2022 RETREAT COMES TO SEATTLE

BIO-INSPIRED TEACHING, LEARNING, AND PRACTICE

Despite the evolution of human–nature relationships and the long trajectory of “designing with nature,” from the earliest indigenous and vernacular dwellings to emerging high- and low-technological innovations, the recent challenges of the global pandemic and climate crisis shine a light on the importance for humans to redouble their efforts to understand the interconnectedness of all life and the fragility of our beloved planet. How might we clarify, frame, and/or reframe the “foundation and essential principles” of bio-inspired design (biophilic, biomimetic, bioclimatic, etc.) and their intersections with building science education and sustainable and regenerative design theories, strategies, processes, and methods for the benefit of humans, other species, and the planet?

The 2022 SBSE Retreat proposes a forum to share the best practices of bio-inspired design as well as an opportunity to find common ground in developing shared teaching and learning resources, definitions, case studies, methods, strategies, and practice. What frameworks might SBSE develop to elevate and integrate bio-inspired design approaches in our individual areas of teaching, learning, research, and/or practice in response to the pressing issues of our day? As Beatrice Ungard from the Regenesis Group suggests, what if we consider how bio-inspired perspectives might shift from focusing on “fixing things that have degenerated” to focus on what “new possibilities or ways of doing things that don’t exist now, but could in the future”?

Biophilic, biomimetic, and/or bioclimatic perspectives on design education encourage educators, students, and practitioners to investigate their personal relationships with the dynamic conditions of place, including other species, ecosystems, habitat, environmental forces, ecological conditions, as well as health and well-being. How might bio-inspired design provide deeper insights into regenerative design intentions and strategies across design issues and scales for all life?

—Mary Guzowski, Margot McDonald, Sandy Stannard, Alicia Daniels Uhlig

SBSE ELECTION RESULTS

Welcome our new board members!

- President-Elect: Alex Rempel
- Secretary: Clarke Snell
- Treasurer: Tom Collins (incumbent)

We are also grateful for the six years’ meritorious service given by out-going Past-President Ulrike Passe. Thanks also to former secretary Emily McGlohn.

We’re ready for a much kinder 2022!

—Bruce Haglund

LETTERS TO THE EDITOR

I finally, after all these years, have something to post to the listserve, but I'm not sure how to do it. 

—Tom Collins

We do our best at making access to our resources confusing. Here's a tip for you and others wandering in the mists of mystery—send your messages to <sbse@uidaho.edu>. I'm not the list server, but I do manage it. —ed.

LISA'S NEW BLOG

"Why Fake Windows for a Dorm are a Bad Idea" is my first blog posted on a newly launched web site <https://lnkd.in/gD9QWwdKQ>. In 2,300 words I explain why the fake windows planned for UCSB’s windowless dorm will not benefit the students. Rather they are there to provide a placebo for the campus administrators, the enabling technology for an astonishingly inhumane design.

My new web site is a work in progress, which I hope will become a useful resource for information on daylighting design. Please come visit and send me your comments! [Find a related article next column.—ed.] 

—Lisa Heschong

MUNGER HALL’S FALSE DESIGN OPTIMIZATION

Architects, when designing buildings, must balance many conflicting design goals in order to achieve an “optimum” design. Inexperienced, or ideologically blinded, architects often make the mistake of focusing on the optimization of one or two design goals to the detriment of other important goals. This misguided optimization has happened over and over, resulting in many of the worst building failures in history. The proposed design for Munger Hall at UC Santa Barbara is the latest example.

Charlie Munger, the amateur and inexperienced billionaire “architect” for the massive dormitory project that would house 4,500 undergraduate students in windowless cubicles deep within a huge concrete hive, offers fake “windows” (video display screens) to provide a poor approximation of real window daylight to the occupants. In this case, the design is optimized to house as many students as possible within the hive, at the lowest cost. A solution seen as the optimum is understandable, coming from a financier whose career has been spent optimizing profits. The costs to the students who must live in this structure include: 100% mechanical ventilation, sub-optimal circadian stimulus, sub-optimal egress in the event of fire or earthquake, very close living with thousands of strangers (frightening to contemplate in the age of Covid), lack of views to the beautiful, seaside UCSB campus, ad nauseam.

