



photos: (l) Benoit Lefrançois [© benoit.lefrancois@yahoo.ca] & (r) Alfredo Fernandez-Gonzalez

Picture yourself at a retreat in the authentic old quarter of Québec (l) or the ersatz environment of Las Vegas' Legoland (r) [or the strip!—ed].

## RETREATS OF THE FUTURE?

*[Applicants are queueing with suggested locations for retreats of the future. So far the following two proposals are unrivaled. Do you have a competing idea? Any content proposals?—ed.]*

### 2009 LAVAL UNIVERSITY, QUÉBEC CITY, CANADA

We were a bit over-optimistic when we thought about Gaspé as a good venue for the retreat. But, eh, we always think first, then cool down. We've come to the conclusion that Québec City would be the best possible place to host the retreat. It's very affordable since we would use University Laval spaces. We are planning for 25–26 June 2009 (with possible extension thru 27 June) preceded by the PLEA2009 conference 22–24 June, the best plan for maximum European and North American attendance. Would that be convenient for most SBSE'ers? We are now working on a web site for PLEA2009 to go online this summer. The retreat could be integrated into the site as soon as the SBSE Board accepts our venue. *[Also, we need a content coordinator volunteer. Who?—ed.]*

—André Potvin & Claude Demers

### 2010 LAS VEGAS, NEVADA

ASES 2010 will be in Phoenix (in mid-May) and LightFair International 2010 will be in Las Vegas (May 10–14). While Las Vegas may not be a preferred destination among SBSE members, we could have a really cool (no pun intended) retreat here. There are many exciting things for people to visit in Las Vegas (before we effectively run out of water!). I want to emphasize that the Springs Preserve <<http://www.springspreserve.org/html/home.html>>, with one building on its campus entirely cooled by passive systems, could be not only a place for us to visit, but the actual location for the retreat with daylighted facilities, usually passively cooled in May, and a Platinum LEED rating. Announcement is premature, but I thought I should suggest Las Vegas as a venue to gauge the level of interest for a retreat here. *[May may be early for full participation. Any counterproposals?—ed.]* 🖐

—Alfredo Fernandez-Gonzalez

## SBSE CALENDAR

### 2008

- Jun 24–28 ARCC/EAAE Conf; Copenhagen
- Jul 22–23 TIA/SBSE Conf; Oxford, UK
- Jul 24–25 SBSE Retreat; The New Forest, UK
- Jul 26–27 Comfort Conf; Windsor, UK
- Oct 22–24 PLEA 2008; Dublin, IE
- Nov 26–28 ANZASCA 2008; Newcastle, AU

### 2009

- May 11–16 ASES Conf; Buffalo, NY
- Jun 22–24 PLEA 2009: Québec City, QB
- Jun 25–27 SBSE Retreat: Québec City, QB??

### 2010

- May tba ASES Conf; Phoenix, AZ
- May ?? SBSE Retreat: Las Vegas, NV?? 🖐



photo: Bruce Haglund

Near the New Forest, the Gridshell at the Weald and Downlands Museum demonstrates sustainable building.

Thanks for a great newsletter, as always. I regret not being active in SBSE all these years; I'd like to join the Educational Resources Committee, hoping that my experience in teaching sustainability and non-studio green building design courses for the last 5 years at NJSOA will add to the forum. I find it difficult to have an effect on studio instruction. I'm invited to try something with a studio: The LEED guidelines will be assessed in a charette format so the students can determine what green strategies make sense in their design solutions for the studio instructor's program. At midterm review it was clear that they wanted to create green buildings, usually a green roof, but did not have the insight needed to be comprehensive.

—Erv Bales, NJIT

*[Terrific! Volunteers are always welcome, so I've passed your request on to SBSE leadership. I hope your letter inspires others to come out for SBSE. Your insight about studio effects is consistent with our experience ... studio teachers have instant street cred, consultants struggle.—ed.]*



Here's a web posting of research I did years ago that may have some relevance today: <<http://www-rcf.usc.edu/~rknowles/aesthetics/aesthetics.html>>. Walter Grondzik suggested that SBSE may find a use for it. Let me know what you think.

—Ralph Knowles, USC

*[You've always been in the vanguard, Ralph, so I suspect your past work rings true today. SBSEers?—ed.]*



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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](mailto:bhaglund@uidaho.edu)>. Direct membership and mailing list inquiries to Michael Zaretsky, Secretary-Treasurer; University of Cincinnati; School of Architecture and Interior Design; PO Box 210016; Cincinnati, OH 45221-0016; tel. 912.655.8718; e-mail <[mz@michaelzaretsky.com](mailto:mz@michaelzaretsky.com)>. 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>>.

