SBSE NEWS

SBSE FACULTY AMONG THE TOP TEN WINNERS

The AIA COTE, in partnership with ACSA, have selected the recipients of the 2019 AIA COTE Top Ten for Students Competition. The competition recognizes ten exceptional studio projects that demonstrate designs moving towards carbon-neutral operation through creative and innovative integration of design strategies such as daylighting, passive heating and cooling, materials, water, energy generation, and sustainable systems. The program challenged students to submit projects that use a thoroughly integrated approach to architecture, natural systems, and technology to provide architectural solutions that protect and enhance the environment.

The jury for the 2019 AIA COTE Top Ten for Students Competition included: David Dowell, El Dorado Inc.; Bradford Grant, Howard University; Matthew Noblett, Behnisch Architekten/Partners; and Mary Demro, Montana State University.

SBSE faculty sponsored three award winners—Dyads Students: Thomas Valcourt, Karl Greschner, & Philippe Bernard; Faculty: Claude Demers and André Potvin, Université Laval; Healing Habitats Students: Catherine Earley, Elena Koeppl, and Sabrina Ortiz; Faculty: Brook Muller, University of Oregon; and Wallingford W2E Students: Sean Anderson, Tobias Jimenez, and Haley Ladenburg, Faculty: Omar Al-Hassawi, Washington State University.

The competition had nearly 500 participants from the following schools: American University of Sharjah, Auburn University, California Baptist University, California College of the Arts, Carleton University, Carnegie Mellon University, Clemson University, Columbia University, Howard University, Iowa State University, Kennesaw State University, Lawrence Technological University, Marywood University, Montana State University, Prairie View A&M University, Pratt Institute, Rhode Island School of Design Rice University, Savannah College of Art and Design, Texas A&M University, Tianjin University, Université Laval, University of British Columbia, University of Detroit Mercy, University of Idaho, University of Memphis, University of Michigan, University of North Carolina at Charlotte, University of Oklahoma, University of Oregon, University of Tennessee-Knoxville, University of Texas at San Antonio, University of Washington, and Washington State University.

SBSE ELECTION YEAR

Our purely volunteer organization seeks nominations or self-nominations for President-Elect, Treasurer, and Secretary. Consider serving or recruit a talented and respected colleague! Send your nomination to any board member before the Annual Meeting Tuesday, 23 Jul, 9:30–10:30 am MDT. You may attend the meeting remotely, see Society Notes on page 3 for details.

—SBSE Board

TOP TEN WINNERS [CONT.]

University of British Columbia, University of Detroit Mercy, University of Idaho, University of Memphis, University of Michigan, University of North Carolina at Charlotte, University of Oklahoma, University of Oregon, University of Tennessee-Knoxville, University of Texas at San Antonio, University of Washington, and Washington State University.


—AIA COTE

continued next column

HTTP://WWW.SBSE.ORG/RETREATS/SBSE-RETREAT-2019
LETTERS TO THE EDITOR

As I read it, according to Kira Gould on LI, the AIA voted yesterday to call the climate crisis what it is, almost: “Yesterday, on day one of A’19, the American Institute of Architects Conference on Architecture, a resolution passed—overwhelmingly (4,860 yes to 312 no)—for AIA to declare an urgent climate imperative for carbon reduction; transform the day-to-day practice of architects to achieve a zero-carbon, equitable, resilient and healthy built environment; and leverage support of our peers, clients, policy makers, and the public at large.” If organizations associated with the education of future architects still refuse to transform education, I suggest they be replaced. We cannot continue to be the laggards in the face of existential and wholly validated destruction.

—Drake Wauters, BEEnow

Meanwhile Britain’s 17 Stirling Prize laureates have issued a similar declaration to their colleagues, <https://www.ribaj.com/culture/architects-declare-high-pearman-climate-change-species-extinction-environment>. Is this the year of the great awakening? Godot waits.—ed.

Collaborators on buildings research might be interested in this new journal <http://www.buildingsandcities.org>. It should be a good forum for our work generally, see aims and scope. In addition there are two special issues presenting daylighting issues, making it clear that they should be included in the initial design benchmarks for a project, studied through iterative design, and followed through with post-occupancy validation and feedback, this book is clearly written and thorough, addressing the importance of daylight and views to occupants and of mitigating the negative impacts of fenestration.

The authors explain the value of daylighting from both the energy use (grid demand) and human well-being (circadian system) perspectives. They make the case for daylighting effectively as a central issue for Zero Net Energy (ZNE), meeting greenhouse gas emission standards, and improving indoor environmental quality. The importance of clear daylighting objectives and feedback mechanisms throughout the design, delivery, and operational stages of the project are stressed, allowing for innovation and integration of systems while keeping industry risk low. This book focuses on daylighted space performance through occupant behavior and subjective assessment of sufficiency, views, and visual and thermal comfort. The authors are clear about the challenge of creating integrated systems that can deliver occupant comfort while meeting energy performance goals and they present emerging strategies to leverage internet-connected sensing devices to create responsive buildings.

