



photo: Bruce Heglund

Plan ahead for the summer 2008 retreat and include a trip to the gardens at Eden and its Grimshaw buildings (biomes and education center pictured here).

IT'S TIME FOR SUSTAINABILITY IN STUDIO

[Here is material I sent to the recent AIA Sustainability Conference in Pomona and also to my own faculty, who are considering how to advance sustainability at USC.—Ralph]

It's time to reevaluate the studio custom of starting with small, simple projects and advancing to ever larger, more complex ones. Usually, as students become more capable, the projects become proportionally more comprehensive and difficult, resulting in students who often become progressively more skillful at making diagrams of shape and layout with increasing degrees of showiness, but not always with a deeper penetration of how the thing actually works. Such an approach does little to address sustainability in architecture. What about delving progressively deeper instead of bigger, at least part of the time?

It's time to develop a set of basic sustainable design strategies that begin with the generally more efficient adaptations to the natural and built environments. Such a framework was used by the AIA Research Corporation in 1979 to establish and then test building energy performance standards (BEPS). The three-step framework was purposely sequential and simple. 1. **Location.** Building orientation, juxtaposition with other on-site structures, and relation to both natural and built surroundings. 2. **Form.** Building size, shape, and structure, including construction materials and the division of interior space. 3. **Metabolism.** Occupancy and HVAC systems. Such an adaptive framework need not, and perhaps should not, be given to students all at once, but systematically spread over a progressive sequence of three studios focusing on different sustainable design strategies.

It's time to embrace other disciplines in the design studio. It has been the habit in some schools to employ mainly design-trained academics and professionals in the studio while relegating technical, historical, and other coursework to a separate academic stream. This separate arrangement, which some presume as necessary, is not sufficient because it depends overly much on the design student's ability to make a connection, a weakness

• continued page 3

SBSE CALENDAR

2007

- Jun 27–30 SBSE Retreat; IslandWood, WA
- Jul 7–12 Passive Solar Conf; Cleveland, OH
- Jul 10 SBSE Annual Mtg; Cleveland, OH
- Jul 13 Tool Day; Cleveland, OH
- Sep 6–8 Greening 7 Conf; Muncie, IN
- Sep 14–15 TIA Conf; Krams, AU
- Nov 22–24 PLEA Conf; Singapore

2008

- Jul 22–23 TIA/SBSE Conf; Oxford, UK ■

ANNUAL MEETING

We'll hold the SBSE Annual Meeting from noon to 2:00pm on Tuesday, July 10, at the ASES Conference in Cleveland, OH, in a room to be listed in the final conference schedule. In addition to the usual agenda, we will discuss our 2010 Education Resource Initiative [*see "Working" p.2*], proposed changes to our bylaws, and nominations for officers. To nominate yourself or a colleague for either President-Elect or Secretary/Treasurer please contact Judy Theodorson at <jtheodorson@wsu.edu>. Elections will be held this fall. ■

—Chris Theis

LETTERS TO THE EDITOR

Since I cannot attend the retreat this year, I hope you can convey my passion for the idea of teaching design faculty about energy-responsive design. In 1975 or so, I took many workshops at Harvard, MIT, and Berkeley that were designed to quickly bring architecture faculty up-to-speed on energy-responsive design. I had learned nothing about energy either at CCNY or Columbia where I earned an M.S. in Arch. Tech. These workshops got me going in the right direction.

We still have the same problem. Many faculty know little about energy-responsive design. For example, many Auburn faculty tell their students that south is the worst orientation.

SBSE is the ideal organization to give these workshops. I know someone at DOE (Alan Hoffman) who could help us get funding. These workshops should be given every summer for the foreseeable future. There might also be basic, intermediate, and advanced offerings. Thus, a faculty member could return thrice to gain a really good understanding.

—Norbert Lechner, Auburn

[It's my pleasure to promulgate your passion. I also noticed a good piece on the sun that you did for the recent AIA COTE newsletter. Soldier on!—ed.]



As always, many thanks for providing me space in your gallery.

—Moji Navvab, Michigan

[And thanks for your cool stuff, I hope everyone follows suit and contributes to the News!—ed.]



