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Steinbrenner Institute Corporate Partnership Launched

Carnegie Mellon has a long tradition of innovative, collaborative research with industry in environmental science, technology, and policy. To build upon this tradition and develop new opportunities for collaborative projects with companies, the Steinbrenner Institute Corporate Partnership (SICP) has been formed and held its first annual meeting on July 9-10, 2008.

Eden Fisher of Carnegie Mellon speaks with Hasso Weiland of Alcoa.

The first annual meeting of SICP was an engaging, dynamic event that attracted 30 participants representing 22 different companies. Presentations in the three themed sessions – carbon footprinting, sensing for water and infrastructure management, and green buildings and energy efficiency – generated lively discussions and information sharing about recent advancements, opportunities for development, and research needs. Discussions with groups of companies are underway to define specific research projects. A follow-up workshop focused on carbon footprinting has been scheduled for January 2009 (see box on page 11).

The mission of the SICP is to conduct cooperative world-class research in environmental science, technology, management, and policy to provide innovative solutions to
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Selected Contents:

Wishing you and your family a peaceful and safe holiday season from the Steinbrenner Institute!

Reflections on the 2008 Seed Awards

This past summer, the 2007-2008 Steinbrenner Institute Seed Grant recipients had the opportunity to present their projects to Mr. and Mrs. Steinbrenner at Carnegie Mellon. Projects included an apprentice program for high school students, an immersion course on corporate social responsibility and two student projects: the Solar Decathlon House and the Solar Splash competition.

Deanna Matthews, research engineer in Civil and Environmental Engineering, presented on the Green Design Institute's apprenticeship program for local high school students. The program exposes students to the field of engineering and its various disciplines, and builds connections for them between engineering and environmental and social issues.
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Model of the Solar Decathlon House

The Capitol Calls:

Engineering Students Invited to Energy Forum in DC

In November 2007, a team of Civil and Environmental Engineering (CEE) and Engineering and Public Policy (EPP) graduate students organized through the Steinbrenner Institute won first place in the Johnson Controls TEAMS essay competition. The Johnson Controls competition for Tomorrow's Energy Ambassadors, Managers and Scholars (TEAMS) sent out an invitation to college seniors and graduate students to draft collaboratively an open letter to the field of 2008 presidential candidates urging them to clarify their positions on important matters related to energy and sustainability. (The letter can be found on the Steinbrenner web page, see the November 20, 2007 press release under the 'NEWS' section)

As a result of winning the competition, the team was invited to attend the 2008 Energy Efficiency Forum at the National Press Club in Washington, D.C., June 11-12, 2008 as a guest of Johnson Controls. The winning team included Shazeen Attari (CEE), Inês Margarida Lima de Azevedo (EPP), Constantine Samaras (EPP), and Benjamin Flath (CEE). "This event was very different from the usual energy conferences I attend because most of the talks were politically oriented, and not technical at all." Azevedo recalls.

Events on the first day of the Forum included a congressional reception during which the students were able to speak with industry and government representatives, and faculty and students from other universities working on energy and sustainability issues. Azevedo had an opportunity to meet with a representative from the Edison Electric Institute, staff members from Pennsylvania State University who "knew about our recent undergrad course project on 'Sustainable Campus,'" and John Brenner, the mayor of York, PA.

On day two, an energy efficiency forum was held with speakers including Maria Vargas, director of strategic partnerships in the Climate Protection Division at the Environmental Protection Agency; Assistant Secretary for Energy Efficiency and Renewable Energy Andy Karsner; Director of the National Commission on Energy Policy Jason Grumet; U.S. Secretary of Energy Samuel W. Bodman; U.S. Senator (MN) Amy Klobuchar; and Chairman of the Coalition for a Democratic Workplace George Allen.

The event was a chance for the students to make connections with their own research. Costas "met a lot of great contacts for my research into plug-in hybrid vehicles, renewable energy, and sustainability in both industry and government."

The forum gave the students an opportunity to feel that they can make a difference with real-world energy and sustainability issues. Regarding the Steinbrenner Institute giving them this opportunity, Costas says that "the Steinbrenner Institute has been a wonderful resource for all of us, and truly a testament to the type of interdisciplinary work that makes Carnegie Mellon such an exciting place."

