TIME TO COMMIT—OXFORD & SBSE

Colleagues, it’s time to get into the travel planning mode. Sign up for our great back-to-back events right now! Book your airfares, book your train fares, buy your carbon off-sets.

OXFORD (UK)

In 1958, the first Oxford Conference set an agenda for architectural education that has been followed for 50 years. But the evolving drivers of energy and construction costs, coupled with shifting social values and environmental crises point to a need to create a new generation of buildings that are part of the solutions to these crises. We must re-evaluate and change much of what we teach, how we teach it, and understand why we teach it. Be part of that change! Join us in Oxford in July 2008. Register for the Oxford Conference at <http://oxfordconference2008.co.uk/>.

SBSE RETREAT AT THE NEW FOREST (UK)

In the spirit of “Resetting the Agenda,” the SBSE New Forest Retreat, focused on new directions in building science research and architectural education, is organized around two objectives (1) share new and emerging best practices and (2) chart a course for SBSE’s engagement in global discussions on the future of both research and education. Join your colleagues from all over the world for more than two days of discussion and debate on the emerging issues in pedagogy and research in areas we all hold dear. Registration has begun. Don’t be left out, sign up now at <http://www.sbse.org/retreat2008/>.

APRÈS RETREAT

Our man at Arup in London, Chris Luebkeman, has vowed to arrange post-retreat tours of a few significant green buildings for SBEers. More info will be posted to the list server and the web page as plans develop.

—Bruce Haglund

Full Retreat info: http://www.sbse.org/retreat2008/
LETTER TO THE EDITOR

Compliments to the SBSE News. I find the contents useful and enjoyable for those who seriously consider architecture. I hope you will deem my information interesting as well. The latest version of ArchiCAD (ver-11) has arrived, and recently we made it available for free to students, teachers, and educational institutions—besides ArchiCAD many other programs can be downloaded after registration on our site <https://eduregistration.graphisoft.com/>.

For more info on Graphisoft Educational Programs, please visit <http://www.graphisoft.com/community/education>.

You might also be interested in our offer to professionals. The free BIM Experience Kit is a brand new, intro package to Building Information Modeling, the latest trend in the AEC industry. The package includes free software, interactive learning, and an online assessment opportunity. Visit <http://trialregistration.graphisoft.com/> for more info.

I would be happy hear from SBSEers with any questions or comments.

—Hana Yamazaki, Graphisoft

[Thanks for the kind words. SBSEers are demonstrating an increasing interest in BIM. Thanks for making access to your software available as we move into a BIM world.—ed.]

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Sue Roaf and Norbert Lechner tête-à-tête at Solar2007 in Cleveland.

COMMIT TO A COMMITTEE

The elephant in the room during last year’s SBSE election was the addition of Article V to the by-laws, which established standing committees and board membership for their chairs. As you read below, you’ll discover that committee members and chairs are appointed by the president. Therefore, please nominate a colleague or yourself for the appropriate committee by e-mail to Terri Meyer Boake <tboake@uwaterloo.ca>. We hope to have the committees fully formed by the May annual meeting in San Diego.

—Bruce Haglund

ARTICLE V – COMMITTEES

Section 1. Standing Committees. The President of the Corporation shall have the authority to appoint committees after consulting with the Board of Directors (as specified in Article III, Section 3 of these By-Laws). Three standing committees shall be constituted on a regular basis unless the Board of Directors determines otherwise. These committees shall be: Awards & Scholarships, Communications, and Educational Resources.

Section 2. Committee Chairs. Each committee shall be chaired by a person recommended by an officer of the Corporation and appointed by the President. The chair of each committee will serve for a reappointable two-year term and will be a member of the Board of Directors during that term. Committee chairs may resign at any time or be removed by a majority vote of the Board of Directors.

Section 3. Committee Membership. Each of the above-mentioned committees will include no fewer than three (3) members, who will be recommended by the Board of Directors and appointed by the President to serve a two (2) year term. The Communications Committee shall include the current SBSE Newsletter Editor and the current SBSE Webmaster.

