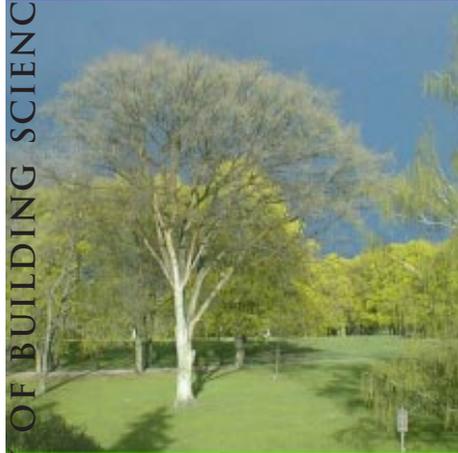


# S B S E N E W S

SOCIETY OF BUILDING SCIENCE EDUCATORS



SPRING  
2002



photo: Robert Marcial

Mountain meadows await SBSEers at Sorensen's. Will Christian Norberg-Schulz there tread?

RETREAT INFO: [HTTP://WWW.SBSE.ORG/RETREAT/](http://www.sbse.org/retreat/)

## ECOLOGICAL LITERACY FITNESS: PRE-RETREAT EXERCISE

Match the following quotations with authors from this list:

A. Tang Lee, B. Bruce Haglund, C. Yelena Chenchik, D. Jim Wasley, E. Christian Norberg-Schulz, F. Nate Krug, G. Christopher Theis.

1. "The projects are then assessed using two criteria that apply to all of them in an attempt to determine if the use of a specific site that represents many of the fundamental issues implicit in a discourse on humanity's place in nature can improve the students' ability to perceive the site as a human construct and to conceptualize its potential to be reconstructed and interpreted through architecture."
2. "To transform this activity from a lonely one of counter-cultural rebellion into one of mainstream practice requires only a critical mass of people who take it for granted as the basis for technical/cultural merit."
3. "Is there a *sustainable aesthetic*?"
4. "That way some of the key elements of teaching sustainable architecture would be integrated into architecture curriculum: students are introduced to the issues early in their studies, the exploration of them continues throughout their education and they have an opportunity to get an in-depth knowledge of the applicable strategies and methods."
5. "It is easy to teach students environmental technology and building science. However, it is more important to instill values and attitudes in our students. All technologies become obsolete, but principles, ethics, and values rarely change."
6. "Their awareness expands to an understanding of the ecology of their question, with each system contributing to the resultant whole."
7. "We only recognize the fact that man is an integral part of the environment, and that it can only lead to human alienation and disruption if he forgets that. To belong to a place means to have an existential foothold, in a concrete everyday sense."

Answers will become clear(er) at the retreat—June 11–14—at Sorensen's Resort in Hope

Valley, California. Registration for the retreat is open until May 1, or until all 40 spots have been filled. ■

—*Chandra Mallory*

## SBSE CALENDAR

### 2002

- May 22–26 ARCC/EAAE Research Conf.; Montréal, QB
- Jun 11–14 SBSE Retreat; Hope Valley, CA
- Jun 14–15 Tool Day @ Patagonia; Reno, NV
- Jun 15–19 ASES Solar2002 Conf.; Reno, NV
- Jun 18 SBSE Annual Meeting; Reno, NV
- Jun 22–26 ASHRAE Conf.; Honolulu, HI
- Aug 1 TIA Competition entries due
- Sep 4–12 TIA Conf.; Yazd, Iran
- Oct 10–13 ACSA Tech. Conf.; Portland, OR

### 2003

- Jun 21–25 ASES Solar 2003; Austin, TX
- Jun 28–Jul 2 ASHRAE Conf.; Kansas City, MO

### 2004

- Jun TBA ASES Solar 2004; Portland, OR
- Jun 26–30 ASHRAE Conf.; Nashville, TN

### 2005

- Aug TBA Solar World Congress; Orlando, FL
- Jun 25–29 ASHRAE Conf.; Denver, CO ■

## LETTERS TO THE EDITOR

Greetings from the sunny south! In preparation for the spring semester, I was leafing through past issues of the *SBSE News*. In the Summer 2001 issue, you mention having copies of an older version of Solar Design Studio from Maui Solar Software. I would love to have a copy to play with if there are any left. Let me know what you need from me in the way of money.

I'm pretty sure I sent in my annual dues last summer. Is there any way to tell if I'm paid up?