There are many ways that architects could “optimize” designs of dormitories if they wanted to minimize costs. They could cut bathrooms within living groups, and instead provide large, communal bathroom facilities at a central location. They could cut the electric lighting by half, saving on both first costs and energy costs. They could reduce the amount of fresh outside air provided to the students by doing as most high rise buildings do—recirculate 80% of the air and provide only 20% fresh air. They could cut most of the elevators and provide healthy stairs for exercise. They could cut common areas and exercise facilities. They could reduce earthquake bracing for the structure, as earthquakes rarely occur.

Of course, most of these “optimizations” are illegal under building and life-safety codes. Some architects in the past have tried these “solutions,” so they had to be outlawed. It is distressing that the university has accepted the poor compromises in the Munger Hall design, even if their architects can convince them that they are legal.

It would be a far better, more humane building if it were built like the other living units at UCSB (and nearly every other university) with windows, daylight, views, fresh air, and easy egress in emergencies. That Munger Hall’s design is such a radical departure from other student housing is touted as a great advance toward affordable housing for all students. What a sorry outcome for the future of student housing if Munger Hall were adopted as a valid prototype by other universities. But like all buildings that optimize for one goal, it is doomed to join the long, sad history of failed buildings—United Nations Building, New York (excessive east- and west-facing windows causing excessive heat gain and requiring extensive mechanical system upgrades to make the building habitable); soft story apartment buildings in earthquake zones (ground floor parking leading to minimal earthquake bracing, resulting in building collapse during earthquakes); geodesic dome buildings (structure optimized at the expense of habitability and adaptability); pencil thin high rise condominiums (optimized for sweeping city views for as many units as possible, resulting in excessive building sway, massive plumbing and structural problems, uninhabitable living units for many residents); early medieval cathedrals (optimized for height and openness resulting in fatal collapses); this list could go on and on.

This critic is a retired architect who devoted his career to improving the energy efficiency of buildings. He also collects stories of building failures and their causes. He expects to add Munger Hall to this collection if UCSB pushes ahead and builds it. 

—Douglas Mahone
**RESILIENT THERMAL COMFORT**

The way in which comfort is produced and perceived has a profound effect on the energy use of a building and its resilience to the increasing dangers posed by extreme weather events and power outages caused by climate change. Research on thermal comfort is particularly important not only for the health and well-being of occupants, but because energy used for temperature control is responsible for a large part of the total energy budget of the built environment.


—Sue Roaf

**CLIMATE ADOPTION AND RESILIENCE ACROSS SCALES**

Seth Holmes and I are excited to announce that *Climate Adaptation and Resilience Across Scales* is now available from Routledge: <https://www.routledge.com/Climate-Adaptation-and-Resilience-Across-Scales-From-Buildings-to-Cities/Rajkovich-Holmes/p/book/9780367467333>.

The book features chapters from a number of SBSE members:

- Seth Holmes (Rochester Institute of Technology): Resilient Design Modeling: Where Are We and Where Can We Go?
- Michelle Laboy and David Fannon (Northeastern University): RHOnDA: An Online Tool to Help Homeowners and Tenants Increase Resilience
- Wendy Meguro (University of Hawai‘i): Designing Resilient Coastal Communities with Living Shorelines
- Martha Bohm (University at Buffalo): Understanding Sustainability and Resilience as Applied: Tracking the Discourse in City Policy.

There are ten other chapters from leaders in the field covering topics like community engagement, resilience hubs, climate and health, inclusive design, passive survivability, floodplain management, and recovery from extreme events. We hope architects, urban designers, planners, landscape architects, and engineers will find this compilation a useful resource for adapting buildings and cities to a changing climate.

