



photo: Bruce Haglund

SBSEers will be housed in the McCall (ID) Field Campus' rustic cabins, which form a rustic quadrangle in a Ponderosa pine forest, on the shore of Payette Lake.

SBSE RETREAT 2012—MCCALL, IDAHO

The Next Generation focuses on our continuing effort to enable architecture studio culture to implement the goals of the Architecture2030 Challenge. We call on faculty, practitioners, content experts, and students to share tools, case studies, and innovative studio exercises with attendees through workshop experiences. We'll augment the participants' contributions with materials and exercises relevant to the *Next Generation* project. The retreat will prepare attendees to implement these techniques and strategies in design studios at their own institutions and will pave the way toward their students competing in our proposed Campus Triathlon competition. This Triathlon will challenge interdisciplinary design teams to propose modifications to master plans, buildings, or single spaces on their campuses in order to achieve carbon-neutral, net-zero energy performance. The first-year competition will be a test-of-concept limited to students of retreat participants and will focus on a campus building redesign.

Retreat participants will stay on the University of Idaho McCall Field Campus in semi-rustic cabins; use the campus' indoor and outdoor classrooms during the day; and enjoy gourmet meals in the on-site dining facility. Formal presentations will be scheduled during morning and evening sessions, leaving afternoons open for informal networking, hiking, swimming, being chased by wildlife, or impromptu gatherings of work groups. The final day of the retreat will be held at the Integrated Design Lab in Boise, ID. Transportation between Boise and McCall will be provided as needed.

The retreat will be focused around the theme of preparing students and faculty to design a carbon-neutral world: issues to be addressed will include studio projects, design tools, interdisciplinary collaboration, social networking, and thinking beyond energy. This retreat is the next step in SBSE's ongoing commitment to leadership in carbon-neutral design.

Plan to join us June 15–18. For more information stay tuned to the retreat web site <<http://www.sbse.org/retreat2012/>>. 🖱

—Christine Bachman, Walter Grondzik, Bruce Haglund, Bob Koester, and Alison Kwok

SBSE CALENDAR

2012

- Mar 1–4 ACSA Annual/Boston, MA
- Mar 18–21 Greening IX/Muncie, IN
- Apr 12–15 Windsor Conf/Windsor, UK
- May 14–19 ASES Conf/Denver, CO
- May 17–19 AIA Conv/Washington, DC
- Jun 7–10 ARCC/EAAE Conf/Milan, IT
- Jun 15–18 SBSE Retreat/McCall, ID
- Jun 23–27 ASHRAE Conf/San Antonio, TX
- Nov 8–10 PLEA Conf/Lima, Peru

2013

- Apr 15–20 ASES Conf/Baltimore, MD 🖱



photo: Bruce Haglund

The deck and dock at the McCall Field Campus invites swimmers, boaters, anglers, and sunset watchers.

CARING BUILDINGS?

[No letters, so here is a bon mot from the list server.—ed.]

Is it time to change the appellation from “intelligent” to “thoughtful” or even “caring?”

I suspect we know a lot of very intelligent people who are not particularly thoughtful, caring, nor responsive, and as a result are avoided or even shunned. What we want are buildings that take care of us, and by extension, the environment. A caring building would never make its occupants look stupid: a caring building would reconnect us with ourselves and the planet. The most caring buildings will be intelligent, since that makes them better carers. The reverse is not true: the most intelligent buildings will not necessarily be caring.

If we seek only intelligence, that may, alas, be all we get. 🖐

—Peter Morris

DUES STILL DUE!

The summer solstice has come and gone! In fact the vernal equinox is fast approaching! It's beyond time to pay your annual dues. See <<http://www.sbse.org/membership/>> for details. 🖐

—Bruce Haglund

POLLS ARE OPEN!

A mail-in ballot is enclosed in this issue, but you may also vote on-line at <<http://www.sbse.org/announcements/>>. You must be a current dues-paying SBSEer for your vote to count (members only!). See above for dues paying details. 🖐

—Bruce Haglund

SBSE News is published quarterly by the Society of Building Science Educators, a not-for-profit corporation. Submit material for publication before the first of March, June, September, or December to Bruce Haglund, Editor; Department of Architecture; University of Idaho; Moscow, ID 83844-2451; tel 208.885.6781; fax 208.885.9428; e-mail <bhaglund@uidaho.edu>. Direct membership and mailing list inquiries to Troy Peters, Secretary-Treasurer; Cal Poly; Architecture; One Grand AV; San Luis Obispo, CA 93407; e-mail <tnpeters@calpoly.edu>. To join our list server or to manage your account go to <<http://www.lists.uidaho.edu/mailman/listinfo/sbse>>. For full membership info and more, visit our home page <<http://www.sbse.org>>.

