



photo: Ulrike Passe

Amber waves of grain and green fields of golden corn will greet next summer's retreat goers!

CALL FOR PARTICIPATION

SBSE RETREAT 2018 "CYCLES," WALNUT CITY, IOWA, 15-18 JUL

We call on faculty, practitioners, content experts, and students to share tools; case studies; and innovative lecture, lab, and studio exercises through short talks; hands-on activities; and workshops at the 2018 SBSE annual retreat. Cycles will focus on the strategies, tools, ideas, and methods we use to teach, practice, and inspire our students in the integration of buildings, landscapes, neighborhoods, and cities through material, carbon, seasonal, and nutrient cycles as part of the larger watershed.

We invite proposals for a 30-minute presentation or a 60-minute workshop on any of the themes below. Proposals must include innovative pedagogical content that relates to teaching and learning for design studio, lecture, or seminar courses. Sessions will take place in parallel, and the venue will hold approximately 25 in each room. We are looking for 15-20 workshops and presentations for the retreat, selected through a review process that will balance content and schedule.

Topics for Sessions and Workshops

1. Material Life Cycles—How life cycles of resources and local relationships inform teaching and practice.
2. Carbon Cycles—How to enhance understandings of carbon cycles in addition to energy as part of the design process.
3. Nutrient Cycles—The food-energy-water nexus at the urban-periurban-rural interface for community and building design.
4. Seasonal Cycles—Promote the design of buildings to benefit from or to withstand solar, wind, water, relative humidity, and other potentially changing climatic cycles.
5. Strategies and Tools—Exemplary tools, methods, and design strategies that teach the importance of the wide range of environmental strategies in design and planning.

6. Roundtable Discussions and Working Groups—"Hot" topics that might include case studies, book and grant proposals, promotion/tenure/mentorship issues, contributions to the 2050 Imperative, and so on.

Your proposals must include:

- Name(s) of session organizer/presenter
- Contact information (institution, email, telephone)
- Session type—30-minute activity and/or 60-minute workshop
- Title of your presentation/workshop
- Description (250 words max.)
- Topic addressed by your proposal (choose from those above)
- Learning objectives (3-5 goals to be achieved by participants)
- Intended outcomes and deliverables
- Take away (if any) for attendees.

E-mail your proposal to Ulrike Passe <upasse@iastate.edu> by 1 Mar 2018, 5:00pm PST. 🖨

—Ulrike Passe

• continued next column

LETTERS TO THE EDITOR

Thank you for the newsletter, Bruce. I enjoyed it, as always. I think the retreat photo strikingly indicates that SBSE is “not a typical academic conference,” as David described. You can also tell it’s not a typical architecture conference because the majority of the participants are wearing blue, not black (!), and a few bold souls even wore red. Very minor correction: SBSE retreat scholar Shreejay Tuladhar is from Harvard, not MIT. No need to publish a correction.

—Holly Samuelson, Harvard

Sorry about the mix-up, Shreejay. All corrected, it’s digital!—ed.



I cannot get into the newsletter! Did you guys kick me out, or what?

—Aydan Hacaloglu

I checked the link, it works. The file is only 2MB, so you should have little trouble. And the News is freely accessed by all, not just the elite! Let’s hear it for net neutrality!—ed.



I just experienced exponentially heightened security screening at the Hong Kong airport. I’m told this procedure is new since 1 Dec. Security screening here has always been more rigorous than in the U.S., but this time my passport was scrutinized no fewer than seven times. Three times I was asked for details of my trip—purpose, where I went, and with whom. Then they would circle back to the same questions, I believe to discover inaccuracies. 🖐

—Jeff Burke

Take note potential PLEA 2018 attendees!—ed.

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SBSE ANNUAL MEETING NOTES

American Solar Energy Society Annual Conference, Denver, CO, 10 Oct 2017

Attending: Eric Carbonnier, Alfredo Fernández-González, Bruce Haglund, Lisa Iulo, Alison Kwok, Victor Olgay, Ulrike Passe, Ute Poerschke, Alex Rempel, Marc Schiler (10 total; 4 board members).