—Nick Rajkovich

**HEATING, COOLING, LIGHTING 5TH EDITION**

Wiley has just announced that the 5th edition of *Heating, Cooling, Lighting: Sustainable Design Strategies Towards Net Zero Architecture* is now available. See <https://www.wiley.com/en-us/Heating%2C+Cooling%2C+Lighting%3A+Sustainable+Design+Strategies+Towards+Net+Zero+Architecture%2C+5th+Edition-p-9781119585794>. As the new subtitle states, the emphasis is now on designing net-zero buildings whenever and wherever possible. The whole book has been revised with a few new chapters added, mostly with the help of my new co-author, Patricia Andrasik.

—Norbert Lechner

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**JOB OPS**

**BALL STATE**

The Ball State University Department of Architecture seeks faculty candidates for a tenured or tenure-track position at the rank of Associate or Assistant Professor available starting August 2022. Major responsibilities include teaching, research, and service in the area of environmental control systems and high-performance buildings as well as the capacity to teach and/or support undergraduate and graduate architectural design studios. We seek candidates who offer innovative and creative delivery of this curricular content. For more information see <https://bsu.peopleadmin.com/postings/28266>.

—Tom Collins

**CAL POLY SLO**

The Architecture Department in the College of Architecture & Environmental Design (CAED) at California Polytechnic State University, San Luis Obispo, invites applications for two tenure-track positions (Design + Technologies of the Built Environment and Design + Representation of Urban Environments) at the rank of Assistant Professor for the academic year beginning 12 Sep 2022.

For more information and to apply visit Cal Poly Jobs <https://jobs.calpoly.edu/en-us/job/507192/assistant-professor-in-architecture>.

—Carmen Trudell

**BOOK NOOK [CONT.]**

**LEED LAB: A MODEL FOR SUSTAINABILITY DESIGN EDUCATION**

Facility performance evaluations inform the long-term life of a building and do not end with design or construction. To this aim, Patricia Andrasik created LEED Lab, in collaboration with the U.S. Green Building Council, an increasingly popular international interdisciplinary collegiate laboratory course, which uses campus buildings as demonstration sites to facilitate the green assessment of existing buildings.

—Bob Koester
SBSE PEOPLE

Mark DeKay will be going to Iuav University in Venice, Italy, in June and July 2022 on a Fulbright Specialist grant. The Fulbright Specialist program sends American scholars for 2–6 weeks to work on a project initiated by an international partner. U.S. scholars apply ahead of time to be on the Specialist roster. It’s a nice program for people at a career stage where they may not be able to participate in the longer semester- or year-long programs. Iuav is a design and art university. Mark will work with one of their design and planning research units on developing their research infrastructure based on an integral approach.

Alfredo Fernández–Gonzalez has received the ASES Leadership in Solar Architecture and Design Award [aka Passive Pioneer–ed.] for those in the passive field whose work has set the stage for others to follow. Honorees are those who developed the theories, research efforts, new concepts, and opportunities for later researchers to expand. Their foresight, innovative thinking, and creativity opened the doors for others.

Elizabeth Grant of the School of Architecture + Design at Virginia Tech will begin a position as Building and Roofing Science Manager at GAF on 16 Aug 2022. Her new email will be <Elizabeth.Grant@gaf.com>.

Traci Rider is among the jurors for the 2022 COTE Top Ten for Students. Full info at <https://www.acsa-arch.org/competitions/2022-cote-competition/>.

COP 26 REVIEW

Professor Rajat Gupta from Oxford Brookes University (Oxford, UK) was involved in two COP26 Glasgow panel discussions considering the key issues for ensuring proper integration of climate adaptation in buildings and how communities can work together to play a more active role in the future energy system.

1) Scottish and Southern Electricity Networks (SSE) invited him to talk about “How communities can coordinate and collaborate to play a more active role in the future energy system” as part of COP26 Innovation Hub on Communities, Cars, and Flexibility. The event was held on 4 Nov 2021. Rajat talked about the community participatory mapping and local area energy mapping work that he has been undertaking as part of EnergyREV and Project LEO.