Urban Land's Life Cycle

The U.S. Environmental Protection Agency recently awarded the Western Pennsylvania Brownfields Center (WPBC) with a Training, Research and Technical Assistance grant. WPBC is partnered with the Pennsylvania Downtown Center in this five-year, $900,000 project, entitled "Assessing Brownfield Sustainability: Life Cycle Assessment and Carbon Footprinting." The goal of the project is to work with small communities across Pennsylvania and provide education and tools that can result in informed decision making.

The primary purpose of this project is to develop the methodology and subsequent tools that stakeholders can use to assess the sustainability of brownfield development. The research applies innovative analytical techniques (such as economic input-output life cycle analysis) to estimate the carbon emissions, pollutant emissions, and energy impacts associated with brownfield development, while documenting the drivers of these impacts given alternative brownfield development scenarios.

The training and technical assistance funded by this grant will educate and disseminate information that allows members of the community to better understand the public health risks of unattended brownfields and the benefits of alternative remediation strategies. In addition, community planners will be trained to use a prioritization tool that will allow for fair, transparent, and equitable brownfield development decisions.

Mitigation of climate change is becoming increasingly important for public policy and economic development. Efforts to promote sustainable development are also spreading. These training efforts will create a better understanding of climate change and life cycle impacts, and the research will develop a new tool for assessing the impacts of alternative neighborhood development scenarios on climate change and life cycle impacts.

The Western Pennsylvania Brownfields Center has been supported by a grant from the U.S. Small Business Administration, but according to Executive Director Deborah Lange, "this is the opportunity for us to take the lessons that we've learned over the last 10 years in Western Pennsylvania and share that experience with other Pennsylvania communities while developing additional decision support tools."

Breaking News

1. Green Design Institute researchers H. Scott Matthews and Deanna H. Matthews have received a $25,000 environmental research grant from AT&T and were named AT&T faculty fellows. Their research is titled: "The Role of Information and Communication Technology in Carbon Risk Management."

2. The head of the Institute for Green Oxidation Chemistry, Terry Collins, has been named an Honorary Fellow of the Royal Society of New Zealand. Collins is credited with creating TAML™ hydrogen peroxide activators, a new class of oxidation catalysts that provide an environmentally-friendly alternative to polluting chlorine-based technologies.

Reflections on the 2008 Seed Awards

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Matthews described how SEER funding has supported the apprenticeship program and also permitted auxiliary activities to assess and publicize the program. Deborah Lange, executive director of the Steinbrenner Institute, received a wonderful letter from the parents of one young man stating that the program "had opened up his world and definitely widened his thinking."

Peter Madsen, Distinguished Service Professor of Ethics and Social Responsibility, presented on his funded project: the creation of an immersion course called "Corporations and Environmental Responsibility" as a way to bring local and national experts together to explore the impact of corporations on the environment and to broaden and deepen Carnegie Mellon students' awareness of these issues.

The students of architecture Professor Steve Lee gave a final report on the building of the 2007 Solar Decathlon House. Involving more than 70 students from six schools within Carnegie Mellon, as well as 30 students from the University of Pittsburgh and The Art Institute of Pittsburgh, the team had strong showings in the Energy Balance and Appliance Events, placing first and tenth respectively. Overall, Carnegie Mellon placed 14th in the 2007 Solar Decathlon competition. The house has been reconstructed at Powdermill Nature Reserve, a biological research station of Carnegie Mellon Museum of Natural History in Ligonier, PA, as an environmental education center and an example of the latest in "green" architecture and engineering.

Mr. and Mrs. Steinbrenner also received an update from mechanical engineering students Mark Fuge and Andrew Choate on the SEER seed funding for the Carnegie Mellon Solar Splash. Solar Splash is a student organization focused on the design, manufacture, and testing of a solar/electric boat for entry in the international Solar Splash competition, at which the team competes annually. SEER seed funding has allowed team members to engineer a competitive solar/electric boat, maintain a high volume web site, and produce a professional technical report. Team members have been afforded the opportunity to diversify their education and thought processes, learning how to interact with technical and non-technical personnel.

