SBSE RETREAT 2011—ALBUQUERQUE

ARCHITECTURAL EDUCATION: TRENDS IN TEACHING AND LEARNING
—A SHARE-IN EXPERIENCE

This is the first call for submissions and a preliminary description of logistics. The retreat is tentatively scheduled for Albuquerque, NM, June 16–18 or June 15–17, 2011 at Hotel Albuquerque in Old Town <http://www.virtualalbuquerque.com/VirtualABQ/HotelAlbuquerque/>. Site Coordinators will be Steven Dent and “Kuppu” Kuppaswamy Iyengar of UNM and Theme Coordinators will be Christine Bachman, UHD and Leonard Bachman, UH.

The retreat will focus on numerous small scale personal interactions and a few large group summary sessions. Many small scale discussions will happen concurrently and each break-out group will summarize and present an overview of their summary statement to a full gathering of retreat participants. We are planning for two such cycles per day with ample unstructured time in between for networking, cross-group discussions, and other free-form activities, including meal time chats, walking in the desert, and plundering each other’s syllabi.

CALL FOR PROPOSALS

We invite proposals for workshops and other formatted events corresponding to the theme topic. Please reply to Leonard Bachman <L.Bachman@mail.uh.edu> as soon as you can.

TOPIC

We’ll focus on innovative and emerging techniques of teaching and learning as seen through our collective efforts and experiences. The potential scope of sessions is quite broad, but will focus on pedagogical techniques, assessment, technology, and trends that SBSE members engage in the realm of teaching and learning within our unique discipline and knowledge areas. Beyond anecdotal discussions of a unique class offering or two, the idea here is to share perspectives on the changing approaches, principles, and context of architectural education as generalizable and applicable methods. Each session must be formed around

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LETTER TO THE EDITOR

Just a correction for now…In the last edition, you labeled our photo from the Daylighting Forum as “under the glow of electric lighting,” which was just sooooo untrue. We spent both days under 100% daylighted conditions. The glow in the photo was from toplighting!

Lisa Heschong, Heschong Mahone Group

[Great! I stand corrected and appreciate your letter of outrage!—ed.]

Thanks for including the piece about the Daylighting Forum in the SBSE News; it looks great. I did want to point out, though, that despite the appearance of the photo, the Forum was actually conducted under daylight only conditions! The upstairs room had open ceilings with exposed structure and mechanicals, as well as two clerestory roof monitors facing in opposite directions running the length of the peak of the roof (I don’t remember which directions they were facing, but both were heavily louvered, blocking any direct sunlight). We had the shades closed on all the windows because all the presentations were projected, but the clerestories provided plenty of light for taking notes. The photo was slightly overexposed, making it look brighter than it actually seemed in the space.

—David Douglass, Heschong Mahone Group

[Okay, okay! Where was my fact-checker? Bad assumption on my part—SBSE simultaneously met in the poorly, unilaterally daylighted space below while the Forum basked in the light of day. A great example of misdirection!—ed.]

On the Ball State campus it is called beneficence. More generically it is termed philanthropy. Philanthropy (according to that ubiquitous source, Wikipedia) is the effort or inclination to increase the well-being of mankind, as by charitable aid or donations. This is a fair description of a very important role that SBSE has assumed over the past decade. Thanks to the foresight of a few, the generous and ongoing donations of a few more, and the volunteer efforts of many, SBSE has been able to maintain and actually increase its awards and scholarship programs through difficult economic times. All members of SBSE should be proud of the support we provide for students. Last year SBSE awarded $9,560 in scholarships and awards. The Board of Directors has approved a somewhat larger scope of spending for the current academic year. This is serious money for a group with fewer than 200 dues-paying members, and it has significant impact.

During the 2009-2010 academic year SBSE provided support for the following:

- 7 scholarships to support attendance at the SBSE Retreat,
- 6 scholarships to support participation at the ASES solar conference,
- 2 best ASES paper awards, and
- 2 SBSE Retreat scholarships for faculty from developing countries.

Two additional opportunities were proposed, but (for a variety of reasons) did not result in awards being made. Eleven SBSE volunteers participated in the application review and selection process. Recipients came from a diverse institutional and geographic background—including Algeria, Belgium, Brazil, and Israel.

For the current (2010-11) academic year, the following awards and scholarship opportunities will be available:

- 8 scholarships to the SBSE Retreat,
- 7 scholarships for the ASES conference,
- 2 Retreat scholarships for developing country faculty,
- 2 PLEA conference scholarships,
- up to 3 ASES best paper awards, and
- Malcolm Wells design awards.