Announcements

1. Nominations are needed for 2017 elections. Nominations to-date include Georg Reichard for President-Elect, Tom Collins for Treasurer, and Seth Holmes for Secretary.
2. Bylaws have now been changed to separate the Secretary/Treasurer position into two discrete positions, with unanimous approval of the active membership who voted.

Treasury report

1. Annual budget for the 14 months from Jul 2016 to Oct 2017
 - a. Balance is >\$20,000.
 - b. Annual expenditures are approximately \$18,000—\$15,500 (scholarships); \$2,000 (fees, primarily Wild Apricot; web hosting, SBSE.org domain name, Paypal, wire transfers, cashier’s checks); and other expenses (PLEA Tool Day, scholarship certificates, speaker honoraria, retreat contingency).
2. Membership funds are accumulating at the rate of about \$2–3,000 per year. As a nonprofit, limits to the amount of cash we can maintain on hand exist. How should this remainder be spent? Consider polling the membership to determine which conferences are more popular. Options:
 - a. Matching funds for events such as the Reynolds Symposium; other single events
 - b. Additional scholarships, including those to new conferences. Suggestions included International Building Physics Conference (U.S. in 2018), North American Passive House Conference, Passive and Low-Energy Architecture (PLEA), Getting to Zero Forum, Façade Tectonics, ARCC Research, or open scholarships to be used at a conference of the student’s choice.

Education and Resources Committee report

1. Website migration is in progress; Georg has plans for staffing.
2. Beta testing of uploading is complete.
3. Ulrike will introduce the resources portal in a talk at this conference.

Future of the Passive Conference discussion

SBSE needs more autonomy to direct the passive conference in ways more suitable to our interests, to see it regain strength. We can manage technical reviews, chair sessions, engage junior faculty. Conversation with Dave Panich indicates willingness of the ASES board to consider our idea. We have a sufficient number of dedicated faculty to run it. Timing is critical to facilitate presentation of student work: conferences in the fall, as ASES is promoting, are awkward—too soon for beginning students, but too late for those who have graduated. (AFG)

- We have an amazing network with great influence—look at how SBSE ran PLEA in LA! All the energy exists to make it happen. (EC)
- ASES used to run an active conference and a passive conference, combining them was a move to save money. (BH)
- At one point the passive conference was bigger! Since the merger, leadership also changed and the passive conference has dwindled. (VO)

Concerns with ASES consist of a lack of peer review and inaccessible publications. (UP)

Money is a factor—when people sense money coming in for photovoltaics, it consumes the ASES board’s attention. It happened in ’92. In contrast, there’s not a passive industry. (MS)

• *continued next page*

REFLECTIONS ON BEENOW

Many of you are familiar with the BEEnow rating system for schools of architecture. It is being developed and promoted by SBSE colleague Norbert Lechner and other thought leaders to reward architecture schools for excellence in educating for carbon-neutral design—and to thereby encourage such excellence among other architecture programs. The organization’s web page <<https://www.beenow.org/>> states that “BEEnow is a voluntary certification program that inspires architecture schools to emphasize the teaching of sustainability so that graduates are competent to contribute substantially to the design of low-carbon buildings.”

Several faculty at Ball State served as peer reviewers for a pilot version of the BEEnow certification approach. We found it generally easy to engage and on target, and anticipate that addressing a full BEEnow certification effort would feel like preparing NAAB accreditation documentation, but at substantially lower intensity and with less angst. As a follow-up to the peer review I participated in a BEEnow Professional Forum Meeting held in Georgetown on 17 Nov 2017; what a positive and energizing experience. Representatives from several major architecture firms were in attendance. Their connection to BEEnow was as potential beneficiaries of architecture curricula that better prepare graduates to deal with the carbon impacts of buildings.

I was particularly taken by a number of opinions expressed at the forum that included what seems a true and deep desire on the part of the firms to meet their Architecture 2030 Challenge targets; a desire to hire graduates who can actively help meet these goals; a need for new hires/graduates who can thoughtfully use analysis tools to inform design (versus just crunching numbers); and a willingness to look for BEEnow certification when hiring future employees. It would be wonderful if these thoughts and needs from practice could be conveyed to those in leadership positions in architectural education. 🖐

—Walter Grondzik

SBSE ANNUAL MEETING NOTES [CONT.]