The Steinbrenner Institute also provided Professor Bob Bingham of the School of Art with seed funding to design and implement a pilot rain garden on the west side of the 2005 Solar Decathlon House (located on campus in the Donner Ditch). He designed this through his Eco Art course, giving his students the opportunity to research the issue by collaboratively engaging in an interdisciplinary design process.

Participants in the program included:
- Robert Bear, Director of Environmental Affairs, Alcoa
- Mary Beth Buchanan, US Attorney for the Western Pennsylvania District
- Court Gould, Executive Director, Sustainable Pittsburgh
- Terry Yosie, President and CEO, World Environmental Center

Interior of the Solar Decathlon House

Solar Splash Competing

Alumnus Spotlight

Noah Horowitz (CIT, '82)

Noah Horowitz's father, a biochemistry professor, hoped that his son would work in chemical rather than environmental engineering. He advised Noah that there was little job security associated with the latter. It soon became evident, however, that Noah's path as an engineer would run counter to his father's advice. Noah's journey over the last 24 years as an environmental engineer has been both rewarding and fruitful, and he now looks to the next generation of talented environmental engineers with the challenge that "there is still much to do!"

Originally from the New York City area, Noah was attracted to Carnegie Mellon because of its diversified academic programs in both the arts and the sciences. He knew that he liked chemistry and thought he knew what engineering entailed. As he progressed through his chemical engineering courses, he began to realize that while the goal was to optimize the creation of a product, a byproduct or waste was also created in the process. Dealing with the disposition of this byproduct waste is what initiated his transformation into an environmental engineer. Noah began his trek in the waste water lab, under the tutelage of Dr. Richard Luthy, where he researched the biological treatment of wastes generated from shale oil extraction processes. After graduating from Carnegie Mellon in 1982, Noah continued his education at Illinois Institute of Technology (IIT), pursuing a master of science degree with a focus on wastewater and hazardous waste treatment.

From IIT, Noah moved into the consulting business - a career path he highly recommends - with Dames & Moore (D&M) in Chicago. He benefited from a variety of experiences but focused primarily on environmental audits, as well as the assessment and remediation of hazardous waste sites. Through these projects, however, he realized that spillage seemed to be more significant than groundwater contamination, and so, he became interested in pollution prevention (i.e., preventing the release of hazardous materials). While at D&M, he was assigned to a project with Kellogg's, which became a springboard for him to land the first ever full-time environmental manager position at Quaker Oats.

Noah worked for Quaker Oats from 1987-1996, a job he describes as being "3 in 1." In his first role, he made certain that worldwide operations met all of the appropriate regulatory requirements. In his second role, he was the in-house technical expert for waste water pre-treatment plants and was responsible for managing remediation projects resulting from past operating practices. But his favorite role allowed him to pursue opportunities for conservation (energy and water), recycling (especially with respect to packaging), and pollution prevention.

Having worked for private, for-profit companies up to this point, Noah decided that he could have more impact working in environmental advocacy and took on a "low-bono" assignment with the Environmental Law and Policy Center (ELPC) in Chicago. He found a real opportunity to contribute through ELPC and was hooked when the Natural Resources Defense Council (NRDC) in San Francisco advertised a position focused on energy efficiency in buildings.

The NRDC gave Noah the opportunity to engage in issues of larger global impact, particularly clean water and the intersection of energy and global warming. Noah also embraced NRDC's philosophy that energy efficiency is the fastest, cleanest, and cheapest way to address global warming. Last year, Noah became the first director of the NRDC Center for Energy Efficiency Standards, the goal of which is to transform markets (through both voluntary and mandatory means) so that the most energy efficient products become the standard.

The NRDC is often the sole environmental group working at the negotiation table with the EPA/DOE-funded Energy Star Program to ensure that the requirements to achieve Energy Star rating are appropriately set. They also work with industry to establish product testing methods and set-up conditions to assure consistency on a level-playing field.

