



Look upon lower Québec City and the port from the upper old town, Laval University's locale.

photo: Terri Meyer Boake

MAKE THE LEAP TO ZERO CARBON DESIGN

The “Leap to Zero Carbon” will likely put patience to the test as schools scramble to incorporate this issue into their teaching and courses. It’s our intent that this retreat build on the New Forest agenda and delve further into the heart of carbon-neutral design. How do we use our current sustainable and passive design teaching to help make the big leap toward teaching students to design to that more particular zero target? We’re looking for your ideas, best lectures, discrete projects, and larger studio initiatives. We want you to leave this retreat fully equipped to teach carbon neutrality and meet the goals of Architecture2030! We can do it through long-standing SBSE basics—sharing our ideas, projects, and teaching resources!

Our suggested topics are: 1) carbon neutrality in lectures; 2) carbon neutrality in studios; 3) CND research; 4) tools; 5) strategies for reprogramming buildings and people to reduce; and 6) great case studies. Presentation times will be short (10–15 min.) and organized into serial sessions so we can accommodate as many presentations as possible, encouraging full participation in each session. Some material presented at this gathering will be added to the “Carbon Neutral Design Project Web Site,” an SBSE education resource initiative funded by the AIA and a private donor. We seek proposals from both faculty and students. With “SBSE Retreat Proposal” as the subject line, by Feb 23, 2009, 5:00 pm EST, e-mail your proposal to both Terri <tboake@uwaterloo.ca> and Mary <guzow001@umn.edu>.

The retreat starts immediately after PLEA, “Architecture, Energy, and the Occupant’s Perspective.” We encourage participation in both events if possible. Québec City is a fantastic venue, and much of the PLEA content regards impact reduction—the basis of Carbon Neutral Design. I know that André Potvin and Claude Demers have some interesting events planned for PLEA! 🖐

—Terri Meyer Boake and Mary Guzowski

SBSE CALENDAR

2009

- Apr 15–18 ARCC Conf/San Antonio, TX
- May 11–16 ASES Conf/Buffalo, NY
- Jun 22–24 PLEA 2009/Québec City, QB
- Jun 25–27 SBSE Retreat/Québec City, QB
- Jul 27–30 SimBuild 2009/Glasgow, UK

2010

- May tba ASES Conf/Phoenix, AZ 🖐



photo: Terri Meyer Boake

Logistics coordinators, André and Claude, have reserved a block of rooms at the Clarendon Hotel, a few blocks from Laval University.

LETTERS TO THE EDITOR

Why am I not deemed a member of the SBSE list server? I'm a member of SBSE, and really enjoy the interchange of thoughts and ideas. Is there something I should do to make my comments legitimate? Thanks for your help.

—Paul H. Raymer, Heyoka Solutions

[Inclusion on the SBSE list server is free, but not automatic. You need to join the list (from all your e-mail addresses) as well as pay your annual dues. See our web site for details.—ed.]



Thank you so much. I just got *SBSE NEWS* Fall 2008. This bulletin was very beneficial for us, especially as architecture students at the University of North Sumatra.

—Julesta Putra, University of North Sumatra

[Thank you! Our aim is to help the next generation the world round!—ed.]



Thanks to Ralph Knowles for posting his excellent links to “solar aesthetics, old research looked at through older eyes” <http://www.rcf.usc.edu/~rknowles/aesthetic_2/aesthetic_2.html>. More important, it led me to Ralph’s web site, <<http://www.rcf.usc.edu/~rknowles/>>, a gold mine of scholarly work, evolving over time, that captures the beauty of the movement of the sun (and other natural forces) and its potential effect on built form. I look forward to reading and savoring these papers.

—Fuller Moore, SBSE Emeritus

[Ralph has taught us for decades that responding to the sun can be aesthetically inspirational and spiritually rewarding.—ed.] 🖐️

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 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>. 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>>.

ENERGY FIRST, CARBON SECOND

[In early December Nina Baird posed a seemingly innocent question about “NAAB and building assessment” on the SBSE list server, but it blossomed into a wonderful, passionate thread. Here are some highlights; get the full breadth of the interchange in the December archive at <<https://www.lists.uidaho.edu/pipermail/sbse/>>.—ed.]

What would a carbon-neutral design be, and how could we be sure we achieve it? Norbert and Jeff seemed to re-frame the initial proposal as zero-energy, which is measurable—at least at the site level. Yet over time it seems to me that list discussions slip between zero-energy and zero-carbon (or carbon-neutral) as though they’re interchangeable terms.

