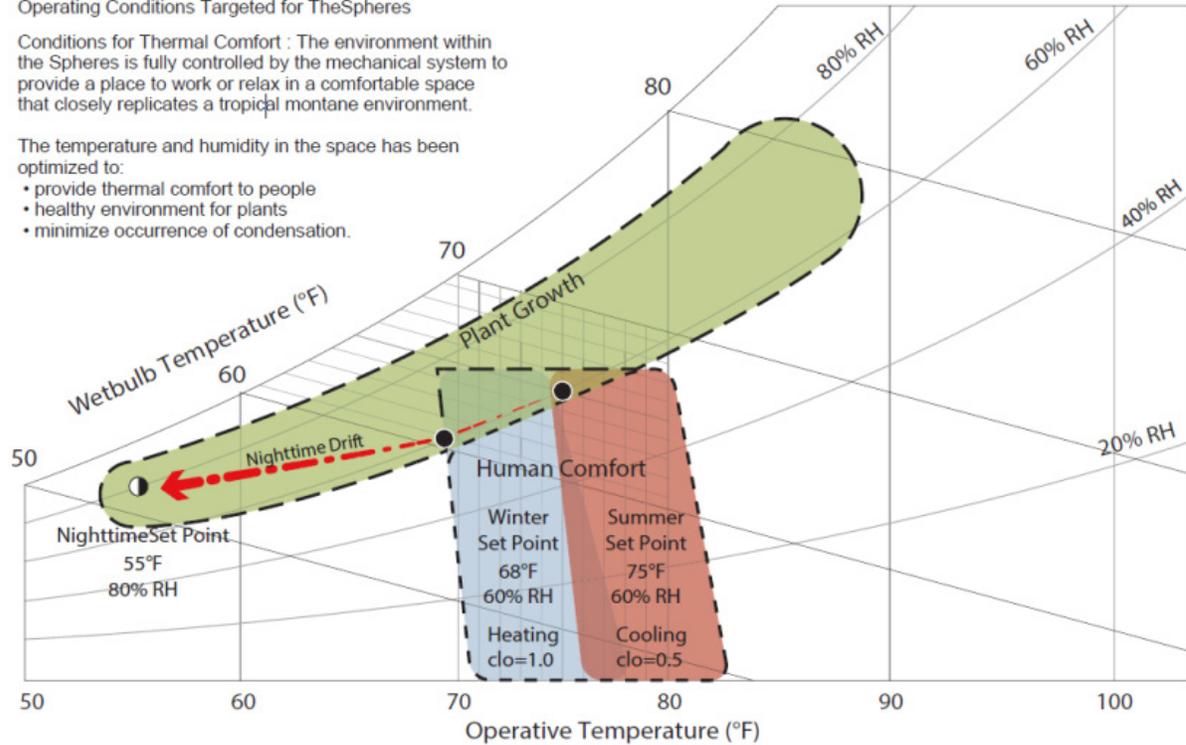


Psychrometric Chart - Comfort Conditions  
Operating Conditions Targeted for TheSpheres

Conditions for Thermal Comfort : The environment within the Spheres is fully controlled by the mechanical system to provide a place to work or relax in a comfortable space that closely replicates a tropical montane environment.

The temperature and humidity in the space has been optimized to:

- provide thermal comfort to people
- healthy environment for plants
- minimize occurrence of condensation.



graphics: NBBJ

SBSE retreat goers who tour the Spheres will find thermal comfort whether they are human or a philodendron thanks to NBBJ's climate-based design analysis!

## 2022 RETREAT SEATTLE: REGISTER NOW!

BIO-INSPIRED TEACHING, LEARNING, AND PRACTICE

The SBSE Board and Retreat Planning Committee are pleased to announce the opening of registration for the 2022 SBSE Retreat in Seattle, WA.

**RETREAT DATES.** 20–23 Jul 2022

### In-person Meeting Seattle, WA

- Wed, 20 Jul: Afternoon Arrival / Evening Welcome Event
- Thu, 21 Jul: Core Program (hybrid)
- Fri, 22 Jul: Core Program (on-site only)
- Sat, 23 Jul: Morning Post Event / Noon Departure

### Virtual Meeting

- Thu, 21 Jul: One-day hybrid format

The 2022 SBSE Retreat is being planned with some online portions to maintain flexibility due to the continuing COVID-19 pandemic.

