SOCIETY OF BUILDING SCIENCE EDUCATORS

photo: Clothilde Pierson

photo: Shristi Tamrakar

Impressions of the 2024 SBSE Retreat from inside Biosphere 2.

2024 RETREAT: 3 PERSPECTIVES

[It seems like last summer's retreat happened long ago. Nonetheless, I've invited three attendees to give you impressions of their takes on the event—as a newbie, a student scholar, and a veteran of many retreats.–ed.]

As a first timer at the SBSE Retreat, I honestly had no idea what to expect. Would it be a stiff, academic affair where the coffee is strong, but the conversations equally intense? Or maybe one of those "everyone already knows each other" situations where I'd be awkwardly hovering around the snack table? But no, the SBSE Retreat was nothing like that.

Instead, it was a small, welcoming group of passionate building science educators who were just as excited to meet new people as I was. Sure, most of the attendees were seasoned SBSE members who seemed to have an unspoken "inside track" on everything, but there was a genuine spirit of camaraderie, and the smaller group made it so easy to join the conversation. The cozy vibe made discussions feel much more relaxed compared to the usual mega-conference setting—and I could actually remember everyone's name by the end of the retreat (a personal victory!)

One of the best parts of the retreat was the sheer volume of new ideas I walked away with. Whether it was from the insightful presentations or the hands-on workshops, my mind was buzzing with ways to improve my courses. The highlight for me was David Fannon's session on how to incorporate AI into building science classes in fun, creative ways.

Then there were the charming traditions that made the retreat feel extra special—like the omiyage (small gift exchange). It was a wonderful way to get to know everyone a little better and trade building science-themed (or not) trinkets (shout out to my new favorite knitted coaster). And I can't forget the building science poem competition, where I might have penned a few questionable rhymes but definitely walked away with a deeper appreciation for poetry… and building science!

Now, let's talk about the location. Biosphere 2, in the heart of the Arizona desert, is unlike any place I've ever been. Not only was it a surreal, science fiction-like setting for our retreat, but we also had the chance to learn about its unique ecosystem and fascinating history. And while the daytime tour was cool, the nighttime tour was a very unique experience—the trip up to the library tower after dark, where we could see the wildfires glowing on the horizon, was an image that will stay with me for quite some time.

In short, the SBSE Retreat was an unforgettable experience that I'd recommend to anyone interested in building science. Whether you're a first timer or a returnee, the conversations, traditions, and inspiring ideas will make it well worth the trip. Thank you SBSE 2024 Retreat friends!

—Clothilde Pierson

Arriving late the first evening, I joined two other student scholars for a carpool, giving us time to connect even before meeting the professionals at the SBSE retreat. Touring Biosphere 2 was surreal—the intricate biomes and self-sustaining systems under glass felt otherworldly. Learning people had once lived inside, isolated for two years, was extraordinary and emphasized the vision behind this vast, earth-like experiment.

The retreat brought together an impressive group. It was wonderful reconnecting with Sue Roaf, and meeting inspiring professionals like Harvard's Nea Maloo, Omar and David from

• *continued page 2*

LETTERS TO THE EDITOR

Biosphere2 commissioning process: From a set of notes displayed in the Visitors Center lobby—dated 13 Jan 1992.... *A problem with valve number six of the desalinator skid. ... NOTE: Valve number six is actually valve number seven and the controller behaves 100% opposite from what it is designed to do*!

—Walter Grondzik, Professor Emeritus

Walter loves the secrets revealed by commissioning and building analysis. This tidbit is from the Retreat at Biosphere 2.–ed.

I had planned to contribute to the winter *News*, but had a flurry of things and the earlier call for items had gone to my spam. I seem to be caught in a war between Google and Apple, I'm sure the result of using an old computer. Time for a new laptop! I'll put it on my calendar for March.

—Fred Tepfer, Oregon

Oh dear, I'm spam!? A cautionary tale? The dog ate my submission? I hope your fans can wait another quarter for your next installment.–ed.

Here's an update on BEEnow. We have completed the platform and are working to certify BSU and CUA. It is being set up on AWS and may be live for all very soon.

—Drake A Wauters, BEEnow

That's good news! Slow but sure.–ed.