MAY 28, 2008, LETTER TO AIA AND USGBC MEMBERS

In early May, AIA and USGBC's volunteer and staff leadership met to talk about how we could work together to advance our common goals for designing 100% carbon neutral buildings by 2030 and other sustainability issues.

USGBC's formative meeting took place in AIA's Board Room, and USGBC acknowledges and celebrates the leadership of AIA Committee on the Environment as a fundamental component of our organization's DNA as well as AIA's commitment to sustainability as expressed in its education and advocacy efforts. Our long history of collaboration, our shared heritage, and the volunteer leadership roles many AIA members play within USGBC make a stronger working relationship a natural.

Similarly, AIA acknowledges and celebrates the work that USGBC and its LEED program have done to move the sustainability and green building agenda forward. To that point, AIA's recently published study on green building rating systems found that LEED performed very well against the sustainability criteria examined.

In that spirit, AIA and USGBC's leadership have agreed to develop a strategic alliance towards how to jointly advance our shared goals, complementing existing collaborative activities which include continuing education, research, and the AIA-coordinated 2030 coalition.

Focusing in those areas where there is already strong collaboration, AIA and USGBC will create a strategic alliance and associated work plan in three main areas—advocacy, education, and research. During the meeting, we identified at least ten possible collaborative projects, and we are certain that in the future more will be identified. The strategic alliance will include an annual leadership meeting, regular meetings among senior staff leadership, and existing efforts such as reciprocal sponsorship of USGBC's Greenbuild and AIA's annual convention.

Finally, both AIA and USGBC would like to recognize and applaud the tremendous working relationships that exist between USGBC and AIA local chapters—which have led to many wonderful examples of market transformation and the advancement of the 2030 goals and sustainable design in communities around our nation.

Thank you so very much for your commitment and your individual leadership. We look forward to sharing our strategic alliance as it develops.

—Christine McEntee & Richard Fedrizzi

MAY 26 COVER LETTER TO AIA MOVERS AND SHAKERS

Not sure how many of you have seen this recent proposal to the AIA Board [*See SBSE's partial proposal below.—ed.*], but it is worthy of your full support. We must move design education ahead quickly if we are to meet the challenges that are now upon us. Our colleagues submitting this proposal are central to this effort. I will do all I can to participate and help them in their important work.

—Edward Mazria

SBSE'S AIA BOARD OPPORTUNITY FUND REQUEST

Synopsis: The Carbon-Neutral Design (CND) Project proposes that the AIA, the AIA Sustainability Discussion Group (SDiG), AIA Committee on the Environment (COTE), and the AIA Educator/Practitioner Network (EPN) collaborate with the Society of Building Science Educators (SBSE) to produce educational and resource materials for carbon-neutral design. For over twenty years SBSE, a non-profit educational organization with members from the academy, governmental agencies, and publishers, has served as an incubator for new approaches to teaching environmentally responsive architectural design. This partnership with the academy will capitalize on the expertise of building science educators and practitioners to produce peer reviewed, web-ready content on carbon-neutral design. The resulting materials will be disseminated through the AIA's web site, the SBSE's international network, and other academic channels.

This proposal outlines three phases of a broader project. Phase I of the project, to be supported with AIA funds, includes the CND Summit and CND Resource. The CND Summit is conceived of as an intensive, three-day workshop focused on the development of consensus-based guide-

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## ANNUAL MEETING NOTES

May 6, 2008, at ASES San Diego 12:30–2:00 pm. Meeting facilitated by Bruce Haglund.

In attendance: Dennis Andrejko, Garry Bowen, Charlie Brown, Harvey Bryan, James Cleveland, Serena Coltrane-Briscoe, Stephen Dent, David Douglass, Alfredo Fernandez-Gonzalez, Lindsay Frizzell, Ben Futrell, Walter Grondzik, Bruce Haglund, Laura Haymond, Alison Kwok, Pablo La Roche, Norbert Lechner, Andrew Lee, Stephen LeSourd, Shih-Hsin Lin, Rhonda Lowe, Margot McDonald, Emily Meier, Victor Olgay, Nick Rajkovich, John Reynolds, Akram Rosheidat, Marc Schiler, Laurie Schosyan, Judy Theodorson, Mehmedalp Tural.

