



photo: Alfredo Fernández-González

This naturally cooled and well-shaded structure at the Springs Preserve will house many of the retreat sessions.

WHAT'S NEW FOR THE 2010 RETREAT?

Las Vegas—noted for lights, fountains, and night life—will welcome this year's SBSE Retreat May 14–17 at the fabulous Springs Preserve. The retreat “Water: Down to Our Last Drop,” will focus on the water issues that confront the human community. Planning is well underway with the schedule now posted on the SBSE web site and the March 15 registration deadline is in the rear view mirror! *[Go ahead, register now! It has become first come, first served.—ed.]*

The retreat is a blend of activities that include presentations by SBSEers, tours of the sustainable landscape and LEED certified buildings at the Springs Preserve, interactive sessions, roundtables featuring architects and landscape architects who design for a water-sensitive environment, Nevada public officials who deal with the problems of keeping Las Vegas' thirst quenched, design process presentations and demonstrations, and a keynote address by Robert Glennon, Morris K. Udall Professor of Law and Public Policy at the University of Arizona, and author of *Unquenchable: America's Water Crisis and What to Do About It*.

This year's Retreat will add an informal poster session so that SBSE members may share research, student work, design work, book promos, and anything else that might be interesting and inspiring to the group! Please send along your poster as a 20" x 30" pdf image to <Mark.Barnhouse@ndsu.edu> by April 15, and register for the retreat so that you can discuss your ideas with the SBSE community!

Registration includes three nights' double-occupancy lodging at the Sahara Hotel (May 14–16); three dinners (May 14–16); two lunches (May 15–16); and local transportation from the hotel to the Springs Preserve (as well as to Hoover Dam on Friday). Evenings will be free to enjoy the city. For more information on the retreat and registration, please visit <<http://www.sbse.org/retreat2010/index.htm>>. For more information on the Springs Preserve, visit <<http://www.springspreserve.org>>. Be sure to pay your SBSE dues when completing your retreat registration! 🖐

—Mark Barnhouse and Cindy Urness

SBSE CALENDAR

2010

- Apr 9–11 Windsor Conf/Windsor, UK
- May 12–14 LightFair Int'l/Las Vegas, NV
- May 14–17 SBSE Retreat/Las Vegas, NV
- May 18–22 ASES Conf/Phoenix, AZ
- May 19 SBSE Annual Mtg/Phoenix, AZ
- Jun 23–26 ARCC/EAAE/Washington, DC

2011

- May 16–21 ASES Conf/Raleigh, NC
- Jul 13–15 PLEA/Louvain-la-Neuve, BE
- Aug 4–7 BTES Conf/Toronto, ON 🖐



photo: Robert Glennon

Robert Glennon will be the featured speaker at the retreat.

I just received the latest *SBSE News*. Thanks so much for including info on my new book. I would have liked to have contributed more to the *News* over the last few years. You are a champ for doing this all yourself. I will try to participate more in the future.

—Michael Zaretsky, Cincinnati

[Thanks for the praise, but I hardly do it all by myself... except for begging for contributions! Some folks even send voluntary submittals... and, in fact, you have contributed more than the average SBSEer. But, of course increased participation is always welcomed!—ed.]



I have recently joined SBSE and the newsletter. However, I wasn't sure if the list serve is different from the newsletter. Could you clarify and if they are different could you sign me up for the list server? 🖱

—Karim Elgendy

[Okay, I've added you to the list server. Indeed the sign-up for membership (includes the print newsletter if desired) and the list server is separate. The membership page tries to point you to these two options, but folks struggle with the concept. Should we automatically (manually) add new SBSEers to the list server? Currently, the two fora are overlapping but not monolithic. We have about 750 on the list server and about 450 SBSE members.—ed.]

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SBSE RAILS AGAINST GREENWASHING?

[Norbert Lechner set off a thoughtful string on the list server with an indignant question. You can access the entire thread at <https://www.lists.uidaho.edu/pipermail/sbse/2010-February/thread.html>.—ed.]

Yesterday I received my copy of *Green Sources: The Magazine of Sustainable Design*. On the cover was Aqua Tower, a very beautiful building that looked like a giant soft undulating radiator. A giant radiator? The 9-inch thick concrete floor slabs project out to create balconies all around the building on every floor. The balconies are major thermal bridges not only in winter but also in the summer when they act as sunshades and get hot both from the air and sun. Can such a radiator be sustainable in Chicago, when energy conservation is the key to sustainability? Furthermore, the glazing is floor to ceiling. Although low-e, the glass facade will most likely have a total R-value of 3 or 4. So, what's the total R-value of this building's facades when the huge thermal bridges are included?