SBSE News is published quarterly by the Society of Building Science Educators, a not-for-profit corporation. Submit material for publication before the first of March, June, September, or December to Bruce Haglund, Editor; Architecture Program; University of Idaho; 875 Perimeter Drive MS 2451; Moscow, ID 83844–2451; tel 208.885.5740; e-mail <bhaglund@uidaho.edu>. Direct membership and mailing list inquiries to David Fannon, Treasurer; Northeastern University, 102 Ryder Hall, 360 Huntington Ave, Boston, MA 02115; e-mail <d.fannon@northeastern.edu>. To join our list server or to manage your account go to <https://www.sbse.org/membership>. For full membership info and more, visit our home page <http://www.sbse.org>.

RETREAT: 3 PERSPECTIVES [CONT. FROM PAGE 1]

WSU, and Jonathan Bean with his student, Alyssa Fink. In a close-knit group of just 17, it was easy to exchange ideas and experiences, and the intimate size made discussions dynamic and collaborative. Jonathan kept us on a productive schedule with breakout groups where we brainstormed research ideas together, an invaluable exercise in team building.

Sessions and guest speakers expanded my perspective on educational strategies from diverse cultural angles, with participants from India, Cambodia, and Brazil sharing insights. Talks on Biosphere 2's mathematics and climate challenges enriched the experience. We saw wildlife in its natural habitat—roadrunners, lizards, birds, and even rattlesnakes—which made the setting even more wild. Luckily, we were able to witness a summer storm in the desert landscape.

The retreat was full- day events with evenings filled with poetry slam and exchanging Omiyage-thoughtful tokens that gave the retreat a sense of warmth and memories of all participants. Overall, the SBSE retreat was a perfectly organized, deeply engaging experience, blending stimulating discussions, scenic beauty, and memorable interactions.

—Shristi Tamrakar

It was a pleasure to participate in this summer's SBSE Retreat at Biosphere 2 near Oracle, AZ. This was my second retreat at this intriguing research facility—the first in June 2014. The programmed meeting topics are not discussed intentionally—but they were excellent. Kudos to Jonathan Bean for trying valiantly to categorize what we as building scientists do daily into a communications paradigm so that people will hear us

The weather: it was hot in 2014, and it was hot in 2024. Three days in a location are not enough time to allow comment on climate. Comfort as a perception, however, is another thing. Numerous attendees sat outside—in the evenings. Yes, it was hot, but it was generally dry. For a Florida resident, low humidity was a gift, and my comfort perception was guardedly positive. Maybe it **is** the humidity.

Dangers: there is a wry tradition of warning retreaters of dangerous things they may encounter at the retreat venue. We were warned about dangerous fauna in 2014—mainly wandering javelinas and slithering rattlers. I got through that retreat without threat of bodily harm. Similar cautions surfaced in 2024 and rightly so. I encountered a clan of javelinas on a solo morning walk; the jury is still out on the personalities of these grazers. Many of the participants encountered a rattlesnake chilling in the outdoor eating area; wonderfully camouflaged in the mulch. Crazy ants also made an appearance, as did a nighttime wildfire on a somewhat distant ridge.

Mission: the original mission of Biosphere 2 (as I understand it) was to test whether humans could survive when untethered to Earth and its many services. The current mission seems to be to test whether Earth can survive when tethered to humans. An example is intentionally increasing the CO2 concentration in the tropical biome to observe the effects on vegetation (no mention of javelinas). Talk about a take on "how buildings learn."—an interesting second act for Biosphere 2, and most appropriate for a building science retreat.

Back of house: participants at the 2024 Retreat were fortunate to get a nighttime tour of the back of the house equipment and systems that keep the public side of Biosphere 2 running. These included chillers, cooling towers (very efficient in the desert, but also very thirsty), fans, pumps, and emergency generators (with backup starters). It was also a thrill for an equipment nerd to once again see the "lung" (a huge, enclosed air volume and diaphragm) that equalizes internal and external air pressure for the domes (to keep them from exploding or imploding). Brilliant and practical building science.

Camaraderie: the abundant (but always inadequate) time to chat with old friends and new acquaintances is a constant at the retreats. True in 2014; still true in 2024. If you have not attended a retreat, you are missing out on a wonderful opportunity, especially in the post-worst-of-Covid world.

The future and the past: there were many new faces at the 2024 Retreat. This is great; it represents the future of SBSE. On the other side of the mirror, however, there was a dearth of older faces in 2024. Clearly SBSE and its membership evolve over time. Less clear is whether we will be able to tap into the expertise and experiences of SBSE members who are becoming less active before it is too late to do so. I humbly suggest, at a minimum, some sort of oral history program for SBSE. Maybe this could start as a series of monthly podcasts?