1. Introductions by all and President's Report (Haglund).
2. New Officers: Leonard Bachman was elected President-Elect; Michael Zaretsky was elected Secretary/Treasurer for 2008–2009. New Bylaws passed: committee appointments have not yet been determined. Nominations should be submitted to Terri Meyer Boake. Alfredo Fernandez-Gonzalez volunteered for curriculum committee.
3. Treasurer's Report (Theodorson) [distributed to all in attendance]: Bank balance at the start of the year was \$40,034. Major income sources are the Sun-Angle Calculator and membership. There are minimal operating expenses. The 2007 retreat was self-sustaining. Scholarship competition support from Jeff Cook (\$6,000 for PLEA scholarship/student competitions), John Reynolds (\$2,000 for student support to SBSE and ASES), Fuller and Jane Moore (\$1,000 for students to SBSE).
4. Membership Report (Theodorson) [distributed to all in attendance]: Membership is 274 + 15 affiliate, a 28% increase over last year. Membership continues to grow internationally with 14% of members from developing countries. 77% of members are identified with a university. The rest are from A&E firms, government, publishing houses, research centers. 11% of members are students.
5. Peer Review Network (Grondzik): Has provided support for P&T for 12 years.
6. Other News (Grondzik): Congrats to John Reynolds, Chair of ASES Board of Directors; Margot McDonald, Chair of Solar 2008 National Organizing Committee; Harvey Bryan, Chair, Passive Technical Review Committee; Alison Kwok, Women in Solar Energy Award. Great SBSE representation/recognition within ASES. [Also, Grondzik is ASES Meetings and Conferences Committee Chair and named FASES.]
7. Newsletter and Web Site Update (Haglund): Call for June newsletter is out. The "beautiful" (color) version is available on-line. Martha Bohm has assumed duties of webmaster. Many thanks to Robert Marcial for his years of service. Liliana Beltran offered to maintain list of schools with sustainability programs.
8. Recognition of Fuller Moore and John Reynolds Scholarships: Thanks!
9. Student Retreat Scholarships (Haglund): Five students have received support for the UK retreat—two from UIIdaho and three from USC.
10. Student Travel Scholarships to ASES: Checks distributed to 6 students.
11. ASES Student Best Paper Award: Not organized prior to event, but Harvey Bryan will put together a review of student papers from the proceedings.
12. Jeffrey Cook Memorial Project (Bryan): Slide project hosted at ASU—not yet live. Okay to link from sbse.org. Also, Jeff's collected works are on the ASU web site.
13. Jeffrey Cook Memorial Scholarship for Faculty from a Developing Country to Attend Retreat: (Bruce and Judy). Shamir Javid from Bangladesh will attend the UK retreat.
14. Jeff Cook Student Travel Award to PLEA Dublin: Call is out. [Don Watson has also contributed \$1,000 to support the scholarship and travel awards. Thanks, Don!—ed.]
15. Jeff Cook Student Design Competition (Bryan & Rajkovich): On-going project.
16. Oxford Conference (Haglund): SBSE has organized one of the ten fora.
17. 2008 Retreat (Haglund): 30 registered including 5 students.
18. 2009 Retreat Plans: Proposal from Claude Demers and André Potvin for a retreat at Laval, coordinated with the PLEA 2009 at Québec City (June). Noted that ASES 2009 is in Buffalo, NY, May 11–16.
19. SBSE, USGBC, and AIA COTE (McDonald): In 2007, developed a MOU with Kira Gould at AIA. There has been less interaction with new leadership. Actively working with USGBC on an awards program for formal education (preK–12 and higher education).
20. ACSA Sustainability Topic Group/NAAB Revalidation (Grondzik): Report was done several months ago, every criteria (programmatic and student work) addresses sustainability.

• continued next column

## LETTERS [CONT. FROM P.2]

Wow, thank you so very much for including Showcasing Healthy Modular Housing in your newsletter! It came out great!

—Michelle Roberts, Ecohealth Homes

[Thank you for contributing! The quality of the News is determined by the quality of contributions. I truly look forward to finding out what everyone is up to. Y'all contribute, eh?—ed.]



I've been exploring ways for my former School of Architecture and Building Science, Jomo Kenyatta University of Agriculture and Technology, to partner with U.S. architecture schools—a sort of cultural exchange or academic partnership. Any ideas on the best way forward? The ultimate goal is for my former college to transform itself to positively affect the society and community around it. I will heartfully appreciate any piece of advice.

—Geoffrey Leyian Kavulya, Ratio Architects

[You can hook up with Geoffrey <vugsus06@alumni.cmu.edu>, a CMU grad, and his u/g alma mater in Kenya. Just ask.—ed.] 🖱

## MEETING NOTES [CONT.]

ACSA adopted most of it. Comment period open. Please comment.