To be fair, the other two green architecture magazines that I receive are just as misguided. They also publicize "green" buildings which, although they have bamboo flooring, reflective glazing, electric car charging stations, and such, are energy hogs. Please contact the publishers to let them know that energy guzzling buildings are not sustainable and therefore should not be presented as green. Greenwash is not green!

—Norbert Lechner

I think it's important to look at the upside (small as it might be), this 'high design' firm has taken sustainability into their work (not just in this project) and are even using solar studies to help create the shape of the balconies. This is an important first step, because firms with a strong design reputation would not have thought about these issues (or the thermal bridging of the slabs, which the article points out they were clearly aware of) just ten years ago.

I believe it's important to encourage high design architects to pursue sustainable design rigorously. I agree with Norbert that it's annoying to see energy hogs called sustainable because of bamboo flooring and no-VOC finishes. But, I think it's fair to say this project is at least a small step beyond that.

The most positive way to move forward is to find a Chicago architecture or engineering school or research group willing to do post occupancy work, including energy monitoring, and to work directly with Studio Gang and their consultants. The next time this firm gets a similar job, it's important for them to understand how well their light simulations, glazing strategies, and slab details hold up when assessed over time. That's the only way to make progress on these issues. Working with the firm is much more productive than attacking them. Jeanne Gang is a very sharp person, and would probably welcome a research project of this type.

—John Quale

I want to thank Norbert for initiating this thread, and everyone else for the great insights. We're listening, and you are affecting the editorial policies at *GreenSource* with your thoughts.

I doubt I can justify the decision to include Aqua Tower, especially on the cover, but I would like to say that it was not a decision we took lightly. We are constantly trying to find projects that are compelling aesthetically AND in terms of performance, but those tend to be hard to come by. As you might imagine, we have interesting debates about some of the projects, and this was one of them!

Also, I hate to say it, but the fact that *GreenSource* gets so many people's attention is because it is such eye candy (I can't take any credit for that aspect). In choosing to include Aqua, we made sure to raise the concern about the "radiator effect." I had hoped that we would get more specific data on how they factored it into their energy model, but that didn't come through. We've invited Norbert to introduce this dialog into the pages of the magazine, and we'll see if we can get Jeanne Gang to respond. So hopefully this criticism will reach a broader audience as well.

Thank you for keeping the pressure on us in the publications world, and keep up the great work! 🖱

—Nadav Malin (president, BuildingGreen and executive editor, GreenSource)

SBSE-LED WORKSHOPS AT ASES

[All of these workshops will be conducted on Saturday, May 22, and require separate registration, but you do not have to register for the conference too. These sessions will have price included in their description. Registration also includes a ticket to the Exhibit Hall. See the ASES web site <http://www.ases.org/index.php?option=com_content&view=article&id=485&Itemid=45> for details.—ed.]

PASSIVE SOLAR HEATING DESIGN AND CONSTRUCTION GUIDELINES—WS16

Many people understand the general principles of passive solar heating systems, but few have the practical experience and know-how to successfully design and build high-performance passive solar buildings. The Passive Solar Heating workshop provides attendees with the fundamental science and the practical knowledge necessary to successfully design buildings that incorporate any of the various passive solar systems available today. The workshop draws on a number of strategies, resources, and tools developed and/or refined by the presenters to offer attendees a comprehensive view of passive solar heating systems from basic concepts to critical design guidelines, to methods of energy performance and economic assessment.

—Alfredo Fernández-González and Daniel Overbey

DESIGNING HIGH PERFORMANCE HOMES—WS14

High Performance Homes can be designed to minimize their consumption of energy, their cost of operation, and their generation of green house gasses. In this Hands-On workshop you will learn how to quickly design and then fine-tune your home using the latest version of HEED (Home Energy Efficient Design), one of the most popular and user friendly design tools. Please bring your laptop, MAC or PC, and you will experience how to use HEED's fill-in-the-squares multi-story floor planner, click and drag window placement, and graphic plots of Annual Energy Consumption (kBtu), Carbon Footprint (CO₂), or Annual Cost for Fuel and Electricity.

