



## 2011 Media Fellowship is a Success!

From June 5<sup>th</sup> to the 7<sup>th</sup>, the Steinbrenner Institute hosted eight journalists for the ninth annual Environmental Media Fellowship. The journalists included Dina Cappiello, a reporter at the Associated Press in Washington, D. C.; James Olsen, a reporter and producer from London-based Lion TV; Jeffrey Tomich, energy and environmental reporter from the St. Louis Post-Dispatch; Jon Gertner, contributing writer for The New York Times Magazine; Paul Day, reporter for CBS TV; Brian Vastag, science reporter for The Washington Post; Adam Federman, a reporter for The Nation Magazine, and Kurt Weinschenker, a digital reporter for WTRF TV in Wheeling, West Virginia.

“The fellowship enables leading environmental science, technology and policy journalists to broaden and deepen their knowledge of environmental issues and provides a unique opportunity for Carnegie Mellon faculty to share their research findings with top reporters and editors, and to learn from an outstanding group of professional communicators,” said Dave Dzombak, faculty director for the Steinbrenner Institute and the Walter J. Blenko Sr. Professor of Environmental Engineering.

The Fellows packed many activities into their two days on the Carnegie Mellon campus. They watched a demonstration at the ChargeCar project, learned about “robots that mirror nature” from Mechanical Engineering professor Metin Sitti, and engaged in conversations with Carnegie Mellon faculty on a variety of topics from air quality monitoring and global warming to green building design.

The media fellows had the opportunity to tour some of Pittsburgh’s landmarks, such as PNC Park for a Pirates Game and Kennywood Park, one of the nation’s “greenest” amusement parks. They were also treated to a different perspective of the city skyline during an early evening river cruise hosted by the Allegheny Conference.

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

*photos at right courtesy Ken Andreyo*

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*Media Fellows with Steinbrenner Faculty Director Dave Dzombak.*



*2011 Media Fellows enjoy a river cruise with members of the Allegheny Conference and Steinbrenner Executive Director, Deb Lange.*

# Steinbrenner Institute Event Highlights

The spring and summer are busy times for Carnegie Mellon and the Steinbrenner Institute campus community. Here are some highlights from the past few months:

## Earth Day 2011 Festivities

On Thursday, April 21st, The Steinbrenner Institute and the College of Engineering co-hosted “Flying High and Heels on Wheels”. This event, commemorating Earth Day 2011, featured live bird demonstrations with falconer Eric Schriver and a campus wide bike rally encouraging participants to forgo their gas power transit in favor of a more environmentally sustainable and healthier option for the day.



*Professor Neil Donahue of the Departments of Chemistry and Chemical Engineering, and a daily bike commuter to campus, with Steinbrenner Institute faculty director Dave Dzombak at the Steinbrenner Institute Earth Day event announcing the “Heels on Wheels” competition to promote bike commuting.*



Carnegie Mellon  
**STEINBRENNER INSTITUTE**  
for Environmental Education & Research



## “Engineering Sustainability 2011: Innovation and the Triple Bottom Line” Conference

The Mascaro Center for Sustainable Innovation (at the University of Pittsburgh) and the Steinbrenner Institute co-hosted the fourth biennial *Engineering Sustainability* conference, April 10-12, 2011. The conference featured a number of nationally recognized speakers including Gregory Keoleian, co-director of the Center for Sustainable Systems at the University of Michigan, Frank Rijsberman, Director of Water, Sanitation and Hygiene for the Bill and Melinda Gates Foundation and Gavin McIntyre, co-founder and chief scientist of Evocative Design, LLC. The number of registrants for the 2011 conference hit a new high at 341 attendees, with 60% of the participants coming from academia, 23% from industry, 11% from NGO's, and the rest from government and the press. The Conference was also attended by 33 graduate students, 2 post-doctoral fellows and 6 assistant professors from Carnegie Mellon, all of whom received partial registration subsidies thanks to a grant from the National Science Foundation and support from the Steinbrenner Institute. For more information on the conference please visit the Mascaro Center website: <http://www.mascarocenter.pitt.edu/>

## 2011 Distinguished Lecture Series in Environmental Science, Technology and Policy

The Steinbrenner Institute was pleased to continue sponsorship of the Distinguished Lecture Series in Environmental Science, Technology and Policy in 2011, as part of the University Lecture Series. Three distinguished speakers shared their considerable knowledge of pertinent issues in sustainability and the environment with the Carnegie Mellon community.

In February, we welcomed former Pennsylvania Governor Tom Ridge, who discussed Marcellus Shale Gas Development in Pennsylvania with his lecture, *“Getting It Right on Marcellus: Opportunity, Responsibility, and Security”*. In addition, Ridge discussed his role in enacting environmental policies in Pennsylvania during his tenure as Governor, including the *Growing Greener Initiative* and *Clean and Green* legislation.



Former Pennsylvania Governor Tom Ridge.  
Photo courtesy Ken Andreyo

Also in February, the Steinbrenner Institute hosted scientist Christopher Reddy from Woods Hole Oceanographic Institution. Reddy’s lecture, entitled *“Searching for Subsurface Plumes following the Deepwater Horizon Disaster”* discussed results from a research cruise he undertook in late June 2010 to search for deepwater plumes of oil in the wake of the April 20, 2010 explosion of the Deepwater Horizon rig in the Gulf of Mexico.

Finally on April 4th, the School of Design and the Steinbrenner Institute welcomed the founding director of the Center for Ecoliteracy, and world renowned theorist in systems thinking, Fritjof Capra. Capra, who is the author of five international best-sellers, including *The Tao of Physics* and *The Web of Life*, discussed the *“Science of Sustainable Living”*.

To learn more about the University Distinguished Lecture Series and other community events, please visit the *Events* page of the Steinbrenner website!