A chapter on innovative daylighting systems promotes the development of complex fenestration systems that are dynamically interconnected and include occupant feedback. The discussion goes through applications for specific products, their performance, and their scalability; building-integrated photovoltaics; dynamic façades; smart glazing; light redirecting systems; interconnected systems showing tools, workflows, determining occupant behavior, and impact of the site. The authors note an interest in both physical and virtual reality mock-ups.

The performance-based design chapter explains the iterative process of whole building integrated design and looks at the current simulation tools and how to use them. It has clear diagrams showing tools, workflows, determining occupant behavior, and impact of the site. The authors note an interest in both physical and virtual reality mock-ups.

A case study chapter presents in-depth information on six large ZNE commercial buildings located in different climates and contexts. There are many helpful illustrations which clearly link to the book’s discussion on daylighting and controls.

The final chapter focuses on the importance of validating daylight performance from the perspective of the occupants—validating design assumptions by comparing performance to intent. There is an example of a desktop polling station to enable comparison of occupants’ subjective assessments to actual conditions.

This book is well written—easily understandable by students as well as professionals. It has clearly labeled pertinent graphics including diagrams, graphs, images, and examples from built projects located primarily in the USA and Europe. The authors have done an excellent job of presenting daylighting issues, making it clear that they should be included in the initial design benchmarks for a project, studied through iterative design, and followed through with post-occupancy evaluations. —Dorothy Gerring

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BOOK REVIEW

EFFECTIVE DAYLIGHTING WITH HIGH-PERFORMANCE FAÇADES

This new book by Kyle Konis and Stephen Selkowitz, published by Springer, makes a clear case for the importance of careful design consideration of daylighting and building performance. Focused on how to move design practice to performance-based design, use context-aware and adaptive shading systems, and follow through with post-occupancy validation and feedback, this book is clearly written and thorough, addressing the importance of daylight and views to occupants and of mitigating the negative impacts of fenestration.

The authors explain the value of daylighting from both the energy use (grid demand) and human well-being (circadian system) perspectives. They make the case for daylighting effectively as a central issue for Zero Net Energy (ZNE), meeting greenhouse gas emission standards, and improving indoor environmental quality. The importance of clear daylighting objectives and feedback mechanisms throughout the design, delivery, and operational stages of the project are stressed, allowing for innovation and integration of systems while keeping industry risk low. This book focuses on daylighted space performance through occupant behavior and subjective assessment of sufficiency, views, and visual and thermal comfort. The authors are clear about the challenge of creating integrated systems that can deliver occupant comfort while meeting energy performance goals and they present emerging strategies to leverage internet-connected sensing devices to create responsive buildings.

The metrics chapter discusses various design issues—Climate Based Daylight Modeling (CBDM) and Spatial Daylight Autonomy (sDA)—the effect of daylight on the human circadian system, which is included in standards such as the WELL Building Standard; glare and visual comfort; the biophilic importance of views, glazing, shading elements and their measurements in the LEED standards; occupant thermal comfort; and the importance of including design performance metrics at the beginning of a project.

A chapter on innovative daylighting systems promotes the development of complex fenestration systems that are dynamically interconnected and include occupant feedback. The discussion goes through applications for specific products, their performance, and their scalability; building-integrated photovoltaics; dynamic façades; smart glazing; light redirecting systems; interconnected systems through internet-of-things-enabled controls (including occupant feedback and control); and providing personalized occupant control for lighting and glare.

The performance-based design chapter explains the iterative process of whole building integrated design and looks at the current simulation tools and how to use them. It has clear diagrams showing tools, workflows, determining occupant behavior, and impact of the site. The authors note an interest in both physical and virtual reality mock-ups.

A case study chapter presents in-depth information on six large ZNE commercial buildings located in different climates and contexts. There are many helpful illustrations which clearly link to the book’s discussion on daylighting and controls.

The final chapter focuses on the importance of validating daylight performance from the perspective of the occupants—validating design assumptions by comparing performance to intent. There is an example of a desktop polling station to enable comparison of occupants’ subjective assessments to actual conditions.

This book is well written—easily understandable by students as well as professionals. It has clearly labeled pertinent graphics including diagrams, graphs, images, and examples from built projects located primarily in the USA and Europe. The authors have done an excellent job of presenting daylighting issues, making it clear that they should be included in the initial design benchmarks for a project, studied through iterative design, and followed through with post-occupancy evaluations. —Dorothy Gerring
SBSE ENDORSES BUILDINGS & CITIES

Out of the ashes of BRI, a new phoenix arises. The former editors and editorial board members of BRI have created a new journal, entitled Buildings & Cities (B&C). The editorial team is Richard Lorch, Faye Wade, Ray Cole, Niklaus Kohler, Sofie Pelsmakers and Fionn Stevenson. We bring a strong track record of experience, integrity and achievement.

There are some important differences: the new journal is independent (not owned by a big publisher) and it is not-for-profit (no shareholders). This stance is because we recognise and honour the efforts invested by our authors and reviewers. It strikes us as fundamentally wrong for others to make financial gain from your work. Therefore, any eventual surplus is either put back into the journal’s activities or will be given as small grants to the research community. We are open-access (no paywalls) and will use a Creative Commons BY license. We will endeavour to include those authors (particularly from least developed countries) who do not have institutional funding.