Materials to be provided to attendees include a handout and a copy of the software loaded on each person's laptop (PC or MAC).

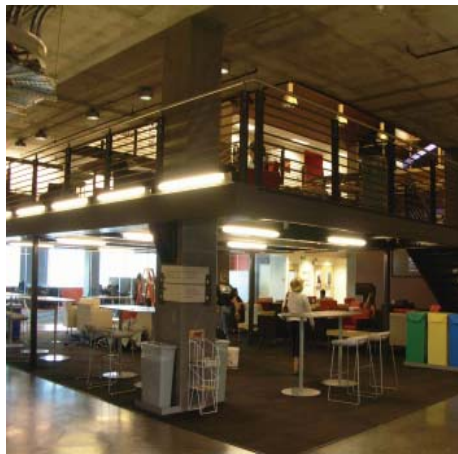
—Murray Milne and Pablo LaRoche

BUILDING PERFORMANCE WORKSHOP: TOOL DAY PHOENIX—WS15

Phoenix Tool Day explores ASU's Walter Cronkite School of Journalism and Mass Communication. The LEED Silver Cronkite Building was constructed with numerous green features, including an east-west orientation for solar control, exterior overhangs and sunscreens for shading windows, energy-saving materials to help optimize building energy performance, low or no-water landscaping, low-flow plumbing fixtures, low VOC building materials, and occupancy sensors for lighting control. In addition, more than 10 percent of the total building material content was manufactured using recycled materials. The USGBC awarded the project 37 points for green features, such as being served by 12 bus lines within a quarter-mile of the site, diverting 79.8 percent of construction waste generated on-site from a landfill and development and implementation of a green housekeeping program.

This intensive Tool Day workshop offers architects, engineers, builders, facility operators, educators, and students a hands-on experience in the use of relatively low-cost instrumentation (coupled with a structured methodology) to better understand building system and component performance. Participants will be taught appropriate use of such instrumentation and methods to facilitate building performance investigations. Tool Day efforts will focus around development of a case study that can be used as a model for future investigations. 🖐

—Walter Grondzik, Bruce Haglund, Alison Kwok, & Troy Peters



Tool Day participants will find out what's going on inside the Cronkite School.

photo: Alison Kwok

BTES NEWS

ELECTION RESULTS

SBSE's sister organization, the Building Technology Educators' Society (BTES), is pleased to welcome and announce our newly elected officers and Board members—President-Elect: Ryan Smith (Utah); Directors: Diane Arm Priest (Idaho), Don Hunsinker (Boston Architectural College), David Peronnet (Hampton), Gil Snyder (Wisconsin, Milwaukee), and Paul Zorr (Auburn). Deborah Oakley (UNLV) continues as President and Shahin Vassigh (Florida International) as Secretary/Treasurer, both until fall 2010.

BTES is a 501(c)(3) non-profit organization whose mission is to promote the best pedagogic practices in architectural construction and structural technology education. Visit <<http://www.btesonline.org>> for complete information about how you can join our network and ever-growing organization.

—Deborah Oakley

2011 CONFERENCE TORONTO

Next year's event will be a joint effort between Vincent Hui (Ryerson) and Terri Meyer Boake (Waterloo). The early August date is in keeping with our two previous events. The venue will be the campus of Ryerson University in downtown Toronto. If you've never been to Toronto, this will be a fine opportunity to see one of the world's great cities. Tours are already being planned, and along with all of the cultural activities available you can see works from renowned architects, e.g., Santiago Calatrava, Aurther Erikson, Frank Gehry, Daniel Liebeskind, and Mies Van der Rohe, all within a short walk of the Ryerson campus.

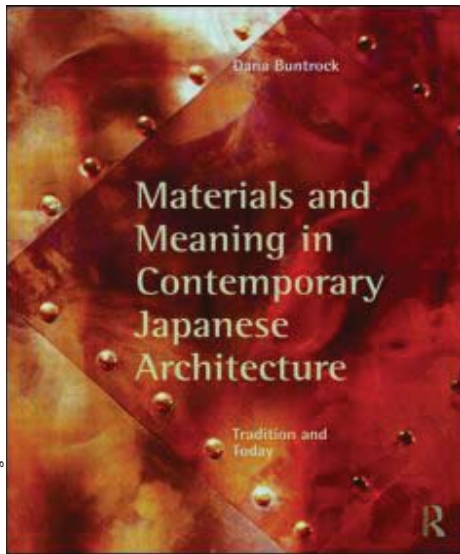
Congratulations to Vince and Terri for submitting an excellent proposal that promises a great event. Tom Brock (IIT) submitted another excellent proposal, so we may already have a venue lined up for a 2013 conference in Chicago.