• continued page 3

SBSE News is published quarterly by the Society of Building Science Educators, a not-for-profit corporation. Submit material for publication before the first of March, June, September, or December to Bruce Haglund, Editor; Department of Architecture; University of Idaho; Moscow, ID 83844-2451; tel. 208.885.6781; fax 208.885.9428; e-mail <bhaglund@uidaho.edu>. Direct membership and mailing list inquiries to Judy Theodorson, Secretary-Treasurer; WSU Spokane; 668 N Riverpoint Blvd; PO Box 1495; Spokane, WA 99210-1495; phone 509.358.7901; fax 509.358.7900; e-mail <jtheodorson@wsu.edu>. To join our list server or to manage your account go to <<http://www.lists.uidaho.edu/mailman/listinfo/sbse>>. For full membership info and more, visit our home page <<http://www.sbse.org>>. ■

MEETING THE 2010 CHALLENGE

REMEMBER THE ALAMO!

A group of 19 AIA and SBSE members and friends gathered over lunch at the recent AIA 2007 convention in San Antonio to begin a discussion on a proposed SBSE education initiative inspired by Ed Mazria's 2010 Imperative and 2030° Challenge. Our purpose was to find courses of action that advance our goals of research and teaching related to zero-energy/zero-emissions/carbon-neutral buildings in ways that will aid schools of architecture and encourage collaboration with practice. We are exploring ideas of how best to implement near-term teaching strategies, including partnerships, and funding avenues for such work. Soon we'll post notes from the meeting and summarize next steps. In addition to refining ideas from our meeting, the initiative will be the subject of the June SBSE Retreat.

If you have any further thoughts about the SBSE 2010 Education Initiative, please contact me <mmcdonal@calpoly.edu>. We thank you for your time, thoughtful consideration, and input during our early process of generating ideas that ultimately we can turn into action.

—Margot McDonald

SBSE 2010 EDUCATION INITIATIVE MEETING WITH USGBC

Attending on 05.03.2007: USGBC representative—Peter Templeton, VP for Education and Research; SBSE representatives—Bob Koester, Ball State; Alison Kwok, Oregon; Margot McDonald, Cal Poly—SLO; Chris Theis, LSU and SBSE President; Jim Wasley, Wisconsin—Milwaukee.

DOE workshops at Harvard and MIT from the 1970s–1980s were cited as great examples of transforming studio teaching coupled with incentives to bring a nontechnical colleague. Canadian architecture schools have made strides in methods for teaching sustainability that include charettes involving the faculty. The SBSE initiative may include R/UDAT-like teams [*The pros from Dover?—ed.*] that drop in on campuses for sustainability triage in the studio. When asked about possible roles for USGBC, Peter noted that they have already participated in other joint efforts (e.g., Congress for a New Urbanism, EPA, Autodesk, Pew Center for Climate Change, World Resources Institute). USGBC staffer Linda Sorrento is assigned to Educational Partnerships. Peter asked about our campus webcast platforms (is there a standard format for receiving transmissions?) as USGBC will be participating in future broadcasts related to climate change and corporate environmental responsibility.

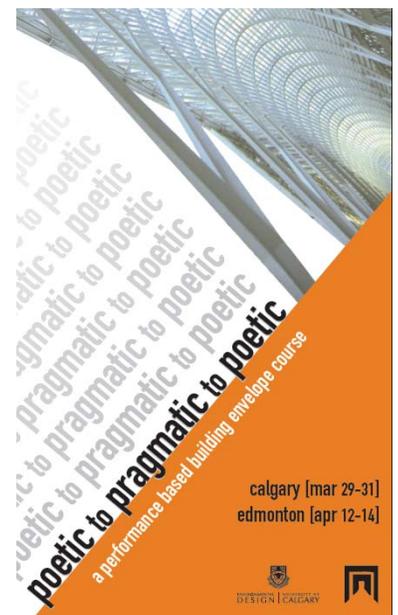
We need to investigate possible funding sources (find out where funders' values lie and their criteria for choosing projects). Funding sources to look into include: ASHRAE, DOE (talk with Dru Crawley), NSF, and Google.

—Jim Wasley

MEANWHILE, IN ALBERTA

We are developing a building envelope course as a joint venture between the Alberta Association of Architects and the University of Calgary Faculty of Environmental Design. After being introduced to SBSE, I ordered the SBSE CDs and found much of the material relevant to our course.

We completed Part I of the course material and delivered it by direct and distance learning in a two-day-plus workshop format to nearly half the ~700 members of the Alberta Association of Architects. It was very well-received in large part due to the graphic [*risqué?—ed.*] nature of the content. So successful in some cases we've had requests from architects who are also instructors at various architecture and technical schools to purchase the resource manual that accompanied the course for use in their courses. We also videotaped a roundtable discussion on building envelope issues to be viewed as part of the course. Various images, some from the SBSE collection, were inserted to reinforce the commentary and animate the discussion. Again, there



• continued next column

have been questions as to whether the DVD could be sold to other institutions for educational purposes. As the sale of material for which we do not hold copyright authorization changes the nature of its use to educational/commercial purposes, please clarify what process would be required to gain permission for use of images from SBSE's collection? [*You'll need to seek permission from each originator of each image and emphasize to the end user the requirement to cite appropriate photo credits wherever and whenever the image is used.*—ed.]

