



photo: Bruce Haglund

A backside view of the Hope Gateway reveals the wind turbine, glulams, the atrium entry, and the cistern perched above the loos clad in local stone.

## SBSE TOOL DAY 2017 EDINBURGH

JOHN HOPE GATEWAY, ROYAL BOTANIC GARDEN EDINBURGH (RBGE)

Edinburgh, 10am–5pm, July 2, 2017

In case SBSEers need extra incentive to attend PLEA2017 in Edinburgh, SBSE is sponsoring a pre-conference Tool Day workshop. This Tool Day builds on a decade-long legacy of workshops conducted by Grondzik, Haglund, and Kwok assisted by architecture students, this time 10 from Idaho. See <<http://www.sbse.org/toolday/index.htm>>.

The John Hope Gateway is a beautiful green building, designed by Cullinan Studio in London, that features well-integrated strategies for daylighting, solar control, water collection, on-site energy production, solid waste management, and low-carbon materials. The workshop will be held in the Gateway's Patrick Geddes Room, which is adjacent to the top floor restaurant. The building's designer, Roddy Langmuir from Cullinan Studio and, perhaps, someone from the engineers, Max Fordham, will introduce the building to SBSEers. Walter, Bruce, and Alison will set the agenda for the day's work, and the Idaho students will familiarize Tool Day investigation teams in the use of our hand-held instruments. At day's end teams will present their findings. The Geddes Room has a capacity of 40 attendees, so participation will be limited on a first-come, first served basis. We'll let you know when registration opens!

After the workshop, we can all decamp to PLEA's opening event, the Historic Environment Scotland party at Edinburgh Castle. It should prove to be an interesting day!

Stay tuned for more details. 🖱️

—Alison Kwok, Bruce Haglund, and Walter Grondzik

## RBGE'S MISSION

### OUR GREEN GARDEN

The Royal Botanic Garden Edinburgh wants to make the world a better place. Working in biodiversity conservation, we recognise the increasing effects that global climate change is having on life on Earth.

We are committed to sustainability and improving our environmental performance, and wish to lead by example. To reduce our global footprint we aim to:

- manage our wastes responsibly
- choose the most sustainable travel means
- use energy and water with care
- buy from green suppliers
- minimize use of hazardous chemicals
- promote environmental awareness
- comply with all environmental standards.

—Simon Milne, Regius Keeper  
 RBGE Environmental Policy Statement  
 May 2014

## LETTERS TO THE EDITOR



photo: Marc Schiler

Every year at Thanksgiving, my wife Dianne and I host the current students, faculty, and alums at our house in Pasadena .

—Marc Schiler, USC

*Nice postcard! Great tradition! Wish we were there?—ed.*



I'm appalled that I don't know how to post to the list server, so do I just email <info@sbse.org> with a post? And then you review and post it? Or is there something else?

—Anonymous

*Our web site actually tells you how—post to <sbse@uidaho.edu>. There's no review unless the post is too long (more than 50kb) or violates some other rule of courtesy.—ed.*



I noticed during my research that you provide your online community with some great resources, so I'm hoping you might be interested in including our solar guides, too. Check out Let's Go Solar <<http://www.letsgosolar.com/>>. 🖱

—Laura Brigham, Let's Go Solar

*Thanks, these are great comprehensive guides for all 50 states!—ed.*

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## POST-ELECTION BLUES AND GREENS

*[The election happened. Things look bleak for administrative support for science and alternative energy. Remember the Reagan years? Our board gathered over the internet to affirm our resolve to soldier on. We're not alone.—ed.]*

The SBSE board is encouraged by the recent developments at Marrakech and the acknowledgement of so many nations, who understand the message of scientific evidence, that climate change is real and is affecting the whole planet. See <[http://unfccc.int/files/meetings/marrakech\\_nov\\_2016/application/pdf/marrakech\\_action\\_proclamation.pdf](http://unfccc.int/files/meetings/marrakech_nov_2016/application/pdf/marrakech_action_proclamation.pdf)>. Furthermore, human activity is responsible for the vast majority of the greenhouse gases that produce climate change, and a large portion of these come from the production and operation of buildings. As building science educators and professionals, we continue our responsibility to implement strategies to reduce our environmental impact and to train the next generation of designers to produce healthy and beautiful low-carbon buildings and cities for all.



photo: Bruce Haglund

Long-time SBSEer Marc Schiler listens intently to Ed Mazria at PLEA2016 in Los Angeles.