We will use Zoom on Thursday for hybrid presentation sessions.

### SCHOLARSHIPS.

**Review of faculty scholarships** will begin 1 Jun with a final deadline of 15 Jun.

<<https://www.sbse.org/scholarships/jeffrey-cook-faculty-retreat>>

**Student scholarships** are due 30 Jun.

<<https://www.sbse.org/scholarships/sbse-student-retreat>>. 🙌

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

## AIA SMALL PROJECT DESIGN AWARD

[A propos the retreat in Seattle, AIA has selected the Seattle Street Sink project as one of the 13 awardees. Find one while you're there!—ed.]



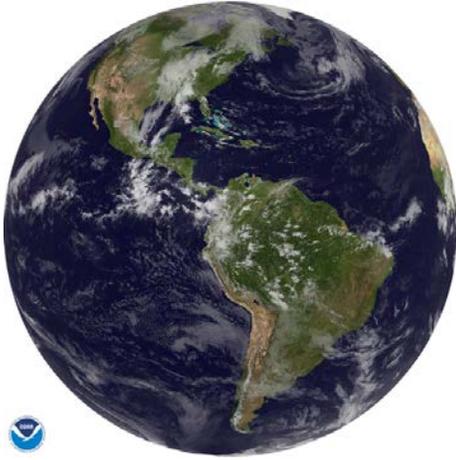
photo: AIA Web Site

Using hose bibs as a water supply and treating gray water on-site, the Street Sink remedies the issues of the city's temporary stations. A cadre of community groups, faith-based organizations, and volunteers host and maintain the sinks on private property, avoiding any bureaucracy and forging new community connections. Modest, yet influential, the Street Sink has improved the lives and health of those most affected by the pandemic. 🙌

—AIA

## CBE CLIMA TOOL UPDATE

graphic: Climate.OneBuilding web site



In April 2022, Climate.OneBuilding <<https://climate.onebuilding.org>> released a completely updated worldwide TMYx data set adding more than 2,500 new locations.

Climate.OneBuilding.org now provides TMYx climate data at no cost for more than 16,100 locations in more than 195 countries and another 5,200 files from other data sources.

All are now easily accessible through CBE Clima Tool <<https://clima.cbe.berkeley.edu>>.

Thanks to Dru Crawley and the team at OneBuilding.Org for the effort. Thanks as well to Federico Tartarini for reflecting the new database in Clima. Thanks to the CBE, UC Berkeley for the continued support. Thanks to all for your support, bug reports, and sharing within your communities. 🙌

—Giovanni Betti

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## SUFFICIENT &amp; RESILIENT BUILDINGS FOR 2050

Designing buildings for 2050 was the subject of a workshop given by Peter van den Engel and myself at CLIMA 2022 in Rotterdam on 23 May. Two days prior a series of tornadoes hit North Germany injuring 43 people and causing widespread damage. My talk started with future climate predictions, using the IPCC 6th Report out in 2022 which shows that by 2050 it is not unlikely that global temperatures could be  $3.0^{\circ}\text{C}+$  ( $5.40^{\circ}\text{F}$ ) above 20th century averages, even as we approach  $1.50^{\circ}\text{C}+$  ( $2.70^{\circ}\text{F}$ ) this year. 2050 is only 28 years away! OMG, I thought as I was explaining how I had designed the Oxford Ecohouse to withstand extreme weather events. I built that house 28 years ago and in 28 more years it will be 2050. Consider how extreme the weather events are even now.

Then I looked around at the great new architecture of Rotterdam. The New Institute of Architecture, Design, and Digital Culture has a floating roof above it that could well be ripped off by an extreme wind. Next door is the Boijmans Depot, storing much precious fine art and sculpture. It is fascinatingly shaped like a giant pressure cooker with all electric doors that slide out of its base that might fail in a power outage rendering it inaccessible or inescapable.