—Mark W. Chambers

ELSEWHERE IN CANADA

It came as no surprise this week when our already absurd, downtown, morning rush hour traffic was “stopped” to facilitate the safe passage of Governor Schwarzenegger’s motorcade en route to meet with the Premier of Ontario to sign Kyoto and climate change agreements to reduce greenhouse gas emissions! Ontario has issued a ban on the sale of incandescent lamps as of 2012, and Toronto will increase recycling efforts by limiting the curb pickup of non-recyclables to one “bag” per household every two weeks in 2008.

I attended the combined Canada Mortgage and Housing Corporation Design Faculty Summit and fourth Greening the Curriculum event in Winnipeg, Manitoba, May 17–18. The event was well attended with participants from most of the architecture schools in Canada; some technical college programs; students; members of the CaGBC Education Committee; and Catherine Roussel, representing the environmental concerns of the AIA. There were some interesting presentations on sustainable housing initiatives in Canada, particularly the results of the Equilibrium Housing Competition, an initiative focused on low-carbon initiatives. Leith Sharp, Director of the Harvard Green Campus Initiative, gave a wonderful presentation on her successes at greening Harvard’s disparate entities (faculty participation was inspired by awarding a wine-and-cheese party to the lab that managed to turn off its vent hoods most frequently!). Professors from the University of Manitoba architecture department gave presentations—one of the more interesting being about a green studio that asked students to take key cultural buildings in Winnipeg, imagine them in the year 2030 without climate intervention, and demonstrate their architectural state. Some fascinating and telling renderings ... hmmm, thought-provoking.

Conference participants spent a great deal of time in break-out sessions trying to better define what we are trying to achieve through our education initiatives as well as to understand the barriers to their achievement in our schools. The latter led to discussions of how to best manage the challenges as well as how to prioritize efforts in greening our curricula. Much emphasis was placed on the importance of post-occupancy evaluation and its role in education.

As I write I am in the midst of the Sustainable Building '07 conference in Toronto, the first of many regional conferences that will lead up to SB08 in Melbourne next year. There have been some great presentations with attendance from all sectors—education, municipal and provincial government, hydro, practitioners—provoking discussion that crosses many levels of implementation issues. Focus has been on successful marketing of green design and potential to transform the market.

I loved the keynote by Bob Willard, author of *The Sustainability Advantage* and *Sustainability the Next Wave* <<http://www.sustainabilityadvantage.com>>. (Must reading!) His “sales” approach concentrates on obtaining energetic buy-in from corporations shown through profits generated by adopting green building practices. He had facts on employee satisfaction, productivity, sustainable design as “risk management,” and today’s stock prices as a reflection of public opinion, not “money in the bank.” Much positive opinion can be gained from the adoption of green practices.

The second keynote was given by Mels Crouwel, Chief Architect of the Netherlands. Holland has had a long history of land management and is proactive in achieving densification of housing, better use of waterfronts and planning for wind power. They are now constructing extra rivers and taller dikes to handle global warming’s higher water levels. Dutch high-performance architecture is exemplary. They’re inviting high-profile Dutch and other EU architects to design key government buildings to LEED Gold and Platinum levels. I’m envious—I think we

TOWARD 2010 [CONT.]

sorely need “Chief Architects” in both the U.S. and Canada to move green building at the pace required. Just imagine George Bush and Stephen Harper consulting an architect with a green building agenda before handing out commissions or committing to planning and energy initiatives. It’s the stuff of which dreams are made. █

—Terri Meyer Boake

IT’S TIME [CONT. FROM P.1]

perpetuated by not giving a more fully integrated role to disciplines essential to sustainable architecture.