Both these events at COP26 were well-attended by policy-makers, business-people, and voluntary sector reps. Interestingly, both had a strong focus on localization and human aspects of energy systems and climate change adaptation. Our recently-developed LEMAP tool for local area energy mapping drew considerable interest from the audience for preparing local roadmaps for achieving net zero.

Links to the two events are available at <https://arcuniversities.co.uk/news/cop26-professor-rajat-gupta-of-oxford-brookes/>.

—Rajat Gupta

NEW SBSE WEB RESOURCES

CLIMATESCOUT

After clicking on the world map to select a climate zone, the application takes you to another page where you can build a section combining appropriate strategies for the selected climate. As you select strategies (we preselected by comparing the 27 building scale strategies from the 2030 palette with the 30 Köppen-Geiger climate subtypes) they appear in real-time overlaid in diagrammatic form, providing an immediate visual connection between the climate and the architectural idea. Clicking on the strategy icon takes you to another page with basic strategy information and links to the 2030 Palette with even more information and examples. Start at <https://www.sbse.org/node/782>.

SOLAR DECATHLON—BUILDING SCIENCE EDUCATION SERIES

See <https://www.sbse.org/node/783>. Altogether this series aims to educate viewers on:

- Where/how energy is used in buildings
- How to define zero energy buildings
- How to apply the fundamentals of thermodynamics to building envelope design
- How to explain the science of how/why buildings use energy
- How to apply this knowledge to design comfortable energy efficient buildings.

Students and working professionals can use this educational information at no cost to complement academic curricula and continuing education activities. 🌞
RESEARCH NEWS

LONDON METROPOLITAN UNIVERSITY

The Nicol Graph is not intended to be a precise method for predicting the exact comfort temperature from the outdoor climate, but it will give a reliable idea of what temperature people in a particular climate are likely to find acceptable. This acceptable temperature can then be linked to the type of buildings which will be best used in these circumstances. Looking at the difference between the acceptable temperature and the likely indoor conditions given the characteristics of the buildings and the adaptive opportunities available.

Thus, a building where the acceptable temperature is much below the acceptable indoor temperature will need to consider whether the availability and use of solar heating will be sufficient or whether heating will be needed. In the opposite circumstances a building in a climate which is likely to give rise to overheating, careful consideration may be needed of the use of shading and the availability of air movement from windows or fans. The Graph will help building designers fit the thermal design to the climatic circumstances. Check it out at <http://www.nicolgraph.com>.

—Fergus Nicol and Sue Roaf

OXFORD BROOKES UNIVERSITY

Professor Rajat Gupta is part of a team that has won a national award for transforming a 1950s block of seaside town flats into modern, energy saving living spaces. At the Inside Housing Development Awards in November, the Climate Change Retrofit Project of the Year was awarded to the innovative development, a collaboration between Beattie Passive, Enhabit, and the Low Carbon Building Research Group at Oxford Brookes University.

The project, which took place in Great Yarmouth, involved the deep energy retrofitting of the six-flat council block, turning it into a healthier, greener, and climate-friendly property. The effect of the retrofit could see energy bills reduced by up to 75%. This block was chosen for the project due to its traditional 1950s style, a common typology across the UK.

The project demonstrated that the success achieved with this building could be effectively used on a wide range of other buildings across the UK. The work created a ring around the building which was pumped full of insulation, with an end goal of enhancing energy efficiency.

The project aimed to develop a fast, efficient, and cost-effective solution to deep energy retrofit, creating a super-insulated envelope around the building that is extremely airtight with no thermal bridges. Residents remained in-situ during the entire retrofit and access to the flats was required only three times during the build—to install the ventilation valves, to remove windows, and to install new window reveals.

—Rajat Gupta

MORE JOB OPS

PENN STATE

A one-year, limited term, renewable Assistant Research Professor position at Penn State within the Global Building Network is now open.


—Sarah Klintetob Lowe

UNC CHARLOTTE

We have two open positions at UNC Charlotte: 1. Assistant Professor in Technology + Design Integration and 2. Research Fellow in Emerging Technology + Design.