Mark your calendars for August 4–7, 2011 (coming more quickly than you might think!) and consider writing a paper for the event. Stay tuned for more details in coming months, both on the SBSE list and the BTES web site <<http://www.btesonline.org>>. 🖐

—Deborah Oakley

🏠 NPR Arizona interviewed **Harvey Bryan** on the urban heat island effect. You can listen in at <<http://kjzz.org/news/arizona/archives/201003/UHI>>.

🏠 **Dana Buntrock** is the Frederic Lindley Morgan chair at the University of Louisville. [See page 6 for details.—ed.] And she has written a new book, *Materials and Meaning in Contemporary Japanese Architecture* (Routledge, 2010), concerned with the art and craft of architecture, and how these skills are used to reflect the particularities of places.



cover: Routledge

✧ After spending four great years with the Rocky Mountain Institute, **Aalok Deshmukh** joins the management team for the USAID-funded ECO-III project in India, which fosters Indo-US cooperation in building energy efficiency. The project works closely with India's Ministry of Power and the Bureau of Energy Efficiency (BEE) and a host of other stakeholders across the country, to carry out a range of activities aimed at enhancing the commercial viability and performance of the Indian energy sector and promoting the use of clean and energy-efficient technologies. A focus area of this project is capacity building and enhancement of the building energy efficiency curriculum, empowering faculty members at architecture and engineering institutions (through 'training of trainer' programs) as well as their students by providing access to world class reference materials and preparing them as next-generation professionals to face energy efficiency challenges in the building design and the construction sector.

🏠 **Martin Gold** is now the Director of Architecture (formerly interim) at Florida. He's

• continued next page

ADAPTING BUILDINGS AND CITIES FOR CLIMATE CHANGE

As discussions about climate change re-take center-stage, both because of the on-going negotiations in Copenhagen for a new climate change treaty, and the increased attempts by climate change skeptics to skew public opinion, Sue Roaf's second edition of *Adapting Buildings and Cities for Climate Change, a 21st Century Survival Guide* (with David Crichton and Fergus Nicol), acquires increased significance as a strong, timely, and influential statement, which provides a thorough analysis of the vulnerabilities, risks, and potential impacts of climate change, as well as a possible map for a future with better social, economic, and physical environments.

The book is a worthy second edition, presenting the reader with a restructured and retooled discussion about climate change, the substantial risks it poses to communities across the world, and the potential negative impacts it can have on these communities, while emphasizing the central role played by buildings and communities. The authors suggest that the design characteristics of modern buildings—such as large size, over glazing, use of light-weight materials, and reliance on mechanical systems—makes them particularly vulnerable to climate change. As an alternative, the authors argue for buildings that offer their users more adaptive opportunities to ameliorate internal climate using both passive and active systems, something lacking in most contemporary buildings, even bioclimatically-designed ones. This edition also gives more emphasis to the need for sustainability to be the driving force in architectural education, and for going beyond the “light touch” approach to covering sustainability issues, but to get students to come to grips with the basic principles of building physics and performance.

Roaf calls for a fundamental re-ordering of our priorities, aspirations, and societies, which, along with new approaches to design and technological fixes, can create the social, economic, and physical environment in which we can survive. She argues for a truly 21st century language of low-carbon and resilient buildings informed by and born of the global commons.

This second edition builds on, clarifies, and enhances the important ideas and arguments made in the first edition. It adds numerous images, graphs, and analytical tables, creating a more effective and useful resource for comprehensive analysis, as well as giving insightful suggestions for a more sustainable future.