—Nina Baird

I have found it really important to aim for low energy first, then low carbon. Otherwise, as our legislation currently does in Britain, there is a danger of jumping over low energy and concentrating too much on low-carbon supplies, both renewables on-site and fuel supplies from outside that purport to have low-carbon factors (e.g., biofuels, which can produce more carbon than assumed and also lead to other emissions with undesirable chemical and greenhouse gas effects).

We say, “Keep it simple, do it well, and only then be clever.” Unfortunately, our POE work tells us that cleverness often comes before getting the basics right. So you find \$1m of PV atop a 50,000 sq ft building reducing its carbon footprint by 10% while you could have saved the same amount merely by ensuring the building was properly airtight and the heating better controlled. Unfortunately our consumer economy tends to encourage us to spend on “green bling” rather than getting the basics right. So things like BREEAM and LEED reward you for adding features, and ASHRAE and utilities reward you for making building services more efficient and elaborate, but not for reducing their capacity in the first place by thoughtful strategic and passive design.

You can measure all the fuels a building uses and on-site generation. Carbon gets you into a mess because it muddles up what is happening in the messy supply chains outside the building. So while you may well need to calculate it, you should do so at the last responsible moment and make sure your assumptions are transparent so you can do the what-if calculations.

We need some absolute (but thoughtful) standards and reward good outcomes—not just ticking the boxes and applying features. We need simple, smart buildings with design, science, and technology thoughtfully applied much more than we need technologically elaborate ones. And we need massively more building-performance-in-use feedback to bridge the credibility gap between expectations and outcomes. It’s unprofessional to hand over a project and walk away. *[Hear, hear!—ed.]* Design and building teams should follow through their buildings into use to pass on their knowledge; help occupiers and managers understand them; and tune them up, review expectations against outcomes, benchmark the building against others, learn what they need to do better next, and spread the word to their colleagues and to the industry.

—Bill Bordass

I agree with the vast majority of what Bill says, but must vigorously disagree about looking at carbon emissions at the last possible moment. The current reward system offers encouragement and incentives to the wrong priorities, so I heartily support a thorough evaluation of those reward systems in terms of their outcomes. As you say, it is of utmost importance to reduce the sources of energy waste, but I would argue that it should not be done without a concurrent awareness of the Greenhouse Gas (GHG) emissions implications. One must know the carbon implications of energy use and energy use intensity reduction measures in order to evaluate them adequately in light of the urgency of avoiding unnecessary GHG emissions.

—Hal Levin

I did say last **responsible** [*ed.’s emphasis*] moment, which is rather different from last possible. And of course this moment relates to the sign-off calculation: during design you need to keep your eye on the carbon implications at the same time as the energy ones. But if carbon becomes the overwhelming obsession, as it is tending to be here in the UK, you lose transparency and end up doing really silly things (e.g., wasting supplies of low-carbon energy) rather than eliminating unnecessary demand. 🖐️

—Bill Bordass

YOUR TO-DO LIST

□ COMMENT ON NAAB CRITERIA DRAFT

SBSE has had significant input on the NAAB changes currently under consideration through an ACSA topics group chaired by Walter Grondzik. Many of the suggestions, if not all, by that group found their way into NAAB's working drafts to-date. Still, I would advise both individual letters to NAAB leadership and a serious review of the draft changes, due out in early March 2009, by all SBSEers. The draft will be available for public comment in March and is scheduled to be voted on at the July NAAB board meeting. NAAB has been responsive to both academia and the profession thus far in the process, especially on sustainability issues. The more input, the better.

—Keelan Kaiser

□ ENCOURAGE BRILLIANT STUDENTS TO APPLY FOR AN ARUP INTERNSHIP

Arup's Foresight and Innovation team will again host interns for work on various projects. The team has expanded to include London, New York, and San Francisco. Successful candidates for 2009 will each be assigned one project, but also will work on other projects with a variety of team members. The focus for 2009 will be the implications of the Drivers of Change work from the past three years on the Future of Cities, see <<http://www.driversofchange.com>>. Contact <Jennifer.Greitschus@arup.com> for more information.