21. Green Building Initiative (Bryan): Students can access Green Globes free for one year.
22. SBSE Education Initiatives: Carbon Neutral Studio Project is being considered for \$75K in funding with a possible additional \$75K for emphasis on affordable housing. [We got it!—ed.]
23. Proposal for Solar Home Education Project (Reynolds): Cheryl Long of *Mother Earth News* invites SBSE sponsorship/assistance for a "solar makeover" project. JR suggests that energy modeling would have to be funded.
24. Misc. Announcements: Charlie Brown: Offer to donate graphic calculation tools for SBSE sale/distribution. Nick Rajkovich: Discussion of development of award for **best passive design** for solar decathlon. Alfredo Fernandez-Gonzalez: DVDs of UNV lecture series sent out to all school libraries. 🖱

—Judy Theodorson

## SBSE PEOPLE

✦ **Martha Bohm** has gone from academia to practice with Will McDonough doing in-house consulting work, rather than pure design work. Lots of research, a bit of Agents of Change-type case-study work coming up in a few months.

⚖️ The 2008 COTE Top Ten Jury included **Gail Brager** as well as Glenn Murcutt.

👤 **Hitesh Doshi** has been promoted to the rank of Professor at Ryerson University.

📖 **Ihab Elzeyadi's** "Green Classroom Toolbox: Retrofitting Educational Facilities for Carbon Neutrality and Students' Productivity—Evidence-Based Design Guidelines" is among the ten projects that will receive AIA '08 funding. Abstracts available at <<http://www.aia.org/research>>.

🌟 **Alfredo Fernandez-Gonzalez** was named one of the top ten most influential leaders for sustainable development in the Las Vegas Valley by *Architecture Las Vegas*, AIA Las Vegas' official publication. He was also featured in the article "The 2030 Mission—What is Nevada's Plan to Reach the Net-Zero Goal?" Alfredo's research on roofponds and green roofs was featured in the local CBS station's special segment on Earth Day. In addition, he was appointed to the Integrated Building Water Management (IBWM) Committee of Green Roofs for Healthy Cities—North America.

🏛️ **Martin Gold** is interim director at Florida this summer while a national search for the new director is on-going. He will be "resetting the agenda" at UF, establishing research-based design, sustainable urbanism, and sustainable architecture as foci of the program.

👤 **Walter Grondzik** has been elevated to ASES Fellow.

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photo: Alison Kivok

Walter Grondzik accepts the FASES certificate in the presence of ASES honchos John Reynolds and Brad Collins.

## LEED 2009 WILL EVOLVE

## MAY 19 LETTER TO ENGAGED PARTICIPANTS

The conversation we've been having since we started to work on LEED 2009 has gone something like this:

Person A: Global warming doesn't give us much time.

Person B: But we can't address much of anything, let alone global warming, if we're only dealing with a small fraction of the entire built environment. We need to get everyone involved.

Person A: Yes, but why get them involved in a system that doesn't take them far enough to save us from ourselves? We need our buildings to be restorative.

Person B: LEED can't save us from ourselves. LEED, as a tool, can engage the market in transformation. That transformation is about people. It is not about LEED credits.

Person A: You're missing the point. We have to be tougher. We have to go beyond.

Person B: No, you're missing the point. We have to find ways to engage a market that has never thought about these issues before.

Persons A and B: Let's find a way to do both.

These documents try to do just that. They incorporate new science and reflect a new understanding of the priorities of our world. They synthesize the countless days and nights of conversations, thoughts, and ideas that have been exchanged since the inception of LEED and then build bold action steps around them.

It's a response of big ideas: a restructuring of the system that allows it to be more nimble, a mechanism for incorporating bioregional issues, a framework that supports rapid response to changes in the market and in our environment, a process for introducing the new technologies that support those changes.

You won't see the full effect of these ideas until you see how it all fits together with the new LEED Online and the certification process, but these shifts allow us to begin to address how human systems integrate with natural systems. Some of the changes are purely technical and some provide a platform for a new direction that will dramatically alter how we launch our collective concerns and common goals.

Provided here are red-lined changes to the rating systems, new scorecards, and a framework for the introduction of regional credits, along with background documents that can help you understand how we got here.