I also ran across several references you made to your obsession with Einstein and relativity (and presumably light). I recently finished a book entitled, *Catching the Light: An Entwined History of Light and Mind*, by Arthur Zajonc. It covers some of the same subject matter as *Empire of Light*, but I liked Zajonc much better for his good discussion of recent developments. The discussion of Einstein was thorough. Sections on von Goethe and the work of Edwin Land were great. I learned about "chromatic adaptation" of which I was only vaguely aware, and it made for wonderful and mystifying demonstrations in my lighting class. It prompted me to get a copy of von Goethe's *Theory of Colours*. I thought you might enjoy it.

Several other items of interest (for you and perhaps the next newsletter):

I recently got *Sustainable Architecture White Papers* (Earth Pledge Foundation, 2000). It is a collection of diverse readings (all quite short and to-the-point) and could be useful in introducing topics to students.

There is an inexpensive infrared laser temperature gun (<\$100) available from Raytek

• *continued next page*

*SBSE News* is published quarterly by the Society of Building Science Educators, a not-for-profit corporation. Submit material for publication to Bruce Haglund, Editor; Department of Architecture; University of Idaho; PO Box 442451; Moscow, ID 83844-2451; phone 208.885.6781, fax 208.885.9428; e-mail <bhaglund@uidaho.edu>; before the first of March, June, September, or December. Direct membership and mailing list inquiries to Sandra Stannard, Secretary-Treasurer; Architecture; California Polytechnic State University; San Luis Obispo, CA 93407; phone 805.756.2076; fax 805.756.2076; e-mail <stannard@calpoly.edu>. Join the SBSE list server by sending **subscribe sbse** to <majordomo@uidaho.edu>. Visit our home page <<http://www.sbse.org>>. ■

## PV OR NOT TO PV

*[As usual the SBSE list server has been churning up delectable discussions. Terri Boake started a chain reaction about photovoltaic use in February. Bill Burke followed up with this provocative insight which I've abstracted here.—ed.]*

I received a question about exterior lighting from a large architecture firm in San Francisco that led me to some unexpected conclusions. The architect is working on a project for a municipality in Northern California that wants the project to be "green." They asked the architect if it would be possible to include solar-assisted street lighting—lights that incorporate solar panels and store electricity during the day to run the lights at night. Lights like this are available, but they are primarily intended for locations where connection to the power grid is unavailable, or where extending the grid would be too costly. Those I found in a web search were mostly "industrial" in look, and perhaps more important, had poor cutoff angles that would produce light pollution and glare. Still, they don't use electricity from the grid, a good thing, right?

A brief discussion I had about how electric generation plants actually operate suggests the solar assist doesn't make any difference from a global perspective. On a diurnal basis fossil fuel and nuclear power plants don't ramp power production up and down—they produce the same amount of power day and night. If changes in demand over a given day occur at all, they occur at large hydro plants which may reduce their power output by closing gates and limiting water flow. Nuclear and fossil fuel plants **do** change their output seasonally. California's demand is driven by air conditioning, so gas-fired plants in California typically produce less electricity in the winter than in the summer. But ramping production up or down in a plant of this kind is a gradual process, not something that happens in a matter of hours.

This discussion of plant operation is simplified, but it's now clear that during the recent California energy crisis power producers **did** withhold production to raise prices, so there must be ways to modulate power output from big plants over the short-term. Given that it's difficult to adjust the output of big power plants diurnally, adding solar-assisted street lights won't have any effect on reducing the amount of greenhouse gases released into the atmosphere. This research led me to two conclusions.

- 1 If an owner is concerned with lessening the global environmental effect from building electricity use, the money spent on solar-assisted street lights would be better spent on measures that lessen the building's peak demand during the day or shift some to night (e.g., night ice storage system used for daytime cooling). But I'm not suggesting we do away with timers that turn off office lights at 6 pm!
- 2 If owners are looking for ways to reduce their power bill, they would be better off going with an energy-efficient design that uses power from the grid, focusing light only where necessary. The design should make circulation paths and building entries clear, while addressing night-sky pollution and glare issues to produce a good-quality visual environment with a minimum of electrical power consumption. A high-quality design would be difficult to achieve given the PV-powered fixtures I found on the web.

If the simple picture of power plant operation I've painted above is correct, it's a compelling argument for using distributed generation sources like PV or wind during the day. Does anyone know more about varying power production in large-scale plants?