Organizational logistics discussion

- Intention at Penn State was to have a conference within a conference. ASES was ultimately organizing it, which presented some difficulties. More detail available. (LI)
- PLEA conference was scheduled almost 1.5 years in advance and yet ASES picked the exact same three days. (MS) ... and we had the greatest SBSE attendance at an annual meeting ever at PLEA LA. (BH)
- Could it reclaim the previous synergy of back-to-back conference and retreat combinations? (AFG)
 - § It helps enormously logistically to have retreat proximate to another event. (LI)
 - § True, but in practice it just doesn’t work because of limited venue space and scheduling conflicts. (AK)
- The passive conference was once an extraordinary event. It could be that way again. We could have peer-reviewed, high-quality publications and create something that’s really great. It’s a *lot* of work. If we did take over and reshape the passive conference, how would we ensure that it’s something unique and valuable? We should emphasize our building science perspective that’s not found in other places. (VO)
- If we rotate among 3 or so places and it’s just a cycle, that would help enormously. (AK)

The next steps are to talk to Carly, Dave, and Paulette to share thoughts for and against a stronger SBSE role in the passive conference. We either need the freedom to do it properly or to look for other venues. (AFG)

Propose a survey to gauge interest with respect to timing, type. BH will help create the survey. (AFG) 🖐

—Alexandra Rempel

ELECTION RESULTS

As the incoming President, it is my honor to announce the results of the 2017–19 SBSE board election.

Georg Reichard has been elected President–Elect (92.4%); **Tom Collins**, Treasurer (90.5%). **Seth Holmes**, Secretary (49.4% ahead by a small margin to **Jonathan Bean** with 45.8%). My thanks to Jonathan for his candidacy. SBSE will need his enthusiasm as an engaged member as we go forward! Please join me in congratulating our new board members. We will start our work immediately with a joint board meeting of all outgoing and incoming members.

Please also join me in thanking our outgoing past-president **Pablo La Roche** for his six years of service to the SBSE. Pablo, I hope you, as have many previous SBSE board members, will join the group of elders, share your advice, and participate as always in our wonderful network.

Many, many thanks also to **Alexandra Rempel** for her tremendous service as Secretary/Treasurer, helping to extend the reach of SBSE over the past years. The increased membership and the resulting increase of scholarships we’ve been able to provide created a big task that she managed with enthusiasm. As president–elect I had the pleasure of working with Alex and look forward to her continued support of our mission in other capacities.

Thanks also to **Alfredo Fernández–González**, for his term as President. We will rely on his expertise and institutional memory as we move into the next years while he serves as Past–President to the board.

Now the baton of SBSE President is being passed to me. I am looking forward to serving you for the next two years as well as welcoming you to Iowa next summer. Please let me know if there is anything you would like SBSE to address. We are looking forward to an interesting 2018!

With energetic greetings from Iowa, and as temperatures drop below the 25°F mark for the first time this year, I am glad it is still getting cold! 🖐

—Ulrike Passe



SBSE PEOPLE

✉ **Omar Al-Hassawi** passed his dissertation defense at ASU and graduated in December.

★ After many years of dedicated work, coordinating and spearheading our efforts to support student participation in the annual retreat and conferences of interest, **Walter Grondzik** has stepped down as Scholarship Committee chair. A search for a new chair is underway. Thank you, Walter, you've made a huge difference for scores of scholars!



photo: Bruce Haglund

✦ **Alison Kwok** was presented with the ASES Passive Pioneer Award by Carly Rixham, ASES Executive Director. Count Alison among those who have developed the theories, research efforts, new concepts, and opportunities for later researchers to expand. Well done! 🙌

GADGET OF THE NANOSEC



photo: Bruce Haglund

LEDs may flicker. This spinner is a cool update on the crude tops used to detect the fluorescent flicker caused by 60-cycle magnetic ballasts. This gizmo spins smoothly and senses 1,000 cycle per second flickering. It's no longer available from Loupi, but they have passed on how to make your own. Let me know! 🙌

—Bruce Haglund

BUILDING RESEARCH & INFORMATION NEWS

The latest *Building Research & Information* issue 46(2), Feb 2018 is now online <<http://www.tandfonline.com/toc/rbri20/46/2>>, and the list of papers is below—a diversity of topics drawing on both social and physical sciences.

