

Ceiling details of the entry lobbies of the Guardian Building (1929, Wirt C. Rowland, of the Smith, Hinchman & Grylls) and McGregor Memorial Conference Center at Wayne State University (1958, Minoru Yamasaki) await SBSEers in Detroit.

CALL FOR PARTICIPATION—SBSE RETREAT '20

PROPOSAL DEADLINE EXTENDED TO 15 APR!

SBSE 2020 Retreat, NETWORKS, 3–6 Aug with optional tour 6 Aug

The SBSE Board and the Retreat Planning Committee are extending the timeline for Retreat session proposals to 15 Apr. The committee has designed a broad range of opportunities to share ideas in the exciting field of building science, including the fast-paced Pecha Kucha research share, traditional research presentations, interactive teaching workshops, and lively round table discussions on current topics. We encourage all interested persons to submit a proposal. As a clarification, you are welcome to submit more than one proposal: for example, a Pecha Kucha share AND a workshop or roundtable discussion. Please see the conference web site for full details regarding session proposals at <<https://www.sbse.org/retreats/sbse-retreat-2020>>.

The urgent call to address climate change through the design of the built environment is at the core of contemporary building science education—using fewer and more ethical resources, designing for more extreme climate conditions, bringing more equitable solutions to spaces in the developing world and impoverished portions of the developed world. As architects and engineers, the boundaries of the site constrains this thinking. The theme for the SBSE 2020 Retreat, NETWORKS, will invite discussion that transcends these barriers and consider neighborhoods, districts, villages, cities, and regions beyond the limits of the parcel line.

Detroit, MI has a long history of technical and cultural innovation—beginning as a French farming and trade settlement to become an industrial powerhouse, the “arsenal of democracy.” Detroit has been the cradle of jazz, Motown, and techno music. Present-day Detroit is one of the largest African-American cities in the United States, with the largest Middle

• continued page 3



Two Detroit culinary originals: coney dogs from American Coney Island [geography check?–ed.] in downtown Detroit, accompanied by Vernor's ginger soda.

photos: James Leach

LETTERS TO THE EDITOR

GETTING TO
zero
FORUM

Thank you for joining us as a Community Partner for the 2019 Getting to Zero Forum! Our Community Partners are invaluable for helping get the word out about the event. We are excitedly preparing for the next Forum, 15–17 Mar 2021, in New York City and would like to invite SBSE to join us once again as a Community Partner. See <http://gettingtozeroforum.org>.

—Leada Fuller–Marashi, NBI

SBSE is happy to serve again as a Community Partner!—ed.



If you haven't checked out the AIA's *Guides for Equitable Practice*, be sure you do. Valuable information for your firm and for students going out into the business world. 🙌

—Nissa Dahlin–Brown, AIA

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FAREWELL TO G. Z. "CHARLIE" BROWN



In 1986 a gaggle of SBSEers gathered for the first retreat at Heceta Head, OR, which was orchestrated by Charlie Brown (upper left). Recognize anyone else?

In the early 1980s Charlie thought it might be helpful if university teachers of building technology formed a support group for sharing and discussing teaching techniques and materials. What started out as the West Coast ECS Club became the internationally inclusive Society of Building Science Educators, which was indeed a brilliant idea. Since 1986 we've met annually to share at our retreats [see <https://www.sbse.org/retreats/sbse-retreat-1986>] and offer resources on our web site. It's unique, and it's sustainable.

Charlie was my first graduate studio instructor in fall 1979. We've been friends and colleagues ever since. He's had a profound influence on my life and on the world. After a long struggle with Parkinson's he passed away peacefully early Saturday morning 2 Apr 2020, at his home in Eugene, OR, at the too young age of 77 years.

You can find out much more about Charlie and the heaps of praise offered at <https://esbl.uoregon.edu/2020/02/20/2020-02-15-remembering-gz-brown/> and you may offer your comments, remembrances, or tributes on the blog.