Each opportunity will have defined application requirements, submission dates, and selection criteria. Details will be posted (on a rolling basis) to the Scholarships & Awards page of the SBSE web site throughout the Fall semester. Announcements will be sent to the SBSE listserv when details for each opportunity are finalized. Stay tuned to the listserv if you (or your students) are interested. In response to a recent listserv call, over a dozen new volunteers stepped forward to assist this year.

Where does SBSE get the funds to support such an active scholarship program? For many years, John Reynolds and Fuller and Jane Moore have made targeted donations to SBSE for this purpose. The Jeffrey Cook Charitable Trust has provided ongoing funds to support the international outreach scholarships. Substantial funding in recent years has come from the net proceeds of Sun Angle Calculator sales. CERES (Ball State University) is currently facilitate such sales; Alison Kwok developed and initiated the idea. Four anonymous donors are supporting the Wells design award. But … we can always do more with more funds. Please consider donating to SBSE in support of student scholarships.

—Walter Grondzik
relevant “take-aways.” A non-exclusive list of interests would include at least some of the following grouped by topic:

- **Assessment:** Defining learning objectives at the course and program level. Designing grading rubrics and grading forms. Testing and measurement for reliability and validity. Other assessment tools.

- **Pedagogy:** Strategies used to enhance student engagement. Evolutions in studio culture and the learning environment. Examples of pedagogy based on specific projects or course designs. Moving from a teacher-centered instruction to student-centered learning. Identification of active learning strategies in lecture and studio courses. Integrated curriculum models, vertical studios, and such. What’s new in problem- and project-based learning. Simulation tools for teaching. Tried and true things to remember.

- **Technology and Teaching:** Teaching resources (e.g., online/hybrid classrooms, videos, seminal articles). Teaching technologies (e.g., classroom response clickers). Time management and workload issues. Web-Based Learning Platforms (e.g., Blackboard).

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**VENUE**

Retreat meetings will be held at Los Poblanos, an Inn, Cultural Center, and organic farm located in Albuquerque’s Rio Grande valley. The original buildings were designed by John Gaw Meem (“father of the Santa Fe Style”) in the 1930s as a private residence on 25 acres in the Territorial Revival Style. It’s now listed on the National Register of Historic Places. Los Poblanos Organics cultivates over 75 varieties of fruits and vegetables for local sale at the farm and by subscription.

Lodging for the Retreat will be 3.5 miles south at the Hotel Albuquerque. It is conveniently located next to Albuquerque’s Old Town, founded in 1706. Old Town contains numerous shops and restaurants, often located on narrow passages or on intimate plazas. At the east edge of Old Town are the Albuquerque Museum of Art, Explora science museum, and the New Mexico Museum of Natural History. A few blocks north, on the Rio Grande are the Botanical Gardens, Aquarium, and Zoo.

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**IGCC CODE HEARINGS CONCLUDE IN CHICAGO**

On Saturday August 21, 2010 the International Code Council concluded over a week’s worth of public hearings on 1,500 code amendment proposals to the International green Construction Code (IgCC) in Chicago, IL. Testimony regarding comments on the first Public Version (PV 1) of the document was offered by an audience representing industry, government, and NGO’s. All comments accepted by the Hearing Committee will be incorporated into Public Version 2, due to be published in early November. Additional comments to PV 2 will then be accepted prior to a January 5 deadline, and will, in turn, be considered for adoption as part of the 2012 ICC code cycle in Dallas next May. The Chicago hearings attracted an International audience via webcast and broke an ICC record for hearing length, with many sessions extending from 8 AM until 9 PM.

The IgCC incorporates requirements for site development and land use, material resource conservation and efficiency, energy conservation, efficiency and atmospheric quality, water resource conservation, indoor environmental quality and comfort, commissioning, and existing buildings. An unusual feature is the inclusion of optional provisions for each of these categories, which can be selected as mandatory by the adopting jurisdiction. The jurisdiction can also require that a proposed project select up to an additional 15 “project electives” to meet, in a process that is analogous to the achievement of points under the USGBC’s LEED rating system. The inclusion of jurisdictional requirements and project electives adds an element of choice and flexibility to this code, intended to make adoption and compliance more user-friendly.