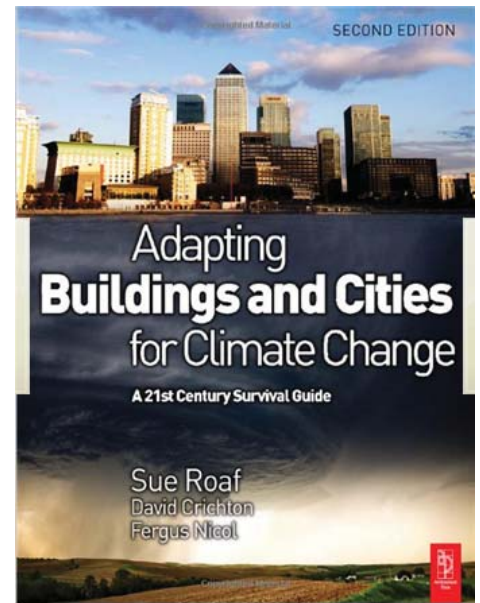
—Hazem Rashed-Ali

BRI SPECIAL ISSUE: CARBON REDUCTION IN BUILDINGS

This special issue of *Building Research & Information* bears a distinctive CaRB stamp, with all but one of the papers written by members of the UK research consortium with the full name “Carbon Reduction in Buildings: A Socio-Technical, Longitudinal Study of Carbon Use in Buildings.” The work presented in this journal reflects the multivalent nature of energy use in buildings, and the consequent transdisciplinary research approach(es) required to tease apart technical, social, economic, and behavioral influences on different building stocks. The CaRB research team holds that previous efforts to reduce buildings' carbon emissions fell short of expectations in part because of a poor understanding of how people use energy in buildings, and how they interact with new technology. The output of much of the interdisciplinary CaRB work is also available on their web site <<http://www.carb.org.uk>>.

As K.J. Lomas points out in the opening guest editorial, it's the framing of the problems of energy demand and carbon emissions that will prove critical to their resolution. The work in this journal frames carbon reduction in building stocks as a socio-technical challenge at the very least, with many more dimensions involved in a full description. The concept of “take-back”,

• continued next column



cover: Architectural Press

discussed or implied in several articles, highlights the importance of framing the carbon challenge appropriately.

The first paper in the issue empirically models energy consumption and throws into question the implicit assumption that efficiency improvements have been responsible for reductions in residential energy demand over the last 40 years. Rather, the authors developed models using only external temperature and energy price, which quite closely predict energy demand. In short, although the UK residential building stock has become higher-performing in recent decades, this has not translated into energy demand reductions. There is some speculation about why this “take-back” might happen—e.g., expansion via renovation of many UK homes, greater use of space heating in newly insulated homes. When many policymakers, as indicated by the 2007 report of the Intergovernmental Panel on Climate Change, view energy-efficiency in buildings as straightforward and low cost, it is vital to understand the impact of these efficiency improvements when human behavior is accounted for. While building enclosures and systems have become more efficient, energy demand for equipment within them has grown across the decades, due to proliferation of information technology. This finding implies a needed broadening of research and regulatory efforts to understand how to appropriately address the full measure of energy use in buildings.

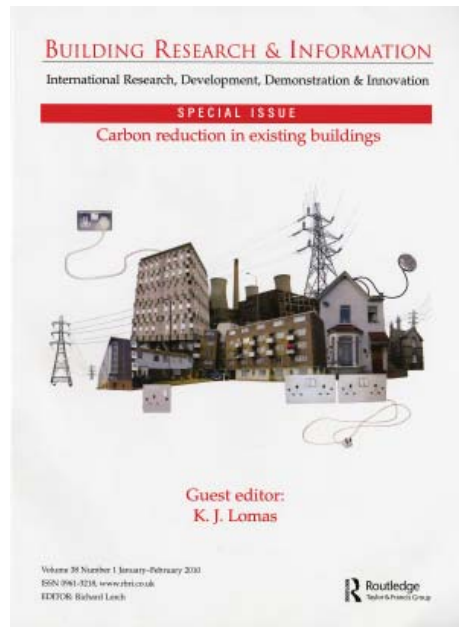
The issue’s concluding commentary on the research challenges inherent in the study of building energy use examines the UK buildings research community specifically, but its keen observations will resonate with SBSEers stateside and elsewhere. Research will prove essential to help formulate and evaluate carbon reduction policy, but the funding for such research is currently insufficient, and should funding arise the research infrastructure will be unlikely to ramp up quickly due to a dearth of expertise and partnerships of the sort needed for these investigations. As ever, BRI articles are available for purchase online, and the guest editorial for free at <<http://www.informaworld.com/smpp/title~db=all~content=g916954003~tab=toc~order=page>>.