—Bill Burke

One way that load control is accomplished is by using peaking plants which tend to be older, less efficient (i.e., more polluting and more expensive) than the base-load plants. Longer-term

• *continued next page*



*Is the Children's Museum in Rome an example of the best use of PVs? Its PV-integrated skylight helps avoid electric light use by day while providing electricity to the grid.*

photo: Architecture Week

## PV OR NOT TO PV [CONTINUED]

control is done by shutting down sections of plants (entire turbines or generators), what plants in California did to force prices up. It's almost always the case that peak-load savings will result in greater reductions of emissions than off-peak savings. Therefore, it would be much "greener" to install a PV system to offset daytime loads than it would be to use it to charge batteries (with additional environmental implications) to run lights at night. Of course, the greenest strategy of all is to reduce the overall load as much as possible.

—Charlie Huizenga

The argument that large, conventional power plants tend not to ramp down generation at night has merit, although it doesn't mean there won't be any fuel and emissions savings from reduced nighttime electricity demand. The time scale on which plant output can reasonably be ramped down varies considerably among steam generation units. The basic problem is thermal inertia—a lot of pipes with water in them take a long time to change their temperature—up to a whole day to ramp a unit up to full power from a cold start-up. So, if you know you'll want your steam generation unit on line the next day, you'd never shut it down just for the night, even if you aren't getting paid for the electricity. Ramping power up and down, without actually shutting the unit off, is a different matter. Though still constrained by the time to change temperatures and pressures throughout the system, large fossil fuel units can serve as "load-following" plants that respond to variations in electric power demand in real-time. Hydro plants and gas turbines are preferable for this purpose, but steam plants do it, too. Furthermore, while their operators prefer all steam plants to operate at 100% output 24/7 for economic reasons, they don't all get to do it if the demand isn't there, and many will ramp down at night to a level where the unit doesn't get cold. Because generators are optimized to perform at a 100% output, at reduced output levels they can become grossly inefficient. If you're only running the unit to keep it warm, the efficiency isn't really at issue; the fuel consumed can be thought of as a parasitic loss required to keep the plant operational. The level at which steam generation plants are typically operated at night may be lower than daytime peak demands, but more than just to keep units warm. In other words, there isn't usually electricity being spilled at night—some of it may be stored, e.g., pumped hydro storage. The main reason it's wasteful is that units aren't operating efficiently at low output levels. If nighttime electric demand is reduced and output from a fossil-fuel steam generation plant at night is reduced, we are probably reducing its operating efficiency even more, in kilowatt-hours generated per therms of gas or pounds of coal. But, we're still burning less fuel overall than before.

Nuclear units are usually kept at 100% output whenever possible for both economic and technical reasons. For safety, the basic operating philosophy is that the less you disturb it, the less chance you have of screwing something up. Besides, the marginal economic and environmental cost of an additional amount of nuclear fuel burn-up is nil (since refueling cycles occur on a fixed schedule regardless of burn-up), so once you have the nuclear plant up and running, you might as well run it at 100% output 24/7. The French are an interesting exception with 75% of their energy from nuclear, so they're forced to run some of their nuclear units as load-following plants—it's technically feasible, but culturally unthinkable in the U.S.

—Alexandra von Meier

The "greenest" thing to do with outdoor lighting is to have **none** of it. Not only are there issues of poor visual quality from glaring, overly-bright fixtures, but light trespass and light pollution is a real biological issue, not just an astronomical or aesthetic concern. You will be hearing more about this issue as biologists start to publish current research on the effects of artificial light on nighttime creatures, from nocturnal mammals on down to the lowliest biotic levels. ■

—Lisa Hescheng

## LETTERS [CONTINUED FROM P.2]

called the Minitemp MT4 <<http://www.raytek.com>>.

Also, through a client who became interested in passive and active solar principles related to the planning of his new home in Maine, I have become aware of an organization (based in Japan, but expanding with a new office in Sausalito) called OM Solar <<http://www.omsolar.com>> and their energy strategies they call Orange Mode. It's an interesting setup—you design the building (residential, commercial, or institutional of reasonably small-scale) and submit the plans to them for analysis, design, and specification of their system, a roof-collector, warm-air, fan-powered system coupled to thermal storage in the foundation. It heats water as well and can involve integrated photovoltaic arrays. From the web site, you can request a small book which shows a number of buildings using the system and how the system works. The book has excellent photographs and wonderful graphic explanations. It's worth a look.

And at the risk of repeating myself, thanks again for your commitment to the organization and the newsletter that have both had such an enormous impact on my teaching and my work. Best wishes to you in the new year.

—Truett James, Texas-Arlington

[Whoa, Truett, editorial overload! Doesn't everyone thumb through old Newses daily? Yes, I still have free copies of Solar Design Studio. We now list loyal (\$\$\$) members on the web <<http://www.sbse.org>>. Thanks for adding to my reading and must-get materials lists. I'm dedicated to sharing the SBSE knowledge base. Thanks for the appreciation.—ed.]