An important remit is in B&C's Aims and Scope: in addition to research on buildings, there is a new focus on the dynamic interplay between the different scales of the built environment—region, infrastructure, city, building stocks, neighbourhood, street and site/building. Increasingly, sustainable development requires us to understand these complex interactions and their scalability. Of course, we will also continue to publish articles about the building scale, user interfaces, wellbeing and health, human development, and appropriate thermal conditions. B&C will address fragmentation—of disciplinary boundaries and responsibilities, of regulation and governance, of research and practice. Understanding how these elements interact is critical for meeting the current challenges we face in policy and practice.

We will continue to have a rigorous, fair and robust double-blind peer review system. B&C welcomes cutting-edge transdisciplinary research articles and proposals for special issues. We’ve expanded the categories of papers that we publish to include research, synthesis, methods, replication, and policy analysis. In addition to these categories, we will also publish briefing articles, commentaries, news and book reviews.

Calls for papers have been announced for two special issues—details on our web site <http://www.buildingsandcities.org> and page 8–ed.). Please spread the word to those who might be interested.

SBSE has endorsed Buildings & Cities. We’re delighted and honoured to be part of your community. We look forward to working with you as authors, reviewers, and readers! 
—Richard Lorch

RESCIENCES

ARCHITECT’S GUIDE TO BUILDING PERFORMANCE

The new (June 2019) Architect’s Guide to Building Performance helps architects better integrate building performance simulation into their design process. Good, 21st century architecture is more than just beautiful; architects can also deliver high performing spaces that address a myriad of social and environmental issues. One of the most powerful tools at an architect’s disposal is building performance simulation. Especially when conducted early and often in the design process, building simulation helps designers test design solutions to cost-effectively optimize performance beyond energy to improve resilience and occupant comfort. The guide is available free of charge at <https://www.aia.org/resources/6157114-architects-guide-to-building-performance:41>. Both Pablo LaRoche and Ulrike Passe were contributors.

—Bruce Haglund

SOCIETY NOTES

ANNUAL MEETING

The meeting will be held at this summer’s retreat on Tuesday, 23 Jul, 9:30–10:30 am MDT.

If you aren’t present at the retreat, register in advance for this meeting at <https://virginiatech.zoom.us/meeting/register/831a67630a1016f43538d7d4481ef37>.

After registering, you will receive a confirmation e-mail containing information about joining the meeting.

2020 OR 2021 RETREAT PROPOSAL

Mary Guzowski seeks collaborators and an appropriate site for a retreat focused on biophilic and biocentric approaches to net-positive and low-energy design. We may be well aware of the performance and pragmatic aspects of net-positive design, but what are its poetic and experiential implications? Aesthetics, beauty, health, and well-being are as important to net-positive design as are reducing waste, energy consumption, and environmental impacts. Biologist and naturalist E.O. Wilson popularized the term “biophilia” or “love of life” in his 1984 seminal text Biophilia. Wilson’s Biophilia Hypothesis suggests that there is an innate emotional affiliation of human beings to other living organisms. A biophilic approach to net-positive design encourages students to investigate the intersections between regenerative design responses to ecosystems, habitat, environmental and bioregional forces, passive strategies (for daylight, natural ventilation, and passive heating/cooling), and health and wellbeing. A biophilic approach to net-positive design provides an opportunity to explore experiential and atmospheric dimensions of design that may not be readily apparent from a performance-based focus. A beautiful retreat location that fosters biophilic connections is desired.

This and other proposals will be discussed at the annual meeting and the retreat.

SUN ANGLE CALCULATORS

These venerable analog calculators are still available via the SBSE web site! See <https://www.sbse.org/sun-angle-calculator>. Their revenue stream supports student scholarships.
We received more than 60 paper and poster submittals from faculty, practitioners, content experts, and students for the symposium. Authors are now working on their final submittals (due Jun 30) after which they will be reviewed through a blind, peer-reviewed process. We are looking forward to a fascinating and reflective set of effective lessons that will move design away from creating fossil-fuel based communities, toward building environments that are healthy, resilient, and carbon-emissions free.

The Symposium will launch on Friday, 18 Oct with an evening keynote lecture by architect Nina Maritz from Windhoek, Namibia, tentatively titled, “From sustainability to resilience—preaching outside the choir” and a reception sponsored by SBSE. Full-day parallel sessions will be held on Saturday, 19 Oct at the University of Oregon’s White Stag Building in downtown Portland, OR. We’re planning optional tours on Sunday, 20 Oct. A limited hotel room block has been reserved for participants at Hotel Zags, formerly Hotel Modera.

Early bird registration is open through 30 Aug and we expect to post the symposium schedule as soon as the final papers/posters have been submitted and accepted. Stay tuned for further information and updates at http://reynoldsymposium.uoregon.edu and on the SBSE list serve.