It’s time to develop fully a natural-forces laboratory. A professional-level facility for simulating sun, wind, water, daylight, and seismic could do much to bridge the gap between technical courses and design studios. Even though it’s possible to simulate by computer the effects of natural forces, it’s no substitute for the element of direct experience. A critical level of awareness can only be captured and shared in the laboratory where, for example, a sun machine or a wind tunnel can act as a powerful teaching platform. █

—Ralph Knowles

LETTERS [CONT. FROM P.2]

On April 11 the *LA Times* will interview and photograph me. The article could be good for regaining a little recognition and for opening outlets for my thinking about a wide variety of subjects. Fortunately, my last medical treatment cleared up my coughing and, to a degree, my penchant to say what I think. In addition to living for a week in a bamboo house in the mountains, I rescued a Filipino extended family of 10 from flooded slums and found them a sound house with 5 rooms and 3 baths. I had a month of sleeping on their only bed with no clothes closets, all lost in the mud flow. The family—grandparents, college graduates, and children—had to sleep on floors. No longer if they can pay the taxes on the new property. [*I hope that’s feasible, Harold.*—ed.] █

—Harold Hay, *World Citizen*

[*You knew my theme would be the paparazzi; you always amaze! Keep on saying what you think!*—ed.]

SBSE PEOPLE

[Are the paparazzi at your door? SBSE faces have been appearing in the press in record numbers—ed.]

photo: Architectural Lighting, Mar 07



Charlie Brown models Baker Prairie Middle School.

▤ **Mark DeKay** was appointed Tennessee's interim Chair of Graduate Studies in Architecture and Design as well as interim Head of the Graduate Program in Architecture.

🏠 **Ihab Elzeyadi** has been promoted to Associate Professor with tenure at Oregon.

🏠 **Alison Kwok** received one of only twenty University of Oregon Faculty Excellence Awards.

⚙️ **Pablo La Roche** and Michael Fox (Architecture) with Phyllis Nelson (Electrical and Computer Engineering) advised an architecture and engineering student group who received honorable mention in the EPA's 3rd annual P3 Award competition—a national student design contest for sustainability. They also garnered the top Ecomedia Award for their project, “Green Kit: A Modular, Variable Application System for Sustainable Cooling,” designed to reduce CO₂ emissions from buildings while helping

• continued next page

photo: Green Source, Apr 07



Robert Marcial uses the Pacific Energy Center heliodon.

SBSE PARADE OF AWARDS

GREENSOURCE WINS 2007 NEAL AWARD

GreenSource Magazine, a McGraw-Hill Construction publication supported by BuildingGreen, was honored with a 2007 James H. Neal Award (considered the “Pulitzer Prize of business media”) as “Best Start-Up Publication” during ceremonies on March 24. The award follows *GreenSource's* successful launch year, which included 2007 Folio Awards for Best Editorial, “Business-to-Business” (Bronze Award), and Best Design of a New Magazine (Silver Award). See *GreenSource* at <<http://www.GreenSourceMag.com>>.

BuildingGreen's editors provide editorial input, feature articles, case studies, and technical reviews of all *GreenSource* content. According to Nadav Malin, editor of *Environmental Building News* and executive editor of *GreenSource*, the collaboration between McGraw-Hill and BuildingGreen is a key reason for the first-year success of *GreenSource*. “The resources and knowledge base of McGraw-Hill Construction is impressive, especially in meeting the challenge that comes with establishing a new magazine,” he said. Also instrumental are the editorial staff from McGraw-Hill Construction, with content overseen by vice-president and editorial director for McGraw-Hill Construction and *Architectural Record* editor-in-chief Robert Ivy, and design supervised by group design director Anna Egger-Schlesinger.

—Jerelyn Wilson

ECOMOD SWEEPS MAJOR ARCHITECTURAL EDUCATION AWARDS

The National Council of Architectural Registration Boards (NCARB) Prize jury has selected the ecoMOD Project, directed by John Quale, as the \$25,000 grand prize winner of the 2007 NCARB Prize for Creative Integration of Practice and Education in the Academy.

The prize makes ecoMOD the first project to receive all three major architectural education awards in the same year, following its recent receipt of the AIA National Education Honor Award and the ACSA Collaborative Practice Award. The NCARB Prize jury noted that the ecoMOD project involved “an extraordinary array of collaborators and a real balance among all the participants.” Paxton Marshall (Engineering) is the ecoMOD engineering director, and Barrett Eastwood (Architecture), the ecoMOD construction director.

“There're a lot of terrific initiatives in architectural education these days, so we're honored to have received all three of these significant awards,” Quale said. “From what I hear, the jurors for each award were impressed by the commitment to quality design, sustainability, and affordable housing within the interdisciplinary project, as well as the connection among faculty design, research, and teaching. The jurors made comments about the relationship with the engineering school, so these awards also honor the work of colleague, Paxton Marshall, and all his students.”

ecoMOD is a multi-year research and design/build/evaluate project whose purpose is to create well-designed, affordable housing prototypes that are modern, modular, environmentally responsible, and energy efficient through interdisciplinary teams of architecture, engineering, landscape architecture, historic preservation, business, environmental science, and economics students. Students work closely with a variety of design and business professionals throughout all three phases of the project. Over the next several years, UVa students and faculty are creating several prefabricated houses through partnerships with Piedmont Housing Alliance of Charlottesville and Habitat for Humanity International. Compared to other design/build projects around the country, ecoMOD is unique in its rigorous focus on sustainability, prefabrication, and the commitment to thoroughly evaluate each project.