When I received my *SBSE News* Winter 2001 issue, I was interested to see the Gonzo structure. Who did it? Where? When? Why? Can I get further information? BETEC just held a symposium in El Rito, NM, to see, build, and discuss affordable and innovative homebuilding <<http://www.nibs.org/BETEC/fall01.PDF>>.

—Jack Warner, DOE

[Candace Gossen did the Gonzo. She has a tell-all web site <<http://www.solar783.com>>.—ed.]



The flow of information on the SBSE listserve is the most informative I have encoun-

• continued page 5

## SBSE PEOPLE

➤ **Rula Awwad-Rafferty** has been tenured and promoted to Associate Professor at Idaho.

🏠 With the release of her new book, *Japanese Architecture as a Collaborative Process*, **Dana Buntrock** will present in the Design and History categories at the ACSA Annual Meeting. Her design piece, “Assembling Architecture,” begins “Construction is a messy process ...” The history paper is on Toyo Ito’s Sendai Mediathèque as a new sort of civic space.

★ **Dent & Nordhaus, Architects (Stephen Dent, Richard Nordhaus)** received an International Illumination Design Merit Award for 2001 for the remodel of Congregation B’nai Israel in Albuquerque. The project has been on *Architectural Record’s* web site (Building Types Studies, Places of Worship) since October, 2001. Steve says they achieved a doubling of light levels while still reducing energy consumption.

🏠 **Katy Janda** has moved to Oberlin College as an assistant professor of ecological design in their environmental studies program. She’s excited to have the opportunity to warp young minds with the study of building performance (à la Vital Signs), among other insidious topics like technology and the environment. Since Oberlin has no architecture department, the design part is more abstract than literal. Yet, Oberlin really liked the idea of hosting a future SBSE retreat.

📖 **Norbert Lechner’s** *Heating, Cooling, Lighting: Design Methods for Architects*, 2nd edition, is being translated into both Chinese and Korean.

✍️ **Fuller Moore** and his wife, Jane, established an SBSE scholarship to fund student travel to attend SBSE events, including the retreat and ASES conference.

🌟 Congratulations to **Hofu Wu!** The AIA grapevine tells us that he has just been elected to the College of Fellows, a well-deserved honor for one of our founding members. ▮

## BEST ERRATA

The Fall 2001 University of Tennessee *College of Architecture and Design Newsletter* reports that Mark DeKay, author of *Wind Sun and Light*, has joined the faculty. [*Hired for his oratory, no doubt!—ed.*] ▮

## RESEARCH FINDINGS

### WELLSIAN CHECKLIST PROJECT

André Potvin of Laval inspired me to launch the Checklist Language Project. I have recruited Russian and Ecuadorian graduate students to translating the list into Russian and Spanish. [*All the criteria are steeped in cultural nuance as well as typographical idiosyncrocies—ed.*] I’m looking for other translators. If you or your students want to volunteer, please contact me <bhaglund@uidaho.edu>. I want to send copies in many languages to Malcolm Wells to assure him that his voice is being heard worldwide.

—Bruce Haglund

### HAY FUND

The Renewable Energy Institute at Cal Poly, San Luis Obispo has awarded a \$25,000 solar energy grant through the SBSE/Evelyn and Harold Hay Fund to a team of faculty at the Center for Energy Research/Education/Service at Ball State University. This project will study the effect of mean radiant temperature on human comfort in passive solar buildings. A side-by-side comparison of test buildings will allow the researchers to determine how the interior temperature varies in both time and space. The results will be used to develop design guidelines to predict how often a given strategy would produce comfortable indoor conditions. The results, due at the end of 2002, will be made available through the Renewable Energy Institute at Cal Poly.

—Margot McDonald

### TRACKING AIR MOVEMENT IN THE LOGAN (HEPNER) HOUSE

Following the ASHRAE’s Buildings VIII Envelope Conference in Clearwater, FL—where Alison Kwok (UO), Walter Grondzik (FAMU), Bruce Haglund (UI), Troy Peters (UO), and Christina Bollo (UO) led a “Taking the Vital Signs of a Building” workshop for practitioners—we journeyed to the Logan House to continue the study of air movement that we’ve been conducting over the past 4 years. Fuller and Jane Moore joined us in taking on-site measurements using hot wire velocity sticks <<http://www.testo.com>> and conducting “illuminance sweeps” across the living space with Sylvania light meters.

Troy and Christina recently tested a low-cost visualization technique—using hydrolysis-produced microbubbles in a sodium sulfate solution to simulate stack ventilation—with a plexiglass scale model of the Logan House and a 37-gallon tank. We tested three window configurations: intended, existing, and proposed redesign.

