“Is it a retreat or a conference?” On a warm summer night in Oregon, Alison Kwok welcomed us with this pithy formulation from G. Z. (Charlie) Brown to explain our next four days together. This question proved to be excellent, but the more vivid (and certainly more visceral) illustration that we were not at a typical academic conference came when Alison introduced a wildlife biologist to discuss the various large mammals that could (but probably wouldn’t) eat us as we enjoyed the beauty of Silver Falls State park.

Lions and bears aside, this event had all the features conferences promise yet so seldom provide: leading experts sharing significant work and prompting lively conversations with their expert audience. Never have so many people whose work I know and admire been so accessible and, indeed, obliging. Like some platonic ideal of a conference, the group was intimate rather than anonymous, the setting was unique rather than generic, the tone friendly rather than fractious.

On the other hand, it certainly felt like a retreat: set in a place of quiet beauty, secluded from the everyday by distance (and limited cellular service), and offering an opportunity for reflection and renewal. Although a first-timer, I found myself welcomed like an old friend into a passionate community of like-minded colleagues, and affirmed in our shared effort to learn and teach. I remember an immediate sense of belonging, as though attending the reunion of the scattered building science family I never knew.

Since then, whenever I attempt to explain the elements that contributed to such an intellectually and personally fulfilling trip, everyone—family, colleagues, long-suffering sales clerks, perhaps you, gentle reader—asked some variation of the same thing, “was it a conference or a retreat?”

Yes!

— David Fannon

SOCIETY AFFAIRS

SBSE ELECTION YEAR

Odd years are election years for SBSE. This is an odd year both literally and figuratively. We are seeking strong candidates for two positions—President–Elect and Secretary/Treasurer. Please make nominations (or self-nominations) at the annual meeting or to <bhaglund@uidaho.edu>.

ANNUAL MEETING

The SBSE Annual Meeting will be held at noon on Tuesday, Oct 10, at Solar 2017 in Denver, CO. Room TBD. Be there or be square!

BOARD ACTIONS

The Board of Directors has drafted proposed by-law changes to split the Secretary/Treasurer position into Secretary and Treasurer positions. Georg Reichard has been named web master and will be redesigning the web site and adding a resource archive. Retreat attendees had a new web preview. Stay tuned! 🌟
Sixteen members and associates of iiSBE have collaborated to produce a paper called Plan B for rapid GHG reductions and resilience in the built environment. The document outlines the views of iiSBE (the International Initiative for a Sustainable Built Environment) on the likely effects of climate change and the range of reactions that may be expected. The document suggests that it may require some extreme climate-related events taking place in major cities of the developed world to cause governments to take resolute action. In such a case, there is a danger that the immediate needs of adaptation, repair, and reconstruction may cause vital mitigation activities to be deferred.

The iiSBE position paper provides a series of 17 suggested actions that could be launched immediately. The proposed measures are all aimed at adaptation to improve urban resilience and to ensure rapid reductions in greenhouse gas emissions. They are all generic, which means that application to any specific location would require adaptation and fine-tuning of the strategy.

—Nils Larsson, iiSBE

Thanks for posting the paper and a supporting Powerpoint on your website at <http://www.issbe.org>.—ed.

Events in Edinburgh

Tool Day at the Royal Botanic Garden Edinburgh

Held in the Patrick Geddes room of the John Hope Gateway, Tool Day was arguably the best ever! It was fully subscribed, the design team from Cullinan Studio (Roddy Langmuir) and Max Fordham (Colin Hamilton and Andrew McQuatt) were on hand to introduce the building, and five international teams spent the remainder of the day exploring building performance. Their group photo and end-of-the-day presentations are on view at <http://webpages.uidaho.edu/sbse/EdinburghToolDay/Participants.htm>.

—Bruce Haglund

PLEA 2017

Thanks to all for coming to PLEA 2017 and helping to make it such an amazing success.

Delegates: In all we had 683 registered, and with guests at the various parties, well over 700 people attended. I am sure you will agree that it was not only great fun but also very interesting.