You are being asked to fully engage as a participant in this discussion and tell us what you think. I, personally, can't wait to hear what you say. 🙋

—Scot Horst, Chair, LEED Steering Committee

## TRACKING SUSTAINABILITY [CONT. FROM P.2]

lines, strategies, tools, and resource lists for carbon-neutral design in both the academic and professional education settings. Participants will include educators from the CND Educators' Network who are currently teaching architectural design studios with carbon neutrality as a theme and practitioners nominated by AIA and/or SBSE. The outcomes of the summit will be used to develop an online, web-based CND Resource. The CND Resource will provide practical design guidelines and strategies to assist in design and planning processes for carbon-neutral design, including case studies that document successful, built projects and an annotated bibliography of CND tools and software. This resource is intended to be adaptable and incorporated into the SDiG 50to50 resource and/or sustainability resource center. The AIA Educator/Practitioner Network, the Committee on the Environment, the Sustainability Discussion Group, and the SBSE have as common goals promoting sustainability in the built environment by providing tools, knowledge, resources, and research ... as well as collaboration to integrate sustainability into the curricula for the education of architects and architectural students. 🙋

—Jim Wasley, Mary Guzowski, Terri Meyer Boake

## PLEA 2009 CONFERENCE PREVIEW

PLEA 2009, THE 26TH INTERNATIONAL CONFERENCE

**Architecture, Energy, and the Occupants' Perspective, 22–24 June 2009, Université Laval, Québec City, Canada**

The PLEA 2009, “Architecture, Energy, and the Occupant’s Perspective,” will follow the PLEA 2008 “Towards Zero Energy Building” at UCD Dublin, Ireland. At a time of major advances in active energy systems, the occupants’ behaviour and their interaction with building systems remain a determining factor in the success of passive, low-energy strategies to reach Zero Carbon architecture and communities.

PLEA 2009 invites you to join us in historic Québec City to participate in an event that will help update your knowledge of sustainable architecture, present current research to an expert audience, and initiate new collaborations with participants from around the world. For those committed to sustainable design education, PLEA 2009 will be followed (we hope!) by the annual SBSE retreat from June 25–27.

### PLEA2009 CALL FOR ABSTRACTS

The PLEA2009 Conference addresses passive, low-energy architecture through occupants’ perspective at the urban and building scales. Although major breakthroughs in sustainable architecture stem from technical solutions bridging material properties and energy flows, the aim of the conference is to position users’ behaviour as a key “active” determinant of energy performance in passive design. Building under extreme climate represents a particular challenge for designers and users since the underlying paradigm of energy conservation and exclusive operation mode dramatically reduces the extent of selective strategies available in more temperate climates. The conference seeks papers addressing the applicability of passive design strategies in extreme climates while improving occupants’ satisfaction, encouraging environmental diversity, and minimising environmental impacts.

Extended abstracts are invited from experts in academia and professional practice. We welcome contributions in all areas of passive and low-energy architecture with special emphasis on the theme of the conference. Authors are invited to submit abstracts in one or more of the following areas—Occupants’ Impact on Energy Performance, Theory and History of Environmental Controls, Sustainable Urban Design and Communities, Post-Occupancy Evaluation (Thermal, Visual, Acoustical, Olfactory), Passive Cooling and Heating, Daylighting, Integrated Design Process, Design Tools and Methods, Materials, Components and Innovative Systems.

All abstracts must be submitted via the on-line submission system at <<http://www.PLEA2009.arc.ulaval.ca>> (available 22 June 2008). Abstracts should not exceed 1,000 words and should be in English, the official language of the conference. All submitted papers will be double-blind reviewed by international and national reviewers selected from the Technical Committee. Please indicate your preference to present your paper as an oral presentation or as a poster. The final allocation will be based on the recommendations of the technical review committee. Conference proceedings will be published by the scientific editor Les Presses de l’Université Laval/Laval University Press.

Important Dates: Web site Launch and First Call for Abstracts—22 Jun 2008; Abstracts Due—26 September 2008; Notification of Oral or Poster Presentations to Authors—24 Oct 2008; Collection of Full Papers—30 Jan 2009; Final Programme and Timetable—27 Mar 2009. 🖱

—André Potvin

## EBN’S CODE FOR “PASSIVE SURVIVABILITY”

Staying on the cutting-edge of building industry practices is a big part of our job at Building-Green. At times, our research and writing leads us to a place where a long-range, far-reaching vision seems very clear. Read Alex Wilson’s call for incorporating “passive survivability” into building codes at <[http://www.buildinggreen.com/press/passive\\_survivability\\_building\\_codes.cfm](http://www.buildinggreen.com/press/passive_survivability_building_codes.cfm)>. I hope this press release spurs SBSEers’ thinking. 🖱

—Jereilyn Wilson

## SBSE PEOPLE [CONT. FROM P.4]

✉ **Mario Grosso** was appointed dean of academic affairs for a new New Hampshire-based, seeking-accreditation, International University with a Campus in a 16th-century castle near Turin. The school has a strong environmental mission and he has planned a B.S. in Environmental Architecture as well as a Master in Architecture (starting next year).