For more than thirty years, the Society of Building Science Educators has supported excellence in teaching environmental science and building technologies. We're firm in our mission <[http://www.sbse.org/about\\_sbse.htm](http://www.sbse.org/about_sbse.htm)>. This practice will not change. We must work quickly to protect our planet, and SBSE will continue to do so by promoting and supporting quality instruction in building science through a broad range of activities, including our annual retreats, seminars, conferences, and scholarships. Furthermore, the SBSE will always be a network for the exchange of information, promotion of research, creative activity, pedagogical excellence, and scholarship across the world. Therefore, we suggest all members respond to Architecture 2030's recommendations <<http://architecture2030.org/trumpaia-a-sleeping-giant-awakens/>>.

Governments influence what we do, as advocates and practitioners of sustainable design, and how we do it. However, we also influence the governments that represent us and the policies they develop as we have practiced for many years. In times when scientific evidence does not persuade our governments of a course of action, it is even more important for us to work together and implement bottom-up solutions. As the SBSE has advocated for decades, education is vital. We must require more than understanding of the issue: We must require the ability to implement solutions.

It is possible to solve the climate change crisis if we work together. Please continue with us in this important task.

—The SBSE Board of Directors

## AIA COTE'S POSITION

Architects play a critical role in creating our built environment. For the last quarter century, the AIA COTE has represented the leading edge of this movement and sets an example for others to follow. We have no intention of stopping now. In an open letter to AIA Architects, COTE reaffirms our determination to remain dedicated to creating a healthy, beautiful, inclusive and environmentally-responsible built environment. I ask for your continued support by reading and joining your fellow leaders in adding your name to the online letter. Now is the time for you and your chapter's COTE Committee to continue to build on our 25 years of leadership. Working together we will make a difference <<http://tinyurl.com/hvug6qt>>. 🖱

—Paula McEvoy

More: *Metropolis* [http://www.metropolismag.com/Point-of-View/November-2016/Architects-Respond-to-Trumps-Election-AIAs-Endorsement/?mc\\_cid=25af97655e&mc\\_cid=987d3ca8c1](http://www.metropolismag.com/Point-of-View/November-2016/Architects-Respond-to-Trumps-Election-AIAs-Endorsement/?mc_cid=25af97655e&mc_cid=987d3ca8c1)

# SBSE RETREAT 2017

## CALL FOR PARTICIPATION

### CRAFT: Shaping Buildings, Ecologies, and Cities

Sublimity, Oregon, July 25–28, 2017

We call on faculty, practitioners, content experts, and students to share tools, case studies, and innovative studio exercises with attendees through active experiences at the 2017 SBSE Annual Retreat. “CRAFT: Shaping Buildings, Ecologies, and Cities” focuses on the strategies, tools, ideas, and ways we use to teach, practice, and inspire our students to consider the ‘making’ and careful crafting of buildings, landscapes, neighborhoods, and cities.

We invite proposals for a 30-minute presentation or a 60-minute workshop on any of the sub-themes below. Proposals must include innovative pedagogical content that relates to teaching and learning for design studios, lecture, or seminar courses. Sessions will take place in parallel and the venue will hold approximately 25 in each room. We are looking for 15–20 workshops and presentations for the retreat, selected through a review process that will balance content and schedule.



Silver Falls Cabin & Conference Center awaits you for the retreat.

Photo: Alison Kwok

#### Topics for Sessions & Workshops

1. Ecological Landscapes—Activities, programs, and research reflecting how these relationships inform teaching and practice.
2. Materials and Embodied Energy—Activities, assignments, and exercises that enhance an understanding of local resources, materials, and manufacturing energy.
3. Climate and Appropriate Technology—Projects and activities involving weather, climate analysis, and strategies that address building and community impacts.
4. Strategies and Tools—Exemplar tools, methods, and design strategies that teach about the importance of place and appropriateness in building design and planning.
5. Roundtable Discussions and Working Groups—“Hot topics” which could include case studies, book and grant proposals, promotion/tenure/mentorship issues, contributions to the 2050 Imperative, and so on.

#### Your proposals must include (template provided [see next column]):

- o Name(s) of session organizer/presenter
- o Contact information (institution, email, telephone)
- o Session type: 30-minute activity or 60-minute workshop
- o Title of your presentation
- o Description of presentation (250 words max.)
- o Theme addressed by your proposal (choose from those above)
- o Learning objectives: 3-5 goals to be achieved by participants
- o Intended outcomes and deliverables
- o Take away (if any) for attendees

**Submission Deadline:** E-mail your proposal to [akwok@uoregon.edu](mailto:akwok@uoregon.edu) by Mar 1, 2017, 5:00p Pacific Time. 🖱

—Alison Kwok

## RETREAT PROPOSAL TEMPLATE

### Organizer Name(s)

**Contact information** (institution, email, telephone)

### Preferred Session Type:

- 1-hour workshop
- 30-minute session
- Either

### Title of Presentation

**Description of Presentation** (250 words max)  
The description of presentation should briefly summarize the presentation’s content, activity, and pedagogical outcomes.