—Chris Luebke

□ ANSWER ARCC JOURNAL'S CALL FOR PAPERS

Submit your journal paper for "Affecting Change in Architectural Education" *ARCC Journal: An Academic Free Access Journal for Architecture*, May 2009, v 6 no 1. Guest editors are Leonard Bachman <lbachman@uh.edu> and Christine Bachman <bachmanc@uhd.edu>. This issue examines how change is effected in architectural education, the history of those changes, and the issues that presently dominate the evolution of architectural education. Given the NAAB Reaccreditation Conference and the Oxford Conference of 2008, there is a sense that momentous change is about to occur, and such change should be founded on objective investigations supported by blind peer review. *ARCC Journal* is an ideal forum for that foundation.

There's a two step process for accepting papers.

1. Initial paper proposal includes a cover page with name and contact information and in a maximum of 3 pages with no identifying content a 300-word abstract, an outline of content, keywords and key references, and images (optional). All proposals are subject to a blind peer review process by an editorial board drawn from member schools and named by the *ARCC Journal* editorial review board. Due Jan 15, 2009, to <arccjrn@temple.edu>. Instructions for paper submission will be sent with letters of acceptance on Jan 30.
2. Full papers of roughly 5,000 words are due Mar 1, then reviewed by an ARCC committee. Final paper due Apr 15, 2009.

—Leonard Bachman

□ CHECK OUT THE OXFORD CONFERENCE REVIEW

The latest issue of the *Get Sust* newsletter <<http://www.get-sust.com/newsletters/issue38.html>> includes a report from the Oxford Conference 2008 which may be of interest.

—Gill Heaton

□ DOWNLOAD THE ARCC 2007 PROCEEDINGS

ARCC held their 2007 Spring Research Conference, "Green Challenges in Research, Practice, and Design Education," in April, in Eugene, OR. More than 50 faculty and students participated in a 3-day event that addressed a number of issues and questions related to the physical, aesthetic, and social aspects of the built environment. ARCC is sending a copy of the print proceedings to all ARCC member schools to place in their libraries. The proceedings are also available at <<http://www.Lulu.com/content/2684378>>. On behalf of the Architectural Research Centers Consortium, we would like to express our gratitude to all the technical reviewers who contributed their time in the review process of the papers.

—Alison Kwok

• continued next column

ENERGYPLUS VER. 3.0

The latest release of the *EnergyPlus* building energy simulation program was completed on Nov 13, 2008, and is now available in versions for Windows, Mac, and Linux operating systems at no cost from the EnergyPlus web site <<http://www.energyplus.gov>>. A few key new features include ventilated slab, fully-coupled 1-D finite element heat and moisture transport model, thermal chimney, CoolTower, additional detailed refrigeration component models, DC-to-AC inverter and simple battery, and direct output to SQLite. We have updated and extended capabilities throughout the existing building envelope, daylighting, and HVAC equipment and systems portions of the program.

The *Energy Design Plugin*, free plugin for the *Google SketchUp* 3D drawing program, makes it easy to create and edit the building geometry in your *EnergyPlus* input files. The plugin also allows you to launch *EnergyPlus* simulations and view the results without leaving *SketchUp*.

EnergyPlus Example File Generator is a web-based service that creates and runs *EnergyPlus* input files for simple models of commercial buildings. The input files (and annual results summary files) are sent to your e-mail address as attachments. This pilot project is currently made available only as a beta service. You can access the service and customize the characteristics of the building you want to model on the *EnergyPlus Example File Generator Application* (pop-ups must be enabled). The set of example input files now includes full-blown models of typical new construction (drawn from the DOE Commercial Benchmarks project). 🖱

—The EnergyPlus Team

YOUR TO-DO LIST [CONT.]

□ APPLY FOR THE CAVIN FAMILY TRAVELING SCHOLARSHIP

Annually \$10,000 is awarded to a U. S. citizen with a professional architecture degree from Cal Poly Pomona or the University of Oregon who is under 35 years of age on March 1 of the calendar year of application. Applications are due to the Fellowship Secretary by Feb 15, 2009. The subsequent design competition starts at 5:00 pm PST on Feb 19 and closes precisely at 5:00 pm PST on Feb 24. Full info available at <<http://www.cavinfellowship.org>>. The design competition is absolutely an individual effort. 🖱

—Brooks Cavin III

➔ **Bill Bordass** helped to successfully launch the Carbon Buzz web <<http://www.carbon-buzz.org>>, a rather promising database for Carbon-Neutral Design on Nov 5.

✈ **Kira Gould** has moved to the William McDonough + Partners' San Francisco studio.