Owners—architects Deb and Peter Hepner continue to enjoy the house and keep their energy bills to a minimum by using natural ventilation whenever possible. Stay tuned for our paper at ASES in June 2002. ▮

—Alison Kwok

Grille de diagnostic écologique qualitatif  
© SBSE @ Tadoussac Retreat 1996\*

Projet:

	dégénérateur			durable	
	+100 toujours	+75 souvent	+50 quelquefois	+25 un peu	0 neutre
pollue l'air					
pollue l'eau pure					
gaspille l'eau de pluie					
ne produit pas de nourriture					
détruit les sols fertiles					
rejette les rebuts non-utilisés					
détruit les habitats naturels					
nécessite de l'énergie					
nécessite transport motorisé					
excès de microclimats locaux					

Le site: \_\_\_\_\_

translation: André Potvin

Le Checklist! (partial)



Troy Peters, Fuller Moore, Jane Moore, Deb Hepner, and Christina Bollo check wind flow in the Logan House.



Microbubbles reveal the stack ventilation effect in this plexiglass model of the Logan House.

## SIGN UP FOR PATAGONIA TOOL DAY

A Vital Signs Tool Day will be held June 14–15, 2002, at the Patagonia Service Center—which houses warehousing, distribution, and customer service functions—in Reno, NV, following the SBSE Retreat in Hope Valley, CA, and preceding the ASES Conference in Reno. It will be a nine-hour event, during which participants become familiar with Patagonia's green building and gain hands-on experience measuring aspects of its performance (e.g. daylighting, thermal stratification, visual comfort, air movement). All involved will gain experience in using equipment, conducting a mini-case study, and working in teams led by university faculty and highly trained students. Patagonia's Roxanne Sterr, Administrative Services Manager, and Dave Abeloe, Distribution Center Director, are collaborating on this program. The building was designed by the Miller–Hull Partnership, Seattle, and was published in *Environmental Building News* (9/10/96) and *Landscape Architecture* (3/97). SBSE members, university students, and professional architects and engineers are encouraged to participate.

All you need to do to register for this free event is e-mail <bhaglund@uidaho.edu>. More info at <<http://www.aa.uidaho.edu/bldgvital/PatagoniaToolDay/>>. Ten people have already registered! ■



Photo: Bruce Haglund

*Building and grounds, Patagonia walks the talk!*

—Walter Grondzik, Bruce Haglund, Alison Kwok

## LETTERS [CONT.]

tered. For me SBSE is a “virtual organization” because I rarely show up at events; however, the fact that there is a group of people whose interests parallel mine, and who struggle to put across the issues of “energy-informed design” to their students, keeps me from feeling isolated among the “high style” designers at our school. Our students bring computer literacy to the “desktop” in studio, so it is relatively easy to add energy analysis to the mix. This semester I am trying to add “the energy ball” to the designers’ juggling act in their fourth-/fifth-year studio.

—Barry Jackson, NJIT

*[It's heartening to hear that the silent members are absorbing information and community from SBSE, but speak out y'all. We'll all benefit.—ed.]*



New masthead is great! Much bolder. I look forward to the spring background.

—Jacelyn Wilson, Building Green

*[Thanks for the vote of approval! Check out the more dramatic color version on the SBSE News web site. And summer is just around the corner, despite March snow!—ed.]* ■

## CD IN REVIEW

### GREEN DEVELOPMENTS CD-ROM VERSION 2.0

Available from the Rocky Mountain Institute, this CD is designed for a wide variety of design professionals, community leaders, real estate developers, and educators. Green development case studies on 200 buildings from around the world include building profiles, financing and marketing, cost effectiveness, and potential profitability of green development projects. The primary sections of the CD include excerpts from *A Primer on Sustainability*, by Diana Lopez Barnett with William Browning (1994), a list of resources, internet links, green development organizations, and green development guidelines. The most useful information for academics is the green development case studies of retail, educational, residential, commercial, health care, hotel/resort, industrial, mixed-use, laboratory, and institutional buildings. Each case study provides a series of images, a summary of project information, process and financial costs to build the project, and green features. To obtain the CD, see the online order form at the RMI website <<http://www.rmi.org/>>. It's just \$20. We hope that we'll see RMI Research Consultant, Ben Shepherd at the SBSE Retreat. ■