• continued next page



photo: ecoMOD web site

“The NCARB Prize money will be used to support student fellowships this summer for the construction phase of ecoMOD3,” Quale said. “I’m in the midst of trying to raise money for fellowships—and this award is a big help.” For more information on ecoMOD visit <http://www.ecomod.virginia.edu>.

—UVa Press Release

CAVIN FELLOWSHIP AWARD

The inaugural \$10,000 Cavin Family Traveling Fellowship has been awarded to Mark Chenchin (Oregon) for foreign travel—study of his own devising. Chenchin’s design solution to the U.S.–Mexico border crossing facility in a five-day design competition successfully merged complex symbolic and sustainability issues.



Cavin Family Traveling Fellowship award winner Mark Chenchin.

At the fellowship awards banquet on March 30 Fellowship Secretary Patrick Sullivan and Brooks Cavin, fellowship founder, announced Chenchin the winner of the annual award as well as alternate, Robert Alexander (Cal Poly Pomona). Other finalists included Ian Merker (Cal Poly Pomona) and Ryan Lingard (Oregon).

The Cavin Fellowship offers travel–study opportunities to West-coast scholars who are U.S. citizens under 35 years old, have a professional architecture degree from Cal Poly Pomona or Oregon, and have at least one year’s experience in an architectural firm. The fellowship is intended to nurture outstanding resource–sustainable design. Applications for the 2008 Cavin Fellowship will begin in December at <http://cavinfellowship.org>.

—Debra Boudreau



The Cavin Fellowship jury (l to r): Gregg Ander (SoCalEd); Kip Dickson (Cal Poly Pomona); Sarah Lorenzen (Cal Poly Pomona); Alison Kwok (Oregon); jury chair John Sheehy (Hawaii).

STUFF FOR YOU

ENERGYPLUS VERSION 2.0

The newest version of *EnergyPlus* (2.0) was released on April 12, 2007, and is now available in versions for both the Windows and Linux operating systems (a Mac version should be available by summer). Key new features include green roofs, phase-change materials, and enhanced building controls. Download at no cost from the *EnergyPlus* web site <http://www.energyplus.gov>. Stayed tuned for a free *EnergyPlus* plug-in for *SketchUp* 6.0. ||

—Dru Crawley

SBSE PEOPLE [CONT. FROM P.4]

homeowners achieve thermal comfort at costs lower than those of ordinary heating and air conditioning systems.

✦ **Kathy Prigmore** was cited in *Architect* (Mar 2007) as notable among black women architects, who comprise only 0.2% of all registered architects.

✦ **Nick Rajkovich** has joined PG&E’s Pacific Energy Center staff in San Francisco.

CHAIR’S CORNER

6 Reasons to Use Pedal Power

Rethinking the ultimate pollution-free transport option.
By John Reynolds, FAIA

We fortunate citizens of the United States represent about 5 percent of the world’s population. Annually, we use about 25 percent of the world’s resources, emit perhaps 23 percent of the carbon dioxide and hold about 34 percent of the world’s accumulated wealth. Addressing this global disparity calls for the f-word: frugality. As we consider this issue’s theme, “Breaking the Oil Addiction,” what might constitute more frugal transport?

Walking, the mode relied on by vast numbers of non-U.S. citizens, is healthy.



John S. Reynolds, FAIA

your car, compared to even the most high-end bicycle. Include a bike trailer for carrying groceries or kids, and you still require but a fraction of the materials invested in a car. Unconvinced? Lift a bike; then try lifting your car.

John Reynolds editorializes in every issue of Solar Today.

✦ Three of **Judy Theodorson’s** WSU Spokane ID students won Cooper Lighting Source Awards for 2007—Honorable Mention, Krissie Morrison; Awards of Recognition, Sue Schreiber and Mary Bareither.