—Martha Bohm

BUILDING INTEGRATED PHOTOVOLTAICS: A HANDBOOK

Simon Roberts and Nicolò Guariento have produced the seminal handbook. It’s truly everything you wanted to know about BIPVs but were afraid to ask. Not an architect or an engineer, Simon is a scientist working in Arup’s R&D office in London. He has lent a strong sense of order and clarity, reinforced by extremely obvious diagrams that reveal simple and complex concepts. If this encyclopedic coverage of the topic was the extent of the text, the book would be worthy of a place in your reference library. However, it goes further by including an extensive concept-integrated set of case studies that are well-illustrated with images from Arup and others’ work worldwide. There’s much of interest for the expert as well as for the novice. 🙌

—Bruce Haglund



cover: Building Research & Information

SBSE PEOPLE [CONT.]

working to reshape the faculty as there’s a great opportunity, considering recent departures and expected retirements.

✉ SB10Brazil will feature keynote speeches by Charles Kibert (Florida) and **Norbert Lechner** (emeritus Auburn), who will also co-lead two workshops. More details on the workshops and conference programme will be available soon at the conference web site <www.fec.unicamp.br/~sb10brazil>.

✉ The new director of the School of Architecture at Montana State is **Fatih Rifki**, who has returned to the U.S. after a deanship in Dubai.



photo: Architect magazine

Marc Schiler and his students examine a building science model.

✉ **Marc Schiler** graced the pages of *Architect’s* December issue <<http://www.architect-magazine.com/education/top-notch-program-master-of-building-science-univ.aspx>> [And you might see how your school is portrayed in the same issue at <

cover: Birkhäuser



photo: Bruce Haglund

A record number of SBSEers attended ACSA New Orleans and took in all things from the ninth ward to the Natchez.

STUFF FOR YOU

BILL GATES' NEW DIRECTION

During a recent TED lecture, Bill Gates announced that his top priority is getting the world to zero climate changing emissions. Because he's committed to improving life for the world's most vulnerable people, he now believes that climate change is the most important challenge on the planet. The TED lecture is posted at http://www.ted.com/talks/bill_gates.html and you can read a good summary and analysis at <http://www.world-changing.com/archives/010976.html>.

—Norbert Lechner

HCL INSTRUCTOR'S MANUAL

An extensive instructor's manual is available for *Heating, Cooling, Lighting: Sustainable Design Methods for Architects*, 3rd edition, 2009. It contains test questions, exercises, project handouts, example projects, and how to draw sunbeams correctly on plans and sections, which is an extremely important way to demonstrate the effectiveness of a solar-responsive design. The on-line manual is available on Wiley's Higher Ed Instructor Companion Site <http://bcs.wiley.com/he-bcs/Books?action=index&itemId=0470048093&bcsId=4638>.

—Norbert Lechner

EMBODIED CARBON IN PRODUCTS

I discovered this cool site where you can look up products and see where the materials to manufacture them come from and their carbon footprint. The site is still being developed, but it is pretty cool. Check it out at <http://www.sourcemap.org/>.

—Christopher Olenyik

GREEN BUILDING RESOURCES

BuildingGreen in partnership with Second Nature will provide information and guidance to under-resourced U.S. colleges and universities. Second Nature has launched a capacity-building program, Advancing Green Building in Higher Education, which addresses challenges to "build green" on campus. BuildingGreen is offering highly discounted access to the premium content in the *BuildingGreen Suite*. BuildingGreen's Alex Wilson has helped draft a study guidance document, "Advancing Education for Sustainability: Teaching the Concepts of Green Building to All Students," which will help guide further work by Second Nature, the U.S. Green Building Council, BuildingGreen, and others to further the advancement of green building knowledge and practice in education. 🖱

—Jerelyn Wilson

TEACHING AND SCHOLARSHIP REPORTS

DANA BUNTROCK—MORGAN CHAIR, SPRING 2010

The Frederic Lindley Morgan chair at the University of Louisville is treated as either a chair of Fine Arts or Architecture. It's awarded by faculty of the Allen R. Hite Art Institute (the Department of Fine Arts) at the University of Louisville in Kentucky as an annual one-semester-long appointment. I'm the 30th and honored to be on a list that includes Max Bond, Leonard Eaton, and Alice Freidman. The full list of faculty can be seen at <https://louisville.edu/art/morgan-lectures/morgan-professors.html>.

My sense is that the faculty here look for individuals with specialties or approaches they feel are not robustly represented within their ranks. There is a very good group of art historians covering Renaissance, Byzantine, and Chinese art and architecture, for example, and a separate art practices faculty that covers areas like printmaking, photography, and interior architecture. I have no idea why they invited me instead of the handful of people working on Japan who are architectural historians! They found and called me; one does not apply.