—Walter Grondzik

GAINING TEACHING EXPERIENCE ABROAD

A GUIDE FOR AMERICANS

I've been teaching building science in Cambodia for the past twelve years and am happy to share my story for those who might consider spending some time in the developing world as a way to gain teaching experience. I'm motivated by discussions at the SBSE Retreat 2024 in Tucson where I gratefully attended as a Cook Faculty Scholarship recipient.

While my path may seem self-directed, it was a series of opportunities that naturally unfolded. I first considered the Peace Corps because of its renowned immersive approach and language training. It's an excellent choice for those interested in a career in development, such as with the UN. I chose instead to select my own destination and focus on architecture. I secured a position in Laos with Sunlabob, a solar power company, promoting "green" buildings. From there I joined a team to develop a roadmap for energy efficiency policy in Cambodia. Consequently, I was invited to teach at several universities in Cambodia, where I've been involved in teaching design studio, building science (a course I developed), and occasionally other subjects. I even had the opportunity to serve as department head for a time which allowed me to write curriculum.

photo: *Robert Limanek*

3rd year design studio, Paragon Int'l Univ., Phnom Penh.

Teaching in Cambodia presents unique challenges and rewards. Because schools often lack resources, your expertise is so valued. Your contributions are likely to surpass the local standards, as many local teachers may not have advanced training or may view teaching as a secondary income source. School management typically focuses on student satisfaction rather than the specifics of your teaching methods, which can simplify your experience. While navigating school politics and curriculum proposals can be challenging, I have chosen to focus on delivering quality teaching within my courses. Teaching material in building science is primarily oriented to temperate climates, so must be inverted or redirected in emphasis. The language of instruction is English and the students are cooperative and have laptops. There is no tenure or benefits (so staying 12 years is perhaps not a smart idea). The salary is low, but so is the cost of living.

Another path to teaching abroad is the Fulbright Program. This option is ideal if you need financial support beyond a local salary and are prepared to navigate the associated bureaucracy. It seems key to a successful application to establish connections with a potential school in your target country before applying. Those Americans who have already been abroad for some time, such as me, are excluded.

There are also various initiatives related to building science, often sponsored by European entities or UN organizations like UNEP or UNDP. My energy efficiency policy work was funded by the EU, thanks to connections through my German boss. However, such initiatives can be fragmented. For example, UNEP recently sponsored DesignBuilder training at the Institute of Technology Cambodia. While it was a valuable first for the country, there was no provision for continuing the license beyond the initial 30-day trial, leaving a gap in long-term availability. It could have been very useful to me because I am not well versed in energy modeling software.

There are many challenges inherent in this setting. There is a lack of community support. Building science is not a thing here yet. I was one of the first to introduce it twelve years ago. And the building code, or any energy code, has not been adopted. Students here are generally willing and able to join opportunities, but there is not really a building science path for them in government, professional practice, or advanced study. There are recently signs of change, such as the establishment of a community of practice at Institute of Technology of Cambodia.

Building science education has great potential for growth in the rapidly developing Global South as it rushes headlong into an air-conditioned future. Despite slow progress, significant gaps remain. I invite anyone interested in gaining teaching experience to at least look beyond borders. It can open one's eyes to the real needs of the wider world and expand the range of your choices professionally.

—Robert Limanek

SBSE SHARES

Sharing the Top Ten 2024 Winners: Posters to Download & Print

Alison Kwok (Oregon) is a longtime friend of COTE. She helped develop the earliest iteration of the Top Ten for Students Competition and has long championed the use of the AIA COTE Top Ten Award winning projects as a pedagogical tool. In 2019, they piloted this idea, making posters of all the winners.

This year, she and others at the school reprised their translation of the winning projects into posters that they printed for their recent 2024 Reynolds Symposium: Design: Resilience. And true to form, they offered to share their work with others. Any interested school, firm, or AIA chapter may use the PDF or INDD files at <https://drive.google.com/drive/folders/1A70aL31SgDmQiFdJhDHlDyU2Eg_TKD0e> to generate their own physical posters. Credit goes to Alison and also Sophia Blatnik (MArch '25) for the graphics (based on the work that Isabel Rivera (PhD '19) did in 2019.

Many thanks to the UO team for sharing these case studies with students ... and for sharing the posters so generously with others.