Beginning with compact fluorescent light bulbs, Noah has spent the last 10 years fighting for more energy efficient lighting, which is critical as it represents 15-20% of an individual's electricity consumption. Also, he has authored language for the Federal Energy Independence and Security Act that will require a phase-out of inefficient incandescent bulbs beginning in 2012. Once in full effect, this phase-out will mean that 30 large power plants will not have to be built; the nation's electric bill will be reduced by more than $10 billion per year; and 100 million tons per year of CO_2 will not be discharged into the atmosphere. (This is the equivalent of taking all the homes in Texas off the grid!)

Consumer electronics are the fastest growing source of electricity use in the home, and Noah is working hard to make television, computers, video games, and the like more energy efficient. He is close to setting energy standards for new televisions in California, and he has obtained the prestigious "Champion of Energy Efficiency Award" from the American Council for an Energy Efficient Economy for his efforts to improve the efficiency of AC to DC power supply boxes, the chargers for cell phones, laptops, cordless phones, etc.

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Noah Horowitz Alumnus Spotlight Continued...

Continued from page 5...
We hope to see Noah on campus in the near future as he has just become a member of the technical advisory committee for a Department of Energy funded project led by Professor Scott Matthews to study the life cycle impacts of solid state or LED (light emitting diode) lights.

Noah truly appreciates his Carnegie Mellon education – especially having been taught a valuable way to think creatively and problem solve. He has watched the field of environmental advocacy evolve to engage corporations as partners in finding faster and better solutions for a sustainable environment. As he looks to the future, he admits that he is not working at a "sustainable pace," and thus, challenges future Carnegie Mellon graduates to lend their help to this goal!

Bringing Abandoned Mine Lands into Productive Use

The Steinbrenner Institute is keenly interested in advancing the reclamation options for abandoned mine lands and, in collaboration with Professor William Messner of Mechanical Engineering, the institute is exploring robotic cultivation of switchgrass on reclamation, brownfield, and agricultural lands. The idea of putting abandoned mine lands and industrial brownfields back into productive use to grow biofuel crops is a compelling one. The robotic cultivation and harvesting approach offers the promise of low-cost, safe operations on these non-traditional, potential agricultural sites. The Steinbrenner Institute is developing partnerships with Pennsylvania companies that have direct experience using marginal land for agricultural production and growing switchgrass.

The project would bring advanced robotic technology and Carnegie Mellon's expertise in this domain to bear on two challenges of importance to the state and the nation: reclamation of abandoned lands damaged from industrial activity and mining, and energy independence through increased biofuel production.

On October 2, a special session was held as part of the annual Pennsylvania Brownfields Conference in Harrisburg, Pennsylvania. About 40 people attended, representing an interestingly wide variety of stakeholder groups, including federal, state, county, and municipal government entities; NGOs focused on abandoned mine reclamation, brownfields, conservation, and industrial and economic development issues; entrepreneurs; academia; consulting engineers; and others. The U.S. Environmental Protection Agency (EPA), the PA Department of Environmental Protection (PADEP), the Western Pennsylvania Brownfields Center at Carnegie Mellon, and HDR Engineering, Inc. sponsored the event.

Principal speakers at the event included:
- Kristeen Gaffney, U.S. EPA, Region 3's Brownfields and Land Revitalization Program
- Scott Roberts, deputy secretary of PADEP's Office of Mineral Resources Management
- Tracey Vernon, director of PADEP's Brownfield Action Team
- Deborah Lange, executive director of Carnegie Mellon University's Western Pennsylvania Brownfields Center
- Tom Kerr, manager of business development for HDR Engineering, Inc.

The mission of the initiative is to find ways to jump start abandoned mine land related projects by positioning them to take the best advantage of existing federal and state brownfield programs. Education is still required, however, to help participants in the respective brownfield and abandoned mine land programs to understand the nuances of each other's programs and to start to create common ground between the programs. Brownfields reclamation and abandoned-mine reclamation have been viewed largely as separate and distinct issues by many. The guiding principle for this initiative is to recognize that stakeholders interested in site remediation, under any program and objective, have much in common and can benefit from improved communications on an on-going basis. The near-term goal is to host a regional conference of interested stakeholders to begin a dialogue and look for common ground between the many state and federal programs for site remediation and development.