Section 4. Roles and Responsibilities of Committees.

4.1 Awards & Scholarships Committee. This committee shall be charged with administering the various award and scholarship programs of the Corporation.

4.2 Communications Committee. This committee shall be charged with coordinating the various vehicles of communication that the Corporation employs to achieve several of the purposes of the Corporation as listed in the Articles of Incorporation. These vehicles include, but are not limited to, the SBSE Newsletter, the SBSE Web Site, and the SBSE Listserv. [So this committee needs at least one additional member.—ed.]

4.3 Educational Resources Committee. This committee shall be charged with administering various means by which the Corporation may establish a network for exchanging information; develop course guidelines, curriculum models, teaching aids and devices for successful teaching; and act as a forum for scholarly work on the analysis and synthesis of energy and resource issues in building design.

Section 5. Coordination and Funding of Committee Activities. The Board of Directors shall be responsible for coordinating the activities of the various committees and for approving allocation of such funding as requested by the committees to carry out their responsibilities.

It’s possible to enjoy the pleasures of camping adjacent to the Retreat site, but did we mention that pigs and ponies might wander into your campsite?
ANSWERING THE CALL
THE SBSE CARBON NEUTRAL DESIGN EDUCATION INITIATIVE

Phase I: The Carbon-Neutral Studio Project

In February 2007, Ed Mazria created the 2010 Imperative as a challenge to architecture schools to step up and teach carbon neutral design ... and SBSE has been working with Ed and everyone else we can think of ever since to deliver on that goal. Thus was born the vision of the “SBSE Carbon-Neutral Design Education Initiative,” an ambitious multi-year extravaganza of carbon-neutral tool development culminating in a program of regional workshops revisiting the DOE train-the-trainer workshops of the 1970s and retooled for the 21st century. This time we mean it, or say goodbye to the glaciers!

Phase I of this circus has now taken on a life of its own. To quote from the master grant proposal, “Phase I of the Design Education Initiative, the SBSE Carbon-Neutral Studio Project, proposes a year-long effort to survey current design studio pedagogy for teaching carbon-neutral design, resulting in the development of both a richly populated web site of best practices and a workbook on carbon-neutral design pedagogy. This effort involves establishing a network of faculty across North America who currently teach architectural design studios with carbon neutrality as a theme, organizing resource-sharing and discussion networks, bringing the year’s work together through a conference to be evaluated by leading practitioners and experts in the field, and producing a workbook and web site.” The educators’ network has been established and includes 32 participating studio faculty at 28 North American schools of Architecture and 27 additional discussion group participants from around the globe. These lists are open to new members. Contact <jwasley@uwm.edu> to join.

To-date, this loose affiliation is a forum to share information and strategies on setting carbon neutrality as a goal in the studio setting, but after a year of meetings with the AIA, AIA COTE, ACSA, USGBC, and assorted potential industry sponsors, we are getting tantalizingly close to funding a summer workshop that will bring together as much of the group as possible to critique our work and develop a richly illustrated workbook of best-practices.

In the meantime, the Carbon-Neutral Design Studio will be a theme of the upcoming SBSE retreat, alongside the larger question of how SBSE should position itself both in terms of educational and research initiatives to take advantage of the coming changes in Washington DC, so break out your carbon trading credits and come on over to England!

(The Design Education Initiative proposal is primarily the work of Mary Guzowski, following on discussions at the 2007 SBSE retreat and working with then SBSE past-president Jim Wasley, president Chris Theis, and president-elect Terri Meyer Boake. Jim Wasley is the P.I. for the Carbon Neutral Studio Project. Too many other SBSE members are involved to list, but if you were at the last retreat you know who you are. A special thanks here as well to Buildinggreen.com for their contributions to the cause.)

I recommend AGi32 (by Lighting Analysis) for quick and simple (maybe) electric and natural lighting analysis. They offer a “free” educational version (not the professional version) for students and faculty to test.