—Kyong Hee Kim

VIRGINIA TECH


- Building Systems
- Environmental Technology
- Building Science
- High-Performance Building

—Michael Ermann

WORCESTER POLY

We are seeking to fill a tenure track faculty position in Architectural Engineering at Worcester Polytechnic Institute (Worcester, MA).


—Steven Van Dessel
STUDENT OPPORTUNITIES

FREE STUDENT MEMBERSHIPS

The Façade Techtonics Institute was founded at the USC School of Architecture. It outgrew USC and is now headquartered in New York, but it still has roots from its founding at USC. Current architecture students from all universities can be members for free. All students are welcome, including building science and engineering students.

On [https://www.facadetechtonics.org/membership], at the bottom of the page, students can click on “individual membership” to connect to the free membership sign-up page. They will need to create a new account and complete the form.

—Doug Noble

NJIT FUNDED DOCTORATES

Fully-funded PhD student positions in Urban Systems at the Hillier College of Architecture and Design at New Jersey Institute of Technology (NJIT) in the Metro New York area. TA assistantships, available for qualified full-time applicants, cover full tuition, personal stipend, health coverage, and other benefits.

For PhD information please visit: <https://design.njit.edu/phd-urban-systems>.

For more information on the general application process please visit: <https://www.njit.edu/admissions/phd-programs>.

Please contact me <chyojin.kim@njit.edu> for questions and further information.

—Hyojin Kim

NORTH UMBRIA UNIVERSITY

We have a PhD studentship opportunity under the NERC funded ONE Planet Doctoral Training Partnership (Newcastle & Northumbria University) <https://research.ncl.ac.uk/one-planet/>.

The proposed studentship topic: Adaptive buildings design to counteract effects of climate change on indoor air quality (Architecture & Environmental Design).


Application link <https://research.ncl.ac.uk/one-planet/studentships/howtoapply/#d.en.849942>.

—Tarek Ahmed

INTRO: THE NET SOLAR HEATING RESOURCE

“But how do you convince yourself that it’s working!!” my dean asked a few weeks ago. What he meant, but was too polite to say, was: How can any reasonable person believe that bluish light, struggling through clouds on a rainy gray November day in the Pacific Northwest, is able to deliver anything approximating useful heat to a living space? A great question, showing both genuine interest and honest disbelief. He’s a scientist, but still, reconciling the new passive heating evidence with his own personal experience was asking a lot. And I could relate because I’d asked John Reynolds a similar question years ago: How can passive solar heating work here in western Oregon, the land of fog and moss? What would it take? He laughed at the time, told me that he and Alison (Kwok) and Walter (Grondzik) had taught me everything I needed to figure that out for myself, and rode off into the mist on his bicycle.

Believing him, but still uncertain, I gathered a small group of sun-worshipers, some who had begun experimenting decades ago, and we spent the next three years studying solar heating systems throughout the Pacific Northwest. Slowly, but encouragingly, pieces started falling into place. We found that clouds, rain, wet soil, long heating seasons—all missing from the New Mexico test bed that had guided thought in passive heating design since the 80s—changed passive solar heating performance enormously. We learned that overcast skies send much of their energy straight down from the zenith which was well-known in daylighting but hadn’t yet been considered in heating, and we also found a surprising amount of heat in this light. We discovered that thermal mass can be designed to suit a situation much more than we’d thought it could in the era of mass-to-glass ratios.

In 2015, I brought our findings to the Highlands, NC, retreat: in a workshop I asked everyone, Given what we’d found so far, should passive solar heating education be redesigned for greater relevance to cold and cloudy climates? And if so, what should we keep from our existing approach? A brief stunned silence may have occurred at the thought of parting ways with the Balcomb guidelines. But everyone got to work, and an hour later the message was clear: we should indeed revise our teaching methods in light of current science, but we have to create simple rules, even if they’re climate-specific rather than universal. Several years later, with Alison’s and Walter’s guidance, these notes materialized in a new Passive Heating chapter in MEEB 13, complete with the necessary conceptual design guidelines. While each step seemed slow, it’s illuminating to realize that in just 8 years, multiple avenues of SBSE input led to a substantial reconception of passive heating design education for greater effectiveness in cold and cloudy climates. This process revised tenets that had required a full-time U.S. Department of Energy team to develop originally, and that had been regarded as virtually unquestionable for four decades. Remarkable itself!