2009 Steinbrenner Media Fellows Go on a Field Trip

Each year, the Steinbrenner Institute names a select group of esteemed national media specialists to its Media Fellowship program. The invited journalists spend four days on the Carnegie Mellon campus, meeting faculty and getting a personal look at some of the university's environmental research. This year's fellows included Janet Raloff, a senior editor/policy at Science News; Jeff Burnside, a producer at WTVJ NBC 6 Miami; Cheryl Hogue, a senior editor at Chemical & Engineering News; and Rosanne Skirble, a senior reporter at Voice of America.

All four media fellows met informally with researchers in labs and in the field. Their interviews ranged from global warming issues to alternative energy, air and water quality, risk management, and green design. "It was a great experience and I did get some wonderful story ideas," said Raloff, who wrote blog entries about her visit. Burnside praised the fellowship for its attention to detail and the eclectic mix of research presentations.

In addition to interviewing faculty, the journalists took a scenic boat ride, attended a Pittsburgh Pirates baseball game at PNC Park, and got a VIP tour of Kennywood Park, one of the greenest amusement parks in America. One of the fellowship highlights was meeting the university's new mascot, a Scottie dog named Maggie. "You just have to love that mascot," said Hogue.

"The fellowship enables leading science journalists to deepen their knowledge of environmental issues, and provides a great opportunity for our faculty members to broaden their knowledge about how the media works," said David Dzombak, faculty director for the Steinbrenner Institute and the Walter J. Blenko Sr. Professor of Environmental Engineering.

Thanks to Chriss Swaney, PR Director for the College of Engineering, for her efforts in organizing this very successful annual event.

Cheryl Hogue, Jeff Burnside, Janet Raloff, and Roseanne Skirble.

Co-engineering Co-generation for the Intelligent Workplace

"Buildings consume 40% of the primary energy used and 70% of electric power generated in the United States," reports Mechanical Engineering Adjunct Professor David Archer. In response to this, Archer is leading a project that teams Carnegie Mellon's departments of Architecture and Mechanical Engineering and the Milwaukee School of Engineering's Mechanical Engineering department to design and install a biodiesel fueled engine-generator with heat recovery equipment and supply electric and thermal power to the Intelligent Workplace on Carnegie Mellon's campus.

"Cogeneration - the generation of power coupled with the recovery of reject heat for use - is a technology that can reduce the energy consumption of buildings and communities, perhaps by a factor of two. The problem is to accomplish this effectively and economically," Archer explains. "We are investigating this problem in our work, both experimentally and analytically, with funding from the U.S. Department of Energy, the Department of Defense, and the Commonwealth of Pennsylvania."

Powered by a renewable fuel source made from vegetable oils or animal fats, the generator presents an alternative to petroleum-based power sources for providing electricity, cooling and heating to the Intelligent Workplace, a 6,500 square foot, eco-friendly workspace and "lived in" laboratory. Its mission is to research and demonstrate advanced building systems and their integration for total building performance, implementing advances in comfort, productivity, organizational flexibility, technological adaptability, and environmental sustainability. It is operated in parallel with the local electric utility and the campus steam grid. The generator provides heating in the winter and cooling in the summer for the Intelligent Workplace and can then deliver steam to the campus steam grid during the fall and spring when neither is required in the Intelligent Workplace.