**Retreat Theme** Please include *one* theme that best represents your presentation. [See full descriptions in column to the left.]

- Ecological Relationships
- Materials and Embodied Energy
- Climate and Appropriate Technology
- Strategies and Tools
- Roundtable Discussions and Working Groups

**Learning Objectives** 3–5 goals that participants will be able to achieve after your presentation. Typically a learning objective identifies behavior(s) that participants will demonstrate. e.g.:

To understand . . .

To be able to . . .

To gain experience . . .

**Schedule** Outline of session timing (e.g., Introduction 5 min; Game 15 min; Q&A 10 min)

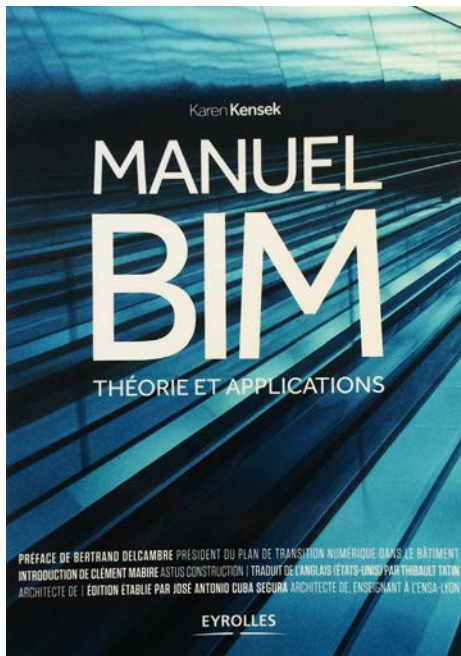
**Intended outcomes and deliverables** (just 1 sentence)

**Take away** (if any) for attendees 🖱

—Alison Kwok

## SBSE PEOPLE

✈ **Simi Hoque** has moved on to Drexel University.



cover: John Wiley & Sons

✎ **Karen Kensek** wrote a popular book, *Building Information Modeling*, published by John Wiley & Sons in 2015, which has now been translated and published in French. Both the English and French versions are available on Amazon. Another edition is being prepared in Chinese that is expected in 2017.

✎ **Pablo LaRoche** and **Marc Schiler** collaborated to edit the three-volume set of papers from PLEA 2016: The 32nd International Conference on Passive and Low Energy Architecture. The complete proceedings are available for PDF download at <<http://www.plea2016.org>>. 🖱



PLEA 2016  
32<sup>nd</sup> International  
Conference on  
Passive and Low  
Energy Architecture

Edited by:  
Pablo La Roche and Marc Schiler  
**Volume 1**

cover: USC

## ASES SOLAR 2017

CALL FOR PARTICIPATION



graphic: ASES

The American Solar Energy Society (ASES) has teamed up with the US DOE Solar Decathlon collegiate building competition for an extraordinary event-filled two weeks in Denver, CO, October 5–15, 2017. ASES's 46th annual conference, SOLAR 2017: Building a 100% Renewable Energy Community, will be held October 9–12, sandwiched between the weekends of public days at the Decathlon. ASES is working with Decathlon organizers to create additional educational, sustainability, and networking events for a fun-filled, rewarding time for people of all ages to celebrate solar energy and sustainability in buildings.

### SOLAR 2017 Opportunities to Present

You may submit abstracts or proposals for the following types of presentations, using the SOLAR 2017 topical areas (listed further below) as a guide:

- **Posters:** A great way to reach a larger audience: your poster will be displayed for the entire SOLAR 2017 conference, in addition to your presence at the poster session.
- **Technical sessions:** ASES will review your abstract(s) and assign it to the appropriate technical sessions. Also you will have an opportunity to have your work published in the conference proceedings.
- **~switch talks:** in this popular fast-paced session you have only 5 minutes to share your ideas or research.
- **Forums:** you propose a topic as well as organize the speakers to address a specific topic. A limited number of time slots are available for Forums.
- **Workshops:** if you are a trainer or teacher and wish to propose an educational workshop, we will allot time either before or after the ASES conference (**not** during the conference) for workshops. Workshops will have registration fees separate from the conference fees, and teachers/trainers may be paid a stipend from these fees.