✪ The Sustainable Energy Authority of Ireland has appointed **Owen Lewis** chief executive of the Sustainable Energy Authority of Ireland, closing a circle from co-founding the Solar Energy Society of Ireland in 1976!

✈ The Arup Foresight team now operates from London, Sydney, New York, and San Francisco. **Chris Luebke** will be relocating from London to San Francisco in 2009. He's looking forward to building and rebuilding his contacts and connections with the SBSE community!

✈ **Michelle Roberts** is now an instructor at the Penn College of Technology/Penn State Factory Built Housing Center/Modular Housing Institute.

✈ After teaching for 21 years at LSU and, before that, 14 years at Kansas, **Chris Theis** is retiring.



photo: Building Green

Alex Wilson, green in wardrobe and philosophy!

✪ At Greenbuild 2008 the USGBC bestowed on **Alex Wilson**, founder and president of BuildingGreen, LLC, the prestigious Leadership Award for Education, recognizing his long service in providing the design and construction community with unbiased, reliable information, tools, and resources, including *Environmental Building News*, the oldest North American publication focused on green building. ✎

This year's Expo in Boston, Nov 18–20, attracted about 30,000 building-related professionals. Compared to GreenBuild 2007, the Opening Plenary left a lot to be desired—scheduled for 3 hours, it lasted a mere 90 minutes. Nonetheless, the African Children's Choir was amazing and keynote Archbishop Desmond Tutu mesmerizing. His calm demeanor and light-hearted humor held the room in awe. He encouraged Americans to continue to move in new directions and applauded the election of a President who will make a difference in lives around the world. He said that God is mad at the U.S. for spending so much money on defense when a fraction of that amount could feed the world and give all fresh water and full bellies. He warned, "We won't win wars against terror as long as conditions make God's children desperate. There's enough for everyone's need, not for greed."

Speaking of greed, with 1,400 vendors the expo floor was a sea of lights, people, and swag. We'd gathered for a symposium on greening our world, reducing our consumption, and changing the norm, yet it looked like any other trade show with take-aways that would never be used or looked at again and absurd amounts spent by vendors to stand out—lights, gadgets, and flashy propaganda. They'd completely forgotten the cause. However a few booths got it, understanding the intent with enthusiasm—Forbo had a small, entirely reusable booth, with electronic media instead of fliers and hand-outs, limiting their footprint drastically. [Perhaps-ed.] The floor was also guilty of "green washing," any product on the floor is believed to be "green," however many contain harmful materials, off-gas, and are simply not the best option. As green professionals we need to push for accountability. By asking the difficult questions we can make a big difference in the building industry.

A session worth mentioning, "Education Revolution—Empowering the Next Generation of Sustainable Designers," presented the first analysis of data from a survey of professors and students in U.S. architecture schools, which discussed the differences between the education students feel they get and what faculty believe they provide. When asked about the challenges/benefits of educating green, professors identified their top three concerns as actually having to teach math and science, scary to both students and faculty; the conflict among form, philosophy, and sustainability; and the need for a curriculum overhaul. Students named curriculum overhaul as the highest priority. Second, students critiqued faculty attitudes and knowledge, emphasizing that many feel professors lack the breadth of knowledge to teach sustainable architecture. Last, they named the topic's newness as an issue—lack of tools, precedents, and course materials. It's apparent that the study echoes the feeling that institutions are out of touch with the needs of students and the professions. Being a young professor, those tendencies came as no surprise, though it was interesting to see supporting data. The white paper on this topic is at <<http://www.rjmhillier.com/insights>>.

Greenbuild 2009 will be in Phoenix. It's sure to provide thrills and networking opportunities with shiny booths and more educational sessions than you and your fifty closest friends could possibly cover. It's guaranteed to have a mind-blowing keynote speaker and some of the more inspirational speakers to gather under one roof. If you're planning on attending, book your hotel now. Trying to find a room in the last few months is a nightmare. If you desire a smaller un-conference experience with many of the same speakers, a higher level of green education, and a highly regulated trade floor, check out the 2009 Living Future conference organized by Cascadia Regional Green Building Council in Portland, OR. See <<http://www.cascadiagbc.org/living-future/09>>.