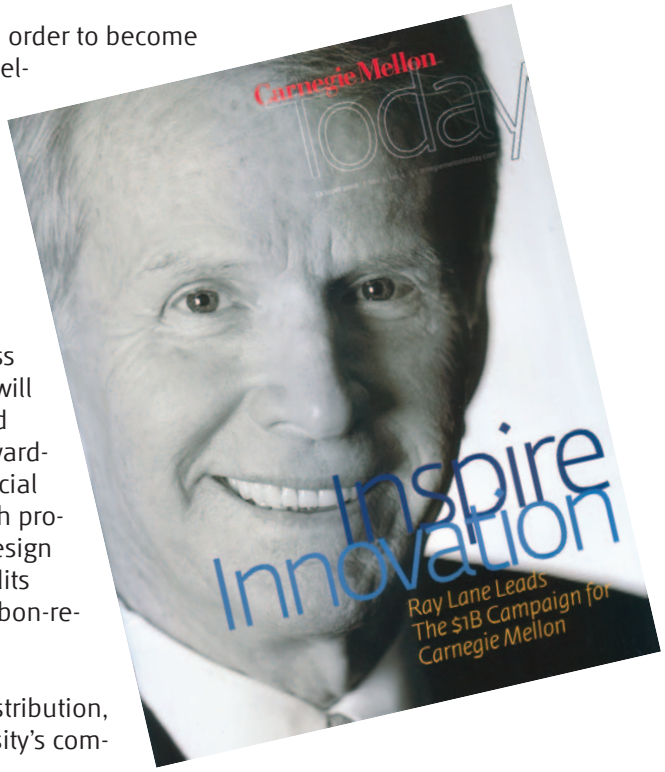
Volker Hartkopf, professor of architecture and director of the Center for Building Performance and Diagnostics, advises the faculty and staff and oversees the systems integration within the building.

Project manager and Ph.D. student in the School of Architecture Fred Betz says, "The Biodiesel Power Generation project provides an in-depth look into the use of biodiesel fuel and other renewable fuels in buildings." Betz continues, "The potential for reductions in pollution and cost while increasing reliability drives the work of the Intelligent Workplace and reflects Carnegie Mellon's overall dedication to innovation in green engineering."

Steam generator in the basement of the Margaret Morrison building.

Carnegie Mellon's Magazine Goes Green

It's not easy changing traditional methods of printing and publishing in order to become more environmentally responsible, but this is just what the Carnegie Mellon Advancement Department is doing. Robbee Kosak, publisher of Advancement's magazine *Carnegie Mellon Today*, announced recently to the Carnegie Mellon community the efforts she and her staff have taken to "green" the publication. Kosak says, "It's no easy feat to produce a high quality publication while also being as green as possible."



Beginning with the October 2008 issue, the magazine is now being printed with EcoSmart branded vegetable-based inks on Creator © gloss paper. In the January 2009 issue, the magazine's printer Raff Printing will be Forrest Stewardship Council certified and will begin purchasing wind credits dedicated to the print production of the magazine. Forrest Stewardship Council certification demonstrates compliance with the highest social and environmental standards on the market. Also, Kosak Design, which provides creative direction for *Carnegie Mellon Today*, is a participant in design association AIGA's CarbonCool program, which means it purchases credits that offset the office's environmental impact through investment in carbon-reducing programs.

Kosak explains, "As the university publication with the single largest distribution, I felt it was critical this publication be a premier example of the university's commitment to the environment."

A Renaissance Award for a Renaissance Man

This past October in Lisbon, Portugal, Professor Joel A. Tarr was awarded the Leonardo da Vinci Medal by the Society for the History of Technology. Tarr, the Richard S. Caliguiri University Professor of History and Policy in the Department of History, has focused his research on the environmental history of cities and the impact of urban technological systems. He is an affiliated faculty member with the Steinbrenner Institute and is the author of a number of books including *The Horse in the City* (2007), *The Search for the Ultimate Sink* (2006), and *Devastation and Renewal* (2003).

The Leonardo da Vinci Medal is the highest honor given by the Society for the History of Technology. It is awarded each year to an individual who has made an outstanding contribution to the history of technology through research, teaching, publication, and other activities.

Professor Tarr's involvement with the Steinbrenner Institute demonstrates the interdisciplinary nature of our education and research. Through Joel's work, we appreciate the evolution of technology and the corresponding environmental impacts – both pluses and minuses.

Dr. Tarr has been especially involved with the Western Pennsylvania Brownfields Center which focuses on the redevelopment of old industrial sites. Deborah Lange executive director the Western Pennsylvania Brownfields Center, describes Tarr as a "visionary of the Brownfields Center." She explains that he "recognized the interdisciplinary nature of the work people are doing around brownfields, making the connection with public policy, engineering, history, and the arts (Studio for Creative Inquiry)."