For submittal info go to <<http://solar2017.org/proposals/>>. For questions contact <[solar2017@ases.org](mailto:solar2017@ases.org)>.

**Submittal deadline: April 1, 2017.** 🖱

—Dave Panich

## 2017 COTE TOP TEN REVISION

As an AIA COTE Advisory Group member, I'm writing with the great news that the newly revamped 2017 AIA Committee On The Environment (COTE) Top Ten Award is launched! Details at <<http://new.aia.org/awards/7301-aia-cote-top-ten-award>>.

### For those who aren't regular submitters to the awards program:

The COTE Top Ten is the premier award that recognizes the integration of great design and great performance. The award consistently receives the most media attention of all the AIA National design awards with mainstream press from Fast Company, National Geographic, and others.

### For All:

There are big changes this year in the COTE Top Ten award criteria. They've been completely revised to encompass issues that have gained prominence in recent years—health, comfort, resilience, and economy. Performance data after at least one year of occupancy is strongly encouraged, whether on energy and water use, occupant comfort, or air quality. Any firm submitting must also be a signatory to the AIA 2030 Commitment, which is step one of the process that can be found at <<http://new.aia.org/resources/6616-the-2030-commitment>>.

The COTE Top Ten Plus award, which previously recognized a single project from the pool of previous COTE Top Ten award recipients, will now become a designation among the Top Ten projects that demonstrates exceptional post-occupancy performance and lessons learned. There is now no time limit for submission after project completion.

**Submittal deadline is January 18**, so it's time to identify project(s) that deserve this significant recognition. Please let me know if you have any questions. 🐾

—Alison Kwok

## CURRICULUM PROJECT



Seven courses have been selected to participate in the pilot phase of the 2030 Curriculum Project, Architecture 2030's initiative to support university courses that 'fully integrate lessons in energy use, emissions, and resiliency into the widest possible range of projects and topic areas, and across all year levels.'

Over 20 proposals were submitted from 18 U.S. schools in 10 states, from graduate and undergraduate degree programs in architecture, planning, engineering, construction management, and real estate development. SBSEers Margot McDonald and Pablo LaRoche were among those selected.

Over the course of the 2016–2017 academic year, Architecture 2030 will support participating faculty through course development assistance, software resources, connections to expert practitioners, and the continued development of the 2030 Palette.

Architecture 2030 will also share the details of these inspiring courses and their successful outcomes, so they can serve as models for transforming the culture of design education in architecture and planning programs nationwide.

### CALL FOR ADDITIONAL COURSES

Architecture 2030 is now seeking additional faculty and schools to participate in the 2030 Curriculum Project. If you have an innovative teaching proposal for winter, spring, or summer session in 2017, we encourage you to **apply by January 3, 2017**. To apply, download the 2030 Curriculum Project RFP <[http://www.architecture2030.org/downloads/2030\\_curriculum\\_project.pdf](http://www.architecture2030.org/downloads/2030_curriculum_project.pdf)>. 🐾

—Anthony Guida

## NEW ENERGY-DESIGN-TOOLS FROM UCLA

### ALL NEW—SBEEED

SBEEED (Small Building Energy Efficient Design) is a new "quick energy sketch tool" for non-residential buildings that will automatically design a code-compliant school, office, auditorium, clinic, warehouse, restaurant kitchen, or hotel. It will then also design either a more energy efficient version or a vintage version using EPW data for any climate in the northern hemisphere. A Bar Chart shows how close each successive scheme approaches zero net energy. Users of HEED will find it familiar, but it also offers a number of new features.

### A TABLET VERSION OF HEED

HEED (Home Energy Efficient Design) is now available to run on the MS Surface Pro. This full-featured implementation of HEED includes floor plan graphics, 3D plots, and dynamic sun shading from building elements, neighboring structures, and landscaping.

### CLIMATE CONSULTANT 6.0

Climate Consultant 6.0 (Build 10) is our latest release that fixed formatting issues with MACs. Previous releases for Build 8 fixed some rendering issues in 3D Charts. Build 7 updated the automatic download feature for EPW weather data files now available on the latest Energy Plus web site, in addition to two major enhancements include a link between Design Guidelines and the 2030 Palette, and the ability to create Custom Plots of the EPW data and calculated statistics. 🐾

—Murray Milne



graphic: Murray Milne

## STUDENT OPS

### OXFORD BROOKES UNIVERSITY

Building Performance Analyst research post in Oxford Brookes University, Oxford, UK

We are pleased to announce a new and exciting full-time Building Performance Analyst (KTP Associate) post as part of our new 34-month KTP project (co-funded by UK Government's innovation agency, Innovate UK) between the Low Carbon Building Group (Oxford Institute for Sustainable Development, Oxford Brookes University, Oxford UK) and Encraft (Building Physics and Engineering consultancy) that aims to exploit an emerging business opportunity to reduce the impact of overheating in buildings, specifically in new housing and extra-care homes being built to high energy-efficiency standards. This issue is of rapidly growing importance as the climate warms.