🌟 **Bruce Haglund**’s amazing interdisciplinary students came away from EPA’s P3 Sustainability Expo with 3 awards and \$2,000 for their Carbon-Neutral McCall (ID) Field Campus project. [*Future retreat site?—ed.*]



Photo: Bruce Haglund

Lynne Westerfield, Hanna Persson, Jacob Dolence, Crystal Van Horn, Jen Kullgren, and Laurie Schuman accept one of their three EPA P3 awards

✉ Not only was **Alison Kwok** conferred ASES’s 2008 Women in Solar Energy award, she was promoted to Professor at the University of Oregon.

🌟 **Pablo La Roche** led the team that won the NCARB grand prize this year, “Low-Cost Sustainable Housing for Tijuana, Mexico,” which was presented last year at ASES. See <<http://www.ncarb.org/prize/2008/index.html>>.

🏢 **Michelle Roberts**, Principal and CEO, Ecohealth Homes, was recognized as among the 30 best and brightest under age 40 in building systems industry at the recent International Builders’ Show in Orlando, FL. She was also featured in the March/April issue of *Building Systems* magazine, a nationwide trade publication profiling innovative construction technologies.

🌟 **Kevin van den Wymelenberg** gives a brilliant discourse on daylighting in *Architectural Lighting*, Apr 08, and at <<http://www.archlighting.com/industry-news.asp?articleID=670541&sectionID=1306>>. 🖱

## STUFF FOR YOU

### CARBON-NEUTRAL DVD

Alfredo Fernandez-Gonzalez has volunteered to serve on the newly formed SBSE committee on curriculum development. His interest in quickly developing and making available teaching materials related to carbon-neutrality is reflected on the interactive DVD he produced in Fall 2007, *The 2030 Challenge: Environmental Design in the Face of Climate Change*. A copy of this DVD, which features contributions by Edward Mazria, Pliny Fisk III, John Reynolds, Susan Roaf, and Alfredo Fernandez-Gonzalez was mailed to the library of every NAAB-accredited program in the United States (and recently to other programs in Canada and Denmark).

If anybody wishes to write a review about the usefulness of this resource, please contact Alfredo as he will be glad to mail you a copy of the DVD, or just download the DVD resources from <http://www.unlv.edu/labs/neat/2030/>.

—Alfredo Fernandez-Gonzalez

### NEW WEATHER DATA

For all you Ecotect weather tool users, the U.S. DoE's National Renewable Energy Laboratory (NREL) just released an updated typical meteorological year (TMY) data set derived from the 1991–2005 National Solar Radiation Data Base update. The TMY3 data and user's manual are available at [http://rredc.nrel.gov/solar/old\\_data/nsrdb/1991-2005/tmy3](http://rredc.nrel.gov/solar/old_data/nsrdb/1991-2005/tmy3). These data sets provide greater geographical coverage than previous TMY sets with information on 1,020 locations in the United States (vs 239 TMY2 sites). Unless they're revised, computer programs designed for TMY2 data sets will not work with TMY3 data. NREL provides a software utility that allows reformatting of the TMY3 data to the TMY2 format at the TMY3 link above.

—Leonard Sciarra

### INTEGRAL CARBON CALCULATOR

The newly posted version of HEED has the carbon calculator that Ed Mazria wanted and a few other goodies (see Help on Initial Design and on the Comparative Plot for Zero Energy Buildings). A number of schools are using it in their 2010 Challenge design studios. HEED works for all the thousand plus new US TMY3 climate stations on the EnergyPlus site. Download HEED from <http://www.aud.ucla.edu/heed>.

—Murray Milne

## MICHIGAN'S CARBON-NEUTRAL STREET LIGHTS

Mojtaba (Moji) Navvab stands in front of a newly installed wind and solar street light at the entrance to Buhr Park. Moji has been working for years on renewable, alternative light sources that use natural resources for energy. The light is a collaboration in design and research between Moji's University of Michigan Architectural Laboratory lab, Full Spectrum Solutions, and the City of Ann Arbor, which paid to have it installed. The gizmo atop the utility pole near the Packard Road entrance to the park looks more like something from science fiction than a commonplace utility device.