UNUSED PROFESSIONAL GROUP POWER

Calls for action fall on deaf ears. Why? Not because individuals are not well-intentioned nor dedicated to their field, but mostly because people are busy and don't realize the power of collective influence. Public comments by many individuals have a certain persuasive power, but recommendations from professional groups have another type of impact. Failure to realize said power makes each and every member complicit in the failure of their particular organization to use its collective power.

Take the 2009 SBSE recommendation to the National Architectural Accreditation Board (NAAB) and to its Canadian counterpart (CACB/CCCA) as an example (the wording below was voted by a large group of SBSE members at the retreat in Québec City, but ultimately the board decided not to pursue the recommendation nor send it officially to NAAB). Take also Paul Rowland's call to action to AASHE in 2010. Since it laid out nearly 40 recommendations pertaining to sustainability that were not addressed to any regulatory agency, it's unclear whether any or how many of the 40 were adopted by individual institutions or faculties, and certainly not by the entirety of architecture schools that train the next cohort of professionals. And take the recommendation put before the BTES board in 2011 (the board declined to take any action on a motion that paralleled the ones below).

So what is needed? A renewed motion that each of these organizations take a firm stand on issues of importance to the profession on whose behalf we all labor. And what is that? One of the important issues is the need to have every freshly-minted graduate in architecture (and other related professions) equipped with the tools, skills, and methods to successfully engage in climate change mitigation via their chosen profession. Such a motion to the respective memberships could be:

This organization recommends that NAAB ... set as its Conditions for Accreditation that every North American architecture school's curriculum provide all graduates with the theoretical and practical competence to consistently design high-quality, carbon-neutral/zero-net-energy built environments (the text in bold was SBSE's wording),

or one like the Boston Society of Architects Board adopted:

BSA Aspirational Curriculum Recommendation to Architecture Schools: Schools that train professionals involved in the building sector of the economy should develop their own curricula that provide graduates with the theoretical and practical competence to consistently design high-quality, low-carbon, or alternative energy built environments. Graduates shall be well trained in the process of creating energy performance-based and other evidence-based design that balances ecological, economic, and social sustainability.

There is no better opportunity to accomplish part of that objective than by having NAAB draft its 2013 *Conditions for Accreditation* in a manner to accomplish said objective.

Here's the conundrum: climate change is so complex that no single profession and no regulating body like NAAB nor its collateral organizations have all the answers on how to mitigate the effects of climate change instead of contributing to its aggravation. During such a time of uncertainty about appropriate mitigation measures to combat a universal condition, about which there is a high degree of certainty (climate change resembles a tsunami that is upon us—present and looming), it seems best to unleash the ingenuity of many bright and dedicated individuals. Who better serves this role than the educators who have access to current research into climate change mitigation measures, access to professionals working in cutting-edge firms engaged in climate change mitigation via their projects, and access to the next cohort of professionals to assure they are competent to undertake such measures?

In short, NAAB and its collateral organizations—AIA, AIAS, ACSA, and NCARB—are in key positions to inspire or challenge every architecture school to harness the ingenuity of its human assets (its faculty, students, administration, and trustees) to craft a program of education (together with the necessary funding) aimed squarely at the desired outcome—to provide all its graduates with the tools, skills, and methods to mitigate climate change.

Are you willing to submit (perhaps again) to your board a motion that will alert NAAB and the collateral organizations not to let another 4 years pass before eliciting curricular proposals from every architecture school for instilling this fundamental competence in all graduates? 🖐

—Peter Papesch

RESEARCH NEWS

SUMMER OF 2011—SOUND WITHIN THE ROMAN COLISEUM

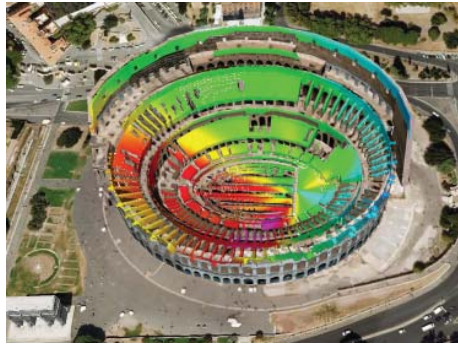
Through the framework of an international collaboration and as members of an International Team for Acoustics in Archaeology & Cultural Heritage (ITACA), Moji Navvab (Michigan) and Fabio Bisegna (University of Rome) along with Gunnar Heilmann (GFAI Tech GmbH, Berlin) providing the needed acoustic-camera instrumentation <<http://www.acoustic-camera.com>>, participated in a performance evaluation of “The Acoustics of Ancient Theatres” using the new technique in acoustic 3D-beamforming. Access to the Roman Coliseum was made possible by the Ministry of Cultural Heritage, with special thanks to Superintendent Anna Maria Moretti and to ministry representative Rossella Rea.