The New Institute of Architecture, Design, and Digital Culture,



The Boijmans Depot for Fine Art

These buildings flag the fact many architects are blind to the more extreme weather ahead. I was myself until I saw that magic number: 28 years from now =  $+3.0^{\circ}\text{C}$ . It is difficult to comprehend. But surely we have a “Duty of Care” to begin to prepare the built environment for such extremes!

Opposite the two museums is the Hogeschool built in the late 1930s and now part of the Rotterdam University of Applied Sciences. The classrooms are naturally daylight and ventilated with well-shaded windows with opening top vents and central side hung panes. In our world that is heating up how much money will they be able to save while running the buildings on minimal cooling energy.

An imperative for architects today—design Energy Sufficient buildings. Sufficiency differs from efficiency. Sufficiency is about long-term actions driven by non-technological solutions, which consume less energy in absolute terms. Efficiency, in contrast, is about continuous short-term marginal technological improvements as stated in *Climate Change 2022: Mitigation of Climate Change, Technical Summary Report*, by IPCC Working Group 3 (2022). They present a “Sufficiency Framework” that reduces the cost of constructing and using buildings without reducing occupants’ well-being and comfort over its lifetime.

We long have been led into thinking that technology will be our salvation—wrong. It is buildings themselves that will not only keep us safe during extreme weather, but also enable us to radically reduce their energy use by harvesting the free, natural energy around them. We must now adapt and mitigate with sufficient and resilient buildings—in time. It is only 28 years to 2050. 🙌

—Sue Roaf



The Hogeschool, Rotterdam, built in the late 1930s

photos: Sue Roaf

## ROBERT BRUCE THOMPSON AWARDS

MIAMI UNIVERSITY STUDENTS WIN TOP AWARDS IN NATIONAL LIGHT FIXTURE DESIGN COMPETITION



board: Suva Mendoza

Suva Mendoza, a rising senior in Miami University's BFA in Interior Design program, was awarded the Citation for Presentation in the 2022 Robert Bruce Thompson Annual Student Light Fixture Design Competition. The 2022 design problem challenged students to design a light fixture for the produce section of a major supermarket chain. Suva's project, Matrix Dewy System, integrates multiple forms of LED lighting within a customizable modular grid system suspended above grocery store produce displays. Sphere-shaped pendants are detailed in direct and direct-indirect models. Linear downlighting strips are recessed into sections of the grid frame. Suva describes the genesis of her design: "Inspired by morning dew drops that replenish plants, the Matrix Dewy System uses this concept to mimic the way nature revitalizes itself to give grocery produce the same crisp vibrancy." Her presentation considered practical construction design details, light sources, distribution of light, and sustainability issues. See the 2022 winning entries at <https://rbtcompetition.org/past-winners/2022-design-problem/>.

The light fixture design project is an assignment in my ARC 414/514 Environmental Control Systems II. The award was actually a repeat for us. I meant to send in the exciting 2021 news last summer, but dropped the ball. In 2021, the competition's design problem was a light fixture for the apparel area of a university bookstore. Four Miami University students won awards in the 2021 Robert Bruce Thompson Annual Student Light Fixture Design Competition:

- First Place: Emily Pate, BA in Architecture (2022)
- Second Place: Mollie McNally, BA in Architecture (2022)
- Citation for Engineering Achievement: Kari Kruse, MArch (2022)
- Citation for Innovative Concept: Danielle Young, BFA in Interior Design (2022)

You can see their 2021 winning entries at <https://rbtcompetition.org/past-winners/2021-design-problem/>. 🙌