The 2019 Reynolds Symposium is supported by the University of Oregon Reynolds Sustainability Symposium Endowment, the Society of Building Science Educators, the Jeffrey Cook Charitable Trust, the UO Technical Teaching program, and the UO Department of Architecture.

—Alison Kwok, John Reynolds, Isabel Rivera

2020s Must be the Step Change Decade

The universe operates in mysterious ways. I was recently included in an Edge email exchange inspired by Bill Bordass’ 15 Apr 2019 article “Half a century of sleepwalking towards climate change” published in the Architects’ Journal with a nice Hellman cartoon entitled “Sleepwalking to Irrelevance.” The comments of two SBSEers (of course they’re both correct, but at different scales) highlighted the exchange and with their permission I share them with you.—ed.

SUFFICIENCY — NOT EFFICIENCY FOR RESILIENT DESIGN

In the UK a discussion has been raging over concern that current design solutions are too dominated by HVAC efficiency solutions. Here are some thoughts for those who see HVAC as the main route to reducing carbon emissions form buildings. It’s the Wrong Answer. What really counts is the basic building design. Post Occupancy Evaluation is fine but design mistakes have already been made by the time it is done. Buildings can be patched up and services improved but they are secondary issues. The main problems are:

1. The wrong types of buildings are being built: light weight/over-glazed/poorly ventilated/ wrong forms and orientation/too tall/no thermal storage/over reliance on mechanical solutions to mask basic design problems.

2. Planning system is mis-focused and can be fudged. Planners know very little about how buildings work so are deliciously happy to pass real turkeys—the bigger the better so they can get max planning revenue. We must understand the need to move to less consuming building types rather than accepting all types that purport to be efficient. It is similar to allowing gas guzzling cars that are slightly more efficient than last year’s model rather than insisting on step change performance requirements.

3. Models not fit for purpose. The everyday computer models used to design not only deter designers from innovative and interesting design, but they also deskill designers to think that design only involves what the models can do.

4. HVAC should be a secondary consideration. Performance shouldn’t be judged by how much energy the machines use, but on human comfort the building produces. Machines are a secondary consideration, way down the to-do list after the design of the building itself.

5. Behaviours are seen by architects and engineers as part of the problem whereas they are part of the solution in the adaptive buildings of the future. Designers will have to learn how to better understand and functionalise opportunities for adaptive behaviours to happen in and around buildings.

6. Poor Architecture is endemic. Designers are wedded to chronic performance mistakes like: a) ceiling to floor windows everywhere, despite the fact they are visually and thermally appalling in most situations from bedrooms to offices where they end up with us seeing what we should not, or having the blinds down all the time and b) huge living rooms covering whole floors so the kitchen, dining, living areas are all one space that is impossible to affordably heat for many and, more worrying, leave nowhere for people to escape to be affordably snug in winter and cool in summer during extreme weather.

7. Natural ventilation. Neither engineers nor architects are taught how to design buildings to be naturally ventilated anymore when the future we face means that buildings around the world will have to be run for as much of the day and year as possible on natural energy, necessitating good design for natural ventilation and solar energy.

8. Thermal storage is hugely important in buildings not only for the harvesting and storage of diurnal/monthly heat/cold sources but also to dampen the fluctuations in temperatures to reduce excessive over heating/cooling indoors. Storage is too often ignored by designers because they do not understand how to charge/store/discharge the free energy involved.

9. Solar Buildings. Designers are too often stuck in 20th century energy supply mind-sets, thinking that energy originates at the plug. The erroneous mantra that solar technologies are ‘green bling’ has corroded many opportunities to create genuinely low-carbon buildings. In the future buildings must operate on building level solar energy where possible and when possible.

• continued next page
Is it so difficult to move forward from the 1990s fossil fuel efficiency paradigm? Trying to ignore the confusing sustainability decade of the naughties, the real challenge is to re-think buildings from the foundations up to where they can be run on free, natural, local energy for as long as possible over the year and to be resilient to extreme weather events and trends so they are truly future-proofed and climate-ready buildings.

Trying to get rest of the world to change is wasting valuable time and energy. Can we not be Confucian and get done what we can achieve on our own small patches? Outlawing any building over ten stories across the globe would be a start. What sort of resources will be needed to tear tall buildings down eventually? As the climate spreads more disasters year-on-year and the penny is beginning to drop, let us make the 2020s the step change decade for design.

—I. Sue Roaf

1. As Chris Twinn and others have already said, this is a systemic problem, which also goes far beyond the building industry and everybody needs to come together to solve it. Unfortunately it is also a “wicked problem,” being both thorny and having been created by those who now hope to solve it. So Rod Bunn was dead right—ideally, we need a wider audience. But we have to start somewhere, and for me it making building professionals professional—they have failed so badly in their duties to society. And with the sustainability agenda this responsibility includes other countries and future generations (of all species) too. It is particularly scandalous that most have been happy to design for compliance and turn a blind eye to the massive performance gaps that resulted.