This method captures the acoustic signature of existing surface materials and space geometry. Through computer simulation it is possible to perform parametric studies on past materials used in these ancient spaces and re-create the acoustic conditions or so-called room acoustics of the times within a virtual environment. The impulse measurements at the real site allow us to create close representation of the sound conditions given a desired parametric through auralization. The Roman Coliseum image shows the sound intensity overlay on the surfaces as spectators screamed, a part of our request for loud sound during the testing session.

The public demand for access to the outdoor archaeological sites during daytime is even greater during nighttime for archaeological visits and several types of cultural events ranging from sports shows to symposia, to concerts. The acoustic properties of ancient performance spaces for Greek and Roman theatre have been studied for accurate reconstruction from possible alternatives of material and design evolution by many investigators. Parametric studies and examination of computer simulation methodology for ancient theatres provides new indices to examine the contribution of each design component. Measured and simulated results show how scattering and diffraction from seats and architectural elements, which is important in outdoor theatres, affects the sound quality and condition. Changes in material characteristics can increase reverberation and enhance sound levels. Computer simulations using a range of boundary absorption and scattering coefficients play a very important role in supporting the choice of the best or most acceptable reconstruction or sustainable design approach among different alternatives.

This study explores application of a newly developed technique in acoustic 3D-beamforming as a close numerical examination of the relevant acoustical aspects of ancient theatres, basing the study on the comparison of ancient and modern structures. Application of the CAVE or Virtual Reality laboratory provides a well-established tool for this task. Simulations have been carried out to evaluate the acoustics of the orchestra, of the cavea, and of the stage using the theatre of Ancient Ostia and the Roman Coliseum as references for ancient theatre, and the Michigan Stadium as a modern theatre. The use of virtual reality and virtual reconstructions of these theatres, combined with auralization techniques, provided the opportunities not only to investigate performance of these theatres in different eras, but also provide a different experience for the users within the virtual world of ancient acoustics. 🖱

—Moji Navvab



False color sound intensity overlay on the Coliseum's spectator areas.



Moji and his colleagues in action in the Coliseum.

RPI LIGHTING RESEARCH CENTER NEWS

The body's internal clock is responsible for regulating the timing of our sleep and other daily biological cycles, our circadian rhythms. During school months, however, teenagers miss out on essential morning light needed to stimulate the 24-hour biological clock. For this reason, professors at RPI's LRC have developed a daylighting design guide that balances the photobiological benefits of daylighting with well-known daylight design techniques that can be applied in schools.

“When done properly, dynamic interiors support human health and activities while also reducing energy demand,” said Russ Leslie, LRC associate director and lead author of the newly published book, *Patterns to Daylight Schools for People and Sustainability*.

The book is the culmination of a research project begun in 2008, sponsored by the USGBC and, in part, by a grant from Trans-National Institutes of Health Genes, Environment, and Health Initiative (NIH-GEI) to scientifically quantify the effects of daylight design on students' well-being and performance in K–12 schools and to investigate the underlying biological mechanisms associated with this possible link.

“When light enters the human eye, the visual system responds differently to it than does the circadian system, which is much more sensitive to short-wavelength (blue) light and needs more light to be activated than does the visual system,” said Mariana Figueiro, LRC program director and principal investigator. “Today's rigid school schedules, requiring teenagers to be in class early in the morning, causes them to miss the essential morning light needed to stimulate the circadian system, which regulates body temperature, alertness, appetite, hormones, and sleep patterns.”

Leslie recommends architects use the new book to identify potential approaches, or “patterns,” for daylighting schools. Similar to traditional architectural pattern books, this one gives model designs that can be adapted to a particular school project. The book includes a “daylighting dashboard” to quickly compare the patterns graphically with indicators of cost, comfort, the visual environment, and energy use. The publication offers conceptual daylight approaches for the three most common spaces in schools: classrooms, corridors, and gymnasias. 🖱

—Mary Cimo

■ **Liliana Beltran** and **John Reynolds** attended the International Solar Energy Society Board meeting in Kassel, Germany, in late August. Following that meeting, both presented papers at the Solar World Congress in Kassel.

✍ In the aftermath of writing his new book, *Integral Sustainable Design*, featured on the AIA web site, **Mark DeKay** gave a 2-hour interview with philosopher Ken Wilber on the topic of Integral Sustainable Design, <<http://integrallife.com/>>, as well as creating a blog entry on Integral Aesthetics, with extended book excerpts at <<http://integrallife.com/member/mark-dekay/blog/sustainable-design-aesthetics>>.