A recent article, “What is wrong with energy efficiency?,” by Elizabeth Shove has been provocative and initiated a wider discussion. It's open access and freely available <<http://www.tandfonline.com/doi/full/10.1080/09613218.2017.1361746>>.

Other contents include:

- Camera-based window-opening estimation in a naturally ventilated office; L. Bourikas, E. Costanza, S. Gauthier, P. A. B. James, J. Kittley-Davies, C. Ornaghi, A. Rogers, E. Saadatian, and Y. Huang
- Materials in Germany's domestic building stock: calculation model and uncertainties; Regine Ortlepp, Karin Gruhler, and Georg Schiller
- Serviceability of façade claddings; A. J. Prieto, A. Silva, J. de Brito, and J. M. Macias-Bernal
- Degree-day building energy reference map for South Africa; Dirk Conradie, Tobias van Reenen, and Sheldon Bole
- Adoption of Energy Star certifications: theory and evidence compared; Andrew R. Sanderford, Andrew P. McCoy, and Matthew J. Keefe
- Understanding domestic fuel use practices in an urban township; Tebogo Sole and Claire Wagner.

We have also started a new blog for the readers and authors of the journal <<http://www.BRICCommunity.net>>. The blog contains commentaries, news, reviews, and more. Have a look!

—Richard Lorch

CENTER FOR THE BUILT ENVIRONMENT ET AL CONTRIBUTION

Some of you might be interested in the new, freely accessible gold open access paper we've recently published in the Feb 2018 *BR&I*.

Based on data from the Center for the Built Environment occupant satisfaction survey database at UC Berkeley, we analyzed whether green certification leads to higher occupant satisfaction with indoor environmental quality (IEQ). The findings included evidence that earning a specific IEQ credit does not increase satisfaction with the corresponding IEQ factor, and that certification level, product, and version do not affect workplace satisfaction.

For full disclosure see Indoor Environmental Quality and Occupant Satisfaction in Green-Certified Buildings; Sergio Altomonte, Stefano Schiavon, Michael G. Kent, Gail Brager <<http://dx.doi.org/10.1080/09613218.2018.1383715>>.

A post on this paper is available on <<https://www.linkedin.com/pulse/green-certified-buildings-better-occupants-sergio-altomonte/>>. 🙌

—Sergio Altomonte

SPECIAL ISSUE

Energy performance gaps: promises, people, practices



Guest editors:
K. Gram-Hanssen and S. Georg

cover: BR&I



photo: Sergio Altomonte

CONFERENCE REVIEWS

ASES SOLAR 2017 CONFERENCE, DENVER

This year at SOLAR 2017 over 380 participants came together in an intimately structured setting to review and strengthen:

- Technical and policy pathways to a renewable energy world
- Synergies for diverse advocates and organizations working together
- Effectiveness of community efforts across the country
- Advancements in building design and energy efficiency
- Education and workforce development innovations.

Through a dynamic mix of provocative plenary sessions, interactive fora and technical sessions, as well as networking events, three key calls to action emerged:

- INFORM policy makers, utility decision makers, and the general public concerning the compelling facts and trends about renewables
- BUILD stronger partnerships with other groups and individuals working for a renewable energy world
- SUPPORT programs at the community level.

ASES welcomes all professionals and advocates to join in this important work to achieve a renewable energy world for all used wisely and efficiently. Visit <http://ases.org/conference> for more detailed information on conference findings and the wide variety of presentations.

—ASES

PLDC 2017 PARIS, FRANCE

Lighting educators met on 1 Nov in a pre-conference session moderated by Alison Ritter and Malcolm Innes, who began with an update of the work achieved by a Think/Do Tank on the lighting profession and lighting education. Guest speaker Natalia Bystryantseva, Head of the Art & Science Institute and Director of the Creative Lighting Design (CLD) program at ITMO University in St. Petersburg, spoke on education that breaks down barriers—academic programs today need to prepare lighting designers to act as “alchemists” and synthesize different kinds of sciences, art, and technologies. It was well-attended by a roomful of educators and industry professionals.