Legacy Document: We will produce a Legacy document with the overviews provided by the 32 forum leaders in the paper sessions they oversaw with their thoughts on what was presented, what it indicated, and where their respective fields might be going.

Proceedings: We were rather overwhelmed by the sheer number of papers presented and Luisa Brotas has made an amazing job of pulling together the presented papers and those from the 105 non-attending authors. The final proceedings are at <https://plea2017.net/>.

Photos: We were very lucky to have a terrific photographer for the conference and Adrian Arbib has been kind enough to put up lots of wonderful photographs at <https://arbib.photoshelter.com/gallery/PLEA-2017/G0000KoibjefJC94>.

Best wishes and thanks again for your support and the great memories from PLEA 2017.

—Sue Roaf

SBSE was on hand at PLEA to give out Jeff Cook Scholarships to İrmak Turan, Sara Nita Tjahjana, Christian Martínez, Isabel Rivera, and José Puchal Salort, presented by Harvey Bryan and SBSE Scholarships to (l to r) Luz Escalante (Idaho), Michael Coleman (Idaho), and Carinne Gauvreau-Lemelin (Sherbrooke), presented by Alfredo Fernandez-Gonzales.
The SBSE 2017 Retreat at Silver Falls State Park near Sublimity, OR, featured a wide variety of teaching presentations, from beginning environmental concepts to advanced programming exercises and comprehensive competition projects. The presentations schedule allowed ample time for dialogue and informal discussion between sessions, as well as opportunities to enjoy the stunning setting of the park in both guided tours and informal excursions. Evenings were reserved for social activities, including a poetry slam and the famous omiyage (teaching material exchange). An afternoon field trip to Mount Angel Abbey offered the opportunity to visit the famed Aalto library, as well as a personal tour of the fully naturally ventilated and daylighted Mount Angel Abbey School with the project design team.

Following the retreat, an optional day of tours in Portland was offered and well attended. The activities included a building tour of the Edith Green–Wendell Wyatt federal building renovation, a tour of UO’s Portland studios and Energy Studies in Buildings Laboratory (ESBL). At ESBL, the researchers demonstrated several testing and simulation areas, and the lab’s wide array of tools and toys. The tours continued with an visit to the Natural Organic Recycling Machine, a large blackwater reclamation plant in the new Hassalo on Eighth mixed-use, infill development. The final stop was the offices of Lever Architecture for a lesson in tall timber CLT construction in the United States. Their office building serves as a demonstration of CLT construction and the upper floor of the building is devoted to a detailed, multimedia exhibit which provided opportunities to inspect full-scale exploded details, animations demonstrating construction sequences, and seismic behavior of the proposed building system for the 130-foot-tall Framework “tall timber” project.

We found the opportunity to socialize and share research and teaching experiences with fellow building science educators to be memorable, enjoyable, and energizing. We also value the unique opportunity to participate in “behind-the-scenes” building tours, often guided by design team members and facility staff.

I just attended my third consecutive SBSE retreat. My first was 2015 as an SBSE student scholarship recipient to present the outcomes from my student teaching appointment while at Arizona State. I was seeking feedback on adjustments and improvements that could be made to further my teaching skills, but immediately realized that the retreat was much more than merely a gathering of scholars to exchange knowledge. What stood out the most was the group’s passion about minimizing the effect of our built environment on our natural environment; their dedication to raising awareness in young professionals about the rewarding outcomes that can result from the art of design when properly understanding the science of the built environment; and their willingness to share teaching material and unconditionally help. All this and much more is why I continue to come back.

This year’s retreat allowed me to disconnect from my busy urban environment and connect with the quiet natural environment of Sublimity, OR. It helped me reflect on past teaching experiences and generate fresh ideas. Attendees were a blend of new and returning scholars as well as recipients of the Jeffery Cook Memorial Retreat Scholarship for international faculty—all helped me develop new relationships both locally and abroad. There were many unforgettable experiences such as the in-depth tours of selected buildings in Portland after the retreat, but the most memorable was the discussion over dinner with G. Z. (Charlie) Brown on my research on passive down-draft cooling towers. Despite it being the first time we met, his passion for the subject was indescribable and his feedback extremely valuable. Such interactions make the retreat special and keep it relevant.