We salute Charlie with this issue's stamp. 🙌

—Bruce Haglund



Charlie at ARCC in Montreal in 2009.

REYNOLDS SYMPOSIUM 2021—ALTO:LIGHT

25–26 SEP 2020, PORTLAND AND MT. ANGEL ABBEY, OR

The year 2020 marks the 50th anniversary of the completion of Alvar Aalto's Library at Mount Angel Abbey. The library has recently undergone repairs of its skylight and is once again in pristine condition. To celebrate this milestone and to honor the beautiful and impactful ways that Aalto made daylighting an integral part of his designs, join us at the 2020 Reynolds Symposium: Aalto:Light, in Portland and at the library in Mt. Angel, OR, 25–26 Sep 2020.

The Finnish architect, Alvar Aalto, has been named “a master of light.” His architecture is among the most well-regarded of the mid-twentieth century. While the majority of his architecture is in Finland and northern Europe, two of his buildings are located in the United States, in Cambridge, MA, at MIT and in Oregon at Mt. Angel Abbey. In his career, Aalto designed 10 libraries, spanning from Viipuri Library, in Vyborg, Russia, in 1935 to Mt. Angel Library in 1970. Arguably, Mt. Angel Library is his best, and it is certainly his most sophisticated in terms of its luminous design.

The Symposium will launch on Friday (25 Sep 2020) with an evening keynote and reception in Portland and run the full day on Saturday (26 Sep 2020) at the Mount Angel Abbey Library. Featured speakers:

Juhani Pallasmaa

One of Finland's foremost architects and architectural theorists. He has taught at numerous universities in Finland and in the United States. He has authored two dozen books and over 300 essays in 30 languages. He has frequently written on and lectured about the work of Alvar Aalto.

Tommi Lindh

The managing director of the Alvar Aalto Foundation. Prior to this he served as architect and keeper of antiquities at the Finnish National Board of Antiquities from 1998 to 2010. He has also had his own architectural practice.

Sirkkaliisa and Jari Jetsonen

Collaborators on numerous books and exhibitions on the architecture of Aalto. Their most recent book, *Alvar Aalto Libraries*, published in 2018 covers all of Aalto's libraries and other book spaces such as the Academic Bookstore in Helsinki. Sirkkaliisa is an architect who teaches at Aalto University and at Washington University. She works at the Finnish National Board of Antiquities. Jari is a photographer specializing in architectural works.

William C. Miller

An internationally published scholar on the architecture of Aalto and other Nordic architects. He had a forty-plus year career as an architect and educator at three institutions—the University of Arizona, Kansas State University, and the University of Utah. Bill Miller is a graduate of the University of Oregon.

Barbara Erwine

An architectural consultant, educator, researcher, and writer. After a mid-career switch to architecture, her design work celebrates the integration of passive design strategies with architectural place-making. She is the author of *Creating Sensory Spaces: the Architecture of the Invisible*.



photo: Virginia Cartwright

RETREAT [CONT. FROM PG 1]

Eastern population of any city in the United States. Detroit is in a process of reimagining itself, examining policies to deal with its circumstance as a “shrinking city,” pioneering new ways to live in a city that mixes the best of dense urban fabric with open zones of green and blue infrastructure that can provide opportunities for local productivity and recreation. SBSE and the University of Detroit Mercy School of Architecture invite you to visit this unique, energizing city. Hosted at the peaceful, wooded Manresa Jesuit Retreat Center immediately north of Detroit, the retreat will include visits to the Williams Natatorium (Williams/Tsien) at Cranbrook, Frank Lloyd Wright's Affleck House, and the Kresge Foundation Headquarters (a LEED Platinum project).

An optional tour of buildings and visits to groups working on larger-scale design initiatives in the city of Detroit will follow on 6 Aug and will include visits to the Keep Growing Detroit Farms, Eastern Market Corporation, Dequindre Cut Bicycling Greenway, Detroit Future City Implementation Offices, and a Ford Rouge Factory Tour. 🖐

—Kris Nelson

AALTO:LIGHT [CONT.]