—Mary Ben Bonham

## MORE AWARDS

DREXEL UNIVERSITY

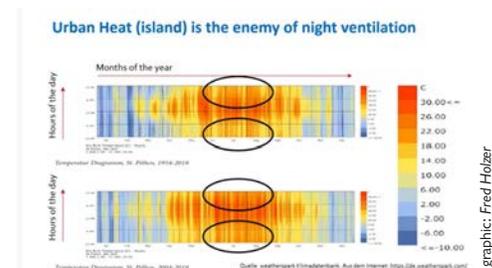
Simi Hoque and her doctoral student, Alissa Sperling, are recipients of 2022 Musuem Innovation Fund from the Philadelphia Academy of Natural Science, which will be used to support the Drexel College of Engineering's STEM outreach summer program, organized in partnership with Girls Inc. of Philadelphia. Hoque is also the recipient of the 2022 grant from the National Academy of Science, Connecting Efforts to Support Minorities in Engineering Education. Lastly, she has received funding from the Longview Fellows, Pennsylvania chapter of Physicians for Social Responsibility, and Drexel's Provost's Office to support her research with the nonprofit, Energy Coordinating Agency, in which she is studying the effects of weatherization on indoor environmental quality, heat stress, and wellbeing. The project is a collaboration with Leah Schinasi, faculty from the Dornsife School of Public Health. 🙌

—Simi Hoque

## EAR/EYE CANDY

We were waiting to get more of the 7 videos from our 7 Apr event on Resilient Design. I just had such a nice e-mail from Donald Watson who enjoyed the first on future climates, so I thought he (you) might like the next two.

There is a huge move back to radiant and hydronic comfort systems: those so interested will enjoy the talk by Austria's Peter Holzer on Resilient Cooling <https://youtu.be/-kkuChauVEY>.



Then, an excellent talk by the wonderful Philomena Bluysen on COVID transmission. It is such a good talk it would make a great thing to show in lessons when talking about designing for future pandemics <https://youtu.be/X8627mo51gw>. 🙌

—Sue Roaf

## SBSE PEOPLE

✉ A few weeks ago, **Joonho Choi** received an e-mail from the USC Provost's Office. He had been selected a recipient of the 2022 USC Mentoring Award. "Unfortunately, I had to miss the prestigious award ceremony on campus, but I received the certificate by mail today! Receiving such a distinguished award from USC is both an honor and a source of humility for me. Many of my best students helped me achieve this honor over my career."

➤ **Mark DeKay** is headed to Venice as a Fulbright Specialist, 15 Jun–26 Jul. He'll be at Iuav University in the Department of Architecture and Arts, working with the group, Research Infrastructure Integral Design Environment (IR.IDE). The invited project is called "Activating Integral Design Environments" and will address their multidisciplinary, multi-scalar design research using the integral model. 🖐

## STUFF FOR YOU



Main Gate of the Tolentini building headquarters of Università Iuav di Venezia (Iuav University of Venice) designed by Carlo Scarpa.

After working with Iuav over the last few years, in 2020 Mark DeKay was invited to provide the concluding essay in a volume Iuav produced entitled, *Territori del Triveneto: Verso un approccio integrato al progetto* (*Territories of the Triveneto: Towards an integrated approach to the project*). His chapter was "Prospettive su Territori Integrali" (Perspectives on Integral Territories). It's a relatively short piece with lots of concepts treated at high-level overview. It should be of interest to the SBSE readership. The English version is at <[https://www.academia.edu/44566088/PROSPETTIVE\\_SU\\_TERRITORI\\_INTEGRALI\\_Perspectives\\_on\\_Integral\\_Territories\\_](https://www.academia.edu/44566088/PROSPETTIVE_SU_TERRITORI_INTEGRALI_Perspectives_on_Integral_Territories_)>. 🖐

## LOW TECH—A RAMBLE THRU THE WINDOW

I've had a personal reason to walk and think quite a bit recently. I've also starting reading Lisa Heschang's wonderful *Visual Delight in Architecture*. Her introduction and my walks brought an "aha" moment: how do the views out of windows really work, and how do designers take advantage? Why do so many recent house designs seem window-impooverished, with fewer, much larger windows than our traditional designs? Thus I began this short piece for *SBSE News*. Then I attended the Reynolds Symposium in Alvar Aalto's delightful library at Mount Angel Abbey, near Salem, OR—all about light, dynamic interior environments, and views. Finally, a day or two ago, someone well-embedded in the world of building science shared a recent editorial [Ko et al. in *LEUKOS*, a journal of the Illuminating Engineering Society] on views and buildings, written in part by SBSEers. So consider this piece as a thought ramble, a daydream walk through ideas about views and buildings, from someone who was a photographer (a curator of views, perhaps) before becoming an architect.