➦ **Jim Grady** has been hired by the School of Architecture at NC State this fall as a half-time Assistant Professor of the Practice and will be teaching an intermediate architectural design studio, ARC 301. His syllabus is entitled “Searching for an architectural aesthetic for a sustainable future.”

➦ **Pablo LaRoche** was promoted to Professor of Architecture at Cal Poly Pomona.

✧ **Ralph Muehleisen** left Illinois Institute of Technology (IIT) as an Associate Professor and director of Architectural Engineering to become Principal Building Scientist in the Building Energy Efficiency research group at Argonne National Lab, just outside Chicago. He remains an adjunct at IIT. The Building Energy Efficiency research group is new to Argonne with over \$2M of annual research funding related to commercial buildings <http://www.anl.gov/renewables/research/building_eff.html>. 🖱



Alison Kwok and Walter Grondzik's GSH second edition is reviewed on page 6.

PLEA 2011 AT LOUVAIN

The Passive Low Energy in Architecture (PLEA) Conference took place July 11–15 in Belgium at the Université Catholique de Louvain (UCL) about one hour outside Brussels, celebrating the 30th anniversary of the organization and the 27th PLEA Conference. Organized and hosted by the Architecture et Climat Research unit, headed by A. De Herde, the 3½ days included architectural tours of exemplary projects and parallel sessions covering numerous topics such as climate, water, tools, practice, education, materials, case studies, retrofits, building physics, and poster sessions. More than 750 abstracts and 340 papers were submitted through a 2-stage peer-review process, and approximately 400 participants gave 125 oral and 130 poster presentations at the conference. Sessions were arranged to begin with papers that had general exposition of principles and finished with concluding or provocative papers addressing the session topic. This year, the conference proceedings were published in 2 substantial (and heavy) volumes, or optionally on a beautiful USB memory key. Amazingly, sessions were kept to strict time tables with a timer display on the presentation computer—nothing like a little bit of peer pressure.

Keynote speakers were Nicholas Godelet on the work of Gejianzhu Architects and Engineers in Belgium and in China <<http://www.gejianzhu.com>> as well as Bernardo Secchi on “The Porous City” <<http://www.secchi-vigano.it>>. Invited forum speakers included Sergio Los on his work with Carlo Scarpa and many projects in his office <<http://www.synergiaprogetti.com>>, Sergio Altomonte (University of Nottingham) who presented mandates for education and sustainable design, and Bernard Deprez who gave a brief history of Louvain-la-Neuve as a university town <<http://www.bepassive.be>>.

Several SBSEers participated in the conference: Owen Lewis (Sustainable Energy Authority of Ireland), signing the new edition of *The Green Vitruvius* (Taylor Francis/Earthscan) with Vivienne Brophy (University College Dublin); Wayne Place with Jianxin Hu (North Carolina State); Ute Poerschke (Penn State); Daphna Drori and Edna Shaviv (Technion); Marilyne Andersen (École Polytechnique Fédérale de Lausanne); Shady Attia (last year's SBSE Scholarship recipient and 2010 ASES Best Paper Award winner and Ph.D. student in Architecture et Climat) with three papers; and Alison Kwok (Oregon) with co-authors Bruce Haglund (Idaho) and Walter Grondzik (Ball State).



Vivienne and Owen show off their new edition at PLEA.

At the final awards session, SBSE presented the Jeffrey Cook Travel Award certificates and \$1,000 to two students: Ning Liu, Ph.D. candidate, Swiss Federal Institute of Technology (EPFL) presenting “Sustainable Alternatives in Developing Countries: preliminary performance assessment and design optimization on the Fitima children's day care and medical centre in Ouagadougou, Burkina Faso” and Daniella Bessers, M.Arch., University of Nottingham, “Designing Carbon Neutral Schools: The Victor Miller Building, a critical review.”

In the closing session, Thomas Herzog (Herzog + Partner) spoke about the need to re-connect with nature in the face of climate change and the subsequent conversation contemplated the importance of measuring sustainability. Preparations for PLEA 2012 are already underway. Juan Ruiz (Pontificia Universidad Católica del Peru) provided a preview of the venue and invited participation for November 8–10, 2012, in Lima, Peru, for “Opportunities, Limits, & Needs: Toward an Environmentally Responsible Architecture.” Start your scholarly engines! <<http://www.plea2012.pe>>.

—Alison Kwok

• continued next page

BTES CONFERENCE AT TORONTO

The 2011 BTES Conference was held at Ryerson University in Toronto in August. “Convergence and Confluence” brought close to 50 professors together to share ideas on pedagogy and research on topics that ranged from traditional structures and materials and methods to sustainability and digital media.