Fritjof Capra addresses the Carnegie Mellon community.  
Photo courtesy Sharon L. West, School of Design

[www.cmu.edu/steinbrenner/events](http://www.cmu.edu/steinbrenner/events)

# M. Granger Morgan Receives Prestigious Award For Academic Innovation from American Society for Engineering Education

By Chriss Swaney, Carnegie Mellon College of Engineering Public Relations Director

Carnegie Mellon's M. Granger Morgan received the Chester F. Carlson Award at a special awards ceremony on June 29 at the American Society for Engineering Education (ASEE) Annual Conference and Exposition at the Vancouver Convention Center in Vancouver.

"This is a wonderful surprise, and I'm thrilled to be receiving such a distinguished award for work that encompasses the challenges and intellectual satisfaction of seeing so many of my students excel in both work and life," said Morgan, a University Professor who holds the Thomas Lord Chair in Engineering and is head of Carnegie Mellon's Department of Engineering and Public Policy.

The Chester F. Carlson Award, sponsored by the Xerox Corporation, recognizes an individual innovator in engineering education, who, by motivation and ability to extend beyond the accepted tradition, has made significant contributions to the profession. This particular award recognizes Morgan for his outstanding leadership and attentive nurturing of Carnegie Mellon's Department of Engineering and Public Policy (EPP), the first of its kind in the nation.

"Carnegie Mellon's Department of Engineering and Public Policy is both unique and innovative in its approach to tackling critical issues that span everything from climate change to security," said Pradeep K. Khosla, the Dowd University Professor and dean of Carnegie Mellon's top-ranked College of Engineering. "Morgan is deserving of the award

for his novel approach to engineering education that has taught so many people around the world about how to deal with uncertainty."

At Carnegie Mellon, Morgan directs the Climate and Energy Decision Making Center, and is co-director of the Electricity Industry Center.

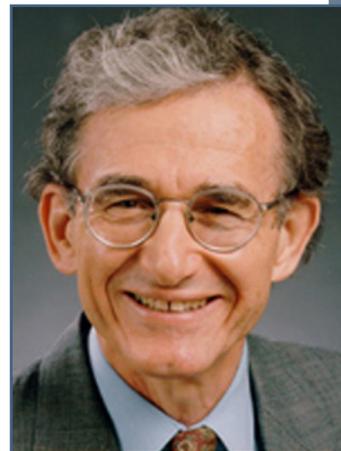


## In Memoriam: Carnegie Mellon Professor Lester Lave

Carnegie Mellon University Professor Lester B. Lave, one of the nation's leading environmental economists, died at his home in Pittsburgh on May 9, 2011, after a four-month struggle with cancer. He was 71.

Lave was the Harry B. and James H. Higgins Professor of Economics at the Tepper School of Business, professor of Engineering and Public Policy, director of the Green Design Institute and co-director of the Carnegie Mellon Electricity Industry Center.

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# 2011-2012 Steinbrenner Institute Graduate Research Fellows Announced

The Steinbrenner Institute Graduate Fellowship program provides support to eligible graduate students across all 7 colleges at Carnegie Mellon who are involved in environmentally-focused, interdisciplinary research projects on topics aligned with the strategic focus areas of the Steinbrenner Institute. The 2011-2012 Fellows include Wayne Chuang (Chemical Engineering), Wee-Liat Ong (Mechanical Engineering) and Arvind Murali Mohan (Civil and Environmental Engineering). Ahmed Abdulla (Engineering and Public Policy) was named the Steinbrenner Institute-Robert W. Dunlap Graduate Research Fellow for 2011-2012.

The following are excerpts from the Steinbrenner Institute Fellows proposals explaining the environmental and sustainability focus of their research.

## **Wayne Chuang, “Characterization and Aging of Black Carbon Particles”**

Faculty Advisors: Neil Donahue, Chemical Engineering/Chemistry; Allen Robinson, Mechanical Engineering/Engineering & Public Policy

“This project sits at the intersection of research in the Center for Atmospheric Particle Studies (CAPS) and the Center for the Environmental Implications of Nanotechnology (CEINT). It addresses key issues of sustainability via health effects and climate science – by better understanding the behavior of black carbon particles in the atmosphere we will be able to inform policy makers seeking to address these critical issues.”

## **Wee-Liat Ong, “Enabling Greener Solar Cells, Automobiles, and Devices through Hybrid Organic-Inorganic Thermoelectric Materials”**

Faculty Advisors: Jonathan A. Malen, Mechanical Engineering/Materials Science & Engineering and Alan J. H. McGaughey, Mechanical Engineering/Materials Science & Engineering

“Advanced thermoelectric materials will make efficient and cost-effective waste heat recovery solutions a reality. Reclaiming this thermal energy will set off a chain of beneficial environment outcomes including zero waste heat pollution, reduced usage of ozone-depleting coolants, and less greenhouse gas and water pollutant emission.”

## **Arvind Murali Mohan, “Determining the Microbial Impacts on the Fate of Radionuclides in Flowback Water from Hydraulic Fracturing of the Marcellus Shale”**

Faculty Advisor: Kelvin B. Gregory, Civil & Environmental Engineering

“The overarching goals of this study are to provide the natural gas developers and their regulators with timely and new information about radioactivity in their industry and guide the development of water management strategies that enable the harvesting of natural gas resources while protecting our other natural resources.”