—Hofu Wu

I concur, AGi32 has great tutorials to help students get up-to-speed fairly quickly. I don’t like the interface much (way too cluttered), but it’s functional and the tutorials really help. I use the program in my acoustics and illumination intro course where we do 8 (of 16) weeks on illumination engineering. Students do 3 or 4 tutorials for an assignment one week, then a small design project the next week.

AGi32 has a great educational policy, offering free educational lab licenses and free time-limited licenses for students’ personal machines. The EDU license coordinator is Dawn De Grazio <dawnd@agi32.com>.

They’ve released V2.0, with an upgraded interface, which I haven’t had a chance to install or even peruse (nor any of the new tutorials). If the interface isn’t any harder than V1.8/9 and the tutorials are just as good, AGi32 might be just what you need.

—Ralph T. Muehleisen

I agree with Professor Wu with one caveat—find someone to be the AGi Champion, either you, a fellow faculty member, or a grad student. Find the money to send someone to AGi school in Colorado or at Light Fair. I use it in my lighting class and without preparation the software can be overwhelming. One big plus is that the tutorials are very good. But if you don’t understand fundamental photometric concepts, I believe you’re trying to do too much. The free version is pretty much the professional version with constant warnings about use limits. I just lectured and am assisting in a lighting studio project at Ball State. I was blown away by the students’ AGi32 work, but these were architectural grad students in a term-long lighting and daylighting studio.

—James R. Benya
SBSE PEOPLE

Bob Koester reports that HEED now has over 14,000 users—doubled in 10 months—and Climate Consultant 3 has over 6,700 users in the 2 years since its release. Murray Milne reports that HEED now has over 14,000 users—doubled in 10 months—and Climate Consultant 3 has over 6,700 users in the 2 years since its release.

CERES NEW MIRROR BOX

The Center for Energy Research/Education/Service (CERES) at Ball State University has recently expanded its available tools and techniques for the study of lighting in buildings. The Center offers access to these capabilities to students, faculty, and the region’s professional design community.

With the excellent support and craft of BSU Facilities Planning and Management personnel, CERES has completed the design and construction of a new Mirror Box Artificial Sky for performing daylighting model studies of building design performance under overcast skies. This 8’x8’x12’ chamber was calibrated last summer by Nick Rajkovich from the PEC.

MORE ON THE SOLAR DECATHLON

The Solar Decathlon is an international competition in which 20 universities from around the world design and construct an 800sf self-sustaining house that is built off-site and then transported to the National Mall in Washington DC. The 20 houses are judged in 10 different competitions over the period of 1 week in early October. Held for the third time in 2007, millions of dollars and thousands of person-hours went into the design and construction of these 20 houses. Each team developed a unique response to a single architectural program.

Recognition of the incredible potential for learning from an in-depth investigation of these houses led to the development of a case-study seminar at the University of Cincinnati in winter 2008, as well as a proposal for a forthcoming book that will cover this content. Zaretsky and his students conducted research and design exploration of the 20 Solar Decathlon 2007 houses, diagramming and assessing how variants on a specific program and site can lead to such diverse solutions. The research focus was the relationship among architectural design decisions, passive design decisions, and thermal comfort.

Each of the 10 students studied 2 houses, applied diagrammatic analyses and research to explore the architectural and passive design decisions, and related these findings to performance in the categories of Architecture and Thermal Comfort. Through these analyses profound relationships were discovered between architectural decisions and effectiveness in achieving thermal comfort. Students used diagrams, charts, graphs, and matrices to graphically describe these relationships.

The architectural areas of comparison included concept/parti, circulation of inhabitant vs. visitor, plan organization, primary/secondary spaces and forms, delineation of outdoor space, geometry, public/private space, and structure. Thermal comfort analyses included climate at origin vs. Washington DC, passive heating and cooling strategies, solar sections, daylighting, electric lighting, cross- and stack ventilation, shading, materials, and active mechanical systems.

PASSIVE SOLAR DECATHLON?

I think it’s time that we make the SBSE/ASES a formal partner in the Solar Decathlon by offering an award to the team that constructs a house that best demonstrates passive environmental systems.