—Kira Gould

SBSE PEOPLE

✈ Martha Bohm is in the midst of a research leave to pursue a PhD at the University of Edinburgh. Her research aims to qualitatively delineate the unique, ad-hoc, and improvisational processes of "spatial-data sensemaking" in early architectural design of aspiring architects during the climate emergency. All you in the UK: be on the lookout for her "Back-of-the-Envelope" workshop in Edinburgh in mid-January!

✪ Gabriel Moraes de Bem's PhD Thesis won 2nd place in a national competition organized by the Brazilian Council of the Construction Industry (CBIC)—25th CBIC Prize for Innovation and Sustainability) The project regards the development of a responsive brise-soleil: ReShaS—Responsive Shading System. The research was divided into

photo: Gabriel Moraes de Bem

two phases: the prototype stage, developed at the Lyle Center for Regenerative Studies under the supervision of Pablo LaRoche (Cal Poly Pomona), and the full-scale implementation in Curitiba, supervised by my primary advisor, Eduardo Krüger (UTFPR). In 2022, he received the Jeffrey Cook Award attending the SBSE Retreat as a Cook Scholar, in Seattle, where he presented the results of the prototype stage. This year he was awarded the Cook Faculty Scholarship to attend the SBSE Retreat at Biosphere 2. 👋

photo: Walter Grondzik

Back of House: The mechanical heart of Biosphere 2.

REVIEWS GALORE

IEA EBC HUMAN-CENTRIC BUILDINGS NETWORK MEETING,

photo: *IEA EBC Annex 95 web site*

The Human-Centric group at IEA EBC Annex 95 in Seville

The IEA EBC Annex 95 (2024-2029), also known as the Human-Centric Buildings Network, met in Seville, Spain 18-19 Nov 2024. The leads who were present, Liam O'Brien (Carleton University) and Marianne Touchie (University of Toronto), along with sub-task and committee leaders put together an exciting and excellent program to inaugurate the first meeting of this new network. This network follows from Annexes 66 and 79 with similar goals to integrate cutting-edge research into human-building interactions to support health, wellbeing, and productivity. Two new committees have been formed in the network to support knowledge coproduction and to ensure inclusive and equitable representation by members outside the typical disciplines and demographics of past annexes. Sub-task leaders directed afternoon sessions to lead participants in brainstorming and building a roadmap for future activities. These sessions were very lively with enthusiastic participation by multiple new and returning members of the network. More information about the workshop and future events can be found at <https://annex95.iea-ebc.org/>. If you're interested in participating, please complete this form at <https://docs.google.com/forms/d/e/1FAIpQLSeYkdF7lhIDN___wqK-f21KbWC_xcigLs6EhlM6tIzvhagx7xA/viewform>.

—Simi Hoque

COMFORT AT THE EXTREMES (CATE) 2024 CONFERENCE

CATE 2024 was held at Universidad de Seville in the beautiful city of Seville, Spain, 20-24 Nov 2024. This fifth CATE conference focused on "investing in well-being in a challenging future." More than 200 participants from all around the world attended. This conference series stemmed from the Windsor Conference (on Thermal Comfort) series organized by Fergus Nicol, Michael Humphreys, and Sue Roaf and held at the beautiful Windsor Castle, UK. Since 2019. Sue Roaf continued the Windsor tradition, but focused the conference on a new theme of issues around and developing solutions for achieving (thermal) comfort in our warming environment.

One of the highlights of CATE 2024 was the range of backgrounds and topics of the keynote speakers, from assessing indoor heat vulnerability and resiliency (Holly Samuelsen), cooling alternatives (Pablo LaRoche), social mass housing (Marta Pelegrin), rethinking comfort in a heating world (Sue Roaf), to views from the industry that have developed solutions such as on 'innovative' fan systems (Christian Schuller from Sulion), dealing with indoor air (Mario Lovric from EDIAQI), heat pump (Pablo García López from Daikin) and on 'conscious' lighting design (Nicolás Machado from Iguzzini).

photo: *Veronica Soebarto*

Previous and current researchers from CBE UC Berkeley at CATE 4

Another highlight the Sue Roaf and Jens Pfafferot workshop to discuss and debate whether

• *continued next page*

REVIEWS GALORE [CONT. FROM P4]

high mass buildings are the way to go to achieve comfort in the extreme conditions. Participants with great enthusiasms put forward and discussed issues such as the use of thermal mass in the tropics and whether existing building simulation tools were able to model and accurately predict the performance of high mass buildings. Another workshop by Julia Day, Zoltan Nagy, Liam O'Brien and Marianne Touchie discussed the new IEA Annex 95 on Human-Centric Buildings for a Changing Climate (see Simi's review on page 4).