Kent Duffy

An award-winning architect who is highly regarded for innovations in sustainable design. A consulting principal at SRG Partnership in Portland, OR, he received a BArch from University of Oregon. He was the project lead on the design of Annunciation Hall at Mt. Angel Abbey.

Victoria Ertelt

The Library Administrator at Mt. Angel Abbey Library where she has worked since 1998.

Abbot Jeremy Driscoll

The 12th Abbot of Mount Angel Abbey. He has taught theology at the seminary there and in Rome. He is the author of a number of books on theology. He has been a long-time user of the library at Mount Angel, having been there during its construction. 🖐

—Virginia Cartwright

CALLS FOR ABSTRACTS

2020 AIA /ACSA INTERSECTIONS RESEARCH CONFERENCE

Time is running out to submit your research project abstract to the first AIA and ACSA for the Intersections Research Conference on Carbon—1 Apr 2020, **Extended Deadline** <<http://bit.ly/Research-Conf-2020>>.

Following on the success of the AIA's Intersections Symposium and the AIA call for Climate Action, the ACSA and AIA are collaborating again to bring you more. We are looking for quality research on the topic of carbon—short-term and long-term strategies for architects and those educating future architects to address this critical problem of climate. Corey Griffin, Penn State University and Erica Cochran Hameen, Carnegie Mellon University, will co-chair the conference. Papers will be blind peer-reviewed and audience engagement will be encouraged.

Submit your research or plan to attend and bring your curiosity! Mark your calendars:

- Abstract submission deadline: 1 Apr 2020
- AIA /ACSA Research Conference: 1–3 Oct 2020

Unfortunately we've canceled our original Intersections Symposium at AIA Conference on Architecture! There would have been three 90-minute sessions focused on Climate Action! Our co-chairs, Phoebe Crisman, UVA and Kyle Konis, USC, had organized three unique sessions featuring research for using now and in the future! Intersections Symposium sessions were scheduled for Saturday, 16 May, in Los Angeles. Learn more at <<https://conferenceonarchitecture.com/>>. 🖐

—Nissa Dahlin–Brown

ECO-HOUSE TURNS 25



photo: Bruce Haglund

Sue Roaf explaining the workings of her Eco-House to students from the University of Idaho.

POLAR LODGE 2020

DID IT SURVIVE THE ANTARCTICA WINTER?

Feb 1, 2020: The Zodiac slowed as we neared the beach. We waded up the shore, breath held, to see the state of the tent we had left a year before at the foot of Collins Glacier on King George Island, Antarctica. Amazingly it appeared to be just as we left it—inside and out!



That look was deceptive, as we did find some real problems with the tent, small wind rips in the external Dyneema on the most exposed sides, water had collected between the two ground sheets (condensation, or wind driven water ingress?) that then dampened some of the trellis wall and rafter members. We experimented with the flue, which worked well heating the interior and the air between the inner and outer ORV8 skins when the heater was on, and learned lots about mending tents.

We have now identified a range of 'Hot Topics' for Extreme Design in very cold climates, some of which we will share at PLEA 2020 in A Coruña, Spain, in Sep 2020. The key learning output is that Extreme Design is not about **products**, but about the **process** of design evolution in unfamiliar conditions. Read about our work in last year's findings in the proceedings at <<http://www.confortattheextremes.com>>.

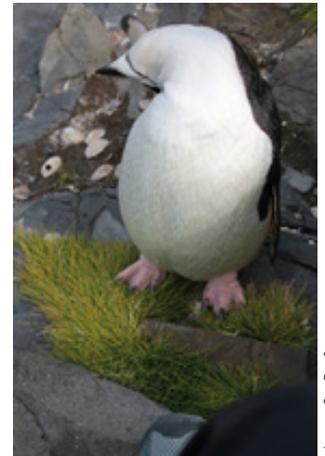
We are on journey now, thinking and learning about the types of Extreme Design we will need to help us 'Bounce Forwards' with safer buildings for very different future climates.