The post holder will be based in the premises of Encraft in Leamington Spa with regular visits to Oxford Brookes University (Oxford) and supervised by the academic lead (Rajat Gupta).

For further information about job description and application pack, please visit: <[https://my.corehr.com/pls/oburecruit/erq\\_job-spec\\_details\\_form.jobspec?p\\_id=028851](https://my.corehr.com/pls/oburecruit/erq_job-spec_details_form.jobspec?p_id=028851)>

Closing date is **22 December 2016**.

—Rajat Gupta

### LRC AT RPI

The Lighting Research Center (LRC) at Rensselaer Polytechnic Institute has recently expanded its M.S. in Lighting degree program to include a paid career externship at a leading lighting manufacturer, design firm, or government organization. Upon graduation, students now have the opportunity to participate in a paid externship for three months or more with one of many lighting organizations that have agreed to host LRC students, including Current by GE, OSRAM, Philips Lighting, the New York State Energy Research and Development Authority, Bridgelux, Hubbell Lighting, Ketra, USAI Lighting, and numerous others.

The application deadline for Fall 2017 is **January 2, 2017**. For more information, visit <<http://www.lrc.rpi.edu/education/graduateEducation/degrees/msintroduction.asp>>.

—Rebekah Mullaney

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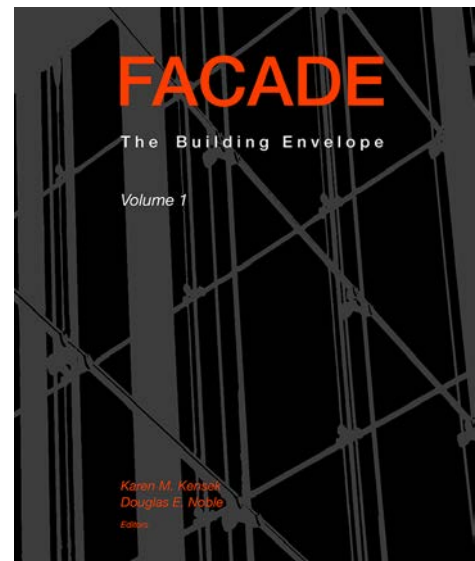
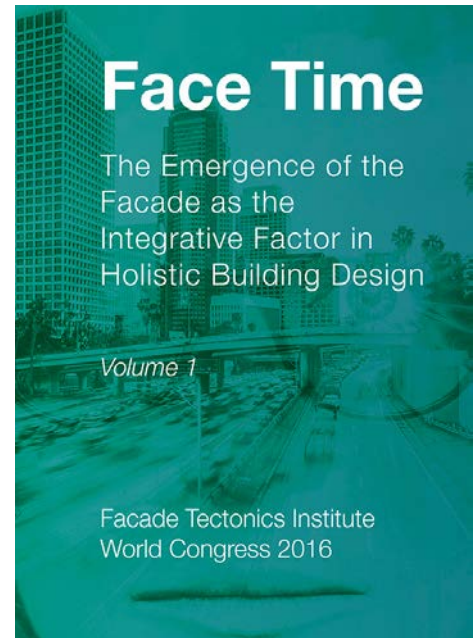
## FAÇADE TECTONICS OUTCOMES

The Façade Tectonics World Congress was held October 10–11, 2016, in Los Angeles. 450 attendees heard from almost 100 speakers whose presentations were selected by a blind, peer-review committee of 300 members. Façade Tectonics is in its ninth year, having held more than 20 conferences and forum events.

Karen Kensek and Doug Noble edited the conference proceedings *FACE TIME: The Emergence of the Façade as the Integrative Factor in Holistic Building Design* from the 2016 Façade Tectonics World Congress. There are almost 100 peer-reviewed papers in this two-volume set, which is available for a free PDF download. Kensek and Noble also edited the two-volume set *FACADE: The Building Envelope*, containing selected papers from previous conferences. The Façade Tectonics Institute was founded by Kensek, Noble, and Mic Patterson almost ten years ago, and the most recent conference attracted an international assemblage of speakers and attendees. We are in the early stages of planning for the 2017 conference, so start writing your building envelope papers. Contact Doug Noble for further information <[dnoble@usc.edu](mailto:dnoble@usc.edu)>.