Photo: RMI Web Site

*A case study of Santa Fe's Inn of the Anasazi is featured.*

—Alison Kwok

## SBSE STRATEGIC PLANNING

A strategic planning meeting will be held March 15–17, 2002 at the Moby Dick Hotel in Nahcotta, WA. SBSE has reserved rooms, which include a huge, scrumptious breakfast (with oysters!) for the board and a small braintrust—Cris Benton, Charlie Brown, Walter Grondzik, Bruce Haglund, Alison Kwok, Sandra Mallory, John Reynolds, and Jim Wasley. Participants will provide transportation to the hotel, snacks and lunch, dinner, alcohol (particularly single malt), and a good percentage of grey matter for planning future directions, resources, and retreats for SBSE. Reviving the structure of *SBSE Goals for the 90s* from the 1992 Seahorse Key Retreat, we'll examine issues facing us in terms of personal, group, and community goals. Stay tuned for outcomes! ■

—Alison G. Kwok

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## SWEET LYNX

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### SAM HUI PRESENTS

Sam has compiled a set of great links to every facet of green architecture sites at <<http://www1.arch.hku.hk/research/BEER/links.htm>>.

### BUILDING ENVELOPES

A site rich in research and case studies<<http://www.buildingenvelopes.org>> has been re-structured and new content is being added weekly. New features: Resources organized by topic (lighting, envelope systems, ventilation, etc); redesigned project section; linking related content items—follow an article to a project that uses that technology or to a tool that simulates that behavior; keyword searching throughout the site. *[And it links to SBSE!—ed.]*

### SOLAR ENERGY IN EUROPEAN OFFICE BUILDINGS

This EC ALTENER project developed an integrated package of teaching materials on solar energy and energy efficiency in office buildings. The audience is multi-disciplinary, including architects, engineers, building economists, and building/energy managers. The project focused on education packages for organizers and instructors of mid-career courses for practitioners in the fifteen EU Member States. The free download <[http://erg.ucd.ie/down\\_midcareer.html](http://erg.ucd.ie/down_midcareer.html)> includes eight technical modules, with four exemplar case studies, and a training software program. The package also includes four instructor's modules, one for each of the four target audiences. ■

—*J Owen Lewis*

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## SBSE MARKETPLACE

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Norbert Lechner has generously contributed 200 images from *Heating, Cooling, Lighting: Design Methods for Architects*, 2nd edition, to the SBSE PhotoCD collection. CD#14 and #15 are available (\$12 each) from CERES (thank you, Bob Koester and Jeff Culp) via the SBSE web site <<http://www.sbse.org/mtl-imag.htm>>.

Sun Angle Calculators are back @ \$15 each! See the SBSE website <<http://www.sbse.org/resources/>>. ■

—*Alison Krok*

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## ATTRACTIONS

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### ACOUSTICS COMPETITION

The 2002 Student Design Competition, sponsored by the Architectural Acoustics of the Acoustical Society of America (ASA), involves a university performance hall, primarily for opera, and associated spaces. Entries will be judged at the 143<sup>rd</sup> ASA meeting in Pittsburgh, PA, June 3–7, 2002. Details about the competition may be found at <<http://asa.aip.org/design.pdf>>. Final results and photos from the 2001 competition in Chicago can be found at <<http://www.ae.unomaha.edu/lwang/asa2001.htm>>

Encourage your students to participate. Contacts are Bob Coffeen <[coffeen@ukans.edu](mailto:coffeen@ukans.edu)>, Robin Glosemeyer <[rglosemeyer@jhacoustics.com](mailto:rglosemeyer@jhacoustics.com)>, and Lily Wang <[lwang@unl.edu](mailto:lwang@unl.edu)>.

—*Lily Wang*

### CERES WORKSHOPS/COURSEWORK

CERES has posted information on its web site about the High Performance School Building Design Workshops to be held in Indianapolis in April at the NCAA Conference Center. Read about the workshops and download a registration brochure at <[http://www.bsue.edu/provost/ceres/ceres/E\\_sbic.htm](http://www.bsue.edu/provost/ceres/ceres/E_sbic.htm)>.

Find the results of the latest Vital Signs coursework—student examinations of interior illuminance, daylighting control, and occupant response in the Michael Graves-designed NCAA Headquarters in Indianapolis at <<http://www.bsue.edu/provost/ceres/vitsi/index.html>>.

—*Bob Koester*

### FACULTY DEVELOPMENT WORKSHOP

Ecosa Institute is hosting a Faculty Development Workshop this May at Arcosanti <<http://www.ecosainstitute.org/>>. Sim Van der Ryn and Mark DeKay are among the presenters. If you have any questions, contact me <[ecosa@mwaz.com](mailto:ecosa@mwaz.com)>.

