainability issues, and a lunch presentation was given by Professor Joel Tarr on the history of natural gas development in Western Pennsylvania. The Forum also included visiting lecturer, Professor Jennifer Van Hook, director of the Pennsylvania State University Population Research Institute with a talk on demographic perspectives on population growth.



US Environmental Sustainability Fellow Russell Meyer at the 2012 Forum.

Greening of Orientation Continues

The Steinbrenner Institute partnered with the Division of Student Affairs and Green Practices to provide sustainable orientation events for incoming first year students and graduate students. Events during the 2012 orientation week included the "Environment at CMU" campus sampler, in which new students were introduced to the myriad of green activities and organizations at Carnegie Mellon. Directly following the campus sampler was the annual Zero Waste dinner co-sponsored by the Eco-Reps. The week wrapped up with the always popular Eco-Fabulous open house. This year students were treated to organic, local hotdogs from the Franktuary food truck while mingling with representatives from Sustainable Earth, the CMU community garden and Eco-Reps.

Center for Atmospheric Particle Studies takes part in "Imperfect Health" Event

On September 26th the Steinbrenner Institute for Environmental Education and Research and University Health Services joined together to present a talk by Dr. Albert Presto of the Center for Atmospheric Particle Studies. The talk was held in conjunction with the ongoing exhibit at the Miller Gallery "Imperfect Health: The Medicalization of Architecture". Presto's presentation: "Air quality, regional pollution *continues on page 13...*

Steinbrenner Institute Community and Campus News

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exposure, & the Marcellus Shale”, provided an explanation of the monitoring activities performed by the CAPS mobile air quality monitoring unit, and the activities that the research center has been engaged in involving pollution concerns in Allegheny and surrounding counties. The event also offered participants the chance to explore the CAPS Mobile Unit, tour the Gallery exhibit and take part in carbon dioxide testing with the Peer Health Advocates from Student Health Services.

Cèilidh “Zero Waste” Tailgate Party

Carnegie Mellon celebrated the annual Cèilidh weekend October 4-7. Cèilidh [ka-le] a Scottish Gaelic term meaning “visit,” celebrates the annual return of alumni, family and friends to campus with tours, sporting events and many other family friendly activities! One of the most popular activities during Cèilidh festivities is the Tailgate Party and the Carnegie Clan Chili Cook-Off held in Wiegand Gymnasium. This year with support from the Steinbrenner Institute and the Office of Alumni Relations & Annual Giving and the assistance of Green Practices, Eco-Reps and Sustainable Earth, both the Tailgate Party and Chili Cook-Off were near zero waste events! Compostable, recyclable and reusable items were swapped in place of the plastic and paper items that have been used in years past. We collected approximately 20 bags of compost and with the help of student volunteers were able to provide on-site education about the importance of waste diversion on the Carnegie Mellon campus.



Eco-Reps provide composting instruction during the Cèilidh Tailgate party, Saturday, October 5, 2012.

2012 Conference Focuses on the State of the Monongahela River

On November 8, engineers, biologists, and community members gathered at WaterQUEST's third annual State of the Monongahela conference at Carnegie Mellon to discuss the current conditions in the Monongahela River. The conference featured a series of presentations on the latest water quality data, watershed health, and developments in cooperative management of the river.



Poster presenters mingle at the 2012 State of the Monongahela.

**Photos courtesy of Mireille Mobley*

The Monongahela River, commonly known as the “Mon,” stretches 130 miles through northern West Virginia and southwestern Pennsylvania and joins with the Allegheny River in Pittsburgh to form the Ohio River. In 2008, the Pennsylvania Department of Environmental Protection tested the Mon’s water quality and



noticed a strange thing: the river was becoming saltier. Concentrations of sulfates, bromide, and chloride were unusually high, and because the river provides drinking water to more than 800,000 people, the DEP and independent scientists began to monitor the river more closely. A year later, a massive fish kill in a tributary called Dunkard Creek led to increased concern about water quality in the basin.

Seeing the need for a united approach to the problem, Carnegie Mellon’s Center for Water Quality in Urban Environmental Systems (WaterQUEST) held its first State of the Monongahela conference in 2010, with support from the Colcom Foundation, to facilitate discussion and collaboration among the scientists and groups studying the river. Two years later, the conference continues to provide a valuable opportunity for scientists and water managers to share findings and discuss future steps in the management of the Monongahela.