Code amendments approved in Chicago include the inclusion of requirements for straw bale construction and an outcome-based compliance path for energy conservation. The interests of audience members ranged from a competitive advantage for products and services to the codification of sustainable policies. There has been considerable interest in the adoption of the IgCC both domestically and internationally, and expectation runs high that this code will become a major factor in the development of a sustainable construction industry.
NEW RESEARCH AREAS IN ARCHITECTURE

MICHIGAN—MEASURABLE DOMAIN WITHIN A VIRTUAL ENVIRONMENT

Architects, engineers, landscape architects, planners, designers, and related professionals use simulation techniques for evaluating and communicating the performance of design options to their clients. Combining different simulation techniques with an interactive virtual environment in real-time can contribute to and remarkably accelerate the decision-making process. Virtual Reality (VR) is the simultaneous simulation and perception of physical attributes of reality in an interactive computer-generated environment in real-time. VR applications in architecture, music, computation, mechanical engineering, and medicine have proven to be beneficial to designers and researchers. The focus of these applications is on the visual and aural aspect of the simulated scenes.

Our research aims to estimate the measurable domain within the simulated virtual environment, including actual sensations of hearing and vision. Specially designed instrumentation allows us to measure the dynamics of light and sound experienced by the user. An immersive virtual pre-defined or random pathway through an architectural space allows us to measure the distinct lighting conditions, colors, and acoustic effects in real-time. The users’ reactions to direct sensations of lighting (darkness, brightness and color of the scenes) and acoustic conditions (flutter echoes, diffusion, and sound decay) provide opportunities to correlate the dynamic ranges of acoustic and visual experiences with their intended or designed target values as measured in real-time. Visual sensitivity and head-related transfer functions are implemented in scenes generated with or without equal color rendition index or complexly distributed chromaticity, or sound with or without echoes, sense of direction, or decay in time, are modeled in virtual computer-generated environment to provide repeatable conditions for testing human aural and visual performance. The real time measuring capabilities using portable sound and light spectrometers positioned within a helmet and or a manikin head allow us not only to record and analyze the conditions with users’ reactions but also view the spectral characteristics of the surround light and sound reaching the simulated users’ ears and eyes.

Our current studies within the virtual environment are focused on the spectral sensitivity of the eye under mesopic conditions for roadway, exterior, and indoor lighting conditions in assisted living buildings and acuity of the ear in experiencing sound source localization with high and low diffusion due to contributions from added physical elements in the architectural space.

—Mojib Navvab
A team of seven KSU Architecture students was awarded first place by the USGBC Central Plains Chapter in the local chapter stage of the USGBC Natural Talent Design Competition: Small, Green, Affordable. The USGBC, in partnership with the Salvation Army through its EnviRenew Initiative, chose to focus this year’s competition on the rebuilding effort in New Orleans. The students were tasked with designing an 800-square foot house for elderly residents in the Broadmoor neighborhood of New Orleans. In addition, the house needed to meet the requirements of LEED for Homes Platinum certification, stay within a $100,000 construction budget, and use universal design principles throughout. The student team now moves on to the national level competing for the chance to actually construct and evaluate their design.

Entitled “[adapt] Broadmoor”, the students designed and documented their competition entry under the direction of Assistant Professor of Architecture Michael McGlynn during a May 2010 Intersession class. The seven students who participated in the class are Andres Al-faro (Houston, TX), Lucas Bergstrom (Lawrence, KS), Jacob Campbell (Derby, KS), Zachary Farrell (Dallas, TX), Kathryn Hawkes (St. Louis, MO), Heather Kuhn (San Antonio, TX), and Lauren Pogue (Alexandria, VA). In addition to the competition entry itself, the students developed and assembled a publication that documents not only the outcomes of the design studio, but the process that lead to these outcomes as well. The publication is available as a download, for free, and in paperback, at cost, from <http://www.lulu.com/product/paperback/%5Badapt%5D-broadmoor/11784907> (download) and <http://www.lulu.com/content/paperback-book/%5Badapt%5D-broadmoor/9100809> (paperback).

The students engaged in a collaborative approach, each assuming responsibility for one major component of the project. Students quickly discovered that, while specialization allowed them to become well versed in a particular area, communication early and often amongst team members was critical to achieving a high performing, integrated design that could be built within budget. A parallel realization was the integral nature of the technical and formal design aspects of the project. Aesthetics remained of utmost importance, but all students saw the impact of their design decisions in relation to other issues of importance such as building performance, accessibility, and construction cost. Knowing that their scheme would be built if they won, proved to be a strong motivator for the team. They knew that their design decisions could have a real impact in the Broadmoor neighborhood and upon those individuals who would eventually live in the house. To a great extent, this collaborative, integrated, and real-world design approach mirrored that which the students will find in practice.

In the second stage of the competition, the student team competes at the national level against 24 other local chapter winners. Ultimately, two student and two emerging professional schemes will be chosen for construction. The four national finalists will be recognized this November at the USGBC GreenBuild Conference in Chicago. After construction, the four houses will be tested for performance with the highest performing house awarded the grand prize at the USGBC GreenBuild Conference in 2011.