The award could go to the team that designs a home that is zero-net energy for heating and cooling in its home climate primarily through cost-effective passive environmental systems. [Determining how to evaluate this performance poses an interesting question.—ed.] As part of the award, the team would have to create a long-term plan to educate the general public about passive and low-energy heating and cooling systems and would upload a series of technical briefs or papers to the SBSE/ASES web site for use by faculty in their classes. These papers/briefs could also be presented in a special session at the ASES conference and at the SBSE retreat.

Rather than remain on the sidelines of the Solar Decathlon, I’d like to think of ways to encourage teams of students to move towards passive environmental systems. An award might do just that, with the added potential benefit of increased interaction between Solar Decathlon alums and SBSE/ASES, bringing a new generation into our ranks.

It could be a win–win for all.

—Nick Rajkovich
In the seven-odd months since publication of Building Research & Information’s Special Issue entitled, “Climate Change: National Building Stocks,” the globe’s buildings have been responsible for about 4.5 Gt of energy-related CO₂, based on prorated 2002 levels. The contributors to the BR&I July/August 2007 issue address this challenge with a body of work examining the energy use of existing buildings and the unique mitigation challenges and opportunities they present.

The broad scope of research in the journal was presented by Diana Ürge–Vorsatz of the Central European University, et.al. Drawing from the Fourth Assessment Report of the IPCC published last year, the authors framed building-specific mitigation efforts both from a greenhouse gas reduction potential and a cost perspective. A thorough discussion of other benefits from these strategies preceded the inevitable discussion of the barriers to achievement of building-related GHG emissions reductions. The paper deftly set the stage for Ürge–Vorsatz et.al. to assess and compare 20 policy instruments in detail in a separate article that evaluated policies according to emission reduction effectiveness and cost-efficiency, as well as providing best-practice examples. Must-reads for anyone seeking a better grasp on the global building sector’s potential for climate change mitigation, the two together form a veritable primer on building climate change mitigation policies globally.

Climate change begins at home for several contributors. Brenda Boardman of Oxford University investigated the measures required for the UK to achieve 60% reduction in energy use in housing stock by 2050, when nearly 90% of existing homes will still be standing. The discussion quickly broadened to include the competing demands of carbon conservation, building heritage, and the fuel-poor. Robert Lowe of the Bartlett School (serving double duty as contributor and guest editor) qualitatively explored the technical options available to achieve the ambitious carbon reductions from housing in the UK. He found targets reachable with improved building and system performance, but total decarbonization impossible without decarbonization of the electricity system. Georg Schiller of the Leibniz Institute took discussion of residential building one step wider by investigating the material flows for urban infrastructure associated with housing patterns, arguing that “the building-centered view needs to be expanded considerably to include aspects of town and regional planning.”

Other journal highlights include: an article on climate research, policies, and priorities in Norway, where the energy supply profile may potentially shift with rising demand from very low carbon intensity hydropower toward gas-fired generation, making efficiency and conservation new and urgent priorities; an article analyzing the 2003 heat wave in France finding the need, among others, for anticipatory lower-carbon building cooling strategies such as improved envelope performance; and an article modeling the long-term behavior of building stock in terms of both material and resource flows.

To echo the words of Robert Lowe in his opening guest editorial, the role of this issue of BR&I is to bring together the communities of policy research, policy implementation, and engineering/building science to exchange information and perspectives on large and complex problems. This issue places the research and arguments surrounding climate change mitigation through existing building stocks “in the public domain in the hope of provoking further discussion among the many disciplines working on these questions.” Many of the articles discussed in this review are available for free download at <http://www.informaworld.com/smpp/title-content=t=g779030874-db=all>. Download, be provoked, and keep the discussions alive.

—Martha Bohm

SAN DIEGO TOOL DAY

Sunday, May 4, 2008, prior to Solar 2008, San Diego Tool Day at the University of California, San Diego (UCSD) will delve into the newly completed, award-winning Student Academic Services Facility (SASF) designed by Rob Wellington Quigley, FAIA.