UniverCity Community Connections

Connections to the community are an important part of Andrew Carnegie's vision for the university, and there are many students, faculty and staff who are working in a myriad of ways to that end in their daily lives. From teacher education to economic development to interacting with local government officials, they are all striving to make and keep thriving connections with the region around us. Still, due to the basic structure of the university, many of them do not interact on a daily, or even weekly, basis. To remedy this, the Community Connection Committee was formed. Facilitated by Jenn Layman of the Office of Government Relations, the goal of the committee is to share ideas, discuss resources and learn about each other's work.

The committee's first major undertaking is the upcoming UniverCity Connections luncheon, bringing together Mayor Luke Ravenstahl, the City of Pittsburgh's department heads and Carnegie Mellon experts in the fields of neighborhood revitalization, workforce development and training, economic development, planning and information systems. The goal of the event is to foster greater strategic and day-to-day communication and collaboration between the City of Pittsburgh and Carnegie Mellon University, identify opportunities to cooperate on initiatives that are important to the city and the university, build relationships and lines of communication, and set the stage for ongoing cooperation.

The Steinbrenner Institute is already actively engaged with the City of Pittsburgh. We have participated in the creation of the Pittsburgh Climate Initiative and co-chaired an ongoing subcommittee titled the "Higher Education Climate Coalition" which is intended to encourage the regional academic community to reduce carbon emissions while setting an example for other institutions. We are also active in the Pittsburgh Green Innovators; a collaboration of for-profit and non- profit organizations (focused on energy and the environment) that is driven to position the region to maximize the opportunity to strengthen the economy though the creation of green jobs.

A number of other Steinbrenner Institute related centers are also engaged with the city of Pittsburgh and the Community Connections program. WaterQuest is working with the Pittsburgh Water and Sewage Authority to develop programs that will help to alleviate some of the problems surrounding our failing infrastructure. The Remaking Cities Institute is currently focusing on the site of a former steel plant in Hazelwood (PA) with the intent of developing a planned growth strategy that is consistent with a sustainable future for the neighboring communities. Finally, the ICES-housed Center for Sensed Critical Infrastructure (CenSCIR) is working on the use of embedded sensors for early defect detection and management at construction sites.

Design Duo: Two Architecture Professors Honored by Heinz Foundation

This fall, Associate Dean of the College of Fine Arts Luis Rico-Gutierrez was appointed to the David Lewis Directorship of Urban Design and Regional Engagement. With this directorship, Rico-Gutierrez will continue to lead the Remaking Cities Institute (RCI), of which he has been director since June 2007. The RCI was created to augment the Urban Laboratory and the Master of Urban Design program in the School of Architecture and to ensure and expand Carnegie Mellon's leadership in education, community visioning and research in the field of urban design (www.cmu.edu/rci). Rico-Gutierrez has been involved with the Urban Laboratory, working with students, citizens, public agencies, and private investment to make recommendations to improve the quality of life in cities.

The Heinz Endowments funds this fellowship in honor of David Lewis, an architect and urban designer. David is a Distinguished Professor of Urban Studies in the School of Architecture and founder of Urban Design Associates, a firm based in Pittsburgh that works in cities throughout the world (www.urbandesignassociates.com).

From 1963 to 1968, Lewis was the Andrew Mellon Professor of Architecture and Urban Design and started one of the first educational programs in urban design in which students worked with elected officials, agency representatives and citizens in communities in the Pittsburgh metropolitan region. Lewis then taught at Yale as the William Henry Bishop Professor of Urban Design where he formed the urban design workshop. Later he taught as the Hyde Professor at the University of Nebraska. In 1990, he returned to Carnegie Mellon and started the Urban Laboratory, which continues to this day. In the late sixties and early seventies he was a core member of the AIA's Regional/Urban Design Assistance Teams and was Chairman of the AIA's National Urban Design Committee in 1976-77. In 1976 he was a Founder-Member of the International Institute of Urban Design. In 1988 he chaired the International Remaking Cities Conference at which HRH The Prince of Wales was the Honorary Chair.

Rico-Gutierrez's committment to urban design reflects a commitment similar to Lewis' and his receipt this award acknowledges this.