Karen and Doug also received a CCAIA Presidential Citation in August 2016 “In recognition of your efforts as a team to create three outstanding programs that support and encourage AIA participation and membership—the NotLY licensing program, the Façade Tectonics Institute, and the annual USC BIM Symposia.” 🙌

—Doug Noble



covers: USC

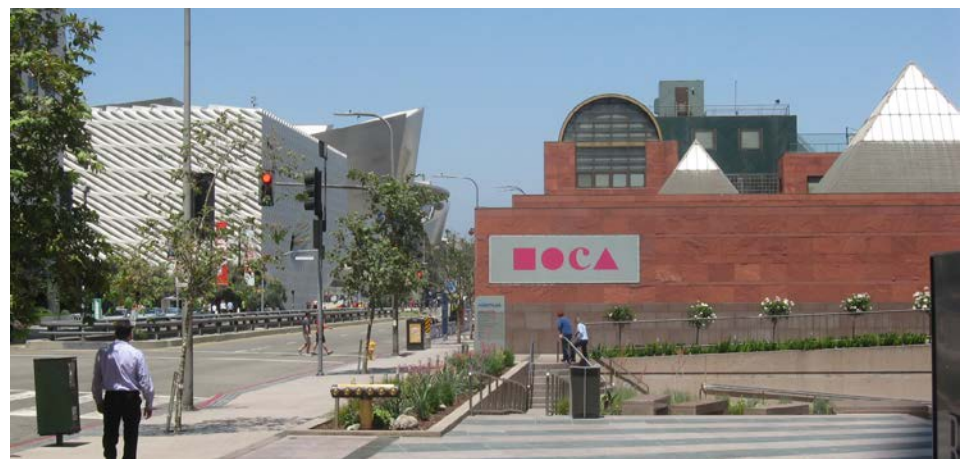


photo: Bruce Haglund

Los Angeles' Grand Avenue features a line-up of cultural venues—(l to r) The Broad, Disney Concert Hall, and LA Museum of Contemporary Art.

## BOOK CORNER

### INTEGRATIVE DESIGN REVIEW

*Integrative Design: Building Systems for Architects and Architectural Engineers* by Khaled Mansy, takes you along a path of scale and site context, to the individual building, and to its constituent parts. Each portion is introduced to the designer in terms of its importance in the design process, reminding us of how each aspect influences others for better or worse.

This discussion makes us, as designers, aware of the consequences of our work, and our responsibility for its outcomes. It is interesting and helpful that the book is organized by major aspects of the design process (pre-design, schematic, and design development) rather than by purely topical headings, as it shows not only how, but when, topics could be considered and, perhaps, in what manner.

Mansy tackles a difficult question: How do you write for studio instruction? Better yet, how to chronicle the information necessary to support integrative design in a studio? The book takes a stance on explaining mundane, but critical, aspects of designing a building. Many textbooks simply present and codify textual information, the ‘what’ of the question, and move on. The mix of entry level information in Mansy’s book also contains a reason why, the context for why his presented information is necessary to the general design of a building, and then often references an image, example, table, and/or diagram. Since much of the information provided will be adapted by a student for a specific design, the method of explaining context without being overbearing is helpful.

However, the book is only that—a book. It serves as decision support for the student, not a decision-making tool. As Mansy mentions, and I agree, it is important to note that the architect makes the final design decision and this reference book only serves to ground these decisions. Architecture studio is a place where students are simultaneously taking from other topics and applying those lessons to their entire design process and it is important to note that the book is written as part of that process rather than only by topics. As such, I believe that the book will be a useful addition to the students’ resources as a reference for comprehensive design.

—Ken Black



cover: Cognella Academic Publishing

## STUDENT OPS [CONT.]

### TEXAS SAN ANTONIO

The Department of Architecture at the University of Texas San Antonio has dedicated 10 merit-based fellowships to recruit competitive professional Master of Architecture (M.Arch.) students for Fall 2017. Each fellowship is \$8,000 per year for up to 3 years (a total of up to \$24,000 per student). The amount of these fellowships is sufficient to cover almost all tuition, at current rates.

Additional information about our M.Arch.-2 and M.Arch.-3 programs can be found via the links:

<<http://cacp.utsa.edu/academic-programs/departament-of-architecture/m.arch.-2/>>

<<http://cacp.utsa.edu/academic-programs/departament-of-architecture/m.arch.-3/>>.