There were presentations by more than 200 authors/researchers—all worthy of recognitions as they covered a wide range of relevant topics to the challenges and solutions in achieving comfort at the extremes with different views from all parts of the world. If you are interested to know more, the conference program showing the titles of all presentations can still be accessed from <https://cate2024.org/program>.

Several SBSEers were present at the Conference, including Jonathan Bean who not only chaired few sessions but also made an exciting announcement at the end of the conference that the next CATE conference in 2026 will be held by University of Arizona! Others included Charlie Huizenga, Simi Hoque, and me who was so happy to see many old friends from my short stint at CBE, UC Berkeley in 2017 and my time at Texas A&M in the 90s.

This great conference was closed by a keynote message from José Manuel Felisi, sending his message from the City of València that in November was still coping with the devastation from the DANA floods. The message was loud and clear—climate change and its impacts are real, and unless we take them seriously, they will cost lives.

—Veronica Soebarto

2024 REYNOLDS SYMPOSIUM,

The 2024 Reynolds Symposium on DESIGN RESILIENCE brought together a diverse array of thought leaders, innovators, and practitioners to explore the vital intersection of resilient design and sustainable design. Held at the University of Oregon on 18-19 Oct, this year's symposium focused on how design can foster resilience in communities, buildings, ecosystems, and economies. Participants engaged in dynamic panel talks, small-group discussions, keynote presentations, and a building tour that highlighted cutting-edge research and practical applications. The symposium emphasized collaborative approaches and interdisciplinary insights, showcasing how thoughtful design can address pressing global challenges.

Even before official start of the Symposium, many participants and speakers were experiencing resilient design, as a group of the attendees traveled to visit a building that is USRC Platinum-rated, the Oregon State Treasury's new Mill Creek Facility, led by the architect and mechanical engineer. .

The event started with a keynote address by Evan Reis (USRC). The next morning, Nicholas Rajkovich (University at Buffalo) presented a backdrop for the day's following panels, around the history and future of resilient design and its relationship to sustainable design.

The first panel presentation, "Paths to Resiliency", included Victor Olgyay (RMI), John Reynolds, (Oregon) and Ann Edminster, (Design AVEnues) bringing their unique and sometimes personal perspectives of the history of sustainable design progressing toward and including resilient design. The next panel was "Scales of Resiliency", with Carrie Brown (Resource Refocus), Gunnar Hubbard (Sustainability Consultant), and Andre Le Duc (Oregon and Resilient Organizations, Communities, and Environments). And a final panel on "Making Resiliency Happen" included Craig Stockbridge (GBD Architects), Chris Lowen (Glumac Engineering) and Allison Anderson (unAbridged Architecture).

photo: *Alison Kwok*

Panelists Anne Edminster, John Reynolds, and Victor Olgyay.

Following the panels, the full symposium group broke into smaller groups, each formed around a different type of hazard, indicated from the outset on their name-badges, for discussion about what everyone had learned to take back to their communities, including in their design work, and for sharing with their friends and family, in hopes of making all scales more resilient for everyone. Nick Rajkovich then concluded the proceedings with an amazing, inspiring, and thought-provoking presentation of quotations and short readings from thinkers across the spectrum of arts and design, that reinforced the intentions behind making for a resilient future.

Selected Takeaway Quotes:

Sophia Blatnik, MARCH '25 The Reynolds Symposium sparked valuable conversations amongst peers and professionals alike. We are becoming increasingly aware of how important our role as designers of the built environment is in this ever-changing climate. This symposium's theme of resilience allowed for those crucial conversations to take form. With a focus on hope and innovation, the daunting task ahead was framed in such a way that inspired me and my student peers to consider pathways in our field that could allow us to be a part of this movement. The opening speakers, Evan Reiss (USRC) and Nicholas Rajkovich (University of Buffalo), set the tone for innovative thinking. My key takeaway is one of empowerment and a determination to combine sustainable and resilient approaches to design.

Hannah Morrison, MARCH '27 Volunteering for the 2024 Reynolds Symposium was such a rich learning opportunity. The wealth of knowledge that John and all the invited speakers were able to impart to attendees in such a short time was incredible. As a new master's student at Oregon, I'm still learning the basic tools of the architectural trade, but attending the symposium broadened my knowledge of the intersections between sustainable and resilient design. I'm excited to progress in my studies so I can more purposefully apply some of my learning, and I hope to maintain the connections I made through volunteering. It was truly inspiring to hear about the ways design can help mitigate the effects of climate change in addition to slowing down the process itself.