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# 2011-2012 Steinbrenner Research Fellows

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## Ahmed Abdulla, “Investigating the Economic Viability of Small, Modular Nuclear Reactors”

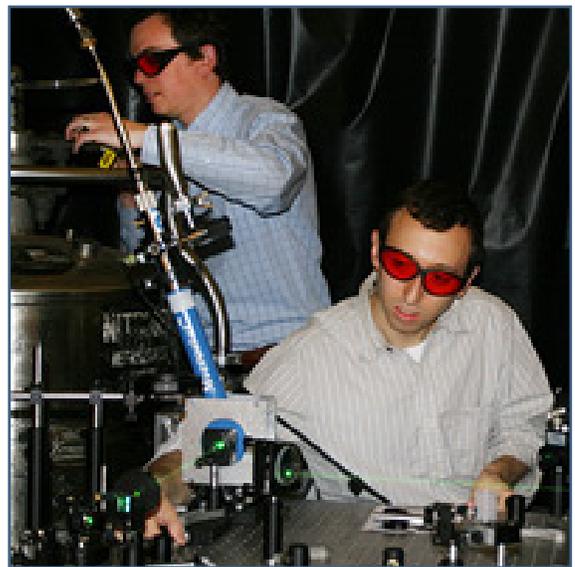
Faculty Advisors: Inês Azevedo, and Granger Morgan, Engineering & Public Policy

“According to the Survey of Emerging Nuclear Energy States, thirty-four countries aspire to join the club of nuclear energy states. The IMF classifies all but two of these –Israel and Italy – as emergent (or developing) economies. These countries will contend with challenges that developed countries do not need to address: poor electricity transmission infrastructures, high risk political environments that make larger plants too tempting a target for attack, and poor liquidity that makes financing a large nuclear power plant virtually impossible. These countries’ development is inevitable, and so is the fact that economic growth will increasingly emanate from these energy-hungry societies. As this transition takes place, it is imperative to look towards establishing electricity production portfolios that rely less on fossil fuels and more on nuclear power and renewable technologies.”

# 2010-2011 Steinbrenner Graduate Fellow Scott Schiffres: Exploring the Unknown

Scott Schiffres knew he wanted to find a Ph.D. program where he could explore ground-breaking energy transportation technologies. But he wanted more. Reputation. Resources. Even intangibles like compatibility with an advisor. All were critical. Schiffres says he found the perfect fit at Carnegie Mellon University.

Key to his choice was Professor Jonathan Malen, his advisor, who is working to create more precise thermal management devices critical to the cooling of sensitive electronic components used in energy transport at the nanoscale. “CMU’s research in this area is cutting-edge,” Schiffres explained. “Professor Malen motivates us with his enthusiasm for exploring the unknown.”



Professor Jonathan Malen (L) and Scott Schiffres (R).

Schiffres says Malen communicates this excitement not only in the lab but also in the classroom. “His talent as a researcher extends to his roles as mentor and instructor as well.”

Building from his initial work on thermoelectric devices in 2010-2011 with support of a Steinbrenner Institute

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# Scott Schiffres: Exploring the Unknown

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Graduate Fellowship, Schiffres is now funded by a new, three-year, \$360,000 grant from the U.S. Air Force to Professors Malen and McGaughey. This work could also improve technologies related to energy conversion, thermal management and high-resolution imaging. Schiffres emphasizes that successful research relies heavily on collaboration, and Malen has succeeded in building a highly compatible team. “In addition to learning from and helping each other, we always have a good laugh,” Schiffres said.

Malen says he tries to convey the sense of contribution that he and fellow faculty members feel when breaking new ground in research. “The smart students that attend CMU need to be challenged, so they can experience the satisfaction of discovery,” Malen said, pointing to the dedication students have in the lab. “Scott is no exception. He comes early and stays late, and is genuinely one of the most curious people I’ve ever met. This has and will lead to his success.”

For additional information on Energy & Environment at Carnegie Mellon visit:  
<http://www.cmu.edu/homepage/environment/>

# Steinbrenner Institute Faculty Director Dave Dzombak Participates in National Lecture Tour on Environmental Issues

Dave Dzombak, the Walter J. Blenko Sr. Professor of Civil and Environmental Engineering and faculty director of the Steinbrenner Institute for Environmental Education and Research, was selected to give a series of nationwide lectures on environmental issues for the members of the Association of Environmental Engineering and Science Professors (AEESP).

“I’m honored to have been selected by my colleagues as the AEESP lecturer for 2010-2011,” said Dzombak. For more than two decades, Dzombak has conducted leading-edge research in the areas of aquatic chemistry, water quality engineering, environmental restoration, and environment and energy.

The tour featured two lectures: “Need and Challenge of Alternative Water Sources for Use in Electric Power Production,” and “Geologic Sequestration of CO<sub>2</sub>: Evaluating and Monitoring Seal Rock Integrity.”



*Steinbrenner Faculty Director Dave Dzombak at the TECO Electric Power Station, in Tampa, Florida.*

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## Dzombak Lecture Tour

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Dzombak visited 18 universities across the U.S. He also spoke at the Metropolitan Water Reclamation District of Chicago, an event that was open to the engineering community of greater Chicago.

The tour visits included lectures for AEESP members, faculty, staff and students of participating institutions, as well as, offering Dzombak the opportunity to engage with students during poster sessions and forums at the schools. The events were designed to allow all members of the universities' engineering community to share ideas and thoughts about important and topical issues in environmental engineering. "The lecture tour has been very popular because the topics our themed speaker is presenting are so very current and critical to ongoing national debates about energy and water use," said Sarina Ergas, head of the AEESP lecture series committee and an associate professor of civil and environmental engineering at the University of South Florida.