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2012 Conference Focuses on the State of the Monongahela River

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WaterQUEST director and CEE professor Jeanne VanBriesen kicked off this year's conference with a review of the river's past and current issues. The first half of the conference focused on water quality data obtained over the past year, and included a presentation from VanBriesen on the research work of graduate students Jessica Wilson and Yuxin Wang. VanBriesen reviewed river water quality data from the past three years, noting that bromide levels have fallen significantly in the past year. She first grew concerned about bromide when concentrations rose in the summer of 2010 and remained elevated in 2011. This year, concentrations of bromide fell back to levels from 2009, which VanBriesen said is great news for the river's drinking water treatment plants. Though bromide is not a concern on its own, it can create carcinogenic by-products when it mixes with disinfectants used to treat drinking water. Levels of these chemicals are strictly regulated to protect human health, but higher bromide levels can make it more difficult for drinking water plants to meet those requirements.

Later in the morning, Rosemary Reilly of the U.S. Army Corps of Engineers presented data showing that total dissolved solids (salts) in the river were lower this year than in earlier years. Overall, the river is looking better than when researchers first began to respond to concerns about high salt in 2008 and 2009. A poster session followed the morning research presentations in which graduate researchers from several universities discussed their latest findings on the health of the Monongahela watershed.

In the second part of the conference, presenters talked about recent developments and new plans in the management of the river. Steinbrenner Institute Faculty Director Dave Dzombak spoke about the Ohio River Headwaters Resource Committee (HRC), a group that was recently formed to support and help inform a new initiative by the Ohio River Valley Water & Sanitation Commission (ORSANCO) to examine water quantity management in the Ohio River Basin. ORSANCO is an interstate pollution control agency that manages water quality across eight states in the basin.

In his introduction of the HRC, Dzombak explained that the committee's efforts will reflect the "growing importance of integrating the management of water *quality* with water *quantity*." He pointed to external pressures on the river system from Marcellus shale drilling activity and water-poor neighbors such as the Atlanta metropolitan region, and emphasized that in order for the waters of the Ohio River Basin to remain healthy and fairly utilized, the states of the Basin must work together. The HRC's members represent a variety of regional, commercial, and academic organizations, including Carnegie Mellon. Dzombak encouraged groups that are interested in engaging with the HRC to share information to contact the Steinbrenner Institute's Deborah Lange. The HRC effort is being led by the Steinbrenner Institute with support from the Benedum Foundation, the Colcom Foundation, the Heinz Endowments, and R.K. Mellon Foundation.

This year's State of the Monongahela conference gave scientists and stakeholders a valuable opportunity to share data and discuss new research activities aimed at protecting this important resource.

The “Green Scene” at Carnegie Mellon



In each Steinbrenner Institute newsletter we feature “Green” news from Carnegie Mellon campus departments and topics being addressed by the Green Practices Committee.

“How to Organize a Zero Waste Event”

A Lunch & Learn for “How to Organize a Zero Waste Event” (100% compostable) was held on Thursday, November 29th in the University Center. Barb Kviz, University Environmental Coordinator, discussed topics including planning the event, what is compostable, where to purchase compostable products, how the compostable material should be collected, and the process to get the compost picked up post-event.

Kviz also informed attendees that departmental food composting is now being offered for office kitchens and break rooms. For more information how to plan a “Zero Waste Event” or on departmental food waste composting, contact Barb Kviz at bk11@andrew.cmu.edu or 412-268-7858.

Campus Conservation Nationals and RecycleMania 2013

Facilities Management Services is planning to sponsor another Campus Electricity Conservation Contest February 3-24, 2013. Our participation stats from the 2012 can be found at the Campus Conservation Nationals website <http://www.competetoreduce.org/past/>

The RecycleMania contest for 2013 will run from February 3 through March 30. For more information visit the RecycleMania website <http://recyclemaniacs.org/>.

During Recycle Mania 2008, people on campus generated 98.68 lbs of waste per person, and in 2012 generated 79.34 lbs of waste per person. Our lowest year was in 2010, when we generated only 69 lbs of waste per capita. Waste less! Recycle more!

For more “Green” news visit www.cmu.edu/environment.



Environmental Coordinator, Barb Kviz provides instruction during a zero waste event.