Yet another discussion began at this retreat, as well. I’d carpooled from Atlanta with Simi Hoque, Sandy Stannard, and Mary Guzowski. As we talked about solar heating on the way, they noticed an impending conflict with the Solar Savings Fraction. If the Balcomb guidelines were revised, what would happen to the SSF, they asked? Another great question. The SSF expresses solar heating potential as a fraction of a total heating need, which is useful, but it obscures the absolute heating energy use avoided. And, if someone reasonably assumed that...
MICHAEL ERMANN’S BUBBLEWRAP HOUSE

An *Architect* magazine acoustics podcast featuring Michael Ermann has been posted to <https://www.architectmagazine.com/design/podcast-how-can-architects-better-understand-sound_o>.

Once you’re briefed on the science of acoustics, you can visit Michael’s day-lighted and insulated house addition at <https://www.architectmagazine.com/project-gallery/bubblewrap-colonial-additions>. Ever the building scientist!

—Bruce Haglund

THE NET SOLAR HEATING RESOURCE [CONT.]

A savings of 80% should be better than a savings of 30%, they would enthusiastically explore passive heating in a place where savings of 80% amounted to, say, 2 MWh (or less), while avoiding it in a place where 30% amounted to 5 MWh or more. To help people understand the true potential of passive solar heating, in other words, an absolute metric was needed. Simi, Sandy, and Mary followed up with me on the way back to Atlanta, and at the next retreat, and the next. Truly, there was no way out of this one!

At last, thanks to many of you, the National Science Foundation, two fantastic graduate students, and multiple collaborators, we have this new metric: the Net Solar Heating Resource, or NSHR. It’s simply the annual solar radiation incident upon a collector surface, of specified area and optimal tilt, that’s useful for space heating. It has to be received when heat is needed, and any that exceeds the need doesn’t count. As you might expect, NSHR patterns are the inverse of active solar resource patterns over much of the U.S.: they increase with latitude and cloudiness, since cloudy climates have longer heating seasons and thus more to gain. The high-desert southwest is still exceptional, of course, but the true passive heating potential in the cloudy Pacific Northwest and Great Lakes areas is much clearer. And, considering the U.S. as a whole, the portion of the resource capture and retaining with current technology is comparable to one-third of the national heating need. In other words, we have immediate access to a tremendous renewable resource that doesn’t compete with other end-uses for electricity (important when the grid is still largely fossil-fueled), doesn’t require trace metal mining, and is virtually untapped: less than 0.2% of U.S. households currently use solar heating. Another remarkable finding, showing that passive solar heating education should be expanded widely throughout our curricula.

Still, even the most compelling maps and graphs don’t answer the question my dean asked, and that reporters have been asking, trying to give their readers and listeners something tangible and relatable. How do we, as designers and scientists, convince our students, our colleagues, our clients, and even ourselves that systems operating on timescales longer than a few minutes, and at magnitudes outside our perception, are actually operating at all? Simply put, how do we know they’re working? An important question for passive cooling and natural ventilation as well. We could rely on screens, blinking lights, or colored panels to show us measurements. But what else can we do, in the realm of thermal delight and beyond, to make these quiet, slow-moving systems tangible, inviting, appealing, and ... well, convincing? We need to ask because without such convincing elements even the scientists will remain skeptical. I’ll leave you with this question for now, and I look forward to hearing your ideas, brainstorms, musings, and poetry about it at the next retreat.

[Read more at <https://around.uoregon.edu/content/passive-solar-could-furnish-third-home-heating-needs>—ed.].

—Alexandra Rempel

USC NABS LA AIA AWARD

Students and Faculty from the CLIPPER Lab and Studio at the USC School of Architecture have been conferred a Design Citation Award from the Los Angeles Chapter of the American Institute of Architects for the Carapace Pavilion project. We designed and fabricated it ourselves (with help and guidance) and will install it at Joshua Tree National Park in the coming months. It is deeply rooted in the building sciences.