You can read Professor Dzombak's travel log from the lecture tour by visiting the AEESP website, and viewing the May 2011 AEESP Newsletter. <http://www.aeesp.org/pdf/publications/AEESPNL.46.2.2011.pdf>



Dave Dzombak (second from left) at Louisiana State University, with AEESP colleagues (left to right) Prof. Louis Thibodeaux, Prof. Kalliat Valsaraj, Prof. Clint Willson

## Congratulations!

It has been a busy season of awards and presentations for Carnegie Mellon students. Here is some of the highlighted research that the Steinbrenner Institute has been excited to co-sponsor and honor:

### Undergraduate Research Awards

The Undergraduate Environmental Research Awards, co-sponsored by the Steinbrenner and Green Design Institutes, was a featured part of the *Meeting of Minds* undergraduate research symposium held on May 4, 2011. The first place winner of the Undergraduate Environmental Research Award was Kristen Severson of Chemical Engineering with her presentation, "Optimal Production of Biodiesel from the Transesterification of Algal Oil using Bioethanol." Kristen was awarded a \$250 prize for her work.

The runners up included the team of engineering students Jule Carr, Carineh Ghafafian, Elissa Goldner, Mahaesh Jayaraman, Lane Kurkijian, Anna Lenhart, Kaiyang Liew, Agnieszka Marszalik, Tejank Shah, Lauren Sittler and Cynthia Clement (mathematics), with their project, "A Feasibility Study of Bio-Gas Digesters and Composting Systems at Carnegie Mellon University"; and also Civil and Environmental Engineering students, Dyanna Becker and Daisy Wang, with their presentation, "Analysis of the Thermal Performance of Green Roofs".

Congratulations to all of the *Meeting of the Minds* winners!

# Congratulations!

## Graduate Research Presentations

On April 6, 2011 the Steinbrenner Institute sponsored the 1<sup>st</sup> annual poster session and reception for graduate student research in environmental engineering, science, and policy. This event was held in conjunction with the Institute for Complex Engineered Systems 25<sup>th</sup> Anniversary Celebration and featured a number of the Steinbrenner Institute Graduate Research Fellows including:

Catherine Izard • Anita Lee • Yeganeh Mashayekh • Scott Schiffres • Elizabeth Traut • Jessica Wilson

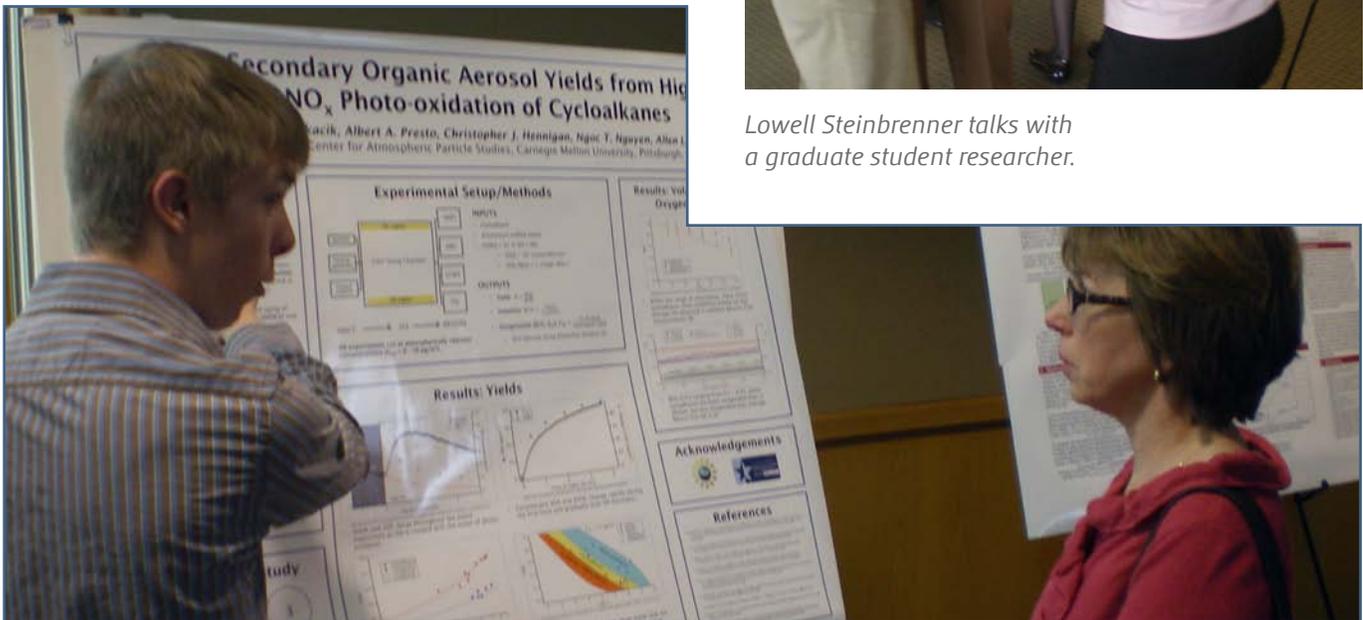
The event showcased the work of over 25 graduate students of from a variety of University disciplines including the School of Design, the English department, Engineering and Public Policy, and Civil and Environmental Engineering.



Steinbrenner faculty director Dave Dzombak with graduate student Erica Trump.



Lowell Steinbrenner talks with a graduate student researcher.



Students engage with faculty and staff during poster presentations  
continues on page 10...

# Steinbrenner Corporate Partnership

## Announcing NEW Steinbrenner Institute Environmental Education Development Grants

The Steinbrenner Institute provides small grants to students, staff and faculty for the development or enhancement of formal and informal environmental education programs. Applications are accepted on a 'rolling' basis and the maximum amount of a SEED grant is \$2500. Applications will be evaluated using and should comply with the following criteria:

- Eligible activities include course development, projects, workshops, events, or conferences; students must be involved in the program; provision of some level of matching funds must be demonstrated.
- Grantees will be expected to write an article for a future Steinbrenner newsletter and present a poster about their program at the annual Steinbrenner Institute poster session.

For more information or to submit and letter application, please contact Deborah Lange, [dlange@cmu.edu](mailto:dlange@cmu.edu) or (412) 268-7121.