Mount Angel Abbey Library skylight

The editorial in *LEUKOS* covers much of what was in my first outline of this piece. In particular, it states the importance of views of dynamic subjects that change over time versus static views, and the value of certain kinds of views, in particular views of nature and of things far away. An excellent paper which I highly recommend, and it pairs well with *Visual Delight*. The paper focuses on finding a shared language for describing views, to create the framework for further research—akin to defining dry bulb and wet bulb temperatures to create a psychrometric chart to guide designers. My interest, a little different from theirs, is about the many ways designers can take advantage of how views stimulate our brains, and thus make buildings that are more attractive, more healing, and more thought-provoking. My consideration is more like a designer, less like a researcher. What windows will make us think? Or learn? Or daydream? Which window views attract us? Do any repel us? Please bear with me as I pose questions and plant seeds for thought as we walk through the subject of views.

**Indoor–outdoor views.** Some of the best modernist buildings create, in places, a minimal separation between indoors and out. If done sensitively, we can enlarge the feeling of the indoor space and invite the viewer to move outdoors. Is success with this strategy intrinsically linked to the subject of the view?

**Reflected views.** Do views presented in reflections in interior glass or in mirrors match the power of exterior views? How can they supplement window views? Or do they detract from windows?

**Composite views: filling in between.** Some windows create a composite image with punched openings. The viewer's mind fills in the missing parts. Is that stimulating, or frustrating? That may depend on the design.

**Multiple views and orientation.** The late Christopher Alexander, in *A Pattern Language*, describes the powerful effect of placing windows on two sides of a room. Rookie thinking for skilled designers, yet also something that seems to be, more often than not, forgotten in practice. Alexander, it turns out, was writing about daylight, not views. Perhaps it applies to both.



Nordia Center.

## JOB OPS

UC BERKELEY CBE

The Center for the Built Environment (CBE) at the University of California Berkeley, is seeking an Assistant or Associate Professional Researcher to lead a new research program on environmental life-cycle assessment and embodied carbon in the built environment. See <<https://aprecruit.berkeley.edu/JPF03464>>.

—Vincent Martinez

## UNIVERSITY OF UTAH

We are actively recruiting for an Energy/Sustainability Manager. The U has bold plans for Carbon Neutrality, Climate, Air Quality, and All-Electric new construction. To achieve these goals the successful candidate will support university project managers throughout the cycle of design and construction projects to ensure balance between university-wide goals and the practical constraints of the project and future operations. While primarily an internal consulting position, some opportunities for project management are likely. The Sustainability Manager will also oversee compliance with LEED certification and Utah's High-Performance Building Standard. Architecture, engineering, or similar design and construction experience preferred for this staff position.

Energy/Sustainability Manager (PRN30577B) University of Utah Jobs—Energy/Sustainability Project Manager pay range is \$60,700—\$115,300. See <<https://employment.utah.edu/salt-lake-city-ut/energysustainability-project-manager/14D7ABA89ABD4B4C80CC47DADCEF9ABA/job/>>.

Contact me directly with questions at <[s.jensenaugustine@utah.edu](mailto:s.jensenaugustine@utah.edu)>. 🖐

—Sam Jensen Augustine

**Layering and framing.** Claude Monet created a magnificent house and gardens later in his career, in Giverny, at the edge of Normandy, where he tinkered for years with how overlaps of views, either into rooms or to gardens, interacted with the interior colors of the rooms. Walking through the house is like reading a seminal book on color theory. Seen in different seasons, it's clear that the changing nature of the garden has a primary role in his orchestration of the views out, yet the design is as much about the frame as it is about the picture.

**Depth of field.** Borrowing this term from photography, how important is it that the view include things both near and far? My intuitive sense is that the best views have both.

**Static versus dynamic views, or viewer.** In the Ko et al. paper, “static” and “dynamic” refer to the view itself, which is certainly important. Unmentioned are the viewers—are they in one place, or are they in motion? In discussing views, we think of a person, often seated, perhaps at a work station, and one or more windows through which they can see the outdoors. How does this change when the viewer is in motion? Think of the experience of climbing a stair with windows on two or three sides as opposed to only having a window at the landing. Also, see Snapshot views, below.