—Cassandra Tyler

SHARE YOUR EXPERTISE AT GREENBUILD 2009

USGBC is now accepting proposals for educational sessions for Greenbuild 2009, "Main Street Green: Connect to the Conversation." USGBC is also accepting applications for qualified professionals to assist in reviewing session proposals. Greenbuild is known for its innovative, informative, and exciting programs, and peer reviewers are essential to its success. Visit <<http://www.greenbuildexpo.org/Program>> to download the calls and more. The deadline to submit is 5:00pm PST, Fri, Jan 16, 2009. ✎

PLEA 2008 DUBLIN—THREE REVIEWS

ORGANIZER

PLEA 2008, the 25th anniversary conference, took place at UCD, in Dublin, 22–24 Oct. At a time of great change in building design, PLEA 2008 marked a milestone in the advancement of the role of passive and low-energy architecture in addressing future environmental commitments. It is widely recognised that buildings can make the single largest and most cost-effective contribution to improving our global environment. Worldwide, ambitious targets are being set in pursuit of zero-energy buildings with little consensus on definition and whether this concept can be extended to encompass communities and cities. These were the dominant themes of the meeting of some 400 experts from 47 countries. The PLEA 2008 best paper prize was awarded to Giles Bruce of the Architectural Association, London for “High Density, Low Energy: Achieving Useful Solar Access for Dublin’s Multi-Storey Apartment Developments” while the best poster prize went to Valentin Gavan, et al of the Centre de Thermique de Lyon for “Double-Skin Façade Exhaustive Simulation throughout Combined Thermal and Daylight Modelling.” A substantial and valuable body of research results and professional experience was captured in the PLEA 2008 presentations, and the above and much more may be accessed on the conference web site <<http://www.plea2008.org>>. Sustainable Energy Ireland was principal sponsor of the conference, and the support of Ecocem enabled all local carbon emissions associated with PLEA 2008 to be offset.

—Owen Lewis

PARTICIPANT

A pre-conference lecture, hosted by the Irish Environmental Protection Agency (EPA), on Tuesday evening, was presented by Wilfried Haerberli, Director of the UNEP World Glacier Monitoring Service. Haerberli presented UNEP’s findings in its recently published report on Global Glacier Changes: Facts and Figures, a lecture that certainly put into context the issues to be discussed at PLEA 2008. The conference itself began on Wednesday with an opening address by the Irish Green Party Chair and Minister for Environment, John Gormley followed by two keynote presentations, the first by Alexandros Tombazi, who gave a passionate and captivating presentation aptly titled, “Architecture in Transition,” including a familiar, but still unheeded, call for greater awareness of and commitment to environmentally-conscious architecture. The second by Alison Kwok highlighted the importance of integrating environmental issues in architectural education, a theme addressed in one of the parallel sessions on the last day of the conference, chaired by Sue Roaf of Heriot-Watt University, stressing education’s role in promoting environmental design in practice.

With three parallel sessions on each day, there was certainly a lot to take in. Day one’s final session on Climate Sensitive Architecture was particularly noteworthy, with a presentation by Farah Naz, who is doing research on comfort issues in garment factories in Bangladesh, an ongoing project that can make a difference to the thousands of workers in factories in developing countries. Presentations showcasing Irish Architecture were a key highlight of the second day. Of particular interest, Sean Harrington Architects presented their recently completed 66 housing units on York Street in Dublin, an example of how sustainable development can be achieved on an inner-city site and on a tight budget. In addition to the oral presentations, poster presentations on an additional range of projects and research were held during the morning, lunch, and afternoon refreshment breaks in the bright and airy foyer of O’Reilly Hall.

Of course, a visit to Dublin would certainly have not been complete without seeing the Book of Kells, the beautifully illuminated manuscript, written around 800AD and containing the four gospels of the Bible. The Book of Kells is housed in the Old Library Building at Trinity College, whose main chamber, the 65-metre Long Room, houses the Library’s antique collection. This viewing was followed by the gala dinner in the 18th-century dining hall of Trinity College.



Special thanks to Vivienne Brophy, Paul Kenny, and Owen Lewis of the UCD Energy Research Group for faultless organisation and hosting us for the three days.

—Mark Olweny

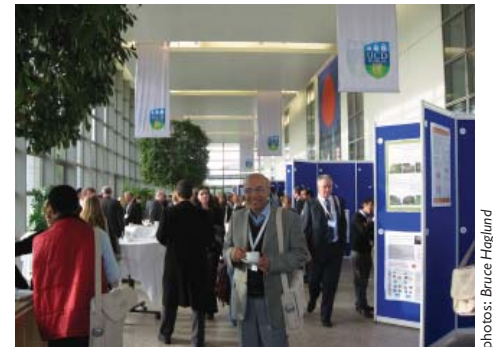
JEFF COOK TRAVEL SCHOLAR

It was a great pleasure and an unbelievable opportunity for me to present my poster at PLEA. I’m from Indonesia, which is very far away from Dublin. Many thanks to SBSE and the Jeffrey Cook Charitable Trust for choosing me. It was my first time attending PLEA, and I not only learned many new things, but also met many people at the conference.