“The new Student Services Center anchors the heart of the university center neighborhood and defines and connects three different campus open spaces. It also enhances pedestrian circulation through a series of covered arcades and open porticos. The façade of the building is comprised of a curtain wall system with sun screens, allowing the building users flexibility in relation to views and sun protection.”

—Rob Wellington Quigley

The SSC at UCSD boasts layered transition spaces with ample shading and ventilation.

This all-day workshop provides a setting in which participants learn to use handheld instruments, conduct a building performance case study through structured methodology, develop hypothesis and investigation strategy formulation, experience behind-the-scenes building investigations, and make team presentations of study results to the workshop participants. Participants gain understanding of objective and subjective procedures for performing post-occupancy evaluations of building performance.

Both the architect (Rob Quigley) and the UCSD campus architect (Boone Hellmann) are enthusiastic supporters who will participate in the workshop. This will be a great opportunity to investigate a fine, new building and to experience the UCSD campus and adjacent Salk Institute. You can register for Workshop 018 through ASES at <http://www.ases.org/solar2008/register/register.htm>. Full Tool Day info is at <http://www.caa.uidaho.edu/sbse/SanDiegoToolDay/>. —Bruce Haglund
BUILDINGGREEN AND THE TAUNTON PRESS

In this time of heightened demand for accurate and unbiased information on sustainable building, BuildingGreen and Taunton Press have taken a bold step that will make the most of their respective strengths in serving the green building industry and supporting the transformation of the building industry toward sustainable practices and the use of environmentally responsible building products.

BuildingGreen, one of the oldest and most respected sources of green building information in North America, announces a partnership with Taunton Press, giving Taunton an ownership stake in BuildingGreen and giving BuildingGreen the ability to extend its leadership in green building information to a broader and larger audience. Taunton will assume an ownership stake in BuildingGreen alongside principals Alex and Jerelyn Wilson and Nadav Malin. “We’re excited to benefit from Taunton’s resources and experience as BuildingGreen grows and matures to meet the needs of an exploding market for green information,” said president and founder Alex Wilson, who has been a regular contributor to Taunton’s Fine Homebuilding. “We have long admired Taunton’s integrity as a family-owned company and the authenticity of its resources, and we look forward to working together.”

The National Center for Healthy Housing (NCHH) has developed 7 principles—intended to save lives and money—for healthy housing.

1. Bringing Healthy Housing and Green Building Principles to Modular Housing. Each home will be built to EcoHealth™ specifications, which are consistent with NCHH’s Seven Principles of Healthy Housing. We anticipate that construction costs would be borne by a local developer and that many of the green and healthy products would be donated. Each home will be tested for volatile organic compounds, allergens, moisture, and radon. Energy performance and ventilation flow rates will be measured.

2. Development and delivery of training for builders and modular housing installers in healthy and green practices. NCHH and EcoHealth™ seek to increase the adoption of the EcoHealth™ building principles throughout the modular home industry. Modular homes are unique in their affordability and quality. Quality installation is critical to ensuring that the home performs to its desired specifications. There are roughly 200 modular manufacturers nationwide and each has a network of 40–150 builders. The training will ensure that the site preparation and on-site installation maximizes the health and energy-efficiency of the EcoHealth™ Home. A training manual will be developed outlining the features and products of an EcoHealth™ Home and important installation details.

3. Media and marketing of the model healthy homes in each of the local communities to increase awareness of sustainable building practices. Each modular home will serve as a model in its community for a minimum of one month. An open-house will be held with tours of the home for the community and media. The healthy and green features and products will be clearly labeled to help educate consumers, developers, students, builders, and architects about their benefits. A brochure will also be developed for each showcase home that will list the EcoHealth™ Home’s features. NCHH will work with its partners to finalize the locations for the multi-site initiative to maximize media and marketing opportunities. The EcoHealth™ specifications may be modified to specify other green and healthy building products (e.g., flooring, finishes, heating/cooling systems) depending on the sponsors for each home.

We anticipate that this demonstration will show that with only a minor increase in expense, green and healthy building principles can be incorporated into modular housing using an integrated design process. We also anticipate that the health status of occupants, including overall health, respiratory health, mental health, and other measures will be improved over baseline measures taken in their prior homes. The instruments used to measure resident health, building performance, and environmental exposures have been validated by NCHH in other studies.