**“Snapshot” views.** These are experienced while in movement when an interior opening slides past a window view, much like the simple leaf shutters on old box cameras. These can create powerful, memorable views, and are all but ignored by the design professions. They're a little tricky to design. Most of the ones I've seen were probably accidents. Why not design them into a building's circulation system?

**The viewer.** Rather than discounting who is seeing through a window, consideration of the person seeing the view has powerful design implications. Some people don't have choices about when and where to partake of views: hospital patients, some clerical workers, assembly plant employees, and so on. Others work with a degree of independence and can move about at will. Does the importance of views increase for those unable to seek them out when needed? Should we provide views in public places that everyone frequents, like near restrooms?

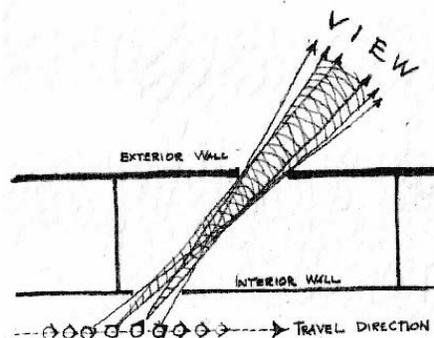
**People views.** Much has been written about biophilia and the power of views of nature. What about views of human activity? People love to watch construction sites. People-watching in cafés and in concert hall lobbies is an ancient and much loved sport. How does this love of human activity fit into our theory of views?

**Angle of view.** To my eye, downward views, upward views, and lateral views are fundamentally different. Does that account for, in part, the difference between the rent in a daylight basement versus a penthouse? Between a sidewalk view at grade versus a sidewalk view from a position raised a foot or two?

**Dynamic reflections and shadows.** Kevin Nute's research shows many innovative ways to bring visual effects natural systems into buildings, through shadows, reflections, moiré, and other techniques. These generally involve windows but not views. Should we expand our thinking about views to be consideration of ways of bringing perception of natural systems into buildings?

A final thought as I near the end of this stroll: There are interesting gaps in the research and writing about views and related subjects. The bibliography of the Ko et al. paper is itself a helpful document for those interested in exploring this field. Thanks for taking a walk with me, and I'll see you next time. 🖐

—Fred Tefter



Snapshot view diagrammed.

diagram: Fred Tefter



Concrete, water, sun, shade, and reflection!

photo: Bruce Haglund

## EVENTS FOR YOU

ARCC 2023: THE RESEARCH-DESIGN INTERFACE, Dallas, TX, 12–15 Apr 2023



photo: ARCC

The Dee and Charles Wyly Theatre (2009), Dallas, TX, by REX + OMA (detail) [Architecture or bar code?—ed.]

CALL FOR ABSTRACTS Due 11 Jul 2022

### Topic Areas

- Planning, Policy, and Resilience
- Healthcare and Facilities Design
- Wellness and the Built Environment
- Technology and Design
- Spatial and Formal Analysis including Human Cognition
- Architecture and the Humanities
- Role of Research in Practice
- Pedagogy
- Open Track

For full details see <<http://www.arcc-arch.org/arcc-2023/>>

Hosted by Texas Tech University in collaboration with the Design Leadership Alliance. Conference Co-Chairs: Saif Haq and Zahra Safaverdi

—Hazem Rashed-Ali

### THE FUTURE OF WORK

Simi Hoque (Drexel) and Burcin Berceik (USC) are co-organizing an NSF-funded workshop focusing on the Future of Work. The workshop will be held over two days on 29–30 Sep 2022, in Los Angeles California. It is supported by the International Network of Networks on Wellbeing in the Built Environment (IN2WIBE), through an NSF AccelNET grant. Engineers, designers, occupational therapists, and health professionals are encouraged to reach out to me <[sth55@drexel.edu](mailto:sth55@drexel.edu)> if they would like to participate in the workshop. 🙋

—Simi Hoque

## SOLAR DECATHLON WINNERS

SBSEERS SWEEP TOP PRIZES—CONGRATULATIONS TAREK AND JONATHAN, AND THEIR STUDENTS FOR THEIR AMAZING WORK!