📖 On May 8 at Lightfair International, **Kevin Van Den Wymelenberg** (Idaho) was awarded the 2007 Edison Price Fellowship for Educational Lighting to support his study and research with the University of Washington Integrated Design Lab Puget Sound and the Lighting Design Lab in Seattle. ||

WHENCE RETREAT 2008?



photo: Bruce Haglund



photo: Welter Gronzlik

Wessex Institute of Technology in the New Forest (where ponies roam freely) near Southampton and Wales’ Center for Alternative Technology (CAT) or Canolfan y Dechnoleg Amgen near Machynlleth are being considered. Where else?

image: Solar Today

INTERNATIONAL SCENE

TIA CONFERENCE 2007

We kindly call your attention to the Teaching in Architecture (TIA) Conference, **14–15 September 2007**, at Danube University in Krems, Austria. The event will focus on theories, methods, and best practices for teaching sustainability in architecture. Full conference info is available at <http://www.donau-uni.ac.at/en/departement/baueumwelt/veranstaltungen/09521/index.php?URL=/en/departement/baueumwelt/tia/09521>. We would be honored to welcome you to Krems this autumn.

—Renate Hammer

SUN, WIND, AND ARCHITECTURE

The National University of Singapore Department of Architecture and the Department of Building Centre for Total Building Performance are committed to environmental sustainability in architecture and planning. We are pleased to host the 24th international conference on Passive and Low Energy Architecture (PLEA) “Sun, Wind, and Architecture” **22–24 November 2007**, in Singapore. We invite experts from academia, professional practice, and industry from around the world to share their expertise within our international community. More info at <http://www.plea2007.org>. ■

—Stephen Wittkopf

STANDARD 189 OPEN FOR PUBLIC COMMENT

ASHRAE Standard 189P, a proposed new standard that will provide minimum guidelines for green building practices, is nearly complete and has been released for public review and comment. Comments will be accepted through July 9, 2007, at <http://www.ashrae.org/publicreviews>. The standard is being developed by ASHRAE in conjunction with the Illuminating Engineering Society of North America (IESNA) and USGBC, and will be the first of its kind in the United States. ■

—Kira Gould



Experience the living machine at IslandWood.

PARTNERS IN EDUCATION

CLIMATE CHANGE AND NATIONAL BUILDING STOCKS

Building Research & Information presents a special July–August 2007 issue, “Climate Change and National Building Stocks,” edited by Robert Lowe.

Among issue highlights is Lowe’s editorial, “Addressing the challenges of climate change for the built environment.” The content addresses a broad range of issues from these social, cultural, and technical subjects:

- “Long-Term Management of Building Stocks,” by Niklaus Kohler and Wei Yang
- “Examining the Carbon Agenda via the 40% House Scenario,” by Brenda Boardman
- “Mitigating CO₂ Emissions from Energy Use in the World’s Buildings,” by Diana Ürge-Vorsatz, L. D. Danny Harvey, Sevastianos Mirasgedis, and Mark D. Levine
- “Urban Infrastructure: Challenges for Resource Efficiency in the Building Stock,” by Georg Schiller
- “Technical Options and Strategies for Decarbonising UK Housing,” by Robert Lowe
- “A Norwegian Perspective on Buildings and Climate Change,” by Kim Robert Lisø, Lars Myhre, Tore Kvande, Jan Vincent Thue, and Viggo Nordvik
- “Lessons from the 2003 Heat Wave: A French Perspective,” by Jean-Luc Salagnac
- “An Appraisal of Policy Instruments for Reducing Buildings’ CO₂ Emissions,” by Diana Ürge-Vorsatz, Sonja Koeppel, Sebastian Mirasgedis
- “The Stern Review: Implications for Construction,” by David Shipworth
- “Energy-Efficient New Housing—the UK Reaches for Sustainability,” by P. F. G. Banfill and A. D. Peacock.

—Richard Lorch

FINAL CLIMATE CHANGE REPORT RENEWS URGENCY OF GREEN BUILDING

The final report by the UN-backed Intergovernmental Panel on Climate Change (IPCC) on the irrefutable evidence of global warming is a clear call to action for everyone involved in the design and building industries to accelerate sustainable practices, according to Brattleboro-based BuildingGreen Inc. <http://www.buildinggreen.com/>. Released in Brussels last week, the report dramatically reveals the role of human activity in increasing global warming. Since buildings are responsible for producing one-third or more of the world’s greenhouse gases, the urgency of the report’s findings and the opportunity to reverse the damage are greater than ever. “It’s clear to me that we have reached a tipping point within the building industry,” says Alex Wilson. “We are recognizing the reality of global climate change and waking up to the need to do something about it. The IPCC report is having a significant impact on world opinion and will help influence the way buildings are planned and designed for generations to come.”