A pre-conference tour of the architectural highlights of downtown Toronto was enjoyed by 20 people who did their best to keep up with our rigorous itinerary! The first stop was Will Alsop’s Ontario College of Art and Design followed by a great exploration of Gehry’s Art Gallery of Ontario. After a great lunch in Chinatown we walked through the University of Toronto Campus to see buildings by Behnisch and Foster. The end of the tour brought us to Libeskind’s Royal Ontario Museum and the Royal Conservatory of Music by KPMB. In the evening we dined beneath the steel framed skylight of Calatrava’s Brookfield Place.

The papers were arranged in parallel sessions with adequate time for both presentation and discussion to allow attendees to take in as much as possible, almost conflict free! Our two keynotes were Colin Ripley of Ryerson University whose talk was titled “Homo Ludens” and Philip Beesley of the University of Waterloo on “Liminal Responsive Architecture.”

The final evening included a gala dinner and awards ceremony to honor BTES leaders who have put extra effort into launching the organization and coordinating the first 3 conferences. BTES has also instituted an Emerging Faculty Teaching Award. The BTES Teaching Award was initiated by the first BTES President Christine Theodoropolous (Oregon) and Gil Snyder, BTES Board Member and Awards Committee Chair. Michelle Addington (Yale), Edward Allen, and Gil Snyder (UWM) served as the awards jury. This year’s winner was Robert Whitehead (Iowa State). The Best Paper Award for the conference went to Kevin Dong and Jake Feldman (CalPoly SLO) for their paper, “Design, Engineer, Construct: Building Large-Scale Structures.”

Proposals are being sought for the 2013 conference. More information to follow!

In order to increase opportunities for peer-reviewed publication and presentation of papers, BTES is hosting a Special Focus Session at the upcoming ACSA 100th Annual Conference in Boston in 2012. The call for papers on “Diffusion Research” has gone out to the BTES and SBSE listserves. Full papers are due October 17, 2011. Information is available on the BTES web site <<http://www.btesonline.org/news.html>>.

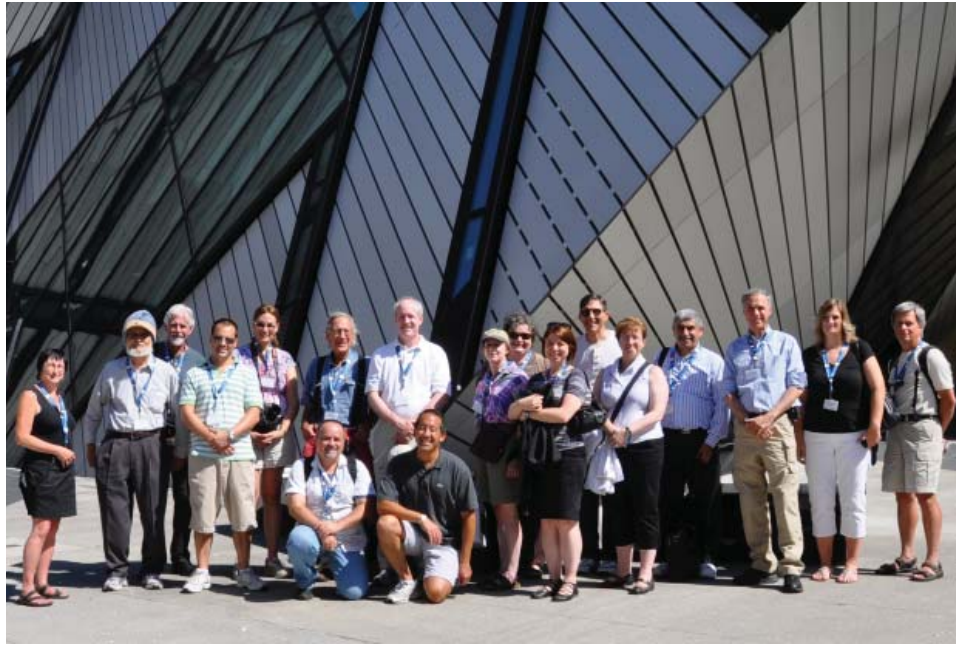
BTES is also providing a mentoring service for junior faculty and faculty who are due for promotion and tenure. See <<http://www.btesonline.org/toronto-conference10.html>>. We’re presently in the midst of migrating our web site to a server that will provide a log-in for additional member content. Stay tuned for updates!