—Michael McGlynn and Diane Potts

MY EFFORT TO FIGHT GLOBAL WARMING

Since the energy that buildings use is one of the main causes of global warming (about 40%), and because making buildings more energy efficient is a practical way to reduce carbon in the atmosphere, I have decided to use my retirement to give lectures and workshops in energy efficient buildings design. I am especially emphasizing solar-responsive design, because it has such a large impact on energy consumption and because many solar strategies are “free lunches that you get paid to eat” (Lovins).

So far, I have been invited to speak in Thailand (4 times), Korea (4), China (2), UK (2), UAE, Iran, India, Indonesia, Italy, Malaysia, and Brazil. In the United States, I have been invited to speak at conferences, architect’s meetings, and at universities including MIT, UMASS, Wentworth, Arkansas, Cincinnati, SPSU, and Auburn.

I am willing to speak anywhere in the world. My only requirement is that my expenses be covered. An honorarium is not required but appreciated. It can even be determined after my visit, when the value of my presentations is clear.

Most often, I will present one or more of the following.

- Lecture to whole school, “Architecture in a Warming World”
- Hands-on workshop, “Solar Geometry and Drawing Sunbeams”
- Lecture/demonstration, “Daylighting is mostly Sunlighting”

If you are interested in inviting me, please don’t hesitate to contact me for more information by mail at 719 Mercer Circle, Auburn, AL 36830; by phone (334) 707-7963; or by e-mail <lechnmm@auburn.edu>.

—Norbert Lechner
STUFF FOR YOU

DIVA-FOR-RHINO

With the fall semester on hand some of you might be interested in a new Radiance/Daysim plug-in that we’ve developed for Rhino, called DIVA-for-Rhino, which supports a series of performance evaluations including physically-based scene visualization, annual radiation maps, climate-based daylighting metrics, glare analysis, and LEED IEQ Credit 8.1 compliance.

The plug-in offers highly optimized simulation workflow within Rhino and can be combined with parametric Grasshopper scripting to generate Radiance/Daysim animations. You can download the plugin from <http://www.diva-for-rhino.com>. If your students are already using Rhino, they’ll probably enjoy using DIVA as there is no need to export into other environments. Happy simulations!
—Christoph Reinhart, Alastair Jakubiec, Kera Lagios & Jeff Niemasz

ECO-STRUCTURE MAGAZINE

I receive this very nice periodical, both in print and digitally, for free. The current issue on Green Healthcare strategies is pretty good. You can subscribe for free at <http://www.eco-structure.com>.
—Terri Meyer Boake

CLIMATE CONSULTANT 5

We have now completed the first year of our three-year research project through the California Energy Commission to expand HEED and Climate Consultant. We have now posted a new version of Climate Consultant that offers four different comfort models. The new version of HEED allows users to click and drag PV collectors onto roofs of any shape. We also are offering workshops throughout California. Find our stuff at <http://www.energy-design-tools.aud.ucla.edu>.
—Murray Milne

BILL LAM FREEBIES

Two of the best books ever published on lighting and visual perception as well as daylighting in climates that have predominantly sunny skies are by Bill Lam—Perception and Lighting as Formgivers for Architecture and Sunlighting as Formgivers—are both out of print. Incredibly, since the copyrights have reverted back to Bill, he makes these books available as free PDFs on his website <http://www.wmclam.com>, and follow the link at the top of the page to ‘publications’. Thanks Bill! 🌞
—Bill Burke

BOOK REVIEW NOOK

EAARTH : MAKING A LIFE ON A TOUGH NEW PLANET

Author Bill McKibben does know how to spell. He just feels that we are no longer living on the planet called Earth. He spends the first half of the book showing how global warming has changed the planet so much that we need to give it a new name. The book is an excellent source of information on all of the changes that have already occurred. He clearly shows that global warming is not a future event.

In the second half of the book, he presents his view of what we need to do to adapt. He compares his views with those of Thomas Friedman, who wrote Hot, Flat, and Crowded. McKibben does not believe that high-tech solutions are the way to go, but rather, that small scale local solutions are better. Although I am not sure of how to best adapt to the new Earth, I recommend Eaarth.
—Norbert Lechner

POCKET SOLAR ARCHITECTURE POCKET REFERENCE

This comprehensive little reference by Ken Haggard, David Bainbridge, and Rachel Aljilani really does fit in your pocket. It delivers all the information from theory to strategy, to facts as well as esoteric insight like, “Design of passive solar architecture is more complex than that of a traditional modern building. … Passive solar architecture embraces this complexity to develop architecture that is more holistic and less of an abstraction.” Might I say it’s a mini-MEEB without bullet-proof protection?
—Bruce Haglund

OREGON BEST GREEN RESEARCH LABS

The Oregon Built Environment & Sustainable Technologies Center (Oregon BEST) has announced new investments that expand Oregon’s university research capability in both solar energy and the sustainable built environment and help Oregon’s green businesses to more quickly commercialize new green products and technologies.