It's a hybrid solar-wind-powered streetlight, topped by a wind turbine and two solar panels and contains a battery to store that energy. The streetlight was installed as part of Navvab's research work at the Sustainable Design Research Laboratory. The 70-watt, 24-volt light can store 100 amp hours at 24 volts in its two batteries. It only turns on at night and is as bright as a traditional streetlight: the light uses induction technology, which means the power needed to generate light is transferred from outside the lamp via electromagnetic fields. Its life expectancy is about 22 years. An added advantage of induction lighting is that it's easier on the eyes at night. "It's not only environmentally friendly, but you have to think of the human aspects of it in terms of night vision," said Moji. Full Spectrum Solutions manufactured the lamp. This streetlight allows the city to take another small step toward its renewable energy goals. Ann Arbor aims to have municipal operations running on 30% renewable energy by 2010, and about 20% of the entire community on renewable energy by 2015. 🖐

—Moji Navvab



Moji with the fixture, and the fixture in detail.

photos: Moji Navvab

## CATHOLIC U'S M.S. IN SUSTAINABLE DESIGN

The School of Architecture and Planning's mission, Building Stewardship, focuses on preparing architects and designers to assume a personal responsibility for the welfare of the world. We stress the interdependence of the words "building" and "stewardship." Our new M.S. in Sustainable Design (MSSD) program is both a natural extension of this mission and a deepening of our commitment to the stewardship of the social, natural, and built environments.

The two-semester program provides students full immersion into the theory and application of sustainable design and instills leadership skills. Courses cover greenhouse-gas emissions and zero energy design, embodied energy and Life Cycle Analysis, national and international rating systems, water conservation and management, and low-energy building materials. Students are introduced to a variety of simulation software that allow them model, analyze, and adjust energy, light, and water vapor as an integrated component of the design process. The culmination is a thesis, either via a design studio or through the more conventional written dissertation. For full information visit see <http://architecture.cua.edu/academicprograms/mssd.cfm>. 🖐

—Chris Grech

## JOB OPS

### CAMBRIDGE UNIVERSITY

Cambridge University, UK, has three job openings in Building Technology in the Engineering Department. Full details at <<http://www.admin.cam.ac.uk/offices/hr/jobs/vacancies.cgi?job=3334>>. The specifics of the BT jobs are—research technologies for low-energy buildings, whose scope includes novel materials and surface treatments; heat transfer through and ventilation flows in buildings; sensors and smart computer-based systems to optimise energy use; and technologies to exploit the energy available on the site from ground source heat pumps to photovoltaic roofs and wind turbines, addressing technologies to improve current stock as well as new build. Informal enquiries may be made to Robert Mair <[rjm50@cam.ac.uk](mailto:rjm50@cam.ac.uk)> or Randall Thomas <[randall.t@ntlworld.com](mailto:randall.t@ntlworld.com)>.

—Robert Mair

### PACIFIC ENERGY CENTER

The PG&E Pacific Energy Center is seeking a Lighting Technology Program Coordinator with 5 years' experience to join our technical staff. We are looking for someone who is interested in making this a multi-year career segment, but will also consider someone who cannot commit for that length of time. This position requires specialized knowledge in the interesting and expanding field of lighting technology. The selected candidate will have experience in applying energy-efficient lighting technologies and design practice methods in non-residential buildings. Responsibilities will focus on advising customers on the selection of energy-efficient technologies and strategies for lighting their facilities through classes, site-specific analysis, and applications engineering assistance. Additionally, the position requires work with PG&E energy-efficiency programs providing lighting technical assistance, analyzing energy-saving lighting technologies for specific projects, and developing tools that increase the overall efficiency of program implementation. Please contact me at <[rxmu@pge.com](mailto:rxmu@pge.com)> if you are interested, know of a candidate, or have questions about the position. 🖱

—Robert Marcial

## USC APPROVES NEW PH.D. PROGRAM

Beginning this fall, the USC School of Architecture will offer a new Ph.D. program in architecture to prepare students for leadership in the profession and academia. Graduates are expected to become leading voices in a range of arenas, including professional architecture and architectural engineering firms, government institutions, and university teaching and research. Participants are expected to bring a strong academic record and a serious commitment to research and teaching. The initial focus of the program will be on the building sciences and technology.

“If architecture is seen as a form of knowledge, the Ph.D. in architecture must lead the effort to explore new knowledge and unknown territories,” said Dean Qingyun Ma. “This becomes urgent today because we start to realize that the way we build and the way we live have contributed so much to the crises of where we build and live.”