This annual gathering has been a great platform, and tremendously helpful during my first years as an instructor of architecture at WSU while concurrently completing my PhD at ASU. I look forward to giving back to SBSE for many years to come. I encourage more young educators and practitioners who are enthusiastic about the intersection between the art and science of designing the built environment to participate in upcoming retreats and become members of SBSE and help it grow and thrive. I am positive that I will.

—Omar Al-Hassawi

RETRIEVAL KUDOS

Thank you so much for a great retreat. I have been talking about it to everyone who gets close to me....:-) and I had SO MUCH FUN by the bonfire with the poetry slam. It just demonstrates what a great group of people we all are.

—Pablo La Roche

Yes, it was fabulous! I second Pablo’s praise!

—Ulrike Passe

Thank you to all SBSE organizers for the Cook Scholarship and giving me the opportunity to meet you all. I have made lots of good friends.

—Yasir Naseem

I’d like to say a BIG THANK YOU to the entire team of organizers of the 2017 SBSE Retreat in Sublimity, OR, for some wonderful days of inspiration!

Those who didn’t make it this year missed a great week of discussions, presentations, and workshops across all domains (A/E/C) with a wonderful landscape as a backdrop paired with thermally delightful temperatures—just to be topped off with an inspiring post-retreat tour of Portland’s architecture!

—Georg Reichard
SBSE PEOPLE

*G. Z. “Charlie” Brown* was honored with a book signing event at the 2017 Retreat near Sublimity, OR.

Charlie Brown and Gail Brager at the retreat.


**DAYLIGHT WARS**

Alvar Aalto’s Mt. Angel Abbey Library (old) vs. Mt. Angel Abbey School (new).

CONFEREENCE NEWS

BEST PAPERS FROM PLEA 2016 LOS ANGELES

We are happy to announce a special issue (Volume 60, 2017 Issue 4) of the *Journal Architectural Science Review* titled, “Special Issue: Passive Low Energy Architecture Association (PLEA): Effects of Envelope & Materiality in the Built Environment,” guest edited by Pablo La Roche, Marc Schiler, and Paula Cadima, with a selection of the best papers from the PLEA 2016 Conference in Los Angeles.

The eight articles included in this special edition represent practical applications and unique approaches to the issues discussed in the PLEA 2016 conference, organized under the theme of the special edition. The link to the special issue is [http://www.tandfonline.com/toc/tasr20/current?nav=tocList].

—Pablo La Roche

ARCC 2017 PROCEEDINGS

ARCC had a very successful conference June 14–17 in Salt Lake City at the University of Utah organized by Ryan E. Smith, Keith Diaz Moore, and Wei (Windy) Zhao.

The final version of the proceedings, *Architecture of Complexity: Design, Systems, Society, and Environment*, is posted to the conference web site, available for download as a PDF. This download includes all published papers and a list of poster presenters from the conference. Further, there is a link for on-demand printing from Lulu [http://www.cap.utah.edu/arcc2017/#scheduleampproceedings].

—Leonard Bachman

PLEA 2018 HONG KONG

SMART & HEALTHY WITHIN 2-DEGREE LIMIT

10–12 December 2018, Hong Kong [http://www.plea2018.org]

We are pleased to inform you that an official launch of the PLEA 2018 Conference was announced in Edinburgh on 5 July 2017.

The urban and built environment represents both challenges and opportunities amidst climate change. As the world approaches the 2-Degree limit, living smart and healthy has become a priority in urban development. With the theme, “Smart and Healthy within the 2-degree Limit,” the conference strives to address the different facets of smart and healthy living. It is the aim of the conference to bring together designers, academics, researchers, students, and professionals in the building industry in the pursuit of a better and more sustainable urban and built environment. [Note: Extended abstracts can only be submitted online by 30 Nov 2017.—ed.]