—*Rob Israel*

### LIGHTING SCHOLARSHIPS

Rensselaer's Lighting Research Center has full tuition and research assistantship scholarships available. We seek applicants from diverse backgrounds for our two full scholarships funded by the GE Fund. Applicants must be U.S. citizens of African, Native American, Latino, or Pacific Islander heritage. Information on our diversity scholarship is at <<http://www.lrc.rpi.edu/newmsl/diversity.htm>>.

If you have students who would like to be immersed in lighting, have them check out <<http://www.lrc.rpi.edu/NewMSL/home2.htm>>.

—*Russell R. Leslie*

### GREEN GLOBES

Developed for ECD Canada, *Green Globes* is an online environmental assessment system for existing buildings. It's a stripped-down, self-assessment version of *BREEAM* that targets building owners/managers <<http://www2.energyefficiency.org/>>. If any of you want to actually run the program, I can get you an ID and password for limited free access. It would be great if some of you would test *Green Globes*. If there is enough interest, we might come up with an educational version.

—*Harvey Bryan*

### TIA 2002 DESIGN COMPETITION: A DESERT ECOHOUSE FOR YAZD

An Ecohouse of not more than 200 square meters is for a family of two adults, two children, and an elderly relative on a site in Yazd. Details at <<http://www.bh.com/companions/ecohouse/>>. The prizes for the competition will include awards of: £1000, £500, £200, and 3 @ £100. Entries are due in Oxford on 1 Aug 2002. Presentation of awards will be made at the TIA 2002: Ventilation Conference in Yazd in September 2002. Entrants shall be students in a school of architecture on the date of the final submission of the project. The entry should not be more than two A1 sheets of paper. ■

—*Sue Raaf*

## GREEN BUILDING FAIR

Have you ever wondered what it would take to create a sustainability event? This year marks my third for organizing the Green Building Fair at the Pennsylvania College of Technology in Williamsport. Although we have programs in all aspects of building construction in both 2- and 4-year degrees, we don't have specific sustainability courses. I was looking for a way to introduce sustainable products and design to students (and to gain information and develop resources for myself).

**How to do it?** Students in the first Building Materials course were required to contact potential exhibitors. We coached them on how to find and identify green products, effectively invite companies to participate, and send out the information under the college letterhead. The secretarial staff graciously helped print letters and fax information. Other tasks included gaining approval for the use of the space, drawing layouts for the General Services staff to set up tables and power, and tracking expenses. As I don't have a budget line for the event and admission has always been free, we charge exhibitors from the NE U.S. and Canada a minimal fee (this year \$150 for an 8'x10' space) to cover advertising and catering costs. Exhibits showcase a wide variety of products and services. We set up a speaking schedule for exhibitors and guest speakers in special interest areas. Corporate sponsorships help defray major costs.

**Who attends?** We sent out flyers in the local builder's association monthly mailing. This year we are looking at offering AIA continuing education credit for some of the sessions. Of course, students attend as well as faculty, staff, and the general public. Last year one person traveled over 4 hours one-way to attend.

**Is it worth all the extra work?** It seems to be! I always meet very interesting people, both by phone and in person, as I organize the event. The displays are wonderful, and the speakers provide information otherwise difficult to obtain. Public awareness seems to be growing, and people are interested in what they can do to promote sustainability. For more information on this year's event, see our web site at <[http://www.pct.edu/green\\_building](http://www.pct.edu/green_building)>. ■

*-Dorothy Gerring*



BioSun's exhibit at last year's Green Building Fair.