2. I think Sue may be taking too narrow a view of POE. Prime purposes include tuning-up the building (something that is hardly ever done and can often save 20% or so on energy and carbon, sometimes more); and closing the feedback loop (so people don’t go on repeating the same mistakes indefinitely, or try to gild the lily unnecessarily; and in particular neglect fundamentals). Sense and science, as you say. But good science needs experiments (the buildings themselves), testing, and feedback. The diagram to the right, which I first introduced at the Closing the Loop conference in 2004 to counter Tom Markus’s argument that POEs were superficial and of no value, demonstrates the complexity of the feedback loop from effective POEs.

3. Another problem is that case studies are dismissed as anecdotal, which they aren’t, as the 2006 paper “Five Misunderstandings About Case Study Research,” by Bent Flyvbjerg (now BT Professor and Chair of Major Programme Management at the Said Business School) clearly demonstrates. So, when through POEs, we identify canaries in the coal mine, instead of acting on that knowledge people say, “We need more data.” Having seen this happen myriad times, I realise that this is just an excuse to put things off and waste money while what was a rare event turns into an endemic problem.

4. Although the adage says, “People learn from experience. Wise people learn from the experience of others.” It turns out that innately wise people are thin on the ground. What really makes most ordinary mortals wise is to confront their own mistakes and then realise the importance of what someone may already have told them. For example, a services engineer told me, “Bill, ever since you banged on about it in PROBE I’ve been trying to make my systems and controls simple, but it wasn’t until I started doing Soft Landings (including users in the design and evaluation of buildings) and understanding how the buildings worked in practice, that I realised that what seemed simple to me was not simple for the occupiers and operators.”

—Bill Bordass

CLIMATE CHANGE, AND SOCIETY COURSE PRIZE

OVERVIEW. Education in architecture and urbanism is well positioned creatively and critically to address the exigencies of climate change. However, pedagogical methods that prioritize immediate applicability can come at the expense of teaching and research that explore the sociocultural and ecopolitical dimensions of the crisis, ultimately limiting the range of approaches addressing climate change in professional practice. We are therefore launching, with ACSA, a competitive call for course proposals on the theme “Architecture, Climate Change, and Society.”

From history seminars to visual studies and from design studios to building technologies, the wide variety of course offerings in schools of architecture is a testament to the diversity of perspectives, skills, and tools that ultimately comprise quality work in the field. In contrast, the urgency of the unfolding climate crisis can seem to demand a singular focus that is antithetical to humanities-based critical inquiry or to longer-term creative and technical endeavors. We seek the kind of realism, however, that redefines problems and leaves room for the imagination. Successful proposals for this Course Development Prize will include methods and themes that innovate within their institutional setting—asking hard questions of students that are equal in weight to the hard questions being asked of society as it grapples with the intertwined causes and effects of climate change.

It is in the spirit of understanding the complex webs of power shaping our lives and the lives of others that the prize aims to contribute to the development of intersectional pedagogy on the theme of “Architecture, Climate Change, and Society” in America today. Change begins with connecting the dots.

Online Submission Site Opens 3 Jun. Submission Deadline is 20 Nov 2019.

<http://www.acsa-arch.org/resources/faculty-resources/course-development-prize>

—Eric Ellis & Jacob Moore

Ulrike Passe gave a keynote lecture at the 2018 BEEP Camp for Building Science Educators, held 22–23 Dec 2018 at the CEPT University in Ahmedabad, India. In collaboration with CEPT’s Centre for Advanced Research in Building Science and Energy (CARBSE), the Indo-Swiss Building Energy Efficiency Project (BEEP) organized the BEEP Camp with the objective to foster a competent future generation of building design and building energy efficiency professionals in India.

Ulrike also helped review the resulting projects of the 7-day BEEP camp for students and young professionals. It brought engineering and architecture students together to design energy-efficient residential projects for low- and medium-income households in two different climate zones.

You can learn more about the camp at <https://www.beepindia.org/participate/beep-network/students-n-educators/camps/> and more about the BEEP as a whole at <https://www.beepindia.org/participate/beep-network/students-n-educators/>.

Robert A. Young, has retired after 26 years of teaching, research, and community service focused on stewardship of the built environment (e.g., environmental controls, historic preservation, and sustainability). He has been elevated to the rank Professor Emeritus effective 1 Jul 2019. His retirement plans include consulting. “I have enjoyed the camaraderie and support from SBSE members over the years and wish everyone continued success in their academic endeavors.”


Victor Olgyay says that he has focused his career on “making buildings part of the climate solution.” He’s a principal at Rocky Mountain Institute, and now he’s bringing his perspective to the AIA Committee on the Environment. He is a new COTE Advisory Group member this year.

“I’ve always been more interested in the implications of architecture than the aesthetics per se,” he says. “I dwell on the E.F. Schumacher side of things.” (The late German economist’s 1973 book, Small is Beautiful: A Study of Economics As If People Mattered, has been hailed as hugely significant; for sustainability thinkers, it is a classic.)