Funding for Oregon State, Portland State and Oregon will purchase key research equipment and add three lab facilities to the Oregon BEST shared-user network of research tools and expertise available to Oregon’s growing green innovation sectors. The four newly funded labs bring the total of Oregon BEST facilities to seven. More than 180 faculty at OSU, PSU, the UO and the Oregon Institute of Technology are part of the statewide network that offers Oregon industry access to advanced research tools, faculty expertise, commercialization opportunities and a well-educated green workforce. The total investment at the four labs exceeds $1 million, with Oregon BEST investing approximately $800,000, and an additional $270,000 coming from university and business contributions. Combined with lab investments brokered by Oregon BEST last year, the shared-user network represents almost $5 million in new lab resources, which are available to Oregon faculty and industry, brought online by Oregon BEST since early 2009.
—David Kenney
2011 ARCC SPRING RESEARCH CONFERENCE

CONSIDERING RESEARCH: REFLECTING UPON CURRENT THEMES IN ARCHITECTURAL RESEARCH

April 20 – 24, 2011 | Detroit, Michigan | Hosted by: Lawrence Technological University

The 2011 ARCC Spring Architectural Research Conference invited papers by those conducting architectural research, in both academia and the profession, which reflects on current and future architectural research. Papers by PhD candidates and other graduate students are encouraged and will be included in a special session.

In addressing this year’s theme, the conference will explore the following issues of how research can help us reflect on various contemporary environmental, sustainable, social, political, formal, and psychological paradigms. The exploration is expected to raise questions around the impacts of these paradigms, whether they have addressed that which they claimed to address, examine where they stand and what effect might they have, and, ultimately, consider how research is an integrated part of our practice and discipline.

The 2010 ARCC Spring Architectural Research Conference is an intra- and inter-disciplinary conference on architectural research. For more information, please see the conference web site <http://arcc2011.ltu.edu>.

KEYNOTE SPEAKERS

The ARCC 2011 Conference will have several keynote speakers appearing across the conference dates. The first confirmed keynote speaker is Alan M. Berger. Alan’s talk will be on aimed at the idea of what the world could be as opposed to what normative practice produces out of the limitations of the current systems.

“Alan Berger is Associate Professor of Urban Design and Landscape Architecture at Massachusetts Institute of Technology where he teaches courses in the department of urban studies and planning. He founded and directs P-REX, The Project for Reclamation Excellence <http://www.theprex.net>, a multi-disciplinary research effort at MIT focusing on the design and reuse of deindustrialized landscapes worldwide. By using low-angle aerial photography, maps, and other graphic evidence, Berger visually reveals evidence and trends of landscape waste throughout the world—from public health hazards such as abandoned mine pits, mountains of slag, and pools of cyanide, to vacant land, landfills, military installations, and places associated with high and low-density urbanization. How these sites are cleansed, valued and considered for adaptive reuse at local and regional scales is Berger’s main area of interest. His work emphasizes the link between our consumption of natural resources, and the waste and destruction of landscape, to help us better understand how to proceed with redesigning our wasteful places for future productive uses and more sustainable outcomes. Berger currently serves as a consultant to the U.S. Environmental Protection Agency on Brownfield and Superfund site revitalization in the American landscape.


—ARCC 2011 Organizers
SUN SPACE UPDATE

Here’s Nick standing in his ill-lit, but very green, sunspace with the slanted 2-story wall, before an ice dam catastrophe dictated a replacement vertical 3-story transparent wall.

ECOTECT TIDBITS, TREASURES, AND TUTORIALS

Now that Autodesk has purchased Ecotect, where can you find all the educational goodies with which Andrew Marsh populated the Square One web site?

The passive lessons are still there at <http://www.squ1.com/archive/>.

— Alison Kwok


— Leena Thomas

You may know of this web site already, but if not, Andrew Marsh has his own site, or as he calls it, “his online notebook,” where some education material can be accessed. There is far less than before and it looks new. Hopefully, it’s a sign of more good things to come. It is mostly concerned with daylight and solar geometry. The link is <http://andrew-mash.com/topics/projects/educational-materials>.

— Paul Kenny

You can change parameters and get immediate feedback from this applet!

WINTER ISSUE SUBMITTAL DEADLINE—DECEMBER 1

FIRST CLASS MAIL