— Tom Hahn, Alison Kwok, and John Reynolds

COMING UP

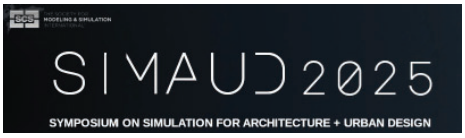
2025 MASS TIMBER CONFERENCE

25–27 Mar 2025, Portland, OR, Oregon Convention Center

The International Mass Timber Conference (IMTC) is the world's largest gathering of mass timber experts, focusing on the entire industry supply chain. Co-produced by WoodWorks and Trifecta Collective, IMTC helps you grow your business, connections, and knowledge of the latest mass timber products and applications. Learn more about IMTC at <https://masstimberconference.com/>.

—Woodworks

SIMAUD 2025, MADRID



We're thrilled to announce the 16th annual Symposium on Simulation for Architecture and Urban Design will be 26-29 May 2025, at the Complutense University of Madrid, Spain.

This year, SimAUD is part of ANNSIM 2025, offering a unique forum to explore cutting-edge simulation research and applications in architecture, urban design, and data science.

SimAUD welcomes a broad range of topics that address the application of simulation and computation in architecture and urban design, particularly those that incorporate emerging technologies and interdisciplinary methods.

Key Dates:

- Paper Submission Deadline: 19 Jan 2025
- Acceptance Notification: 7 Mar 2025
- Camera-ready Deadline: 26 Mar 2025

We invite submissions for full papers, short papers, and tutorials. Join us to share your work and connect with experts dedicated to advancing simulation in our fields. For details, visit the SimAUD website. <https://www.simaud.org/2025>.

—Mohamed Aly Etman,

BUILDINGS & CITIES BLURBS

HEALTH INEQUALITIES AND INDOOR ENVIRONMENTS

This *Buildings & Cities* special issue, guest edited by Anna Mavrogianni & Marcella Ucci, explores how indoor environments affect health inequalities, inequities, and injustice. Health inequalities are a crucial aspect of public health and a pressing societal challenge. Access to healthy indoor spaces that are optimized to promote health should be seen as a fundamental right for all. This special issue helps to identify many existing inequities in order to improve methodological approaches, share vocabularies among disciplines, and create new knowledge necessary for safe and healthy indoor environments for all. Equitable design could translate into prioritizing air quality improvements in the homes of people suffering from respiratory conditions, introducing inclusive design elements for disabled people, or providing energy retrofit subsidies to low-income, fuel-poor households.

See <https://journal-buildingscities.org/collections/health-inequalities-indoor>.

ENERGY SUFFICIENCY IN BUILDINGS AND CITIES

This *Buildings & Cities* special issue, guest edited by Tina Fawcett, Sarah Darby, and Marlyne Sahakian, considers the role of sufficiency. Energy and climate policies have tended to focus on the promotion of energy efficiency and renewable energies, but there is no evidence that these measures alone will be able to meet climate and sustainable development goals. This special issue explores what the concept of sufficiency means for the built environment—both as a floor (minimum) and a ceiling (maximum) to ensure a "good life". Sufficiency is explored in many interconnected issues such as land use and density, space usage (size and adaptability), sharing of goods, services and spaces, and space conditioning (heating, cooling and ventilation) for health.

See <https://journal-buildingscities.org/collections/energy-sufficiency>.

2024 VIDEO CHALLENGE

Each year *Buildings & Cities* runs a Video Challenge for early career researchers. This is an exercise to create a 2-minute video to explain the significance of their research to the public. It enhances the entrants' communication skills and also provides the wider civil society with easily accessible statements about the vitality and importance of built environment research. The 5 winners were recently announced. You can watch their videos at <https://www.buildingsandcities.org/video-challenge/gallery-2024.html>. Encourage your PhD students to enter the Challenge in 2025! It's a great learning experience and life skill.

CALL FOR PAPERS: LIVING LABS

Deadline for abstracts: 10 Feb 2025

What are the roles and impacts that living labs play in increasing civic resilience and supporting ecological transition in different contexts and at different scales?