—Terri Meyer Boake

NATURAL HAZARDS RESEARCH AND APPLICATIONS WORKSHOP

I was recently asked to be on the Practicing Disaster Recovery panel with Allison Boyd (CSA International), Karen Helbrecht (FEMA), and James Schwab (APA) at the 36th Annual NHRAW in Colorado in August. The general thinking is we are one disaster away from financial collapse, and the design profession and academia are not yet at the table. We discussed the need and the challenge to rebuild in sustainable ways. It proved to be an interesting group with great poten-

• continued next column



Terri (far left) and the BTES entourage paused for a group photo before Libeskind’s Royal Ontario Museum.

photo: Terri Meyer Boake

tial. See <<http://www.colorado.edu/hazards/workshop/2011/current11.html>>.

Planners, emergency managers, city managers, and other local officials need hands-on guidance about the disaster recovery process as they plan and implement strategies for effective local recovery. They get much of this guidance from consultants who have developed a recovery specialty, but they have also relied on FEMA documents and the APA’s 1999 *Green Book, Planning for Post-Disaster Recovery and Reconstruction*.

There is a need for newer, more nimble advice, and FEMA and APA have joined forces to develop an entirely new document. *Planning for Post-Disaster Recovery: Next Generation* is tapping the skills of leading recovery experts, developing Web-based tools for immediate use, and incorporating recent experience and experimentation. Key considerations will be how recovery planning fits into the larger scheme of community planning priorities, including options for pre-disaster recovery planning and for better integrating mitigation into recovery planning. Issues addressed will include financing, recovery, defining and enhancing resilience, and helping the public cope with the “new normal”—to seize positive opportunities when it is clear that things will never be the same. 🖐

—Dan Williams

STUFF FOR YOU

A/C ANIMATIONS ON YOUTUBE

I've posted to YouTube three animation sequences, aimed at architecture students, to dynamically demonstrate air-conditioning (with some content on active heating, air distribution, chiller operation, ground-source heat pumps, and economizer cycles)—“How Air Conditioning Works” (parts 1, 2, and 3).

- <<http://www.youtube.com/watch?v=2wZb6HgIDE0>>
- <<http://www.youtube.com/watch?v=j1nYipLAv0U>>
- <<http://www.youtube.com/watch?v=NyNeh7wPQQk>>

—Michael Ermann

EDUCATE PRIZE

An international student award celebrating outstanding work <<http://www.educate-sustainability.eu>> was announced and opened Jul 14, 2011. The prize aims to reward original and innovative ideas and pedagogical methods promoting sustainable principles and practices in curricula of higher education. Faculty and their students may register for the Educate Prize and gain access to the online Educate Knowledge Base, an interactive platform featuring a vast body of issues, principles applications, case studies, and tools. Three categories of entries will be collected: Category I, Student Design Project (undergrads 1st- or 2nd-year); Category II, Student Design Project (graduate and postgraduate); and Category III (open student work).

—Bill Burke

CALL FOR PAPERS EAAE/ARCC 2012

EAAE/ARCC “Cities in Transformation Research & Design, Ideas, Methods, Techniques, Tools, Cases” will be held in Milan, 7–10 Jun, 2012. The deadline for abstract submission is 6 Nov 2011. More information about the conference can be found at <<http://www.eaae-arcc2012.polimi.it/>>. I hope you all consider submitting your work to the conference.

—Hazem Rashed—Ali

NEW/FREE: HEED AND CLIMATE CONSULTANT

The latest version of *HEED 4* contains many new features, and the latest version of *Climate Consultant* was posted in June. These two programs are available for no charge from UCLA—download them from <<http://www.aud.ucla.edu/energy-design-tools>>. 🖱

—Murray Milne

BOOK REVIEW NOOK

SUSTAINABILITY, AGENCY, AND DELEUZE?

The discourse on sustainability has reached an interesting moment of inflection, bringing DC megawatts and LEED commissioning into ever greater proximity with Deleuzian multiplicities and Lefebvrian contingencies. Whether a case of the more the merrier or be careful what you wish for, with academics of all stripes now “discovering” that sustainability was always already a part of their discourse, it certainly begs the question, dear SBSEers, of what that means for our own building science discourse. After all, you did happen to sneak in reading *A Thousand Plateaus* and everything by David Harvey and Mike Davis between *MEEB* chapters and *Radiance* trials, didn't you?