In 2020 gone was the pristine ice-sheet of 2019, now scarred by running rivers of melt water. Gone were the penguins, off to colder climes, except one who took a shine to me (see him preening himself next to my shoe!).

On 7 Feb the temperature soared locally to 18.3°C. By 9 Feb it had reached a record breaking 20.75°C at a Brazilian base. Welcome to the extreme climates of the 21st Century— time for us to explore more Extreme Design to survive in them.

Don't forget our Student Desert Tent Competition site opens for downloaded entries on 1 May with prizes of £2,000, £1,000, and £500. See <<http://www.extremelodge.org/home/competition/>>. What hot topics will arise from the very high temperature tents we wonder? Join us on the journey to find out! 🖐



photos: Sue Roaf

—Sue Roaf

CONFERENCE CALL

2020 IES ANNUAL CONFERENCE

New Orleans, LA, Aug 6–8, 2020, Hilton New Orleans Riverside



The theme for the 2020 IES Annual Conference is Hindsight/Insight/Foresight. This expansive theme explores our relationship to light, both historically and looking toward the future. The objective of the conference is to provide educational sessions and experiences relevant to the audience of lighting professionals, academics, and other related design disciplines. This year's theme is intended to spark the conversation about how light is used, how light affects the user, and how we see that relationship evolving as we move forward. In addition to speaker presentations, the Conference program will also consist of technical papers and posters on a wide range of lighting-related topics.

Technical Papers & Presentations (30 minutes, including 5–8 minutes for questions):

There are two classes of presentations:

- **Peer-Reviewed Conference Papers** (3,000 words or less, with a maximum of 10 pages, submitted in the IES Conference paper format)
- **Technical Presentations** (refereed by 3-page extended abstract (maximum 800 words). Authors are encouraged to include figures in their abstract to convey information on the details and/or findings that will be covered in the paper. No formal paper will be required for technical presentations accepted under this category.

Acceptance decisions will be based on the potential technical quality, originality, impact, and relevance to the conference audience. Papers recently published that would benefit from dissemination to conference attendees through a formal conference presentation or poster are also encouraged. Only the Peer-Reviewed Conference Papers will appear in the conference proceedings.

Deadline for Submission—3 May 2020. Submitters will be notified regarding the status of their entry by late May 2020.

Posters (coupled with the manufacturer tabletop session):

Posters will be evaluated for inclusion based on submission of 3-page extended abstract (maximum 800 words). Authors are encouraged to include figures in their abstract to convey information on the details and/or findings that will be covered in the poster.

Submitters will be notified regarding the status of their entry by mid-Jun 2020.

Deadline for Submission—24 May 2020 🖐️

—Zoe Milgram



photo: Bruce Haglund

The ruins of Fountains Abbey near Ripon, UK. Thanks Henry VIII.

NEW GRAD JOB OP

I work as the Sustainability Director at Lake|Flato as my “day job.” We have a position open on the sustainability team, and it would be perfect for recent graduates from your programs. Please include this job posting in the *SBSE News*. Hopefully your network knows of some good candidates to send our way <<https://www.lakeflato.com/contact/careers>>. 🖐️

—Heather Holdridge

CLIMATE STUDIO DEBUTS



graphic: Solemma

We are excited to introduce *ClimateStudio*, our new daylighting and building energy modeling software. *ClimateStudio* is the result of Solemma’s 10 years of experience developing *DIVA-for-Rhino* and an intense, year-long collaboration with 14 architecture firms, engineering firms, and façade manufacturers. It features ground-breaking simulation speeds, an intuitive interface in *Rhino3d* and *Grasshopper*, and an extensive library of real-world materials and templates, drawn from validated sources such as the U.S. Department of Energy, ASHRAE, and the International Glazing Database. *ClimateStudio* automates reporting for LEEDv4 daylighting credits and other popular standards, and links to the AIA 2030 Design Data Exchange, for simplified tracking of project and firmwide goals. With *ClimateStudio*, quickly testing and archiving design ideas is easier than ever before. Further info at <<https://solemma.com/ClimateStudio.html>>. 🖐️

—The Solemma Team

SBSE PEOPLE

✦ **Liliana Beltran** has been selected as a 2020/2021 Fulbright Scholar to conduct research in Japan with the Department of Architecture and Urban Design at Ritsumeikan University. Her second Fulbright award.