The educators’ session set the tone for another PLDC that featured a balanced array of research findings and lessons learned from practice presented in four concurrent sessions. You could escape the technical sessions to partake in the lighting manufacturers’ displays or to venture through the City of Light. John Mardaljevic observed, “At PLDC events the boundaries between education, research, and application dissolve, creating a true community of professionals where each may learn from every other.”

The big news is that this formerly Euro-centric biennial conference has decided to become worldwide and annual. The next event will be in 2018 in Singapore, with a European venue in 2019, and, tentatively, New York City in 2020. For details see <https://pld-c.com/>. Y’all come!

—Kristina Lutscher and Bruce Haglund

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Daylight dominated this ASES venue!

CLIMATE ADAPTIVE DESIGN



CAD featured a tour of sustainability-minded New Belgium Brewery’s Asheville, NC, operation.

During the past three years Climate Adaptive Design: Where Climate Science Meets Building Science, hosted by The Collider and AIA Asheville, has grown from 40 attendees in 2015 to 80 in 2017. Each year the event brings together world-renowned climate scientists and architects to provide insight on how their professions are addressing the changing climate. In addition to the full day of presentations, the event also offers a public lecture with content for all from homeowners to industry professionals.

This year’s event included a public presentation by keynote speaker Victor Olgyay, a bioclimatic architect from Boulder, CO, and principal with the Rocky Mountain Institute. Olgyay shared his personal history of designing with climate in mind. Olgyay designed his first passive solar house in Asheville and has since worked as an architect, writer, professor, researcher, daylighting designer, and environmental consultant. “Architects have a big responsibility for the role the built environment plays in climate change,” said Olgyay. “Globally, buildings consume 35 percent of all energy and 60 percent of all generated electricity—much of which is produced by fossil fuels. As the largest end-use energy sector, buildings account for more than one-third of all U.S. greenhouse gas emissions. Therefore, all buildings from our homes, offices, schools, or shopping centers—and the architects who design them—can either exacerbate our climate problem or be a foundational part of the solution.”

Olgyay believes that buildings must support human and ecological needs. His research on ecosystem services as criteria for green building assessment resulted in the “Green Footstep” building tool, demonstrating a lifecycle approach to the reduction of carbon, water, and ecological footprints. 🐾

—Emily Coleman-Wolf

STUDENT OPPORTUNITY

**GETTING TO
zero** **Join Us!**
April 17-19, 2018
Pittsburgh, PA
gettingtozeroforum.org
NATIONAL FORUM 2018

Calling all current students and young professionals! You are invited to join us to discover how we are driving ultra-low and zero energy buildings to a tipping point that will transform the built environment. For the upcoming Getting to Zero National Forum this 17–19 Apr in Pittsburgh we are hoping to have 50 students attend and are hosting a pre-conference workshop just for students and young professionals.

Students can receive Malek scholarships for registration and, in some cases, travel expenses. We are offering a special registration rate of \$245 (you must be a full-time student to register at this rate and bring a valid student ID when you check-in at the conference) and \$100 for a pre-event workshop. Young professionals should register for a full forum pass. To register visit <<https://gettingtozeroforum.org/registration>>.

We are pleased to introduce the George Malek Memorial Scholarship Fund for students and young professionals (with less than three years' experience). This scholarship honors the legacy of NBI Board Member George Malek, director of energy-efficiency services at Commonwealth Edison and an industry leader. We can think of no better way to remember George's spirit and commitment to energy efficiency than to instill the same in the next generation of advocates.

If you are a current student of architecture, engineering, real estate development, public policy or another related field OR have been working for less than three years and need financial assistance, fill out our scholarship application <<https://gettingtozeroforum.org/forum-scholarships/>>. Applicants can receive scholarships for registration (100% for students; 50% for young professionals) and in some cases travel expenses.