Duties are light and support is generous. I'm getting a very good stipend (a bit more than Fulbright gives you for a year), teach one course one day a week to a whopping seven students—though an additional four are auditing—and give two lectures at the local art museum on campus. There is a credit card I am asked to use to lunch regularly with colleagues, and the Morgan endowment is subsidizing a trip students and I will take to St. Louis to compare the architectural approaches in Ando and Maki's St. Louis buildings. Bought a nice new Mac. Have a lad assigned to me who is getting increasingly frustrated that I do my own copies. They empty my garbage cans regularly, which is not happening at Cal. Oh, they even paid my parking pass—and there is easy parking in the faculty lots, to my amazement!

Louisville hospitality should be even more legendary than it is—the university arranged my furnished apartment in a nice part of town (though I pay the rent), and everyone has bent over backwards to make us welcome. They gave my husband a darkroom to use on campus, and it seems like they would be chagrined if there was anything we wanted and did not mention.

It is nice.

—Dana Buntrock

OVERHEARD ON THE SBSE LISTSERVR

I show my students pioneering work in solar architecture and I tell them that a) to draw a musical analogy, it's the equivalent of "classic rock"—Genesis, Stones, U2—and that b) now we have good green projects which could be ColdPlay or Killers, but c) we also have quite a bit of glossy greenwashing (which you might think is good if you don't know anything about sustainability), which is much like Britney Spears—for kids that don't know much about anything. I hope nobody is offended and I won't get sued by a recording company.

—Pablo La Roche

PS: I do like other music.

So where does Motown/R&B fit in your green building to architecture mapping?

Being an acoustician, I play music before almost every class. I used to try to pick topic-centric songs (i.e. Pink Floyd "echoes" when talking about echo and reverberation in rooms), but about 3 years ago I just started going over landmark albums and recordings in rock, pop, jazz and classical music.

The standard album for my Introduction to Acoustics and Illumination is "Songs in the Key of Life" by Stevie Wonder. By the time I'm done I usually get 2 or 3 students to actually buy (and not just download) the album. I just finished Dave Brubeck's "Time Out" and before that did John Coltrane's "A Love Supreme" in Building Electrical Design (I guess something in load calculations brings out the Jazz in me). I just finished The Beatles "Rubber Soul" and started Bob Marley's "Exodus" in Control of Sound and Vibration in Buildings. 🖱

—Ralph Muehleisen

2009—A SAD YEAR FOR SOLAR PIONEERS

IN MEMORY OF HAROLD HAY

It is with great sadness that I report the passing of Harold R. Hay, chemist and solar pioneer. He died at his Los Angeles home, on December 22, 2009, after a brief illness. His loving wife and companion, Evelyn, preceded him in death some thirty years earlier. He celebrated his 100th birthday at SOLAR 2009 in the company of his SBSE and ASES families.

Harold Hay's personal collection of books, photographs, and articles, has been donated to California Polytechnic State University (Cal Poly), San Luis Obispo. He has also left a nominal sum for a biography and funded student research related to his areas of interest in passive solar design.

To fulfill his last wish, an invitation will be promulgated to members of SBSE, ASES, and the larger passive solar community to contribute essays related to Harold's quest for adoption of passive solar buildings and technology. It will be a tribute or *Gedenkschrift* to a most committed individual who inspired many generations of solar energy educators and entrepreneurs. In this way, we will create a living document that will carry these long overdue ideas forward at a time of no greater urgency than the 1970s when Harold first built the Skytherm (roof pond) House in Atascadero, California.

In the meantime, if you would like to share your thoughts, remembrances, and reflections on Harold Hay and his life, a blog has been created at <<http://haroldhay.wordpress.com/>>. This site will be an on-going repository for articles and related links. In addition, Harold was recognized in the March 2010 issue of *Solar Today* magazine (page 58).

—Margot McDonald

REMEMBERING GEORGE LÖF

Dr. George Löf, a pioneer of solar architecture, died in October at the age of 95. Löf, an engineer, began to experiment with flat-plate collectors in the early 1940s, and his 1943 house in Boulder, Colorado, has been called the first solar-heated home in the US.