Three titles from the recent spate of Routledge offerings that are notable in this sustainability meets social justice meets high theory milieu:

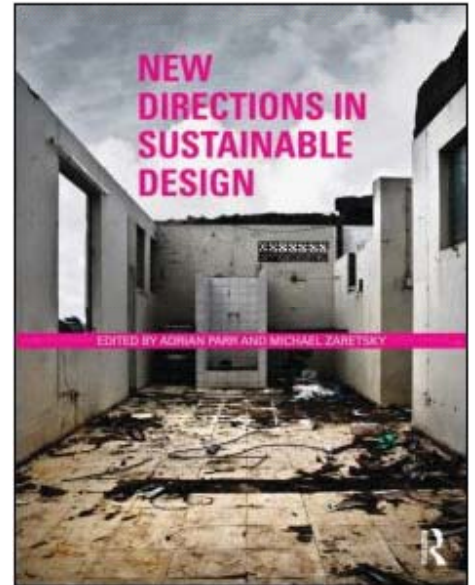
Spatial Agency: Other Ways of Doing Architecture (2011, a print version of that namesake's already fine web site); *Agency: Working with Uncertain Architectures* (2010); and, my recommended favorite, *New Directions in Sustainable Design*, edited by Cincinnati's Adrian Parr and SBSEer Michael Zaretsky. To different degrees, all three call for political agency—used as often to describe the architect's branching out in pursuit of just causes as with building users' production of space—into the ever protracted notion of sustainability. Most wonderful about Parr and Zaretsky's collection (and not least of all their own substantial essay contributions therein) is a multivalent take on sustainability which holds LEED's feet and William McDonough's entire practice to the fire, even as it ponders Peter Eisenman practicing Deleuze's “philosophy of sustainability” (no, I'm not making this up), and the “elimination of the human” in order to rethink a possible better future for humans. Charged material with a purpose, the ensemble of articles here won't disappoint nor go down easily. If one is awkwardly reminded in these new texts that a perennial critique of the building science mindset is its tendency towards “instrumentalizing knowledge,” one may wonder if that critique, by theorists who spend little time with technology, isn't self-serving. This criticism is thoughtfully dispelled by dually self-reflective and technical texts like David Lee Smith's recent *Environmental Issues* (a Cincinnati SBSEer again!). So, Sustainability and Deleuze anyone?

—Rob Svetz

THE GREEN STUDIO HANDBOOK'S SECOND EDITION

The search for more effective approaches for integrating green strategies and issues into architectural design processes, as a means for facilitating the design of more green buildings, continues to be both an important objective and a serious challenge. It is especially the case when considering early schematic design, which offers the most potential for high-impact design decisions, but also presents the most difficulty for integrating green strategies and issues. Among the many references and books developed for this purpose, *The Green Studio Handbook* certainly stands out with its unique and extremely effective approach that aims to offer designers easy access to knowledge, allowing them to make informed evaluations of the potential suitability and effectiveness of specific green strategies for their projects, as well as numerous useful tools for the preliminary sizing of relevant systems and technologies, and their implementation.

The Green Studio Handbook offers a highly informative and succinct resource for the principles and concepts associated with most major green strategies and systems, as well as their design procedures, implementation considerations, and sizing methods. Numerous illustrations and examples are also provided for each strategy in addition to a list of resources for further information. The structure and graphic design of the handbook successfully allows for easy navigation between its different sections dealing with envelope, lighting, heating, cooling, energy production, water, and waste. The handbook is ideal both as a source book and, if needed, a



cover: Routledge

WHITHER THE ISU SOLAR DECATHLON HOUSE?

Iowa State University's entry in the U.S. Department of Energy's 2009 Solar Decathlon competition, the Interlock House, has been reassembled at the Iowa Department of Natural Resources' (DNR) Honey Creek Resort State Park for use as nature interpretive center and staff offices. Iowa DNR now owns the house and has led the reassembly.

"Researchers from Iowa State's Center for Building Energy Research (CBER) are gearing up to track the building's performance in Iowa's climate," says Ulrike Passe, who directs the center. CBER is a member of the Institute for Physical Research and Technology, a network of scientific research centers at the university. "This work is a unique opportunity for real-time, long-term building performance evaluation of a zero-net energy building in Iowa and in the Midwestern climate."

The Interlock House successfully produced more energy than it used during the week of the competition in Washington, DC. Although the house was designed for the extremes of the Iowa climate, it has yet to operate through the full range of a hot, humid Iowa summer and a bitter, cold winter. For the DNR's program, the Interlock House has been reassembled on a new walkout basement, added below the deck and opening to the south.

With technical assistance from DOE's National Renewable Research Energy Laboratory (NREL, Golden, CO) the house has been outfitted with a complete data acquisition system, jointly funded by ISU IPRT and Iowa DNR. The sensors will monitor indoor temperature and humidity along with electricity consumption. Of course electrical and thermal energy production at the house will be recorded as well.