Douglas Noble, associate dean and program chair, said, “The school has great strengths and a lengthy history of research in structures, environmental control systems, materials/methods, sustainability, and digital processes. We are especially interested in technology integration and design intelligence, and the Ph.D. program will allow us to seek additional federal and private research grants.” Recent funded research has included urban glare/daylight analysis, seismic performance, energy management systems, and digital tool-building. 🖱

—Douglas Noble



The UK's waterscapes vary from Big Ben and sustainability icon Portcullis House on the foggy Thames to the severe tidal action at quaint Mevagissey in Cornwall.

## MORE STUFF FOR YOU

### ENERGY DESIGN PLUGIN

DOE and NREL are pleased to announce the public beta release of the *Energy Design Plugin* for *Google SketchUp*.

The plug-in can be downloaded for free from <[http://www.energyplus.gov/energy\\_design\\_plugin.html](http://www.energyplus.gov/energy_design_plugin.html)>. With it you can easily create and edit the building geometry in your *EnergyPlus* input files. The plug-in allows you to launch *EnergyPlus* simulations and view the results without leaving *SketchUp*. Designed to integrate seamlessly with the *SketchUp* environment, it allows you to use the standard *SketchUp* tools to create and edit *EnergyPlus* zones and surfaces. You can explore *EnergyPlus* input files by using all the native *SketchUp* 3-D capabilities to view the geometry from any vantage point, apply different rendering styles, and perform accurate shading studies. The plug-in allows you to mix *EnergyPlus* simulation content with decorative content such as background images, landscaping, people, and architectural finish details—all within the same *SketchUp* model.

This plug-in makes it easier to work with *EnergyPlus*. However, expertise in using *EnergyPlus* at the text level is highly recommended for performing successful and accurate simulations. The beta version of the plug-in does not yet handle all critical input objects. Some editing of the input file will usually be required outside *SketchUp*.

After installation, the help files should get you started. You might also try opening some of the input files that are included in the Examples directory. If you have any problems, please contact us at <[energy\\_design\\_plugin@nrel.gov](mailto:energy_design_plugin@nrel.gov)>. We'd appreciate any bug reports, suggestions, or other feedback.

—The *EnergyPlus* team

P.S. You will need to install the free version of *SketchUp* and *EnergyPlus* V2.1 before installing the *Energy Design Plugin*. 🖱



photos: Bruce Haglund



photo: Alfredo Fernandez-Gonzalez

Harold Hay surrounded by Alfredo Fernandez-Gonzalez and his family at ASES 2008 in San Diego.



photo: Bruce Haglund

This new solar duplex in Moscow, ID, demonstrates Harold's frustration. It has solar thermal panels, yet more unshaded west aperture than south!



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## STILL KICKING ASS AT 99

Friends here's the EU position on passive and renewables. For forty years I've tried it get these ideas across to architects, yet not one has built a house, even though I offer matching funds. That is frustrating. The problem is greater than all of us. I am caught; it is an architectural technique but it requires an understanding and application of business and buildings by the millions, not design/build and not RE. I wrote, "Dear Dr. Laustsen, acknowledging your importance in international certification of solar buildings, I hesitate to press my inquiry about the quotation sent to me by a friend, which has you saying, 'Now we should return to the work of Americans in the 1970s—especially the work of Harold Hay.' It was a depression remover to hear at age 99 (and from an architect). I shall not be forgotten."

—Harold Hay

Thank you, but unfortunately I can't take the honour for these words. I heard them, too, at the passive house conference in Nuremberg in early April, and I'm sure they were said by Wolfgang Feist from the Passive House Institute in Freiburg. But I agree with his comments.

There were a lot of interesting experiments in Southern California in the 70s, as there have been in Germany and in Austria in the last two decades, trying to use passive solar heating to a very large extent. It's my experience that these ideas are spreading to a large number of countries, and that they will include not only solar heating and DHW, but also passive cooling and solar-driven natural ventilation. I'm sure the energy prices were too low in the 1970s for the market to take up the passive solar, and that energy supply expectations were too optimistic. Now IEA recommends that countries adopt an active policy for passive houses and zero energy buildings to ensure they become a larger part of the market, and in the longer term, become mainstream for buildings both in developed and developing countries as endorsed by the G8 leaders in Heiligendamm last year.

As an architect I hope this new challenge will inspire architects to build healthy, nice, and interesting buildings. You can quote me on any or all of this. 🙌

—Jens Laustsen

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FALL ISSUE SUBMITTAL DEADLINE—SEPTEMBER 1

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FIRST CLASS MAIL