Questions or more information <[rahman\\_azari@hotmail.com](mailto:rahman_azari@hotmail.com)>. 🖱

—Rahman Azari



photo: Bruce Haglund

Edinburgh’s National Portrait Gallery, a PLEA venue, features exceptional daylighting strategies.

### CASE STUDY PUBLISHING OP



An innovative new resource for students, faculty, educators, professionals, and policymakers, *Case Studies in the Environment*, published by University of California Press, is a journal of peer-reviewed case study articles with slides and teaching notes, articles on case study pedagogy, and a preprint server for editor-reviewed case study slides. *Case Studies in the Environment* is organized around a comprehensive collection of cases within six domains, the first three domains—Climate Change Mitigation and Adaptation, Ecology and Biodiversity Conservation, and Environmental Law, Policy and Management—coming in mid-2017. The remaining three domains—Sustainability, Energy and the Environment, and Water Science and Technology—will launch in 2018–20.

## BOOK CORNER [CONT.]

### CASE STUDY PUB OP [CONT.]

Through 2017, all content in the journal will be available free for researchers, teaching faculty, students, professionals, and policymakers who want to better understand environmental practice. In the meantime, we encourage you to:

- Contribute your own case study for peer review and publication
- Sign up for periodic email alerts about *Case Studies in the Environment* or follow us on Twitter.

For more information on submitting a case study article or slide deck, including detailed author guidelines, please visit <[cse.ucpress.edu/author-information](http://cse.ucpress.edu/author-information)> or email <[cse@ucpress.edu](mailto:cse@ucpress.edu)>. 🖱

—The CSE Team

• continued next column

## JOB OPS

RPI

### Building Technology Position

Provide expertise in fundamental and advanced architectural and environmental design/technology instruction at undergraduate and graduate levels. Advance architectural knowledge through creative contemporary design practice, environmental systems, emerging energy systems, or sustainable building technology. Assist in development and success of Building Science Program.

### Arch. Design/Arch. Sciences

Expertise as an instructor and researcher, engaged in nurturing the research enterprise of CASE, the Center for Architecture, Science and Ecology. Based in Manhattan, CASE is an Institute-wide research consortium of interdisciplinary collaborators from academia and industry. Seeking candidates with expertise in: architectural design, product/industrial design, building systems, advanced technologies or building structures, material technologies, intelligent building systems, environmental design and technology, or computational design and technology.

### Architectural Design Development

Provide expertise in architectural design and technology instruction at the undergraduate and graduate levels. Seeking candidates with substantial professional experience in a leading position of a successful architecture practice, as well as a record of research/scholarship. Ideally, the candidate has a professional registration as an architect.

General Criteria and Application Instructions are available at <<http://www.arch.rpi.edu/2016/11/tenured-or-tenure-track-openings-soa-rpi/>>.

## UNIVERSITY OF OREGON

### Sustainable Design + Technology

Department of Architecture seeks a creative and innovative faculty member for a full-time tenure-track position to teach in the areas of sustainable design and technology, engaging critical contemporary urban issues such as livability, shelter, and environmental quality. Anticipated to be at the rank of assistant or associate professor, appropriate to the successful applicant's experience, the appointment is to begin Sep 2017. For more information <<http://careers.uoregon.edu/cw/en-us/job/519273/assistant-or-associate-professor>>.

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## TEACHING REPORT: IOWA STATE

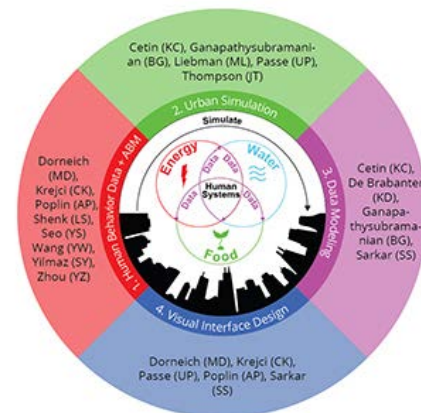
### BIG DATA RESEARCH PROJECT

Iowa State University and the city of Des Moines have teamed up on a big data research project that could transform the way cities handle sustainability and mitigate climate change, particularly in marginalized neighborhoods. The ISU researchers are developing a prototype decision-making tool that integrates data-driven science and human behavior to address environmental and social challenges, said Ulrike Passe, the lead faculty investigator. Passe is an associate professor of architecture and director of the Center for Building Energy Research.