—Michelle Roberts and Rebecca Morley
MORE ON NAAB CRITERIA CHANGES

ACSA SEeks Feedback on Accreditation Issues

ACSA has published its draft report for the 2008 NAAB Accreditation Review Conference (ARC). ACSA members are encouraged to review the report and send comments between now and the end of March. The report includes six recommendations for action regarding accreditation and a statement of forces affecting programs today—all of which were distilled from a year-long discussion among our members to identify the key issues facing ACSA schools in the short and long term. Go to [https://www.acsa-arch.org/files/about/ACSA--ARC-Report-Feb-2008.pdf](https://www.acsa-arch.org/files/about/ACSA--ARC-Report-Feb-2008.pdf) to download the ACSA ARC Report (PDF, 232 KB).

Three Overlapping Issues for the ARC:

1. **Sustainability.** All architecture programs have evolved to address this emergent issue. How should accreditation conditions and criteria evolve?

2. **The Profession of Architecture.** How do we respond to the tension between professional education and vocational training?

3. **Responding to Global Change.** The architecture profession is undergoing rapid change. Are schools staying ahead of change? How should the accreditation process adapt?

How to respond: by email to <arc@acsa-arch.org>, on our ACSAcred blog <acsaccred.blogspot.com>, and at the ACSA Annual Meeting, March 27–30, in Houston, Texas.

—ACSA

SBSE Urges Members to Read and Respond

The ARC should prove interesting reading for SBSEers. It addresses many of our concerns about teaching green architecture and sustainability, including suggesting a new perspective:

**Architectural Education and Environmental Stewardship**

The program must demonstrate that it equips students with an informed understanding of ecological and environmental problems in the built environment and develops their capacity to address these problems with environmentally-responsive architecture and urban design decisions. In the APR, the accredited degree program may cover such issues as how students gain an understanding of environmentally sustainable architecture, including the complex interactions of built and natural environments; the emphasis given to generating knowledge that can mitigate social and environmental problems; how students gain an understanding of the ethical implications of decisions involving the built environment; and how a climate of global awareness is nurtured.

Give it a read and respond to ACSA with your opinions!

—Bruce Haglund

SIDE TRIP SIDEBAR

As long as you’re in the UK for the Oxford Conference and the SBSE Retreat, you might want to feast your senses on a widespread array of green architecture as sampled below.

—Bruce Haglund

You could check out the new daylighted education center at the Eden Project in St. Austell (top), the green roofs and daylighting at the new Scottish Parliament in Edinburgh (middle), the ode to shading at Chiswick Park in London (bottom), and old and new construction in the heart of London (left).
Focus the Nation!

I hope every SBSEer, their schools, and students participated in Architecture2030’s joint teach-in and competitions with Focus the Nation earlier this semester. Don’t miss the next event!

—Bruce Haglund

PEA 2009 Plus SBSE Retreat in Québec?

We [our colleagues at L’Université Laval—ed.] have accepted the organisation of the PLEA 2009 conference which will be held during summer 2009 in Quebec City. As we would like to ensure as many SBSE participants as possible, it would be interesting to explore coordination with the SBSE retreat or other events. We also know that ASES 2009 will be held in nearby Buffalo May 8–14. As we have not yet settled on a date, different scenarios can be explored and SBSE’s input is welcome. [I’ve asked Claude and André to make a proposal at the SBSE Annual Meeting in San Diego.—ed.] If the SBSE 2009 retreat is around Quebec, here is a possibility, a site owned by our faculty to provide summer courses and seminars: <http://www.perce.ulaval.ca/hebergement.html>.

—Claude Demers and André Potvin

L’Université Laval owns a retreat site in the Ville de Percé in the shadow of Rocher de Percé. Imagine yourself there.

The dots show the relative locations (from left to right) of Québec City, Tadoussac, and Ville de Percé.

Summer Issue Submittal Deadline—June 1

First Class Mail

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