Corporate Partnership (Continued)...

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environmental challenges in the metals, chemicals, construction/buildings, energy, and other industrial sectors. Through the SICP, the Steinbrenner Institute seeks solutions to specific issues and needs of the partners within its broader theme of transitioning to an environmentally sustainable society.

The Steinbrenner Institute for Environmental Education and Research at Carnegie Mellon coordinates and promotes the activities of 18 environmentally-related research centers at Carnegie Mellon. A number of these research centers focus on areas that are highly relevant to corporate environmental challenges and performance objectives. Information about these centers is provided at: http://www.cmu.edu/Steinbrenner.

Eric Kelusky of NOVA Chemicals Corp., George Pavlovich of Bayer Materials Science LLP, and James Bogdan of PPG Industries, Inc.

Ed Rubin of EPP presents an overview of research on carbon capture and sequestration.

Research centers affiliated with the Steinbrenner Institute have a number of ongoing corporate collaborations. For example:

- The Carnegie Mellon Electricity Industry Center, formed in 2001 with the support of the Alfred P. Sloan Foundation, works with more than 15 utilities and other government, industry and non-profit stakeholders.
- The Center for Iron and Steelmaking Research, formed in 1985 with support from National Science Foundation, has 20 major industrial members and is the largest academic center for steelmaking research in the United States.
- The Green Design Institute, formed in 1992 with support from IBM and other companies, conducts a wide range of research on green product and process design.

Companies qualify for membership in the Steinbrenner Institute Corporate Partnership by supporting research in one of the centers associated with the Steinbrenner Institute at the annual level of $10,000 or more per year. Other companies can become members through the payment of an annual fee.

Members of the SICP include corporations with social, economic and regulatory pressures for higher levels of environmental performance while meeting the desires of customers, shareholders, current and future employees, and communities in which they operate. The SICP addresses topics of common interest as well as topics that may be specific to a member or subset of the total membership. The Steinbrenner Institute provides partial support of new collaborative research projects.

If you are interested in learning about the benefits of membership in the SICP for your company, and for more information about how your company can join the discussions to define specific research projects in the topical areas listed above, please contact Dr. Deborah Lange, Executive Director (412-268-7121; dlange@cmu.edu).

Corporate Workshops on Carbon Emissions and Life Cycle Assessment
January 29 and 30, 2009
Tepper School of Business at Carnegie Mellon

Corporate representatives should plan to attend for an in-depth examination of applications and uncertainties of carbon emissions inventories as well as life cycle assessment theories and methods

Hosted by the Green Design Institute and the Business Executive Education Center at the Tepper School

For details and to register:

http://gdi.ce.cmu.edu/education/2009_workshops/GDI_Workshop.html

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Recommendations for PA Climate Change

University Professor of Architecture Vivian Loftness was recently appointed to the Pennsylvania Climate Change Advisory Committee by Governor Edward Rendell to advise on global warming issues and identify green economic opportunities for the state.

The goal of the panel is to issue a report on the potential impact of climate change on health, the economy, wildlife, agriculture and tourism in the State of Pennsylvania, and to develop an action plan for dramatically reducing the energy demands and carbon impacts of utilities, buildings and communities, transportation, as well as forestry and agriculture.

Loftness, a LEED-accredited professional whose research focuses on high-performance buildings, is guided in her work by a belief that "Pennsylvania should be a destination state for young professionals, families, retirees and international businesses focused on quality of life at the lowest environmental cost."

She brings to the committee the following outline for Pennsylvania Climate Actions to meet serious environmental goals and enhance the state economy: a recommitment to main street and walkable, whole life communities; green buildings; mixed modes of transportation; new energy public utility strategies; new water public utility strategies; surface/landscape storm-sewer solutions; and a recommitment to "Penn's forests" towards becoming the lowest carbon state with the highest quality of life.

Loftness is encouraging the committee to explore the areas where real carbon savings might occur and she has suggested that specific attention be given to demand and carbon impacts for each of the following areas:
- utility energy sources
- building and community energy
- mixed modes of transportation
- agriculture

The report is due to be published in Spring 2009.

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