His 1957 house in Denver (with architects James Hunter and Tician Papachristou) featured a beautifully low-tech system: roof-mounted flat-plate collectors to heat air that was distributed to the house and stored in gravel-filled cardboard tubes. Löf published numerous technical papers in the 1960s describing the house and its performance. He was President of the ISES from 1973–75, and built several solar houses at Colorado State University in the 1970s that contributed to the development of solar cooling.

I had the privilege of visiting Dr. Löf at his home on several occasions in summer 2009 for my research on the history of the solar house movement in the 1940s and 50s. His Denver house was virtually unchanged in 52 years (although the solar heating system no longer operated). We talked at length about his contributions and his role in the movement. He was alert and energetic, living alone, so I was shocked to hear of his death just weeks later.

The Löf house, which should be considered a major monument of 20th century architecture, will likely be lost. In exclusive Cherry Hills Village, surrounded by stucco estates, the land is worth many times more than the modest and weathered solar home. 🖐

—Tony Denzer



Harold Hay exhibiting his unending curiosity while touring Paws' living machine in Muncie, IN, with SBSEers Bruce Haglund and Alfredo Fernández-González.

photo: Bruce Haglund

JOB OPS

BUILDINGGREEN

BuildingGreen, publisher of *Environmental Building News*, has an opening for an editorial intern. The flexible, full-time schedule has a \$12/hour stipend. This twelve-month position has a May/June start date. Good writing skills, a strong command of the English language, the desire to learn about green building strategies and products, a willingness to help with whatever needs doing are essential characteristics of the right candidate. To apply, e-mail resume, cover letter, and references to John Singer at <jobs@BuildingGreen.com>.

FLORIDA

The University of Florida School of Architecture invites applications for two tenure-track associate or assistant professor positions in the area of architectural design. Candidates for these positions must also have a defined complementary interest in another area of our curriculum, and be able to teach seminars and/or courses in that area. Of the two positions, one will favor complementary expertise in architectural technologies and/or sustainability, the other will favor expertise in architectural technologies or/and a solid record of professional practice. Initial screening of the applications began March 1, 2010, and the search will continue until the two positions are filled. You're invited to submit a letter of application outlining studio philosophy, complementary curricular area of interest, research interests and goals; a curriculum vitae (CV); a portfolio of scholarly or creative work; and at least three references with contact information to Alfonso Perez-Mendez <alfperez@ufl.edu>.

LAWRENCE BERKELEY LABORATORY

The Heat Island Group at Lawrence Berkeley National Laboratory (LBNL) seeks a Materials Postdoctoral Fellow with a strong background in materials science, chemistry, or physics to work for a project characterizing the soiling and weathering of exterior building surfaces. This is a full-time, one-year appointment with the possibility of renewal based upon job performance, ongoing operational needs, and continuation of funding. Apply directly at <<http://www.jobclub.com/banman/a.a.spx?ZoneID=0&BannerID=146&AdvertiserID=38&CampaignID=804&Task=Click&SiteID=1&RandomNumber=386454>> and submit a single attachment that includes both your resume or CV and a statement of your research interests. Be sure to note where you found out about the position. 🖐



Löf's collectors (partly visible behind plywood screens) simply consisted of clear glass, airspace, black aluminum, and insulated backing

photo: Tony Denzer

THEIS GOES PLATINUM



photo: Terri Meyer Beadle

Chris Theis wears the ACSA Distinguished Professor Medal awarded at the annual conference in New Orleans.

NICK'S EXPERIMENTS IN EXTREME SOLAR

This winter Gary Reysa, Nathan Hurst, and I did some experiments with a small structure with a high temperature overhead mass solar heating system in Montana, where the weather outside is frosty—10° to 20°F below zero. Our massy attic air temp reached 180°F.

We're moving on now to an 8' D-cube with a 2-watt motorized damper; a \$75, 2-watt 486 clone; and a car radiator. The description of the new set of changes to the Barra Box and performance for the first couple days is at <<http://www.builditsolar.com/Experimental/dCube/BarraResults02.htm>>. The performance for the old version is at <<http://www.builditsolar.com/Experimental/dCube/BarraResults01.htm>>. And the basic description of the box is at <<http://www.builditsolar.com/Experimental/dCube/BaraBox.htm>>. [Fascinating reading and photos!—ed] 🙌

—Nick Pine



Barra Box in its Montana habitat. Brrrrrrrr!



Oops! We melted the thermometer!

photos: Nick Pine

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