Photo: Dorothy Gerring

## ACSA CONFERENCE CALL

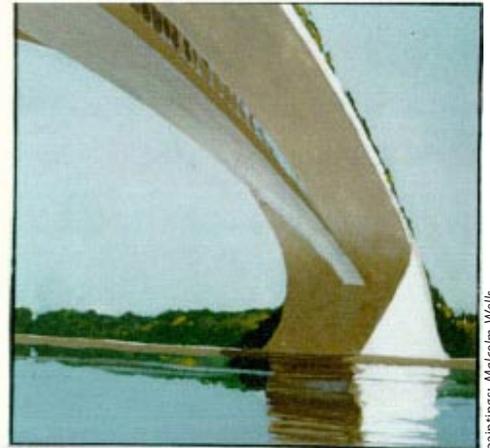
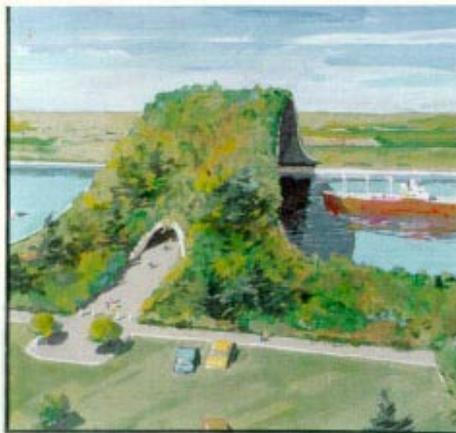
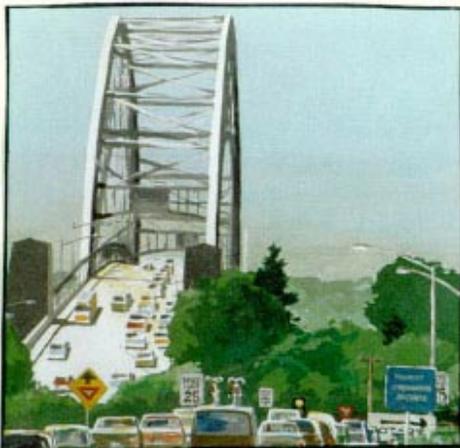
The ACSA Technology Conference will be held at the University of Oregon Portland Center, October 10–13. SBSE will sponsor a plenary speaker (to be announced).

The conference explores the craft and production of the house as a method of understanding the technologies that inform design, construction, and occupation. Influenced by climate, culture, and consumption, a broad definition of house provides for a rich diversity of topics. Researchers, educators, and practitioners are invited to share their technology and housing work. Pacific Northwest product and material associations and companies active in the housing industries will offer workshops on new applications of materials and processes featuring presentations by professional design teams. There will also be tours to manufacturing plants and housing projects. In addition, we anticipate a series of lively open sessions on topics of interest to building science educators.

Details and registration information are available at the ACSA web site at <<http://www.acsa-arch.org/meetings/>>. ■

*-Christine Theodoropoulos, Oregon*

## A WELLSIAN TRIPTYCH



Paintings: Malcolm Wells

*"I painted this view of Sagamore Bridge to remind us of our grandparents' selfishness. They dug a ship canal right through Cape Cod ... and built a one-species bridge across it! Animal and plant migrations that had occurred for millenia were abruptly ended. But no one thought of those things in 1935.*

*"Now we do. Now we have no excuse for such self-centeredness. Wildlife bridges over highways are beginning to appear. Now it's canal time. A living bridge will help pay down our debt to the silent world."—Malcolm Wells*

## DON PROWLER REMEMBERED

On Sunday, February 17 the huge 1928 Ralph Cram-designed neo-Gothic chapel at Princeton University was the site to remember Don Prowler, FAIA, who taught courses on energy-conscious design at both Penn and Princeton for more than two decades as well as at Cornell, Virginia, Michigan, Chicago, and Washington.

His first college degree combined physics with fine arts, a template for his rich lifelong engagements. Don was among the new generation who launched passive solar design in the late 1970s. He was co-director and editor of the proceedings for the Second National Passive Solar Conference, Philadelphia, 1978. Don and Jeff Cook co-edited *Passive Systems '78*. A major milestone, a \$150,000 grant from the Department of Energy, allowed Don and Harrison Fraker to develop, with leading educators, teaching materials for energy use in buildings—volumes that provided a platform for the transformation of architectural curricula and were recognized by a *Progressive Architecture* Research Award.

In the past decade, he was especially active with programs sponsored by NREL, DOE, EPA, FEM, and the Sustainable Buildings Industry Council, exemplified by his collaboration in *Energy-10* software development, and his leadership in teaching *E-10* nationwide. As a technical consultant for many federal and private projects, he left his mark on many beautiful and efficient buildings. He was originator, author, and editor of many FEMP and SBIC publications including the new video, *Labs for the 21<sup>st</sup> Century*. He made pivotal contributions to the web site, “Whole Building Design Guide,” a single portal to criteria and guidelines for integrated design. In *Modest Mansions: Design Ideas for Luxurious Living in Less Space*, he beautifully illustrated how small American homes can be organized to be less expensive to build, cheaper to maintain, and interesting to live in.

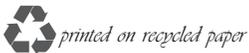
Among those who spoke about their friend and colleague were academics (Jeff Cook, ASU; Harrison Fraker, UC Berkeley; and Doug Kelbaugh, Michigan) and professionals (Susan Maxman, past president AIA, and Helen English, Executive Director SBIC). He will be sorely missed in the many places we have not gone. ■



photo: Mady Prowler

Don Prowler  
November 10, 1950–February 8, 2002

—Jeff Cook



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