The IPCC report, “Climate Change 2007: The Physical Science Basis,” cites proof of increases in CO₂ concentrations from burning fossil fuel and neglectful land-use practices. “There will be a strong push to dramatically reduce the carbon emissions of buildings, which will drive very significant improvements in energy performance,” Wilson says. “By 2010, the average new commercial building will use just half the energy of an average commercial building in use today. The greater demand for low-energy, green buildings will, in turn, drive innovation and result in even lower energy consumption in the decades following.” The IPCC report also confirms the value of existing initiatives, including the LEED green building rating system, which will continue to evolve in response to the growing recognition that carbon emissions must be dramatically reduced. There is already a plan to make a 50% reduction in carbon emissions a prerequisite for all LEED-certified buildings. “There will continue to be growth in the number of LEED-certified buildings, though an even greater impact of LEED will be the changes it generates throughout the entire building industry. Not all buildings will be LEED-certified, but key components of LEED will become standard practice throughout virtually the entire building industry.”

Making buildings energy efficient is the first step toward building green. The 2030 Challenge, which was adopted last year by the AIA and the U.S. Council of Mayors, calls for a 60% reduction in energy use in new buildings by 2010 and net-zero-energy buildings by 2030. “With

• continued next page

INTEGRATING HABITATS DESIGN COMPETITION

STUDIO OPPORTUNITY—REGISTRATION BEGINS SEPTEMBER 15

Metro's Nature in Neighborhood Initiative and co-hosts announce the "Integrating Habitats" design competition featuring a prestigious international jury. This cutting-edge competition will encourage innovative, collaborative proposals that combine design excellence, ecological stewardship, and economic enterprise. Proposals will serve as models for future development in the greater Portland, OR, area and beyond. A broadly-distributed publication will highlight winning teams and designs.

We encourage participation of practitioners and students from all relevant disciplines including landscape architecture, architecture, planning, urban design, stormwater management, engineering, water quality, ecology, wildlife biology, and development. The competition will feature special awards for student entries. Entries are due December 17, 2007.

The competition will feature four categories:

1. Mixed-use development with light-rail transit stop and major multimodal trail adjacent to a regionally significant creek and riparian corridor.
2. Site planning and design of a large-scale commercial development (including a "green" home building center) adjacent to a wetland complex.
3. Residential infill development combined with restoration of a contiguous oak habitat corridor while maintaining property values and maximizing the biodiversity of open space.
4. Renaturing infill, multi-unit, affordable and market-rate housing reuse of a former school site for multi-generational living combined with reuse of historic place.

For more information and updates contact <integratinghabitats@metro-region.org> or visit <<http://www.metro-region.org/integratinghabitats>>. ■

—*Brook Muller*

PARTNERS IN EDUCATION [CONT.]

energy costs remaining high and unpredictably volatile, not only will these dramatic reductions in energy use benefit our environment, they will save buildings' owners and occupants a great deal of money." Wilson concludes, "The building industry sector is an ideal engine for enlightened change."

—*Jerelyn Wilson*

LRC ACCEPTING STUDENT APPLICATIONS FOR FALL 2007

The Lighting Research Center (LRC) is accepting applications for Fall 2007 graduate education program enrollment. You can choose from three graduate degree options:

- Master of Science in Lighting. This two-year, 48-credit program immerses students in lighting research and application.
- Master of Science in Architectural Sciences with a concentration in Lighting. This 9-month, 30-credit program is ideal for those who have practical experience and want to advance their professional careers in lighting.
- Ph.D. in Lighting. This highest degree in the field of lighting allows students to undertake concentrated research. It is designed for students who want to work with leading researchers or teach at the university level.

To learn more about or enroll in one of these exciting graduate programs visit <<http://www.lrc.rpi.edu/education/graduateEducation/>> or contact Dan Frering, the LRC's manager of education at 518.687.7149 or <frerid@rpi.edu>. ■

—*Keith Toomey*

JOB OPS

LIGHTING RESEARCH CENTER

The Lighting Research Center (LRC) is seeking three new full-time professionals. Positions available include:

- Director of Energy Programs. Lead the LRC in electric utility issues, policies, and technology applications.
- Senior Research Scientist. Initiate and lead research related to the effects of lighting on people.
- Research Specialist. Plan and conduct research projects.

Learn more about these opportunities or apply online at <<http://www.lrc.rpi.edu/aboutus/careers.asp>>. An eo/aa employer.