## Steinbrenner Institute Corporate Partnership Joins Forces with SURF for Annual Meeting

The second Steinbrenner Institute Corporate Partnership (SICP) program was held in conjunction with the annual Sustainable Remediation Forum (SURF) on the Carnegie Mellon campus on October 5<sup>th</sup> and 6<sup>th</sup> 2010. SURF "promotes the use of sustainable practices during implementation of remedial action activities with the objective of balancing economic viability, conservation of natural resources and biodiversity, and the enhancement of the quality of life in surrounding communities" ([www.sustainableremediation.org](http://www.sustainableremediation.org)). The theme of the 2010 SURF was "Building Bridges among Stakeholders". The meeting featured a keynote address from Deborah Lange, Executive Director of the Steinbrenner Institute and the Western Pennsylvania Brownfields Center, as well as a host of community and economic development experts from the Carnegie Mellon and the SURF communities. To view the presentations by Deborah Lange, Colin Horwitz from the Institute for Green Science, and Robert Cavalier, of the Center for the Advancement of Applied Ethics and Political Philosophy, visit the SICP section of the Steinbrenner website <http://www.cmu.edu/steinbrenner/Corporate%20Partnership/2010-sicp-meeting.html>

The goal of the SIPC program is to conduct cooperative world-class research in environmental science, technology, management, and policy to provide innovative solutions to environmental challenges. Through the SICP, the Steinbrenner Institute seeks solutions to specific issues and needs of the partners within Steinbrenner's broader theme of '*Transitioning to an Environmentally Sustainable Society.*' For more information on joining the Steinbrenner Institute Corporate Partnership program please visit the Corporate Partnership section of the Steinbrenner website.

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# A Conversation with Professor Peter Madsen about the 2011 “Environment Today” course

The annual Environment Today course was held March 25-27, 2011 in Posner Hall. The topic of the spring course was *“Biodiversity and Environmental Justice”*. The weekend course covered complex issues dealing with environmental impacts for current and future generations. The course was led by Professor Peter Madsen, Distinguished Service Professor of Ethics and Social Responsibility in the H. John Heinz III School of Public Policy and Management, and supported by a generous grant from the Heinz School. Throughout the weekend, 77 undergraduate and 20 graduate students enrolled and engaged with a diverse lineup of speakers including Carnegie Mellon faculty members John Soluri, Christine Mondor, and Joel Tarr. The course also featured members of the local foundation and non-profit communities, and faculty members from Chatham and Duke Universities, and the University of Pittsburgh. The Steinbrenner Institute recently put some questions to Professor Madsen concerning the evolution of the 2011 Environment Today course, and some of the more interesting developments from the course. Here are some excerpts from that conversation.

***Can you tell me why and how the topics of Biodiversity and Environmental Justice were chosen for the 2011 Environment Today course?***

“Last year and this past March, the Environment Today course was collaboratively designed with the assistance of two student leaders, Dyana Becker, President of the student environmental organization Sustainable Earth, and Erica Spiritos, President of the student branch at Carnegie Mellon of Engineers Without Borders. Based upon a survey of attendees of the course in March 2010, the topics for the 2011 course were chosen. In addition, one purpose of this course is to focus upon and explore topics that could be called timely and controversial and the issues within the broad areas of biodiversity and environmental justice were (and are) exactly that.”

***Were there specific highlights that were mentioned by students who attended the course?***

“In this year’s course survey taken of students who were enrolled for course credit, there were several comments about what they found to be highlights of the program. First, they were very happy with the schedule of course presenters, in particular with the great variety of different views presented by the speakers. They found the “course concept” to their liking in that they could attend sessions throughout a weekend and be immersed in the topics, which the course investigated. Also, students said that while the technical level of the presentations were high, the speakers were engaging and able to relate their presentations to the student’s personal lives. One student expressed his or her feelings by calling the course “amazing!”

***What are some of the positive outcomes for students who choose to take part in the Environment Today course?***

“Through this course students have the chance to become acquainted with the excellent environmental research and scholarship that is conducted by Carnegie Mellon faculty and additional experts from various other national and local colleges and universities. This past course saw faculty from Duke University, the University of Pittsburgh and Chatham University. Likewise students heard reports of work being done “in the trenches” from

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# “Environment Today” course

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practitioners who have been laboring to resolve the problems associated with environmental justice and biodiversity. As a result, the most positive outcome for students in the course was a raising of their level of awareness of these significant environmental issues.”

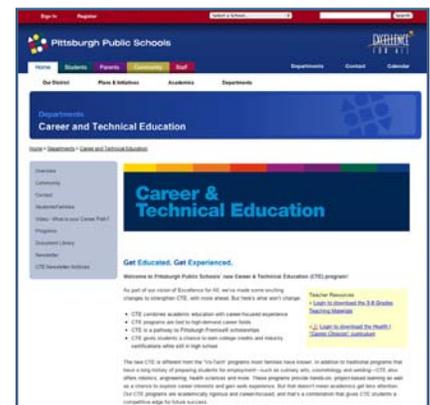
***In your opinion, how does the Environment Today course help to enrich the sustainability and environmental education climate at CMU?***

“There are two main ways that this course contributes to the furtherance of sustainability and environmental education at CMU. First, because it reaches so many students and members of the campus community, it underscores the importance that we place on such matters. Second, given the excellent quality of the presentations, the course contributes to the knowledge base of those who attend and students who chose to take the course for credit had to submit a research paper on an issue raised during the weekend which gave them the time to reflect upon their learning experiences.”