As part of PLEA 2018, to encourage student participation, a “Student Design Colloquium” will be included as one of the conference sessions. It aims to invite imaginative ideas, projects, and action plans that best demonstrate an interpretation of the conference theme. Short-listed teams will obtain studentship to present their ideas at the conference. Registration for the Student Design Colloquium is open until 31 July 2018.

—Sze Wai
NEW BOOKS BY AND ABOUT SBSEERS

TRANSFORMING ARCHITECTURE: A FESTSCHRIFT IN HONOR OF G. Z. “CHARLIE” BROWN

The German term Festschrift translates as “festival of writing” and refers to a book dedicated to a highly respected academic and presented during his or her lifetime. A similar Latin term translates as “book of friends.” This book celebrates Charlie’s career and the ideas that he and those he inspired have produced. The chapters were submitted by friends.

Throughout his career, Charlie has modeled intense dedication to and relentless pursuit of his ideals. He has worked tirelessly to transform design—to innovate design technology, practice, and building operation—to combat climate change. The human-associated cause of climate change is corroborated by science, and the contribution attributed to buildings, and by extension to architects and engineers, is well documented. Charlie was among the first authors to describe the challenges that climate change places on architectural resiliency, and the evidence of its associated negative human health effects continues to grow. What hope do we have to reverse this trend? We have the hope afforded by Charlie’s ideas and work.

The direct link to order the book online is <https://ecommerce.uoregon.edu/order_form/esbl-book-purchase-transforming-architecture>. We have a Festschrift page up on the ESBL web site with all this information as well at <https://blogs.uoregon.edu/esbl/festschrift/>.

—Alen Mahic

PASSIVE HOUSE DETAILS: SOLUTIONS FOR HIGH-PERFORMANCE DESIGN

by Donald B. Corner, Jan C. Fillinger, Alison G. Kwok, Routledge 2018

Passive House Details introduces the concepts, principles, and design processes of building ultralow-energy buildings. The objective of this book is to provide design goals, research, analysis, systems, details, and inspiring images of some of the most energy-efficient, carbon-neutral, healthy, and satisfying buildings currently built in the region. Other topics included heat transfer, moisture management, performance targets, and climatic zones. Illustrated with more than 375 color images, the book is a visual catalog of construction details, materials, and systems drawn from projects contributed from forty firms. Fourteen in-depth case studies demonstrate the most energy-efficient systems for foundations, walls, floors, roofs, windows, doors, and more.

—Routledge book blurb


—Bruce Haglund

continued next column

CARBON-NEUTRAL ARCHITECTURAL DESIGN, SECOND EDITION

The second edition of Pablo LaRoche’s book carbon-neutral architectural design is now available from CRC Press. This expanded edition has more examples from research and practice, and includes chapters on climate change and carbon-neutral design, thermal comfort, climate analysis, solar geometry, envelope and energy flows, passive cooling and heating, and a new chapter on building simulation. In essence, it’s a book about principles and energy as a shaper of architecture that responds to climate and people. John Reynolds ends his foreword “this book is a challenge to go deeper, to better understand not only how to achieve truly high performance, but why.”

As Terri Boake said the other day, writing books is a labor of love, and there is a lot of love (and time) invested in this second edition. If you are an educator, please consider it for a class (from studio to ECS). If you are in practice or a student, please consider as a reference. The link to the book is <https://www.crcpress.com/Carbon-Neutral-Architectural-Design-Second-Edition/Roche/p/book/9781498714297>.

For a free inspection copy e-mail crctext-book@taylorandfrancis.com with the subject “Request for e-inspection copy.”

Also, if you have any comments, questions, or suggestions, please send them my way.

—Pablo La Roche
EVENTS

DIVA DAY 2017

We are excited to announce that registration for DIVA Day 2017 is now open at <http://solemma.net/Events.php>. DIVA Day is an annual symposium on the use of environmental analysis tools in design practice, research, and architectural education. This year, we will be hosted by the Center for the Built Environment at the University of California Berkeley. The event will take place on Friday, October 27. As in previous years, we will be holding a student competition.