First, I learned how to give a good poster presentation for an international conference. Second, I learned advanced methodology and computer software, which I have not experienced in my country. Third, I learned about the development of building science, technology, and its applications. These matters are particularly beneficial as I am planning to continue for a PhD. And also as a lecturer I will transfer this useful experience to my institution.

There were other advantages in coming to the conference. I met a lot of people willing to share their experience and knowledge in building science and technology. Moreover, I have made friends from other institutions and schools and some SBSE members, such as Bruce Haglund and Alison Kwok, who I believe will totally enrich my networking for my future career. And last, but not least, I went to Dublin which is very beautiful in nature with its old buildings. 🙌

—Religiana Hendarti



The bright and airy foyer of O’Reilly Hall at UCD set up before (left) and occupied during (right) PLEA.

JOB OPS

KANSAS STATE UNIVERSITY

Three tenure-track faculty to teach Design Studio and Building Construction Systems or an open specialization related to sustainable architecture. Full position descriptions at <https://www.acsa-arch.org/faculty/jobs/view.aspx?Job_Index=489>.

LOUISIANA STATE UNIVERSITY

Fill retiring Chris Theis' shoes with a terrific opportunity to influence the integration of sustainable design practices in the curriculum as well as overall campus sustainability at LSU. Contact <dcod6@lsu.edu>.

MCGILL UNIVERSITY

Develop a new program area in environmental practices and integrative design; re-think conventional notions of sustainability, integrative design, community and urban design/development in the contemporary context. Contact <annemariadams@mac.com>.

PORTLAND STATE UNIVERSITY

Research and teaching interests in the area of building energy-efficiency technologies and related topics embodied in the concept of green buildings. Contact <sustainability@pdx.edu>.

U.S. GREEN BUILDING COUNCIL

Seeking Research Managers to assist a growing variety of projects contributing to USGBC's goal to increase collaboration and build on existing research as it relates to green building and LEED. Full job description at <<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=63&#resmgr>>.

UNIVERSITY OF FLORIDA

Two positions in technology and structures. We've initiated our review, but will accept applications until the positions are filled. <http://www.dcp.ufl.edu/arch/main/faculty-personnel_position.htm>.

UNIVERSITY OF MICHIGAN

Environmental building technology, with a focus on passive and active building performance, energy-efficient building, and building systems integration. Contact <moji@umich.edu>.

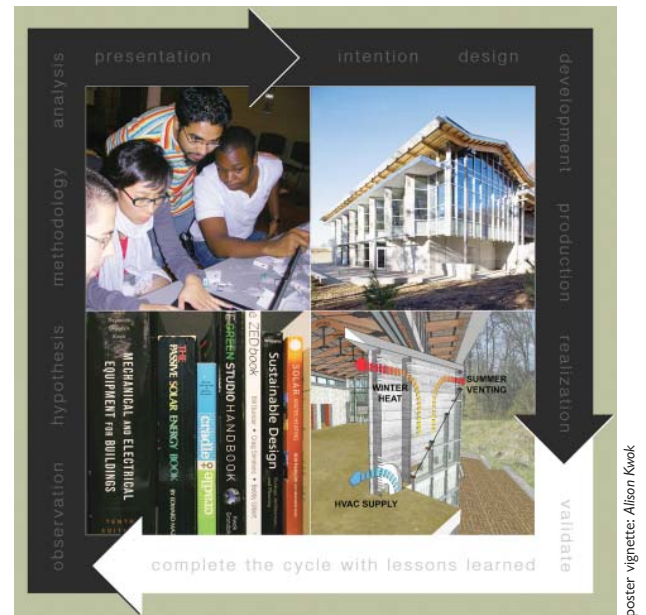
UNIVERSITY OF WYOMING

Position in Architectural Engineering with an emphasis on Building Energy Systems. See <<http://uwadmnweb.uwo.edu/HREmployment/showjob.asp?jobid=3025>>. 🖱