2 Mar: Rolling application process closes

9 Mar: Last day that applicants are notified of acceptance

Acceptance is dependent on students volunteering 4–6 hours at the national forum event. 🙋

—Stacey Hobart

FUTURE CONFERENCE UPDATES



graphic: PLEA2018 web site

STUDENT-FRIENDLY PLEA 2018 CONFERENCE

SMART & HEALTHY WITHIN 2-DEGREE LIMIT, 10–12 Dec 2018, Hong Kong

The urban and built environment represents both challenges and opportunities amid climate change. As the world approaches the 2-degree limit, living smart and healthy has become a priority in urban development. Through four tracks—Science & Technology, People & Community, Design & Practice, and Education & Training—PLEA 2018 will bring together designers, academics, researchers, students, and professionals in the building industry in the pursuit of better and more sustainable urban and built environments.

A Student Design Colloquium, one of the PLEA 2018 sessions, invites imaginative ideas, projects, and action plans that best demonstrate an interpretation of our conference theme. Up to 20+ shortlisted teams will be offered student scholarships to present their ideas at the conference. Registration for the Student Design Colloquium is open until 31 Jul 2018. More details are available at <<http://www.plea2018.org>>.

In the meantime, to encourage student participation in the PLEA 2018 conference, the registration fee for all full-time students (HK\$2000 or ~\$260 USD) will be comparatively lower than that of previous PLEA conferences, and further discounts will be given to students from low-income countries, mostly in Africa.

[Furthermore, to encourage student participation SBSE will offer one \$1,000 travel scholarship and continue to administer the Jeff Cook Student and Faculty Travel Awards.—ed.]

—Edward Ng

ICSA2019

FIRST ANNOUNCEMENT AND CALL FOR ABSTRACTS

ICSA2019, the 4th International Conference on Structures and Architecture, will be held in Lisbon, Portugal, 24–26 Jul 2019 <<http://www.icsa2019.com>>.

ICSA2019 is the world's leading and largest global conference bridging the gap between structures and architecture. The contributions to creative and scientific aspects in the conception and construction of structures, advanced technologies, and complex architectural and structural applications represent a fine blend of scientific, technical, and practical novelties in both fields. The International Association of Structures and Architecture <<http://www.structures-architecture.org>> aims to explore and promote the merging of structures and architecture, encompassing all the aspects related with the recent advances in the art, practice, and theory of teaching, as well as with researching, designing, and building structures.

The time lag since ICSA2016 has been decisive to build a solid basis for ICSA2019. Some relevant milestones were achieved which have provided this new edition with undeniably extra added values:

- Co-sponsored and endorsed by prestigious institutions
- Extended worldwide scientific committee integrated by researchers and practitioners with significant backgrounds in architecture and in structural engineering
- Stimulating keynote lectures by recognized experts
- Mini-symposia and special sessions.

• continued next page

Abstracts should be submitted in electronic form by using the restricted area of the ICSA2019 web page before 15 Mar 2018. Abstracts will be subject to a review process by at least two members of the scientific committee. Authors will be notified of preliminary acceptance of abstracts by 15 May 2018.

The proceedings will be published by Balkema (Taylor & Francis Group), including a book of extended two-page abstracts and a CD-ROM containing the full eight-page papers. These documents are due on 15 Nov 2018. Acceptance will be notified before 15 Feb 2019. Proceedings will be sent for indexing by both Thomson Reuters (Conference Proceedings Citation Index-ISI Proceedings) and Elsevier (Scopus and EI).

Updated information on ICSA2019 can be found at <<http://www.icsa2019.com>> or by e-mailing the ICSA2019 secretariat <secretariat@icsa2019.com>.

—Paulo Cruz

SIMAUD 2018

The Symposium on Simulation for Architecture and Urban Design (SimAUD) focuses on simulation and design computation for the built environment. It offers a venue to present and discuss innovative simulation methods and techniques. SimAUD 2018 takes place at TUDelft in the Netherlands, 4–7 Jun 2018.



graphic: SimAUD

A reminder that the deadline for submissions (full papers, short papers, projects, and videos) is 23 Dec 2017. Details at the link <<http://simaud.com/2018/venue.php>>. All submissions are peer-reviewed and considered for selection by the scientific committee. All accepted full papers (8 pages) will be published in the ACM Digital Library. However, all accepted papers (both full and short papers) will be published in SimAUD's proceedings.