Olgay and the Buildings Practice of Rocky Mountain Institute have been leading an initiative to responsibly and cost effectively decarbonize the built environment by 2050. This includes encouraging deep energy retrofits; providing existing buildings, districts, cities, and portfolios a path to zero energy and carbon; scaling impact by blending thought leadership with pilot projects; and providing replicable proof points to industry. Olgay has a wide range of experiences in architectural design and planning, and brings specializations in bioclimatic building and daylighting design to his work.

Rocky Mountain Institute has been active in retrofitting buildings for many years. “We did a lot of proof of concept projects to show how we could scale up,” Olgay says. “Now we are developing the business case and value propositions for buildings to interactively integrate with the grid, working with NREL, DOE, and others. We are working on portfolios and district-level projects. Many of these include vast amounts of square footage and they have large-scale impacts that involve replicability, utility grid implications, and local job markets.” A recent article that Olgay co-authored for Renewable Matter, “Grid-Interactive Buildings: Good for Business and the Environment” highlights the business benefits of grid-interactive buildings.

On the advocacy side, Olgay is in conversations with his U.S. Senator Cory Gardner (R-CO) to encourage tax code amendments that would include more incentives for retrofits. “The market can spur the adoption of high performance buildings, but to meet our carbon targets for buildings on time we also need supportive public policy” said Olgay, “I am excited to work with the COTE advocacy team to promote effective, bipartisan legislative solutions.”

—Kira Gould

More SBSEers in the News

The Virginia Polytechnic Institute and State University team led by Georg Reichard, Deidre Regan, and Zach Gould [an SBSE student member who also presented at PLEA] was victorious as the Grand Winner (and Attached Housing Division winner) at the U.S. Department of Energy Solar Decathlon Design Challenge Weekend. Georg says, “While there were quite a few SBSEers at the event (Walter Grondzik, Tom Collins, Jonathan Bean), only our team was lucky. There may be other SBSEers involved, but we really could become a hub for additional information for this event.”

The event was held on 12–14 Apr 2019, at the National Renewable Energy Laboratory (NREL) in Golden, CO, and included 45 finalist teams, representing 37 collegiate institutions, across the United States and other countries. Read more at <https://www.solardecathlon.gov/blog/archives/5269>. 

—US DOE & Georg Reichard

The PLEA 2020 Conference will look into the interplay between research, technology, and design in defining and planning future cities. We invite submission of extended abstracts that address the conference theme and focus on one of the following topics:

- Sustainable Buildings (energy efficient buildings, health and wellbeing, material technology, vernacular, refurbishment)
- Resources (renewable energies, technologies, circular economy, nature based solutions, urban metabolism)
- Resilient and Extreme Design (adaptation, self-sufficiency, relief, urban climate, climate change, vulnerability, risk management)
- Sustainable Communities (urban climate, outdoor comfort, mobility, walkability, planning and policies, culture and society, future city visions, green infrastructure)
- Analysis and Methods (simulation and design tools, surveying and monitoring methods)
- Education, Awareness, and Dissemination (architectural training for sustainability, professional development, sustainable initiatives, environmental activism)


—PLEA 2020 Conference Secretariat

Following the requests of many of our colleagues, the deadline for abstract submission has been extended to the 30 Jun 2019. Abstracts can be submitted through the electronic submission system EasyShare <https://easychair.org/account/signin_failed?l=s5HawFlfuB7Q3UG9kJ1B6C> or send by e-mail to <colloqueoasis@gmail.com>.

For more information, please visit our web site <http://beo2019-biskra.com>.

—Noureddine Zemmouri

Two important dates:

- Extended abstract submission deadline: 31 Jul 2019
- Notification of decision for inclusion in the program: 15 Aug 2019


—Rahman Azari

Georgia Tech Ph.D. Symposium

Divergence in Architectural Research, will take place on the Georgia Tech campus in Atlanta, GA, 5–6, Mar 2020. The symposium, organized by the ConCave Ph.D. Program of the School of Architecture at Georgia Tech, seeks to create a platform for sharing current research in architecture with invited scholars and other doctoral students, in architecture and allied fields.

The Call for Papers invites doctoral students to present their ongoing research to help expand the conversation on the state-of-agency in architecture research today. The symposium will act as a nexus for connections with established scholars and fellow researchers. Interested students should submit their abstracts by 7 Sep 2019, on the symposium web site <https://arch.gatech.edu/divergence-symposium>.

—Hayri Dortdivanlioglu & Marisabel Marratt
MORE CONFERENCES

EAAE-ARCC INTERNATIONAL CONFERENCE 2020

Heads up, from 10 to 13 Jun 2020 the EAAE-ARCC International Conference will be hosted by the Higher Technical School of Architecture of the Polytechnic University of Valencia, Spain <http://www.upv.es>. The topic chosen for this edition is “The architect and the city.”

No further details are yet available.

—Ivan Cabrera i Fausto

X IAQVEC 2019 IN BARI, ITALY


IAQVEC is a premier international conference series, held once every three years. The conference covers a wide range of key research areas with the goal of simultaneously improving indoor environmental quality (IEQ), energy efficiency-enhancing wellbeing, and sustainability.

We are glad to report that the conference has accepted over 300 full papers. We are sure that the attention towards IAQVEC 2019 will grow even further in the next months and we look forward to meeting you in Bari next September.