ONE MORE CONFERENCE REVIEW

BEHAVIOR, ENERGY, AND CLIMATE CHANGE CONFERENCE (BECC) 2008

Sacramento, CA, was home to more than 700 participants for the second conference on behavior, energy, and climate change, Nov 16–19, 2008, at the Hyatt Regency Hotel. Convened by the California Institute for Energy & Environment (CIEE), University of California <<http://ciee.ucop.edu>>, Stanford University's Precourt Institute for Energy Efficiency <<http://ipiece.stanford.edu>>, and the American Council for Energy-Efficient Economy (ACEEE) <<http://aceee.org>>, this conference focused on understanding individuals' and organizations' behavior and decision-making and using that knowledge to accelerate the transition to an energy-efficient and low-carbon future. International participants from utilities, policy institutes, communications and marketing companies, and academics (few architects) gathered around concurrent behavior change tracks that were focused on a variety of scales: individuals/social norms, communities/cities, media/marketing, physical environment, and climate policy; subtopics included segmentation, feedback technologies, tools and modeling, partnerships, and metrics. The sessions were organized to maximize conversations and to give people a chance to talk! Rather than beginning with keynotes, the opening plenary/dessert reception started with a refreshing, interactive, provocative, and fun session that stimulated discussion. Led by SBSEer Rick Diamond, Senior Advisor for CIEE, roundtables focused on ideas for behavior-related legislation, regulation, program, and action for the new U.S. administration, states, cities, and other organizations. In keeping with a low-carbon footprint, there were no bottles or cans during the refreshment breaks and meals, no plastic holders for name tags, organic food at the breakfasts and lunches, no conference totes or heavy advertising materials. We caught up with SBSEer Katy Janda just in from Oxford University. Nick Rajkovich presented an update from our AIA/Upjohn Research project, "Addressing Carbon Neutrality in Architectural Practice," and Alison Kwok presented a poster, "Feedback Loops for Climate Change in Architectural Education." All sessions were captured through on-site audio recordings (available on CDs) by HungryMindRecordings.com. The message was clear: changing deep-rooted behaviors is difficult, but necessary. It is our behavior that must adapt, not that of other species. 🖱



Alison Kwok's poster illustrated a feedback loop shared by education and practice that can improve building performance through lessons learned.

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—Alison Kwok

SBSE SCHOLARSHIP COMMITTEE FORMED

Newly appointed committee chair Alison Kwok has recruited several new members to help balance the committee, bringing in new perspectives and contributions, and has reviewed the budget vis-à-vis the income and expenses for our scholarships and awards. Please welcome new members Walter Grondzik, Jonathan Knowles, and Troy Peters, and thank you to Leonard Bachman and Chris Theis for staying on and providing continuity to our existing scholarships/awards. 🖱

—Alison Kwok

UNIVERSITY RESEARCH

CARBON-NEUTRAL HEALTH CENTER IN RURAL TANZANIA



The site donated by the Village Council for the Roche Village Health Center in Tanzania.

I was contacted in Spring 2008, by the Cincinnati-based nonprofit organization Village Life Outreach (VLOP) to be a LEED consultant on the Roche Village Health Center in rural northern Tanzania, a region with no power, no clean water, nor sanitation. With funding to begin design of a much-needed health center they hired an architect from Dar Es Salaam who developed a proposal that didn't relate to site, energy and water needs, nor labor skills and materials available. Unsatisfied, VLOP contacted me through the University of Cincinnati. VLOP has been taking students and faculty from UC's medical, nursing, and engineering schools to this district in Tanzania for various forms of outreach since 2003.

I spent summer 2008 delving into that culture, climate, construction practices, and precedent research with UC Graduate Research Assistant, Conor Brady. We developed a presentation board for the 2008 fundraiser for Village Life Outreach. In fall 2008, I led a graduate architecture elective studio to develop a schematic design proposal for the site, buildings, and construction systems of the health center. The studio researched cultural, climatic, programmatic, and technical considerations for this project. Methodologies included construction of earthen walls and floors and meetings with the clients, ARUP engineers, and many others. Through research, we realized that transition from vernacular construction (mud-hut with thatch roof) to contemporary construction (kiln-fired mud-brick with corrugated roofs) had led to the depletion of the local wood resources for kiln-drying and created buildings that are short-lived, structurally unsound, and thermally uncomfortable. As a result, we have been developing not only a proposal for a health center, but proposals for reconsideration of local construction methodologies. During the fall quarter, I was in Tanzania for two weeks assessing material availability in Kenya and Tanzania, meeting with local architects and builders, meeting with local village organizations and spending several days on site. The resultant projects represent potential future directions for the health center as well as alterations to predominant construction techniques for the region. While in Nairobi, I met with staff from a company that produces Interlocking Stabilized Soil Blocks (Makiga, Inc.) and was able to bring examples to show in extremely well-accepted meetings with the Roche Village Council. The local villagers agreed that this technology could positively transform construction in the region while tremendously reducing deforestation.