MASSACHUSETTS COLLEGE OF ART

MassArt, Boston, seeks part-time faculty to teach single courses in the new Master of Architecture Program beginning summer 2008, while still practicing in the field. Courses will include: Graduate Design Studio, Mechanical Engineering, Construction, Professional Practice, Architectural History, Lighting and Daylighting, Real Estate Development, and Structures. Review of applications will begin June 1 and continue until these temporary, part-time positions are filled for the first academic year. For instructions on submitting applications visit <<http://careers.massart.edu>>. Direct questions to <pseitz@massart.edu>. An eo/aa employer.

BERLIN COLLEGE

Environmental Studies seeks a full-time, one-year Visiting Assistant Professor in the College of Arts and Sciences beginning August 2007. The successful candidate will teach a total of five classes including at least one section of our introductory course, Environment and Society, and at least three intermediate- or upper-level courses in her or his area of specialization. A Ph.D. or terminal degree is required. Full info at <<http://www.oberlin.edu/HR/FACOpenings/FAC07-43.html>>.

Send letters of application, including a curriculum vitae, undergraduate and graduate academic transcripts, and three letters of reference to John Petersen, Director; Environmental Studies Program; A. J. Lewis Center; 122 Elm ST; Oberlin College; Oberlin, OH 44074; by June 8, 2007. Fax 440.775.8946. Applications will be considered until the position is filled. An eo/aa employer. ■

SCUPPER PERFECTION?

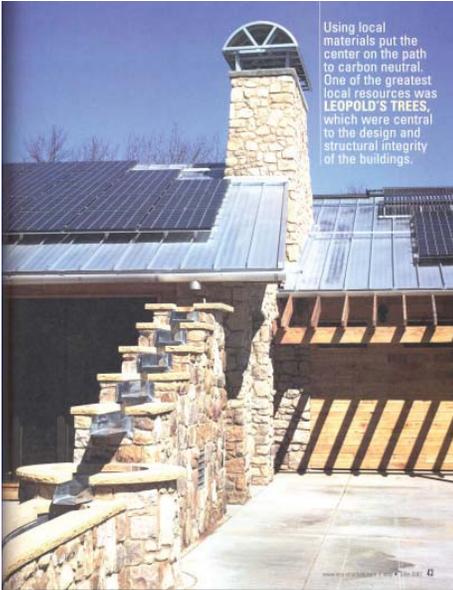


photo: eco-structure, may/june 07

Mike Utzinger was the Environmental Coordinator for the carbon-neutral Aldo Leopold Legacy Center featured in the May/June issue of eco-structure magazine.

CHEAP PHASE-CHANGE MATERIAL?

[Why not? Idaho researchers have used kitty litter for desiccant cooling.—ed.]

George Lane is 75, used to work for Dow Chemical, and has about 150 patents, including US 4,613,444, “Reversible phase change compositions ...” issued 9/23/1986, now expired (see <<http://geocities.com/davidmdelaney/pcm/US-patent-04613444-Lane-Reversible-phase-change-composition.pdf>>), which describes adding a dash of sodium chloride and potassium chloride and about 2% strontium chloride hexahydrate to calcium chloride hexahydrate to help ensure phase change stability (i.e. lots of cycles, freezing at 26°C, and melting at 30°). George warns against heating his mix much above 40°C, which would melt the nucleation centers which might not return until the mix is brought to 0°F.

The containers need to be strong to avoid being scratched or punctured by the mechanical actions of freezing and thawing, and with a 10% volume change with phase, the containers must be elastic, pleated, or have some air fill to reduce the peak pressure. They also must be well-sealed to avoid losing or gaining water from surrounding air. We can't add too much sodium or potassium, saturation is fine, but too much or too little strontium gives the freezing curve a slope, not a plateau. By adding salt to water (for safety, since this is exothermic) George made calcium chloride hexahydrate from DowFlake and PellaDow road salt, at about 5 cents a pound (the strontium salt used in road flares costs twice as much). The salt starts as a di- or tetra-hydrate with desirable impurities. When I suggested baking it in an oven to drive off the water, then adding water to double the weight, he said that couldn't be done without disassociation, but a university chemistry lab could analyze the water content by various simple means. I wonder how.

Can somebody turn George Lane's 12-page patent into a foolproof DIY cookbook recipe? It could be part of a 1-pound kit with enough strontium salt to treat a 50-pound bag of local calcium chloride.

—Nick Pine



SBSE NEWS
C/O BRUCE HAGLUND
DEPARTMENT OF ARCHITECTURE
UNIVERSITY OF IDAHO
PO BOX 442451
MOSCOW, ID 83844-2451

FALL ISSUE SUBMITTAL DEADLINE—SEPTEMBER 1

FIRST CLASS MAIL