—Umberto Berardi

BUILDINGS AND CITIES PREVIEW

CLIMATE EMERGENCY AND BUILT ENVIRONMENT EDUCATION

June 03, 2019

Fionn Stevenson explains why rapid change is needed to redefine education and training. Students need to be able to access and understand existing principles, methods and solutions for carefully defined, problem and evidence-based learning. The built environment disciplines and their corresponding institutes/regulators must radically update their professional validation criteria for their education programmes now and more closely define the key competencies that professionals must have.

Read on at <https://www.buildingsandcities.org/insights/commentaries/climate-emergency-and-built-environment-education.html?bclid=1wAR3FjyZUjGn_F9rPdttzAEqMGIArNKVPo8i7ZQ4ii1-R0XhL42pwwVpk8iE>.

—B&C

PUBLISHING OPPORTUNITIES—TWO CALLS

SPECIAL ISSUE OF BUILDINGS & CITIES—CLIMATE JUSTICE: THE ROLE OF THE BUILT ENVIRONMENT

Guest editors: Anna Mavrogianni (UCL) and Sonja Klinsky (ASU)

As the built environment is at the heart of the lives of people and communities and is central to climate adaptation and mitigation, a deeper understanding of the justice implications of efforts to change or maintain the built environment in the context of climate change is essential.

You are invited to submit abstracts to this special issue of Buildings & Cities journal <http://www.buildingsandcities.org>.

This special issue will specifically explore the roles that the different scales of the built environment play in the climate change and inequity nexus. It seeks to examine the full implications of the built environment on social inequities and human development in the context of climate change: how might climate change or climate policies exacerbate these problems, what the scale of this implication is likely to be, and what policies, strategy solutions, resources and capabilities may be required to manage these concerns within and between countries.

Full details about the scope of the special issue, the background, full range of topics, information about submitting abstracts and timeline can be found at <https://www.buildingsandcities.org/calls-for-papers/climate-justice-the-role-of-the-built-environment.html>.

The Closing Date for ABSTRACTS is 15 JUL 2019.

SPECIAL ISSUE OF BUILDINGS & CITIES—CARBON METRICS FOR BUILDINGS AND CITIES: CROSS-SCALAR ASSESSMENT & CONTROL OF GHGS

Guest editor: Thomas Lützkendorf (Karlsruhe Institute of Technology)

This special issue goes substantially beyond the calculation of embodied and lifetime energy/CO2, to explore

1. what should be the appropriate units of assessment and how these could operate across different scales (building, neighbourhood, city, region) of the built environment
2. how units of assessment could operate across different scales (building, neighbourhood, city, region) for each country’s/region’s built environment
3. how units of assessment for the built environment can engage with the Nationally Determined Contributions (NDCs) and the more recent commitment to limiting global warming to 1.5°C or less.

This special issue explores questions such as:

• Is there a need for carbon metrics and benchmarks or target values that can be used widely? Should there be regional variations?
• Would the creation of carbon metric(s) for the built environment help to accelerate the societal goal of reducing GHG emissions?
• How would these measures assist with the development of public policies and regulation?
• How would these measures improve planning, design, construction, operation and retrofit of buildings, neighbourhoods and cities (top-down and bottom-up approaches)?

Full details about the scope of the special issue, its background, full range of topics, information about submitting abstracts and timeline can be found at <https://www.buildingsandcities.org/calls-for-papers/carbon-metrics-for-buildings-and-cities.html>.

The Closing Date for ABSTRACTS is 26 SEP 2019.

—Richard Lorch
Sue Roaf and Fergus Nichols have been part of the organizing team for the Windsor Conference on Thermal Comfort in the UK for many years. Last year, the group, gathering on the grounds of Windsor Castle, decided to launch a new conference addressing comfort at the extremes.

As they wrote in the opening invitation statement, “In the face of an ever more extreme climate the world is calling urgently for answers to questions of how people can stay not only comfortable, but also thermally safe and healthy in a warming world. Current and future temperature trends and events threaten not only buildings, settlements, and cities, but also the temporary settlements built to cope with transient populations.”

They promised to gather international figures in Dubai from architecture, planning, engineering, health sciences and more to discuss how to best provide Comfort at the Extremes in the complex political and economic environments we occupy. What better place to enable sustainable architecture researchers from Brazil and Mexico to meet with health science experts from the Netherlands and Australia than in Dubai? Dubai, which appears like a mirage in the desert sand of the Persian Gulf, felt quite pleasant in April. The event took place in Dubai International Academic City, slightly outside of downtown, at the UAE Campus of Heriot Watt University.

The format of the conference was half panels with full attendance and invited speakers, such as Mat Santamouris and Pablo La Roche and many others who provided the overall background and challenges, while the other half of the time was dedicated to workshops on specific topics such as ‘natural ventilation.’ I was fortunate to have been invited to co-lead this workshop in order to discuss how to push the limits of comfort in a warming world without the feared increase in energy-heavy air-conditioning. Long and frequent breaks left ample time for in-depth conversations and enabled potential new collaborations, and of course everyone had to go out one evening to admire the tallest building in the world, the Burj Khalifa.