She has also received a T3: Texas A&M Triads for Transformation grant for research on Human-Centric Daylighting in collaboration with TAMU's Computer Science Department.



photo: ACSA web site

✦ **Karen Kensek** was named an ACSA Distinguished Professor. See more at <https://www.acsa-arch.org/awards_archives/2020-architectural-education-award-winners/>.

✦ **Chris Meek** has been awarded FAIA status under Object Two—Education, research, literature, or practice (with the option of a subcategory of management or technical advancement).

✦ **Ulrike Passe** was invited by Edward Ng, PLEA president, to join the PLEA Board of Directors by unanimous vote for the next six years, and she accepted. Thus, SBSE will have a direct connection to PLEA. ✎



Photo: James Leach

The Exploded Model T at The Henry Ford in Dearborne, MI.

RESEARCH AT IOWA STATE

Dense urban areas use more energy, water, and food resources than they can produce, forcing them to rely on external sources. But a team of researchers is imagining bold new ways to make Midwestern cities more self-reliant. The Sustainable Cities Research Team recently received a \$2.5 million grant from the National Science Foundation to develop a framework for analysis of food, energy, and water systems for greater Des Moines, which includes the city and the surrounding six-county area, and to formulate scenarios that could result in a more sustainable city. The team includes scientists from a wide range of disciplines at Iowa State University, the University of Northern Iowa, and University of Texas at Arlington.

The group intends for its results to inform decisions about food production, energy use, environmental outcomes, and related policies that would apply to a large number of cities in rain-fed climates similar to Des Moines. Their innovative approach could help cities conserve building and transportation energy, reduce environmental impacts, and improve city sustainability.

“Urban areas use a disproportionate amount of resources that have to come from far away, and they also tend to produce a disproportionate amount of waste,” said Jan Thompson, Morrill Professor of natural resource ecology and management and principal investigator for the grant. “Our team is going to look at ways we can make food, energy and water systems more sustainable.”

‘Holistic’ approach to urban sustainability

The project will compile and analyze large quantities of data on current and future climate conditions, food production, energy use, and associated environmental impacts in Des Moines and the surrounding area. An effort led by Nick Schwab, an associate professor of psychology at Northern Iowa, will conduct focus groups and surveys to gather input from a wide range of additional stakeholders, including consumers, farmers and business owners who produce, distribute, and sell food in the area. The team is also working with a group of community leaders and members of local organizations who will serve as an advisory board to the investigators.

Team member Baskar Ganapathysubramanian, professor of mechanical engineering at Iowa State, will lead efforts to run complex computer simulations for scenarios in which more food is produced locally to forecast environmental, nutritional, and economic impacts for each scenario. The project will take a “holistic” approach to urban sustainability that will “account for a range of systems and how they interact with one another,” said Ulrike Passe, an associate professor of architecture and project coordinator for the research team. “A city has complex problems with many factors and sources, so we need complex models to provide some clarity,” Passe said. “These systems are all connected.”

Given current and future urban climate conditions/scenarios researchers will analyze the potential for increased urban agriculture, community gardens, and other green space within city limits. Passe said such approaches can contribute to urban food security as well as improve energy efficiency in urban buildings. Strategically placed plants near buildings can provide shade and help dissipate heat, thus reducing energy use for cooling and at the same time diminishing the severity of flooding in the area. “What if we could turn vacant lots into gardens and orchards?” Passe asked.