We will be concentrating on the science, modeling, and design application of circadian/healthy lighting and introduce Solemma’s new related product, ALFA. Confirmed speakers include Steven Lockley from Harvard Medical School, Susan Ubbelohde from UC Berkeley, Mehlika Inanici from University of Washington, Dan Weissman from Lam Partners, Nathaniel Jones from Arup, and our own Jon Sargent.

We are looking forward to seeing you at DIVA Day.

—Alstan, Christoph, Jeff, Jon, and Timur

BUILDING SIMULATION 2017

Christoph, Jeff, Shreshth, and I played a new iteration of the DIVA Simulation Game at BS2017 during the “Teaching Energy Modeling as a Game” session on Aug 9. This year the first prize was a full DIVA4 license. The second and third best entries received a copy of the Daylighting Handbook.

If you want to know more about the DIVA Simulation Game or would like to play it in a class you teach, you can find more information such as an in-depth description, the game file set, and several video tutorials at <http://solemma.net/SimulationGame.html>.

—Timur Dogan

RACE TO ZERO 2018

The next U.S. Department of Energy Race to Zero Student Design Competition is April 21–22, 2018, at the National Renewable Energy Laboratory (NREL) in Golden, Colorado.

To prepare for the event, the new Race to Zero Competition Guide is available, and the team application website is open. Start your application to gain access to additional competition information and resources.

The competition challenges collegiate teams to apply sound building science principles to create cost-effective, market-ready designs that meet DOE’s requirements. The fifth annual Race to Zero 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.

Learn more about the Race to Zero competition and winning designs by visiting <https://energy.gov/eere/buildings/us-department-energy-race-zero-student-design-competition>.

—DOE EERE

JOB OPS

UNIVERSITY OF PENNSYLVANIA

Assistant Professor of Architecture with expertise in Energy, Ecology, and Design.

We seek qualified applicants for a full-time, tenure-track position at the rank of Assistant Professor for the 2018–19 academic year beginning July 1, 2018. This appointment is to the standing faculty, who are responsible for maintaining and extending the discipline of architecture through their teaching, scholarship, and participation in school governance.

The position is for candidates qualified to offer graduate-level instruction in architectural design, energy and environmental design, environmental technologies, climate and architecture, and/or building performance analysis. Candidates will be expected to teach required and elective courses as well as design studio. At Penn, instruction in architecture is offered at the undergraduate, professional, post-professional, and doctoral levels. Environmental topics have been integrated in different ways at each level, including an undergraduate dual-major in Environmental Studies, a masters-level certificate program in Ecological Architecture, and a post-professional MSd in Environmental Building Design. Teaching may occur at all levels, and there are established research units in the subject areas—the Center for Environmental Building and Design and the Kleinman Center for Energy Policy.

Applicants should describe their agendas for research and/or design practice in their area of specialization, and their experience in teaching. At a minimum, they should have a MArch or a PhD in the area of specialization. A review of applications will begin on Nov 1, 2017, and continue until the position is filled. Applicants should provide a letter of interest, curriculum vitae, a description of their teaching, research, and/or practice agenda, a portfolio of design work, samples of student work, publications, and the names and contact information for three references.

The full ad and application details can be found at <https://facultysearches provost.upenn.edu/postings/1191>. Questions? Mail <brahamw@design.upenn.edu>.

—Bill Braham
**RESEARCH NEWS**

**INNUMBER AND RESIDE**

SBSE friends from abroad—Rajat Gupta (Oxford Brookes, UK), Rajan Rawal (CEPT University, India), Katy Janda (University of Oxford, UK), and Paul Ruyssevelt (University College London, UK)—are pleased to announce they have recently been awarded two 4-year collaborative UK/India projects (iNUMBER and RESIDE) devoted to energy-demand reduction in the built environment in India. Both projects are jointly funded through the Indian Department of Science and Technology, the Research Councils UK, and the Newton Bhabha Fund.