A field trip to the Bastakia windcatcher settlement concluded a very packed agenda. This visit enabled insights into habits and customs of Dubai as well as a glimpse into the history of this fascinating place through the reconstructed and well-maintained historic neighborhood, where wind catchers were built by Persian merchants. While the building we visited was air-conditioned, the burlap windcatcher in the Dubai History Museum actually worked.

I would like to thank the Cook Charitable Trust for providing the funds to enable my travel from Ames, IA, to Dubai.

—Ulrike Passe

NAAB has just posted the draft of the next iteration of its *Conditions for Accreditation*, available for free at <https://naab.app.box.com/v/draft0-Conditions>. Check it out.

You may be interested in NAAB’s rather tentative take on the Student Learning Criteria on page 10 of the document. Read on.

“4.2.2  Student Learning Criteria—Student Learning Objectives (The Steering Committee has discussed three potential directions for this learning criteria. They have decided to bring all (3) forward to the ARForum19 in Chicago so that participants can have a conversation and input about how this objective should be structured to provide the best outcomes for the students, the schools and the profession.)

- Option A: Integrative Design—The Program must demonstrate how the curriculum prepares students with the ability to apply and integrate the requirements of zoning/building codes, regulations, and the broader implications of health, safety, and welfare to a comprehensive building design displaying multiple building systems.

- Option B: Integrative Design (Use existing copy from current C3 SPC)—The Program must demonstrate how the curriculum prepares students with the ability to demonstrate the skills associated with making integrated decisions across multiple building systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

- Option C: Should a new idea be explored? Is the term integrative design a twenty-year term that still has relevance? What are we expecting from the students?”

[I’m expecting them to be able to design beautiful, comfortable, affordable, net zero buildings that help mitigate climate change and improve Gaia’s health!]—ed.

What do you all think? 🤔

—Bruce Haglund
**AIA SURVEY ON BP TERMS**

AIA’s Building Performance Knowledge Community invites you to submit your feedback on a glossary of building performance terms we are developing.

The survey takes approximately 30 minutes to complete, but you may review as many or as few terms as you wish. Terms are broken down by subject area.

We ask that you submit feedback no later Friday, 5 July. If you have any questions, please reply below or email us at <tdbp@aia.org>.

View the terms and access the survey at <https://network.aia.org/viewdocument/building-performance-definitions-pr?CommunityKey=840c9b88-08bd-4ce0-a59d-7b029b78af52&tab=librarydocuments>.

—Emily McGlohn

**SBSE CALENDAR**

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<tr>
<th>Date</th>
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<tr>
<td>2019</td>
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<tr>
<td>Jul 18–20</td>
<td>ISBS 2019/Dallas, TX, USA</td>
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<td>Jul 22–25</td>
<td>SBSE Retreat/Centennial Valley, MT, USA</td>
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<td>Jul 24–26</td>
<td>Int'l Conf Structures &amp; Architecture/Lisbon, PORTUGAL</td>
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<td>Aug 5–9</td>
<td>ASES Solar 2019/Minneapolis, MN, USA</td>
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<td>Sep 5–7</td>
<td>IAQVEC 2019/Bari, ITALY</td>
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<td>Oct 9–11</td>
<td>Getting to Zero Forum/Oakland, CA, USA</td>
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<td>Oct 18–19</td>
<td>Reynolds Symposium/Portland, OR, USA</td>
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<td>Nov 4–7</td>
<td>Solar World Congress/Santiago, CHILE</td>
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<td>Nov 15–17</td>
<td>Buildings, Cities, Performances/Chicago, IL, USA</td>
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<td>Dec 2–4</td>
<td>BEO 2019 Symposium, Biskra, ALGERIA</td>
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<td>Sep 1–3</td>
<td>PLEA2020/A Coruña, SPAIN</td>
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**FALL ISSUE SUBMITTAL DEADLINE—SEPTEMBER 1**

**PROJECT STASIO’S 2019 COMPETITION**

A competition to produce actionable simulation graphics is now open, with winners to be announced at ASHRAE Building Performance Analysis Conference this year.

For energy analysts, one of the most difficult challenges is condensing a great deal of data into an intelligible format so architects can understand it. For architects, one of the challenges in working with analysts is not knowing what performance-related questions can be asked and answered. A solution that connects both is IBPSA USA’s Project StaSIO, a crowd-sourced, public web site that succinctly answers the question by connecting performance questions with graphics from simulation outputs.

In 2018, the Project StaSIO team organized a competition in conjunction with ASHRAE/IBPSA-USA’s Building Performance Analysis Conference and SimBuild. Over 60 entries were received and an esteemed jury of architects, energy analysts, and mechanical engineers selected the competition winners. Building on the success of the 2018 competition, the StaSIO team is launching another competition this year. Check out Project StaSIO’s new web site <https://projectstasio.com/2019-competition/> for details of the 2019 competition.

**Deadline for Submissions : 15 Jul 2019**

—Tarek Rakha