**Photo courtesy of Ken Andreoyo.*

This issue features the first of a series of updates from Carnegie Mellon student groups focused on issues of environment and sustainability. The first group update is from Sustainable Earth, an undergraduate student group working to improve sustainability campus-wide. Sustainable Earth aims to encourage Carnegie Mellon University and the Pittsburgh Community to actively practice ways of living sustainably, to network with other organizations, on and off-campus, who are interested in strengthening environmental initiatives in Pittsburgh. The group organizes participatory community events and volunteer activities open to all. Our update on Sustainable Earth's activities comes from Christopher Conte, a senior Business Administration and Statistics major in the Tepper School of Business.

Sustainable Earth has enjoyed continuous growth in active members and success on projects and initiatives. Most of our projects deal with consumption and waste, because we believe this is the area where Carnegie Mellon has the most room for improvement. If you don't already know, you should be proud to hear that the EPA ranked Carnegie Mellon as the number two purchaser of green energy among colleges and universities and number 40 among all companies and organizations. We have been working very hard on a number of projects, and the improvements we see from year to year motivate us to keep up the hard work.

Thanks to Unilever and Louis McCauley, Director of Facilities-Housing, and Dining, a couple of campus dorms are testing out water-saving shower heads. If they are successful, they may be implemented in all dormitories. A handful of Sustainable Earth members designed posters encouraging students not to waste food; these posters have been placed in most dining locations and campus dormitories. We have also produced posters for the Reusable Cup Initiative launched by campus food service provider CulinArt last year. The initiative offers students a discount on fountain beverages when using their own cup.

What else has Sustainable Earth been working on? "SOOOO MUCH" -a direct quote from a couple of our members. Cat Mao, the new Vice President, is involved in several teams, and has also designed cardboard recycling instructions to place in all the dormitory waste stations. Bridget McCoy, who was shocked at the amount of plastic bowls and food trays being thrown away, is working with Barb Kviz to add container recycling stations in the UC, Resnik, and the Atrium. Our new president, Rachel Wong, is working with Shernell Smith of Student Affairs to create an informational "how to recycle, compost, and live sustainably" lecture for freshman orientation. Long-time members of the club, Danielle Parnes and Matt Powell-Palm, are working on a solar energy project with alumnus Chris Gassman.

Additionally, although not directly related to the environment, we've set up a donation bin in Entropy, encouraging students on the meal plan to put their extra Dinex to good use; all donations benefit the Pittsburgh Community Food Bank.

I'm thrilled with the amount of change we've made and are continuing to make. I only wish I had started more projects earlier on in my time at CMU! However, I am confident that Sustainable Earth will continue to accomplish great things, building from the valuable relationships we've made around campus.

1st Annual Carnegie Mellon Campus Sustainability and Food Day Celebration

On October 24th, Carnegie Mellon University participated in the 10th annual Campus Sustainability Day and national Food Day celebrations. Campus Sustainability Day is an event promoted by the Association for the Advancement of Sustainability in Higher Education, focusing on campus sustainability accomplishments and encouraging efforts towards greening college and University campuses. “Food Day”, created by the Center for Science in the Public Interest, is powered by a diverse coalition of food movement leaders, organizations and people from all walks of life and takes place annually on October 24 to address issues as varied as health and nutrition, hunger, agricultural policy, animal welfare and farm worker justice.



Peer Health Advocates educate about “Meatless Mondays” during Campus Sustainability Day activities.

Carnegie Mellon participated in these events for the first time with a full day of offerings for both campus and community members. Events included a live broadcast of the AASHE Campus Sustainability Day Keynote and Live Chat: “Preparing Students for a Changing Climate”, and the Carnegie Mellon Student Sustainability “Show and Tell” in which individual students and students groups came together to display and chat about the many projects in the realm of environment and sustainability. The “Show and Tell” event showcased the diverse projects happening at CMU from Meatless Mondays, to the Community Garden to campus wide composting efforts and provided an open forum for conversations about how we view food, health, nutrition and waste on our campus. The culminating event of our Campus Sustainability and Food Day celebration was a keynote talk by “Food Sleuth”, Melinda Hemmelgarn, M.S., R.D.

Campus Sustainability and Food Day events were the product of a partnership forged between our campus sustainability community and the local sustainability community. Sustainable Earth, Eco-Reps, Peer Health Advocates and the CMU community garden, with support from University Health Services, University Dining Services, the Steinbrenner Institute and Green Practices, and partners including Chatham University, Masters of Food Studies Program and the East End Food Co-op joined together to present the programs.