### 2022 Design Challenge Grand Winners

**Residential Divisions.** Georgia Institute of Technology (Atlanta, GA), Faculty Sponsor Tarek Rakha

- Project Summary <[https://www.solardecathlon.gov/2022/assets/pdfs/22DC\\_RH\\_GT\\_SUMMARY.pdf](https://www.solardecathlon.gov/2022/assets/pdfs/22DC_RH_GT_SUMMARY.pdf)>.
- Presentation Slides <[https://www.solardecathlon.gov/2022/assets/pdfs/22DC\\_RH\\_GT\\_FINALPRES\\_2022-04-19.pdf](https://www.solardecathlon.gov/2022/assets/pdfs/22DC_RH_GT_FINALPRES_2022-04-19.pdf)>.



### ENGLISH AVENUE YELLOW JACKETS

2022 DESIGN CHALLENGE - RETROFIT HOUSING



graphic: Team Georgia Tech

**Commercial Divisions.** The University of Arizona (Tucson, AZ), Faculty Sponsor Jonathan Bean

- Project Summary <[https://www.solardecathlon.gov/2022/assets/pdfs/22DC\\_MB\\_UA\\_SUMMARY.pdf](https://www.solardecathlon.gov/2022/assets/pdfs/22DC_MB_UA_SUMMARY.pdf)>.
- Presentation Slides <[https://www.solardecathlon.gov/2022/assets/pdfs/22DC\\_MB\\_UA\\_FINALPRES\\_2022-04-19.pdf](https://www.solardecathlon.gov/2022/assets/pdfs/22DC_MB_UA_FINALPRES_2022-04-19.pdf)>.



graphic: Team Arizona

You can find much more about the decathlon at <<https://www.solardecathlon.gov/event/2022-design-challenge-results.html>>. 🙋

—Bruce Haglund

## 2022 COTE TOP TEN FOR STUDENTS WINNERS

SBSE FACULTY SPONSOR TWO WINNING PROJECTS



graphic: Team Tumi

### TUMI

**Students:** Mia–Kim Bouchard, Alice Corriveau–Gascon, and Roxane Gagnon  
**Faculty Sponsors:** Claude Demers and André Potvin (Université Laval)

**Juror Comments:** Tumi is at once whimsical and highly technical, packed with a spectrum strong solutions that appear to respectfully respond to the indigenous Inuit culture and support their self-determination. The in-depth consideration of culture is executed masterfully through the strong concept and overall story arc. The technical details and strong graphics fuse alluring design, sustainable strategies, and social infrastructure into a remarkably compelling project.



graphic: Team Uqumujuq

### UQUMUJUQ—ARCTIC GREENHOUSE IN CAMBRIDGE BAY

**Students:** Florence Bouchard–Bédard, Daphné Garon–Rioux, and Coralee Tremblay  
**Faculty Sponsors:** Claude Demers and André Potvin (Université Laval)

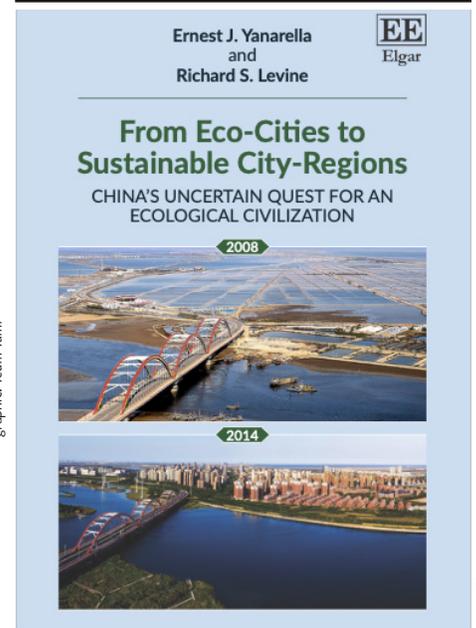
**Juror Comments:** Uqumujuq—Arctic greenhouse in Cambridge Bay is compelling for its elegant design and strong emphasis on community spaces amplified by beautiful renderings and thoughtful analyses. This project also stood out for empowering the community to come together to create their own space within a larger unified form.