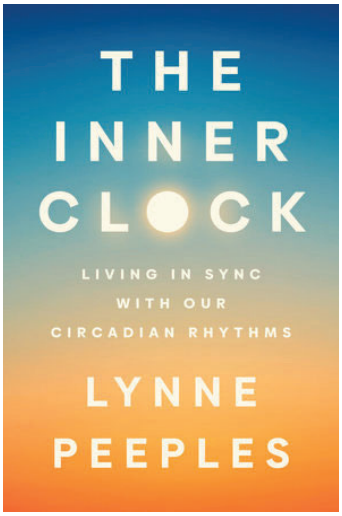
This special issue will examine the roles that living labs have in creating or enhancing resilience in local communities. What mediation methods are used in the different stages of collaboration? How can success or efficacy be measured? What lessons arise about transferability between different labs/situations? What inventive methodologies are developed/used in living labs within different contexts and at different scales? Full details at <https://www.buildingsandcities.org/calls-for-papers/living-labs-cfp.html>.

—Richard Lorch

BOOK NOOK

NEW BOOKS ON LIGHT AND HEALTH.

Two wonderful new resources on light and health became available this fall. One is definitely worth the price of a hardback copy (US $30.), and the other is a free download!



cover: Penguin Random House

The first is *The Inner Clock: Living in Sync with Our Circadian Rhythms*, by Lynne Peeples, a rising star in science journalism based in Seattle. She spent two years visiting and interviewing world experts on circadian biology and light measurement, including many researchers you may already know. In addition, in the best journalistic tradition, she conducted a number of her own experiments to experience circadian effects firsthand, such as living in an underground silo for 10 days without any external clocks or temporal clues. At times funny and humble, with many personal asides, this book (300+ pages) still presents the emerging science clearly and accurately. It offers a balanced summary of current human circadian knowledge and implications. Plus, it is an entertaining read for you, your students, your family members, even your science-skeptical friends!

The second, *Solid State Lighting: Review of Health Effects*, is a consensus report years in the making from a CIE committee. It can be downloaded from <https://www.iea-4e.org/publications/ssl/solid-state-lighting-review-of-health-effects/>. The authors include colleagues from Canada, Australia, and France, including the current CIE President, Jennifer Veitch of Natural Research Council of Canada. The report (100+ pages) is elegantly written, each chapter with a brief summary overview, detailed referenced discussions, and simple bulleted conclusions, followed by policy and research needs recommendations. Chapters are organized by Photobiological Safety; Glare; Temporal Light Modulation (flicker); Circadian Effects; Acute Neuro-Behavioral Effects; and Long-Term Effects. Even if you think that you are up-to-date on human circadian biology, I urge you to go deeper, especially into recent findings about flicker and long term effects of light exposure patterns.

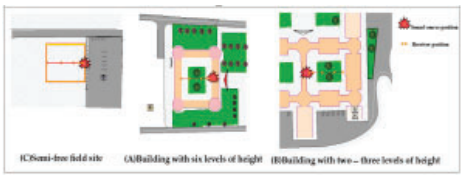
In the past decade, research into the biological effects of light has been dramatically accelerating on many fronts—from marine biology, where MBARI (Monterey Bay Aquarium Research Institute) has identified biofluorescent capabilities in a majority of all species of marine animals it has studied, to "ALAN" (Artificial Light at Night) where it is now understood that electric light at night can be a potent biological pollutant; to basic developmental biology, where light exposure in utero has been shown to have impacts on later adult behaviors. Thus, it is becoming increasingly clear that it is time to re-evaluate our 100+ year romance with, and reliance on, ubiquitous electric light.

—Lisa Heschong

FACADE DESIGN AND THE OUTDOOR ACOUSTIC ENVIRONMENT

We're excited to announce a new publication on the fascinating topic of *Facade Design and the Outdoor Acoustic Environment* by PhD student Sami Hmouta.

This research, which began years ago with the original concept of the music of the facades, explores how the composition of building facades creates unique soundscapes that shape and define outdoor spaces. Each facade acts as a composer, producing a distinct acoustic environment for the space it surrounds.



graphic: *Sami Hmouta*

Study buildings at Batna 1 University.

Links to the publication:

Website: <https://www.mdpi.com/2075-5309/14/11/3339>

PDF Version: <https://www.mdpi.com/2075-5309/14/11/3339/pdf>

—Noureddine Zemmouri

JOB OPS

CAL POLY SLO

Assistant Professor of Architecture, Fall 2025

The Architecture Department in the College of Architecture & Environmental Design (CAED) at California Polytechnic State University, San Luis Obispo, seeks applications for a full-time, tenure-track Assistant Professor to begin 11 Sep 2025. We invite applications from candidates with expertise in the creative integration of architecture and building technologies including structure, building envelope, materials and assemblies, decarbonization, and construction methods.