Dr. Hemmelgarn’s talk, entitled “F.A.R.M.: Food, Art, Revolution, Media: Changing the Way We Think to Change the Way We Eat. Exploring the power of images and stories to transform and support healthy food, farmers and communities” discussed everything from the effects of industrial agriculture on our economy and health, to the importance of supporting small family farms, to how our purchasing decisions can be influenced by marketing and shrewd product design. The “Food Sleuth” used images of local farmers and producers and some clever exercises to provoke participants into thinking about our own definitions of “good food” and encouraged us to “think beyond our plates”. Immediately following the talk, attendees were treated to a buffet of local and seasonally themed finger foods provided by Soergel’s Orchards, The East End Food Co-Op and Wild Purveyors.

Carnegie Mellon's Solar-Powered Boating Team Awarded Research Grant from Constellation Energy

Carnegie Mellon University students have received a \$40,000 grant from Constellation Energy for their continuing research and development of competitive solar-powered 18-foot-long racing boat.

"We are elated with this grant as we research to improve the technologies that go into our boats, and we are working toward competing in the DONG Solar Challenge in the Netherlands in 2014, one of the premier solar boat races in the world," said CMU Solar Splash team leader Nathaniel Krasnoff, a junior mechanical engineering major from San Diego. "This is the largest grant our team has ever received, and we are so grateful for the opportunity to continue our work toward developing cutting-edge, renewable energy technology."



CMU Solar Splash entry in the 2012 Solar Splash competition in Cedar Falls, Iowa.

The team was one of 10 programs selected nationwide to receive the "E2 Energy to Educate" grant, which comes from the Constellation Energy family of retail electricity and natural gas suppliers. Constellation is a subsidiary of Exelon Corp., which is one of the nation's leading energy providers. The grant is designed to "enhance student understanding of the science and technology needed to address energy issues, and reach and inspire students to think differently about energy."

"I think this kind of grant program ultimately helps students better understand the need for creating a future built on sustainable energy," Krasnoff said.

"We're very proud to sponsor research and education programs that will help prepare a new generation for energy opportunities and challenges that lie ahead," said Kenneth Cornew, president and CEO of Constellation Energy.

CMU's Solar Splash team competes in intercollegiate regattas that promote energy conservation while giving students hands-on engineering experience in a competitive setting. More than 30 students from the Mechanical Engineering, Chemical Engineering, Materials Science and Engineering and Electrical and Computer Engineering departments, in addition to the School of Design, the School of Architecture and the Tepper School of Business collaborate and compete at the annual Solar Splash competition, which involves various sprint and endurance races for fiberglass and carbon fiber boats. CMU's Solar Splash effort has been underway for the past eight years.



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Conferences and Announcements

University Lecture Series: “We are what we eat...and what we build: Designing Healthy Communities”, February 21, 2013

4:30 pm, Porter Hall #100 (Gregg Hall)

Dr. Richard J Jackson, MD MPH, Professor and Chair, Environmental Health Sciences
UCLA Fielding School of Public Health

Environment Today: The Three E's of Water, February 22-24, 2013

The “Environment Today” is an annual mini-course that brings students together over a weekend to discuss environmental issues affecting our planet. This weekend course will focus on the “Three E's” of one of our most essential resources: Water. We will consider environmental impacts on water, and will explore other issues such as the equity and economics of water as a resource. Speakers will focus on the policy, protection, health and history in relation to our use of water resources. Additional topics to be covered are water quality and management, water consumption, and energy related issues. For more information visit the Weekend Today website <http://www.cmu.edu/weekend-today/index.html>.

Imperfect Health: The Medicalization of Architecture

Ongoing through February 24, 2013

Miller Gallery at Carnegie Mellon University

For more information <http://millergallery.cfa.cmu.edu/exhibitions/imperfecthealth/>

Engineering Sustainability 2013, April 7-9, Pittsburgh, PA

The Mascaro Center for Sustainable Innovation at the University of Pittsburgh and the Steinbrenner Institute for Environmental Education and Research at Carnegie Mellon University are pleased to announce Engineering Sustainability 2013, scheduled for April 7-9, 2013 in Pittsburgh, Pa. For more information on the Conference visit the Mascaro Center website <http://www.engineering.pitt.edu/MCSI/conference/>

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