More information on these and other projects is available at <<https://www.acsa-arch.org/competitions/2022-cote-competition/winners/#toggle-id-10>>. 🖱

—Bruce Haglund

## BOOK CORNER

FROM ECO-CITIES TO SUSTAINABLE CITY-REGIONS



cover: Elgar

Bob Koester has provided a thorough review of this book for *THE PLAN Journal (TPJ)*, which is available gratis to all at <<https://www.theplanjournal.com/article/eco-cities-sustainable-city-regions-china-s-uncertain-quest-ecological-civilization>>.

—Bob Koester

BUILDING PERFORMANCE BASICS

## Building Performance Basics



an introduction to delivering buildings that work

Pieter de Wilde

Happy to announce the publication of *Building Performance Basics*, published via Kindle Direct Publishing (KDP), available via Amazon. 🖱

—Pieter de Wilde

cover: Kinelle Direct

FINAL WORD

UCSB REDUX

photo: Bruce Demonte



UCSB isn't all about the controversial Munger Hall [See SBSE News winter 2021-ed.]. In a fit of atonement KieranTimberlake was hired to design Henley Hall Institute for Energy Efficiency which "offers a lesson in natural ventilation" and solar shading via its façade-defining brise-soleil. Read Metropolis' cool, heartening 7 Apr 2022 article at <https://metropolismag.com/projects/henley-hall-kierantimberlake-natural-ventilation/?utm\_campaign=ID%20%26%20ME\_Sustainable%20Breakthrough>.👉

—Bruce Haglund

INTRODUCING THE CARE TOOL

UNLOCKING THE VALUE OF REUSE

In this critical decade for climate action, the existing built environment is a key asset to achieve substantial, near-term carbon reductions. Leveraging the buildings we already have avoids embodied emissions from new construction, reduces operational emissions from existing buildings, and provides social and economic benefits.

In most cases, the greenest building is the one that already exists, but that can be challenging to quantify. These carbon benefits of reusing existing buildings are rarely incorporated in climate planning, carbon tracking, or design decision-making. The Carbon Avoided: Retrofit Estimator (CARE) Tool addresses this gap by offering high-level carbon projections for reusing and upgrading existing buildings compared to replacing them with new construction. See more at <https://architecture2030.org/caretool/>.

The need for the CARE Tool is urgent with expressions of interest from a diverse set of stakeholders, ranging from architecture and engineering practitioners to city officials, historic preservation commissioners, and global NGOs. A proof-of-concept version of the CARE Tool has been developed and vetted thanks to seed funding and the support of industry partners, including the Zero Net Carbon Collaboration for Existing and Historic Building (ZNCC), the Climate Heritage Network (CHN), Architecture 2030, and the Carbon Leadership Forum (CLF).

We are excited to announce that Architecture 2030 will now manage and provide the staff support to complete the first phase of the development for the CARE Tool's online interface by fall 2022. 👉

—Architecture 2030

SBSE CALENDAR [COVID-19 RESTRICTIONS MAY CAUSE CANCELLATIONS]

- 2022
- Jul 20–23 SBSE Retreat 2022/Seattle, WA, USA
- Sep 5–6 CATE22/Edinburgh, UK
- Sep 21–24 ASES Solar 2022/Albuquerque, NM, USA
- Sep 29–30 IN2WIBE Workshop/Los Angeles, CA, USA
- Nov 9–11 VIBRArch 2022/Valencia, SPAIN
- Nov 14–16 BECC 2022/Washington, DC, USA
- Nov 23–25 PLEA 2022/Santiago, CHILE
- 2023
- Apr 12–15 ARCC 2023/Dallas, TX, USA 👉

FALL ISSUE SUBMITTAL DEADLINE—SEPTEMBER 1



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To: SBSE Members and Friends  
Planetwide



B E A N \* M A I L

\*Jonathan Bean, SBSE Awards and Scholarship Chair.