**iNUMBER** engages with Indian municipalities and local partners to develop a data-driven intelligent urban model for built environment energy research and municipal planning. For further information contact Rajan Rawal <rajanrawal@cept.ac.in>, Katy Janda <katy.janda@ouce.ox.ac.uk>, or Paul Ruyssevelt <p.ruyssevelt@ucl.ac.uk>.

**RESIDE** focusses on residential building energy-demand reduction in India using large-scale monitoring, modelling and community energy planning approaches. For further information contact Rajat Gupta <rgupta@brookes.ac.uk>.

—Katy Janda

**CALL FOR RESEARCH PAPERS**

*Hindawi Advances in Civil Engineering Journal* Special Issue: New and Advanced Materials and Technologies in Ultralow-Energy Buildings. The call for papers for this special issue is posted on the journal’s website at <http://www.hindawi.com/journals/ACE/si/343525/cfp/>. I encourage you and your students to submit! The lead Guest Editor is Geun Y. Yun from Kyung Hee University who was a visiting scholar in the UOregon Department of Architecture 2015–16.

Potential topics include, but are not limited to, the following:

- New and advanced materials and technologies for the ultralow-energy building
- Integration of new materials and technologies into the ultralow-energy building
- Composites and materials for superinsulation and high-performance windows
- New challenges in high-performance windows and HVAC systems
- Advances in materials and technologies in daylighting and electrical lighting
- Energy and environmental performances of the ultralow-energy building
- Recent achievements in the design and performance evaluation of the ultralow-energy building
- New findings on occupant comfort and energy-performance modelling


—Alison Kwok

**EQUIPMENT REDUX!**

**USC**

Our students helped rebuild and refurbish the small shake-table (above) and load table (below) that we use for teaching. Goetz Schierle built these two several decades ago. We use an ElectroSeis and amplifier for the shake table. Former student Sandra Brown Novales created a computer interface as her thesis project, so now we can use a specific seismic event signature for the lateral load.

—Doug Noble

**SBSE RETREAT 2018—CYCLES AT HONEY CREEK RESORT STATE PARK (IOWA)**

Next year our retreat, “Cycles,” will be at a lake in Iowa, July 15-18, 2018. Stay tuned for details!
INAUGURAL POETRY SLAM

Georg Reichard has an rapt audience as he slams poetry at a full moon and an IPA.

Our first retreat poetry slam around the campfire was both well-received and fiercely executed! Is it the next SBSE tradition? Or just a fad? Bring your bon mots next summer! Stay tuned.

—Bruce Haglund

GOOD NEWS FOR USC BUILDING SCIENCE

There are 24 new incoming students to the Master of Building Science program at the University of Southern California (pictured above). The students come from eight different countries. The number of applications last year was about double the average year. [I’m wondering if this increased enrollment is widespread among SBSEers’ schools.—ed. Or is it more a reflection of greater international commitment to sustainability and building science?—ed’s ed.] 🌱

—Doug Noble

SBSE CALENDAR

2017
Oct 5–15 Solar Decathlon/Denver, CO, USA
Oct 9–12 ASES Solar Conference/Denver, CO, USA
Oct 27 DIVA Day/Berkeley, CA, USA
Nov 1–4 PLDC2017/Paris, FRANCE

2018
Mar 12–15 Cold Climate HVAC 2018/Kiruna, SWEDEN
Apr 21–22 Race to Zero 2018/Golden, CO, USA
May 16–19 ARCC-EAAE 2018/Philadelphia, PA, USA
Jul 15–18 SBSE Retreat 2018/Walnut City, IA, USA
Dec 10–12 PLEA 2018/Hong Kong, CHINA 🌱

WINTER ISSUE SUBMITTAL DEADLINE—DECEMBER 1

SBSE NEWS
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TO: SBSE MEMBERS & FRIENDS
PLANET-WIDE

* Marc Schiler sits in an office alcove à la a member of the Scottish Parliament.