For more information on Carnegie Mellon’s Weekend Today courses, visit the Weekend Today website at <http://www.cmu.edu/weekend-today/index.html>

## Carnegie Mellon Students Featured in Pittsburgh Public Schools “Engineering, Architecture and Construction Virtual Tour”

In February 2011, the Pittsburgh Public Schools (PPS) unveiled their new Career & Technical Education (CTE) program. As a part of the new CTE curriculum, engineering and architecture students from Carnegie Mellon were interviewed for a 10 minute video introducing students to the creative and technical career paths that are open to them and providing some insight into how to prepare for a future in one of those fields. In addition to encouraging Pittsburgh Public School students to pursue challenging math and science classes, CMU students suggested that future engineers and architects explore classes in writing, languages, and computer programming to round out their educational backgrounds. Pittsburgh Public Schools plans to use this video segment as an addition to their Career & Technical Education curriculum for grades 3-8. To view the PPS produced video featuring Carnegie Mellon students, Natalie French, Kevin H. Williams, Mark Zhuang, and Greg Yuen please visit the PPS website at <http://www.ppstube.tv/play.php?vid=671>.



# The “Green Scene” at Carnegie Mellon



This is the first installment of a new feature in the Steinbrenner Institute newsletter. In each issue, we will feature some “Green” news from Carnegie Mellon campus departments, interesting topics being addressed by the Green Practices Committee, as well as, upcoming events, environmental education opportunities and conferences that might be of interest to our readers and the Carnegie Mellon community at large.

## 2011 Recyclemania Results!

Recyclemania is an annual 10 week long competition that allows colleges and universities to compare their recycling rates and waste generation statistics against other schools in their peer group and against previous year’s totals. Carnegie Mellon has been participating in this national competition since 2004.

The 2011 results continue to show the positive effects of the campus community’s commitment to sustainability. Carnegie Mellon was able to increase our overall recycling rate (the percentage of total generated waste that is recycled) from 16% in 2010 to 18.4% in 2011.

To visit the full menu of Carnegie Mellon’s recycling statistics please visit the Recyclemania website at: <http://www.recyclemaniacs.org>

## Breaking News!

Carnegie Mellon is ranked third on the U.S. Environmental Protection Agency’s (EPA) top 20 list of college and university green power purchasers. As of 2011, Carnegie Mellon University will purchase 100% of its energy from renewable sources (Source: 8.5x11 Newsletter). The University of Pennsylvania ranks first and Oregon State University second on the EPA list. Read more: <http://www.epa.gov/greenpower/toplists/top20ed.htm>.

## Green Tours and Gigapans!

The Green Practices website has lots of great information about the innovative design aspects of the Carnegie Mellon campus. Among the newest items on the website are the Gigapan photos of sites featured on the campus Green Tour. These photos were compiled and posted by three former Civil and Environmental Engineering graduate students, Wei-Yang Chen, Swapna Sridharan, and Kayna Shipp. The photos allow the viewer to truly experience several of spots highlighted on the Green Tour map. To view the Green Tour and the photos visit the Green Practices website <http://www.cmu.edu/greenpractices/campus-green-tour/index.html>

## Get In My Belly!

Ten Big Belly solar waste & recycling stations have been placed around the Carnegie Mellon campus. These waste containers compact 5 times more trash, using solar energy for power and using wireless technology to indicate when they are full.



# Carnegie Mellon Representatives Speak on Sustainability at ACPA Conference

The American College Personnel Association, a division of the National Center for Higher Education, hosted the fourth annual Institute on Sustainability this June at the University of Colorado at Boulder. The conference brings together students, staff and faculty from colleges and universities across the United States to share their stories and tips on campus greening. The goal of the annual conference is to provide a toolkit to engage faculty, staff and student populations in the many different facets of campus sustainability, including weaving sustainability into the curriculum, green design and campus renovation projects, and encouraging student activism in the areas of campus greening.



*Vanessa Schweizer, Indira Nair, and Shernell Smith at the ACPA Conference.*

The Conference featured three prominent members of the Carnegie Mellon community in the Higher Education Panel discussion and presentation; Indira Nair, former Vice Provost Emeriti and Professor of Engineering and Public Policy, M. Shernell Smith, leader of diversity and multicultural initiatives in the Division of Student Affairs, and former PhD student in Engineering and Public Policy, Vanessa Schweizer.

The three discussed their experiences in weaving sustainability through all aspects of the campus environment including procedural, curricular, social and administrative. The presentation, entitled, “Integrating Sustainability into the Fabric of Campus: The Carnegie Mellon Experience” discussed the need for broad levels of participation and meaningful communication among stakeholder groups while building a “comprehensive vision and actionable plan for integrating sustainability into the tartan of your campus”.

“It was heartening and energizing for me to see devoted Student Affairs and facilities staff dedicating time to understanding how to implement environmentally sustainable ways on campuses. It wasn’t about academic concerns alone - it was about actually inspiring, informing and helping students and the rest of the campus live sustainably,” said Vice Provost Emeriti, Indira Nair about the ACPA Institute on Sustainability. Vanessa Schweizer, who is currently a post-doctoral fellow at the National Center for Atmospheric Research, added that “Each of us -- as faculty, staff, students, or alumni -- has a unique vantage point for inspiring and working with others in the campus and broader communities to make sustainability a reality. Thus none of us should be shy about stepping forward to build bridges that might develop our collective capacity to think and act sustainably.”