For the first year of the project, CBER researchers will evaluate whether the goal of the Interlock House to obtain a net energy balance or surplus can be achieved on an annual basis. Comfort and energy performance data from the house's sensors will be compared to weather data. And performance will be evaluated against current industry standards. Appropriate adjustments to the systems and controls will be proposed for the second year if needed. The whole state will be watching! 🖐

—Ulrike Passe



The repurposed ISU Solar Decathlon House under reconstruction at Honey Creek.

JOB OPS

LAWRENCE BERKELEY LABS

Three positions available:

1. Senior Scientific Engineering Associate to develop energy-efficient glazing, shading and façade-related technologies; devise systems for very low energy buildings using simulation tools, lab testing, and field studies; and work collaboratively with industry to accelerate widespread market adoption of these technologies and systems.

2. Research Scientist to develop energy-efficient façade-related technologies and systems for very low energy buildings using simulation tools and field studies as well as accelerate widespread market adoption of these technologies and systems.

3. Scientific Engineering Associate to conduct research, implement, and distribute next generation tools for building energy and control system modeling simulation and analysis in support of the design and operation of low energy buildings.

See our web site <<http://www.sbse.org/announcements/index.htm>> for further info.

SWISS FEDERAL INSTITUTE OF TECHNOLOGY, ETH ZURICH

Assistant Professor (Tenure Track) of Materials Science for Sustainable Construction. The Department of Materials of ETH Zurich <<http://www.mat.ethz.ch/>> invites applications with special focus on interfaces, resilience, and durability. Potential candidates are invited to send their CVs to: <Ludwig.gauckler@mat.ethz.ch>.

WASHINGTON UNIVERSITY

Assistant Professor in Architectural Design and Environmental Systems—a full-time, tenure-track position with a focus on design and environmental systems (technologies and ecologies) to teach both advanced design studios as well as fundamental and advanced courses in environmental systems across the curriculum. Candidates should submit a letter of interest, curriculum vitae, names and contact information for three references, and portfolio samples of both academic and professional work to: Chair, Design/Environmental Systems Faculty Search; College of Architecture; Washington University; Campus Box 1079; One Brookings DR; St. Louis, MO 63130. For full consideration, applications should be received by November 15, 2011. 🖐

BOOK REVIEW NOOK [CONT. FROM P. 6]

workbook, thus increasing its potential usefulness in schematic design stages, in general, and in university design studios, in particular.

The handbook's second edition offers a restructuring of the introductory chapters, now titled the Green, the Studio, and the Handbook, providing a better introduction to the premise and the approach of the handbook. This second edition also includes several green strategies not covered in the first edition as well as further improvements and developments to many of the previously existing ones. The second edition also includes a new and expanded set of superb case studies, covering a wide range of geographic locations, climates, building types, and green strategies. The new "Roadmap to Strategies" analytical table provides the handbook user with the means to quickly navigate to the case studies most relevant to their desired strategy, thus further facilitating use of the handbook.

The handbook's authors, Alison Kwok and Walter Grondzik, describe *The Green Studio Handbook* as being both a reference guide and a source of inspiration for both students and architects. Having used it in my own studios, I've found it to be very effective in achieving both objectives. The handbook's second edition further builds on the success of its first edition, and I highly recommend it for all design studio instructors. 🖐

—Hazem Rashed—Ali

 PROTOTYPE TO REALITY



photos: Juintow Lin

The greenish prototype and design/build crew at CalPoly Pomona (above) and the first Haitian version of the soon-to-be orange house and its local construction crew (below).

 AFTER THE QUAKE IN HAITI

The first house for the Haiti Reconstruction Project designed by students at Cal Poly Pomona has been completed with plans for 25 more going up in the next 2 months. The house was designed and prototyped by students under the direction of Juintow Lin and Michael Fox in an effort to respond to the desperate need for affordable housing in the aftermath of Haiti's 2010 magnitude-7 earthquake. Development efforts have been carried out with Pacific Green Innovations of Portland, OR, which has established a complete manufacturing and fabrication facility in Haiti. The house is constructed with a unique resin-coated corrugated paper core sandwiched between magnesium board panels manufactured in Haiti and built entirely by local workers using very few imported materials. The final price of the house is \$8,000 USD.

The orange prototype was built as part of a housing exposition in Haiti and will become a permanent home for a Haitian family after the exposition closes. 🙌

—Juintow Lin



photos: Juintow Lin

On-site construction (above) led to an orange-painted prototype at the Haiti Housing Exposition (below).



SBSE NEWS
 C/O BRUCE HAGLUND
 DEPARTMENT OF ARCHITECTURE
 UNIVERSITY OF IDAHO
 PO BOX 442451
 MOSCOW, ID 83844-2451

 WINTER ISSUE SUBMITTAL DEADLINE—DECEMBER 1

FIRST CLASS MAIL