Fabrication was off site with no on-site construction yard, and final installation was to be completed in one day using only one truck and one trip. Fabrication requirements called for five panels to be cast using one cleverly designed mold on a single deck in the precast facility. The mold was designed and digitally fabricated by students using a high-density foam milling CNC machine in the digital fabrication lab at the university. The panels use integrally-mixed steel fiber instead of traditional rebar.

The Carapace Pavilion is a prototype replacement enclosure for the standard double-restaurant buildings used widely throughout state and national parks. The design sought a more site-specific form as an appropriate complement to the curvilinear forms of the natural rock “inselberg” landscapes and the extreme climate conditions of Joshua Tree National Park.

More than 100 students participated, led by Doug Noble and Karen Kensek (above).

There is a three-minute YouTube video of the jury comments and our statement. The link will take you directly to the right spot in the two-hour video so you can see just the three-minute part describing our project. It starts with one minute of jury comments, followed by two minutes of Doug summarizing the project. See <https://youtu.be/nL6DYZjHVxo?t=5903>.

—Doug Noble
**LAST WORD**

**DESIGNING BUILDINGS FOR PEOPLE**

Our built environments can affect us in many subtle ways. Simply sensing fresh air and natural light or seeing greenery and open space can uplift our mood and improve our well-being. But these healthy environments are increasingly difficult to achieve in practice. The vital collaboration between the many people involved in designing and producing buildings is often not achieved. Then there is the pressing need to reduce waste and pollution. Managing these demands is a challenge, especially in a traditional climate of short-term thinking. *Designing Buildings for People* explores how we can learn from buildings of the past, vernacular architecture, and the natural world around us while still harnessing the opportunities presented by technology to think creatively, work collaboratively, and exercise a transdisciplinary approach.

— Derek Clements–Croome

**NO LOW-TECH DESIGN FEATURE**

I was hit by a pickup at 7th and Blair last Thursday, now recovering at home after a couple days in the hospital. Between the concussion and a couple of broken bones (tibia, pinkie finger), and various cuts, sprains, and bruises, recovery will take a while and I should skip contributing to the Winter issue. I’m definitely on the mend, each day a huge improvement, and I’ll be back to my old irascible self before we know it, but I shouldn’t promise what I might not be able to deliver. Using a keyboard is really slow right now. Recovery prognosis is good, I’m pleased to say. [Cars need to be more heedful, eh? Glad you’re on the road to recovery. No worries about not doing December, but I’m sure your fan-base will mourn. You’re tougher than Helmut Jahn who succumbed to a car/bike crash in my old hometown of St. Charles, IL, at age 80 earlier this year...—ed.]

I’ll leave it up to you to simply leave it out, [I opt to leave it in for your fan-base’s benefit.—ed.] or say that I was stopped by the laws of physics when the truck didn’t stop for the traffic laws of Oregon, or whatever you want. And say that I’ll be back with more Low-Tech.

So, I missed the kerfuffle over the Charlie Munger dorm at UCSB [You can catch up on page 2.—ed.], although I do remember Sara mentioning it while she was here over the weekend. Something tells me that the students, alums, or the Coastal Commission will raise a ruckus.

Ride carefully, my friends.

— Fred Tepfer

**SBSE CALENDAR [COVID–19 RESTRICTIONS MAY CAUSE CANCELLATIONS]**

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<th>2022</th>
<th>Event Name</th>
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<td>May 21–22</td>
<td>Reynolds Symp 2022/Portland and Mt. Angel, OR, USA</td>
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<td>Jun 21–24</td>
<td>ASES Solar 2022/Albuquerque, NM, USA</td>
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**SPRING ISSUE SUBMITTAL DEADLINE—MAR 1**

SBSE News  
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To: SBSE Members & Friends  
Planet-wide

More about Patricia Andrasik at <https://www.catholic.edu/catholic-university-profiles/more-profiles/Patricia-Andrasik.html>.