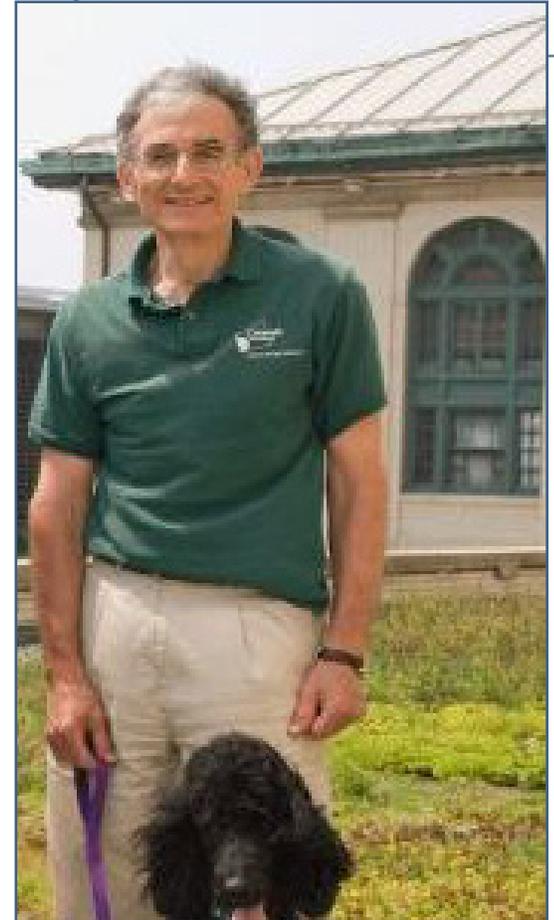
For more information on ACPA campus sustainability efforts visit their website at <http://www.myacpa.org/task-force/sustainability/>

# In Memoriam: Carnegie Mellon Professor Lester Lave

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“Lester Lave was an icon at Carnegie Mellon, where he had achieved the highest plateaus in scholarship and friendship,” said Mark Kamlet, provost and executive vice president at Carnegie Mellon. “His work transcended many fields, most notably in areas of risk, the environment and economic decision making. The world has been changed by his work; a claim that not many can make. A multitude of friends worldwide are left behind but his work continues through these same colleagues and friends, as well as his former students.”

“Lester was a remarkable professor, researcher and colleague,” said Robert Dammon, dean of the Tepper school of Business. “He was a beloved teacher and a prolific scholar, admired by his students, academic peers and policy-makers. He created a body of meaningful research, placing him among the world’s most respected thought-leaders on global energy issues and public policy.



*Professor Lester Lave*

Lave spent most of his career at Carnegie Mellon applying tools developed in economics and risk analysis to problems that profoundly affect the lives of millions of people. Lave first came to international prominence in the 1970s when, together with his student Eugene Seskin, he used statistical methods to demonstrate that air pollution in American cities was causing a significant increase in death rates. While these results were vigorously contested by industry when they first appeared, the findings have been widely supported by subsequent research, and they served as a key early basis for EPA regulations to improve air quality.

Lave had an outstanding ability to choose important problems, perform careful analysis, and present results that questioned conventional wisdom. Much of Lave’s research focused on the problems of balancing environmental and other risks with economic and other social objectives. “Throughout his career, Lester Lave made substantial contributions to advancing environmental science, policy and regulatory approaches in the United States and worldwide,” said David Dzombak, the Walter J. Blenko Sr. Professor of Civil and Environmental Engineering and faculty director of Carnegie Mellon’s Steinbrenner Institute of Environmental Education and Research. “In addition to using his powerful intellect, creativity and communication skills to make research contributions, he has used these same gifts to bring research developments and new thinking about environmental stewardship to the public realm.”

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# Lester Lave Obituary

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Lave did his undergraduate work in economics at Reed College in Portland, Ore., where he graduated Phi Beta Kappa. He earned his Ph.D. in economics at Harvard University. He often collaborated in research on health care delivery with his wife, Judith—also a Harvard-trained economist—who is a professor at the School of Public Health at the University of Pittsburgh.

In 1982, in recognition of his many contributions to environmental and public health, Lave was elected to the Institute of Medicine (one of the three arms of the National Academy of Science). He served on, and chaired, numerous study committees of the National Academies, and most recently chaired the academy report “Real Prospects for Energy Efficiency in the United States,” which demonstrated large opportunities for saving energy by improving buildings. At the time of his death he was chairing an academy committee on whether and how to make motor fuels from biomass.

For the past 15 years, Lave has devoted much of his attention to two problems: green design and restructuring and improving the electricity system. He helped to found and served as director of Carnegie Mellon’s Green Design Institute which has focused on finding environmentally acceptable ways of manufacturing, using, disposing of, and recycling products.

A greatly loved teacher, he counted among his students CEOs of some of the nation’s best-run companies. He also was the primary mentor of 40 doctoral students who have gone on to successful academic careers.

With the exception of five years at the Brookings Institution in Washington, Lave spent his entire professional career at Carnegie Mellon, where he published or contributed to 28 books and more than 400 professional and other publications.

He served for eight years as the head of Carnegie Mellon’s Department of Economics. His academic appointments spanned the Tepper School of Business, the Department of Engineering and Public Policy in the College of Engineering, and the H. John Heinz III College’s School of Public Policy and Management.

Lave is a past president of the Society for Risk Analysis and has served on many committees of the National Academies of Science and Engineering, the American Association for the Advancement of Science, the American Medical Association, and the Office of Technology Assessment. He also is a founding member of Pittsburgh’s Group Against Smog and Pollution.

In 2010, Lave received the Prestigious Richard Beatty Mellon Environmental Stewardship Award from the Air and Waste Management Association. The award is given to an individual whose contributions of a civic nature have aided substantially in pollution abatement and for developing increased interest for the cause of air pollution control and waste management for the betterment of the environment.

Lave is survived by his wife, Judith, their two children, Jonathan M. Lave of Washington, D.C., and Tamara R. Lave of Miami, Fla., and two grandchildren.