Candidate's scholarship and/or related architectural practice experience should demonstrate the integration of sustainable and resilient building technology systems. In addition, candidates should describe a record of successful teaching in building technology lectures and design studios. Special consideration will be given to applicants who address the interrelationships of social equity, climate, and the built environment in their teaching, scholarship, and/or critical practice.

Primary teaching responsibilities include required building technology lecture courses and related hands-on workshops, technology electives, and may also include undergraduate design studios. The large lecture courses are team-taught and the curriculum co-developed, which provides a rich teaching environment for sharing ideas and expertise to shape coursework and evolve Cal Poly's long tradition of building technology education.

Please see the full position description and details about how to apply at <https://jobs.calpoly.edu/en-us/job/543173/assistant-professor-in-architecture>.

—Sandy Stannard

UNIVERSITY OF OREGON

I'm pleased to share this position opening below for a tenure-track assistant professor position in Architectural Design, Structures, and Mass Timber to join our faculty in the fall of 2025. Please consider applying and/or spreading the word to other qualified colleagues.

See <https://archenvironment.uoregon.edu/fall-2024-faculty-openings-school-architecture-environment>.

—Ihab Elzeyadi

DEMO HOUSE, NEPAL

Here's one of the model demonstration houses constructed in Rapti Sonari Rural Municipality and Duduwa Rural Municipality plus the group of engineers after the training session.

—Rupesh Shrestha

ENGINEER'S TRAINING IN NEPAL

Engineer's Training on Resilient Housing in Lumbini Province, Nepal

[Dear Readers, recall the Mason Training in Nepal article in the Fall News!–ed.]

In the Terai plains of Nepal, traditional vernacular homes face a persistent challenge: during floods, mud plasters and flooring disintegrate, leading to further structural damage over time. To address this issue, innovative solutions are needed to protect homes and improve the resilience of local communities.

With the support of partner organizations in the Flood Resilient Housing Solutions Technical Working Group (Flood:TWG), Rupesh Shrestha is leading the application of flood-resilient techniques, such as raised plinths and lime-stabilized soil, combined with earthquake-resilient technologies. These measures are being employed to enhance the durability and resilience of houses in flood-prone areas. Two demonstration houses were constructed in Rapti Sonari Rural Municipality and Duduwa Rural Municipality located in Banke district. In order to share learnings from this project, through collaboration with National Housing and Settlements Resilience Platform (NHSRP) , CRS Nepal and Caritas Nepal, a 3-day Engineer's Training on Resilient Housing was conducted in Aug 2024 in Nepalgunj, Lumbini Province .

The training focused on enhancing the understanding and application of Lime Stabilized Soil Technology for flood-resilient construction, updating participants on Nepal's national building codes, and empowering local engineers to utilize natural building materials effectively. The program included theory sessions, practical demonstrations, a field visit, and interaction with local masons and communities. Training was also supported by the Department of Urban Development and Building Construction (DUDBC) Banke. Government engineers from nine municipalities in Banke, Bardiya, and Kailali districts of Lumbini province and Sudurpaschim province participated, gaining critical skills to build durable, sustainable homes in flood-prone regions.

—Rupesh Shrestha

SBSE CALENDAR

2025	
Jan 23–25	Intl Conf Climate Change, Miami, FL, USA
Mar 25–27	2025 Mass Timber Conf, Portland, OR, USA
Apr 2–5	ARCC Int'l Conf., College Park, MD & Washington, DC, USA
Apr 24–25	CIBSE IBPSA-England Tech Sympo, London, UK
May 26–29	SIMAUD 2025 Sympo, Madrid, SPAIN
Jun 2–5	BTES 2025 Chicago, IL, USA
Aug 4–6	ASES Solar Conf., Boulder, CO, USA
2026	
tbd	CATE 2026, UArizona, Tucson, AZ, USA

WINTER ISSUE SUBMITTAL DEADLINE—DECEMBER 1

SBSE News
c/o Bruce Haglund
Architecture Program
University of Idaho
875 Perimeter Drive MS 2451
Moscow, ID 83844–2451
bhaglund@uidaho.edu

To: SBSE Members and Friends
Planetwide

VAN DER RYN* MAIL

* Sim passed this year, see https://ced.berkeley.edu/news/sim-van-der-ryn-pioneer-of-ecological-design-passes-away-at-89