We've been using *Ecotect* to assist in the site and climate analysis as well as site and building design. In addition, ARUP has donated the time of several engineers from their Chicago office. All these influences have led to a design process in which solar, thermal, wind, and water considerations have remained absolutely integrated in design development. The project is supposed to begin construction in summer 2009 if funding goals are achieved.

On my last day in Tanzania, during my final meeting with the village council, I asked if there were any stories, myths, or histories that were important for us to know. The Village Leader, Alfred, explained that the full story would take five hours to tell. But his summary roughly translates as, "The people of this village are known as the Kamegata People. They were located in Sudan for many generations, but about



Michael Zaretsky (r) meets with the Village Council and Village Leader, Alfred (l).

four generations ago decided to re-settle in more fertile land. They sent out a search party who landed on the land that the Village Council has now donated to Village Life for the Health Center. Soon after settling here, a group of foreigners attempted to take the land, and the Kamegata successfully protected it. Before that king died, he told the people the next group of foreigners who came to this piece of land would come to help them and specifically to help their development. They believe that we are that group of people."

—Michael Zaretsky

LIGHTING THE COLTS' INDOOR PRACTICE FIELD



Comparison of HDR photograph (above) and HDR computer simulation image (below) of existing conditions at the Indianapolis Colts' indoor practice facility.

During the summer of 2008, the Lighting Laboratory at Ball State University's Center for Energy Research/Education/Service (CERES) performed a collection of lighting studies for the National Football League's Indianapolis Colts to improve the lighting conditions in the team's indoor practice facility. Using physical measurement, computer simulation techniques, and High Dynamic Range (HDR) photography and imaging, a team consisting of CERES staff and BSU architecture graduate students investigated a variety of alternatives for improving the facility's electric lighting system and for introducing daylight. 🖐

Robert J. Koester,



cover photo: Architect magazine

We've come a long way—building science educator Vivian Loftness was featured on the October cover of Architect. This issue is also chock-full of articles dear to SBSEers' hearts. Check it out!



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SBSE'S CARBON-NEUTRAL DESIGN INITIATIVE

Are you aware of SBSE's Carbon-Neutral Design (CND) initiative? If not, the effort is focused on gathering strategies and best practices from practitioners and educators who engage in CND work. The efforts, funded by the AIA and several other organizations, are progressing. Jim Wasley is the principal investigator, along with first phase co-P.I.s Mary Guzowski, Terri Meyer Boake, and John Quale. To-date, we're working on a series of web-based resources that will include 15 well-documented design studio profiles, including ready-to-use individual exercises from SBSE member programs; case studies of AIA Cote Top 10 winners approaching zero-net energy use; case studies of affordable housing projects approaching zero-net energy use; resource compilations, such as annotated bibliographies and software lists; and nifty, new carbon analysis tools, target-finding tools, and software assessments by Mike Utzinger, Harvey Bryan, and Pablo LaRoche. All should be available by April, ready for roll out at the AIA convention.

A recent thread of e-mails on the list server has mapped the content of two recent weekend-long discussions—a CND summit at the University of Wisconsin Milwaukee in October (Don Watson facilitated), and a CND educators' summit at Harvard just after GreenBuild 2008. As we continue to make progress on this effort (although finding a precise focus has been a challenge), we will continue to look to SBSEers for insight and content. When we have good draft of the public content, we'll make it available to all. Our ultimate goal is to offer regional train-the-trainer workshops at schools throughout North America. We still need to find the money to make that larger vision happen, but we aren't standing still by any means!

If anyone out there has any particularly useful tools, resources, or successful case studies, please forward them to Jim, Terry, Mary, and John. We're particularly interested in those focused on affordable housing. We can't guarantee they will be included in this first pass, but it will be very helpful to have them for discussion and later incorporation as we develop collective wisdom.

CND raises the bar—and we hope to gather and produce useful resources to share with all interested parties. 🙌

—John Quale and Jim Wasley

SPRING ISSUE SUBMITTAL DEADLINE—MARCH 1

FIRST CLASS MAIL