# Steinbrenner Institute Hosts Rachel Carson Homestead Event

On June 29<sup>th</sup>, the Steinbrenner Institute was pleased to host a screening of “*Rachel Carson’ Silent Spring*”. This documentary chronicled the life and struggles of biologist Rachel Carson, as one of America’s first and most influential environmentalists. A number of Carnegie Mellon alumni, faculty and staff have been involved in the efforts of the RCHA over the years and as such the Steinbrenner Institute was happy to be asked to offer our support of the Rachel Carson legacy preservation efforts. The event was one of many held to draw attention to the Rachel Carson Homestead Association’s participation in the national “This Place Matters” competition presented by the National Trust for Historic Preservation. The contest allowed community organizations and individuals to enter sites of historic and cultural significance to their communities and to compete for votes. The site winning the most votes received \$25,000 to be used towards preservation efforts. 100 organizations participated in the contest and over 80,000 votes were cast!

The Rachel Carson Homestead Association (RCHA) finished in 5<sup>th</sup> place, with 7,000 votes, beating 95 other organizations nation-wide. The contest helped to draw national attention to the life of Rachel Carson and the efforts to preserve her childhood home. RCHA is continuing their efforts to raise preservation funds by creating the First Annual Pittsburgh Community Experiences Fundraiser. This fundraiser features prizes to be drawn on September 15 with proceeds benefiting the RCHA restorations. For more information on the fundraiser, Rachel Carson Homestead Association memberships and RCHA in general, please visit the website at [www.rachelcarsonhomestead.org](http://www.rachelcarsonhomestead.org).



# Upcoming Events

## Cèilidh: Homecoming, Family Weekend and International Festival October 27-30, 2011

*Cèilidh [ka-le]: n. a Scottish Gaelic term meaning “visit,” used to describe a celebration with stories and tales, poems and ballads, music and dance. Cèilidhs were traditionally hosted in family and friends’ homes.*

Be a part of Carnegie Mellon’s inaugural Cèilidh Weekend, a celebration for the entire CMU family, combining the traditions of Homecoming Weekend, International Festival and Family Weekend. Alumni, families, students, faculty and staff are all invited.

Weekend highlights include:

- President’s Address
- Alumni Awards
- Faculty and Student Lectures and Panels
- Art Exhibits



For more information and full line-up of the Cèilidh events visit the event website at <http://www.cmu.edu/ceilidh/>.

## Carnegie Mellon to Host North America’s Largest Conference on Sustainability in Higher Education

The Steinbrenner Institute and Carnegie Mellon University are proud to announce our involvement as one of the Campus Host Sponsors for the AASHE 2011 Conference and EXPO in Pittsburgh, Pennsylvania on October 9, 2011. This annual three-day conference presented by the Association for the Advancement of Sustainability in Higher Education (AASHE), is the largest North American conference focused on sustainability in higher education, expected to draw over 2500 participants to Pittsburgh, from more than 10 countries. AASHE has a reputation for providing the greatest campus sustainability information exchange and in-depth experience within this conference format. The focus of the 2011 conference is creating sustainable campuses and communities and will include community service projects for both conference attendees and Student Summit participants

Kicking off the conference will be Dr. Wangari Maathai, Nobel Peace Laureate and Founder of the Green Belt Movement. Additional keynote speakers include Sandra Steingraber, author and ecologist, and Tim White, Chancellor of the University of California Riverside. Bill McKibben, founder of 350.org will join as the AASHE Student Summit Keynote presenter. Dr. Mitchell Thomashow, former president of Unity College; Leith Sharp, Executive Director, Illinois Green Economy Network; and well known environmentalist David Orr from Oberlin College will speak to intimate audiences during the 3 day event.

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# Upcoming Events



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## **Carnegie Mellon to Host North America's Largest Conference on Sustainability in Higher Education**

CMU's faculty, staff and students presenting at the conference include:

- Martin Altschul, University Engineer, Facilities Management Services
- Chris Gassman, Student, GBA Sustainability Committee, Chair, Tepper School of Business
- Barb Kviz, Environmental Coordinator, Facilities Management
- Anna Lenhart, Student
- H. Scott Matthews, Professor of Engineering and Director of Green Design Institute
- Lauren Sittler, Student
- M. Shernell Smith, Multicultural & Diversity Initiatives, Student Affairs

The Steinbrenner Institute and Green Practices will be providing a tour of several campus LEED new construction or commercial interiors building projects and environmental research centers. The Tour will continue to Phipps Conservatory and Botanical Gardens, future home of one of the world's first Living Buildings. Phipps commitment to conservation, biodiversity and sustainability is demonstrated through its earth-sheltered LEED® Silver Welcome Center, state-of-the-art Production Greenhouse, revolutionarily designed Tropical Forest Conservatory, and future net-zero energy and net-zero water Center for Sustainable Landscapes.

### **AASHE 2011 Conference and Expo**

October 9 – 12, 2011

David L. Lawrence Convention Center

Pittsburgh, Pennsylvania

For more information: <http://conf2011.aashe.org>

### **AASHE Student Summit**

October 9, 2011

David L. Lawrence Convention Center

Pittsburgh, Pennsylvania

For more information: <http://conf2011.aashe.org/program/aashe-student-summit>



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## Welcome!

The Steinbrenner Institute for Environmental Education and Research is pleased to welcome a new staff member, Erika Ninos. Erika recently joined the Steinbrenner staff as the environmental program coordinator. She comes to Carnegie Mellon from a recent position with Chatham University. Erika holds a master of science in sustainable systems, with a concentration in environmental education from Slippery Rock University. She has worked in the environmental and sustainability community in Pittsburgh for many years, having held positions at both Phipps Conservatory and Botanical Gardens and the Pennsylvania Resources Council.

Erika will be responsible for much of the content of the Steinbrenner newsletter and the website, as well as assisting with programming for campus sustainability projects. She will also be assisting Professor Jeanne VanBriesen with a new National Science Foundation IGERT (Integrative Graduate Education and Research Traineeship) program; *Nanotechnology-Environmental Effects and Policy* (NEEP). You can reach her via email at [elninos@cmu.edu](mailto:elninos@cmu.edu) Welcome Erika!



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