The research team will identify opportunities and challenges related to making Des Moines and similarly sized cities in rain-fed Midwestern landscapes more sustainable. For instance, asking farmers what they would need to consider for producing locally sourced fruits, vegetables, and meat will likely uncover potential concerns about equipment purchases and profitable marketing opportunities, said Matt Liebman, Henry A. Wallace Endowed Chair for Sustainable Agriculture and professor of agronomy. All those considerations will factor into the team’s work, Liebman said. ✎



photo: Jan Thompson

The team will analyze a range of ways more food could be produced in and around Des Moines, including in community gardens.

REGENERATIVE UPGRADE

photo: Mark Maryanovich



The Lyle Center for Regenerative Studies—CSU system’s first carbon-neutral facility—is the recipient of a multi-million dollar grant that will be used towards much-needed upgrades and improvements. This funding will help to maintain a design that is in accordance with the Center’s original mission while updating it to respond to our vision for the future.

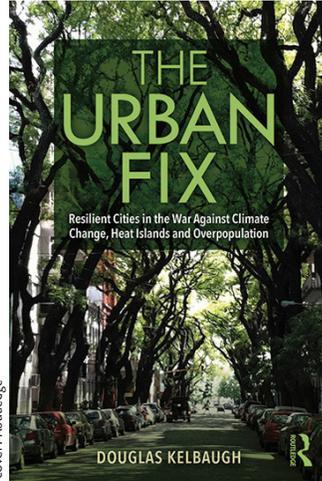
More at <http://env.cpp.edu/rs/news/chancellor%E2%80%99s-office-awards-lyle-center-more-5m>. 🖱

—Pablo LaRoche

SELF-ISOLATING? ARE YOU THE URBAN FIX?

THE URBAN FIX: RESILIENT CITIES IN THE WAR AGAINST CLIMATE CHANGE, HEAT ISLANDS AND OVERPOPULATION,

by Douglas Kelbaugh. Routledge, 334 pages, \$39.95.



In *The Urban Fix*, Kelbaugh argues that cities are a front-line in the “war” against climate change, and need to be reoriented through urban planning and design. In doing so, he reviews current research on climate change—a large inventory of frightening probabilities that will be familiar to many readers. Kelbaugh then passes over scores of strategies that would provide respite from the hot days ahead. The book’s sprawling attempts—each well-intentioned if inadequate—provide one indication of the immense complexity of the problems we face.

It’s hard to fix the problem when the problem is itself so fixed. 🖱

—Aleksandr Bierig

SBSE CALENDAR [COVID-19 RESTRICTIONS MAY CAUSE CANCELLATIONS]

2020

Apr 6–9	NIBS Bldg Innovation 2020/Arlington, VA, USA
Apr 16–19	Windsor Conf on Thermal Comfort/Windsor, UK
May 14–16	AIA/ACSA Symposium/Los Angeles, CA, USA
Jun 10–13	EAAE–ARCC Intl Conf/Bari, ITALY
Jun 23–26	ASES Solar 20/20/Washington, DC, USA
Aug 3–6	SBSE Retreat/Bloomfield Hills, MI, USA
Aug 6–8	IES Annual Conf/New Orleans, LA, USA
Aug 12–14	BPAC & SimBuild/Chicago, IL, USA
Sep 1–3	PLEA2020/A Coruña, SPAIN
Sep 25–26	Reynolds Symp 2020/Portland, OR, USA
Oct 1–3	AIA/ACSA Intersections Conf/Philadelphia, PA, USA
Oct 8–10	PLDC2020/New York, NY, USA

2021

Apr 6–9	Getting to Zero Forum 2021/New York, NY, USA 🖱
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SUMMER ISSUE SUBMITTAL DEADLINE—JUNE 1



SBSE NEWS
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TO: SBSE MEMBERS & FRIENDS
PLANET-WIDE



G Z B M A I L *

* G.Z. “Charlie” Brown co-founded SBSE with Ed Arens in 1985.