A call for workshops is also open; see <http://simaud.com/2018/call_for_workshops.php>. The SimAUD Workshop Day welcomes proposals in a range of formats for either half-day (3-hour) or full-day (6-hour) sessions. Possible session formats include, but are not limited to:

- Demonstration and/or hands-on instruction of a simulation-based tool or workflow
- Theoretical introduction, overview, or break-out session on a simulation-based topic
- Case-studies in simulation-based methods with a focus on application.

We hope you may consider these calls and disseminate across your relevant networks. 🖐

—Michela Turrin and Tarek Rakha



photo: Bruce Haglund

Participants in SBSE Tool Day at the Royal Botanic Gardens Edinburgh enjoyed a productive and beautiful day!

RACE TO ZERO

The next Race to Zero is 20–22 Apr 2018, at the National Renewable Energy Laboratory (NREL) in Golden, Colorado.



photo: Race to Zero

Students from 84 teams, representing 68 collegiate institutions, have taken a big step in advancing their education and careers by participating in the 2018 USDOE Race to Zero Student Design Competition. These teams will vie during the next three months for the 40 finalist spots!

The competition challenges collegiate teams to apply sound building science principles to create cost-effective, market-ready designs that meet DOE's Zero Energy Ready Home program requirements and the forthcoming publication, *Advanced Energy Design Guide for K–12 School Buildings—Achieving a Zero Energy Building*.

The fifth annual competition includes a new commercial building design contest in addition to the residential building contests, giving teams many options of building types as the focus of their design challenge. The Race to Zero is designed to provide students with:

- An opportunity to participate in hands-on building science analyses, including in-depth investigation of specific interactions and integration of building design
- Access to unique building science training from recognized experts and educators
- Experience working on a multidisciplinary team which is vital to professional work
- Partnerships and networking with industry professionals and companies
- Interactions with national thought leaders about zero energy buildings and future innovations
- A tour of NREL's award-winning high-performance buildings.

Learn more about the Race to Zero competition and winning designs at <<https://energy.gov/eere/buildings/race-zero-competition-details-and-requirements>>. 🖐

—NREL

SOLAR DECATHLON 2017



Washington University's Solar Decathlon house was among those on display in Denver during ASES Solar 2017.



photos: Bruce Haglund

... and all were bigger inside than outside!

MIT RESEARCH NOTE



image: Christoph Reinhart

Some of you might be interested in our new outdoor thermal comfort study for which we tracked 16,000 regular attendees and 676,000 visitors in a public courtyard in Cambridge, MA. This study made me a fan of the UTCI metric, see <<http://web.mit.edu/sustainabledesignlab/projects/NorthCourtStudy/index.html>>. 🖐

—Christoph Reinhart

SBSE CALENDAR

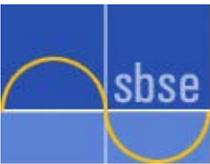
2018

- Mar 12–15 Cold Climate HVAC 2018/Kiruna, SWEDEN
- Apr 17–19 Getting to Zero Nat'l Forum/Pittsburgh, PA, USA
- Apr 20–22 Race to Zero 2018/Golden, CO, USA
- May 1–4 Living Future 18/Portland, OR, USA
- May 16–19 ARCC–EAAE 2018/Philadelphia, PA, USA
- Jun 4–7 SimAUD Conf/Delft, NETHERLANDS
- Jul 15–18 SBSE Retreat 2018/Walnut City, IA, USA
- Dec 10–12 PLEA 2018/Hong Kong, CHINA

2019

- Jul 24–26 Int'l Conf Structures & Architecture/Lisbon, PORTUGAL 🖐

SPRING ISSUE SUBMITTAL DEADLINE—MARCH 1



SBSE NEWS
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TO: SBSE MEMBERS & FRIENDS
 PLANET-WIDE



photo: Bruce Haglund