There's so much unrelated data available—from census and economic information to policy studies and weather records—but it needs to be merged into a useable model. At the same time, we need to gather new data on how people operate their buildings and how the urban context impacts those buildings. City governments need to have a data-based tool that helps them decide how to allocate resources for conservation measures like tree planting and storm water management. Scott Sanders, Des Moines city manager, added, "The creation of this decision-making system will provide staff access to an amalgamation of big data, which they presently have no way to effectively evaluate, that is a critical component to the future of successful and resilient cities, The growing interest in community wide sustainability is at a critical juncture in our city's history. The demand far outweighs the city's ability to provide all of the required and desired improvements within its current budget constraints. The need for a data-driven process and policy to help assess and prioritize the city's investments has never been higher."

Big Data for Sustainable City Decision-Making was funded by ISU President Steven Leath's initiative for interdisciplinary research, which provided \$375,000 seed funding this fall for the three-year research start-up (and \$50,000 last year for project planning). Passe's team brings together 16 campus researchers from 14 academic disciplines, including natural and social sciences, engineering, design and humanities. They are partnering with Laura Graham, the sustainability officer in the Des Moines City Manager's Sustainability Office. For full story see <<http://www.news.iastate.edu/news/2016/10/26/bigdata-passe>>. 🖱

—Ulrike Passe



Big Data Project design graphic.

graphic: Iowa State

## BTES 2017 CONFERENCE AWARDS PROGRAM

### EMERGING FACULTY AWARD

This award recognizes building technology educators, early in their teaching career, who display excellence and innovation in their teaching performance, methods, and subject matter.

### 2017 BOOK AWARD

The BTES Book Award recognizes an outstanding new book on the topic of building technologies that significantly contributes to building technology education in architecture. The prize will be a \$1,000 award stipend to help cover registration, travel, and lodging for attending the BTES biennial conference.

### STUDENT SCHOLARSHIP

Two award categories have been established, one for a paper submittal and one for a design portfolio. Each award will be chosen by a BTES-member jury, and will provide a \$500 scholarship for travel expenses, free conference admission, and a 1-year BTES membership.

Full info at <<http://www.btesonline.org/conferences.html>>.

—Deborah Oakley



## RESEARCH REPORT: OXFORD BROOKES

### COMMUNITY ENERGY GENERATION AND SMART STORAGE PROJECT

Project ERIC (Energy Resources for Integrated Communities) was announced as a winner in the prestigious 2016 Energy Awards at a ceremony in London on 30 November 2016.

The project was named Residential Energy Project of the Year and was also highly commended in the Innovation Energy Project of the Year category <<https://www.theenergyawards.com/winners-2016>>. Project ERIC, launched in January 2015, is a collaboration between Moixa Technology, Bioregional, Oxford Brookes University Low Carbon Building Research Group, Oxford City Council, Re-energise, British Gas, and SSEN. ERIC is funded by Innovate UK under the localised energy systems competition.

The £1.2million UK Government-funded project, in which the Low Carbon Building Research Group of Oxford Brookes University is the lead academic partner, demonstrates how distributed generation (solar PV) and smart battery storage in a community can be managed to reduce average peak grid load and increase self-consumption of local PV-generated electricity across the Rose Hill estate in Oxford (UK), benefiting both local residents and the environment. ERIC has installed smart battery storage packs and electricity-generating photovoltaic panels on more than 80 homes, plus a community centre and a school. An electric car club is also part of the research and demonstration project.



photo: Rajat Gupta

Households participating in ERIC in Oxford.

Rajat Gupta of the Low Carbon Building Group at Oxford Brookes is the academic lead on the project, responsible for monitoring and evaluating the energy savings achieved at the household and community level, and the experiences of the occupants. As part of the project evaluation, residents were found to be concerned about rising energy prices and believe it is important to reduce both their household energy use and the energy use of the community as a whole. An assessment of the household electricity use and solar PV systems revealed a wide variation in the amount of electricity used by each household, while all PV systems are performing significantly well and generating significant amounts of renewable energy.

For further information, please contact Rajat Gupta, <[rgupta@brookes.ac.uk](mailto:rgupta@brookes.ac.uk)>. 🖱

—Rajat Gupta



photo: Bruce Haglund

If you visit Oxford, check out the Natural History Museum!

## SECOND CALL

FREE TO A GOOD HOME!

**Low velocity, boundary layer wind tunnel for architectural applications.**



photo: Scott Johnston

Miami architecture students doing science in the boundary layer wind tunnel's plenum.

I'm retiring, and none of the faculty on our campus is interested in the wind tunnel I built. I'm hoping to find an interested SBSE member who would put it to good use. It was designed with help from Jack Cermak, the founder of the Wind Energy Lab at CSU. The wind tunnel is designed to be disassembled and transported. The floor, walls, and ceiling of the plenum are individual flat panels, and the inlet and fan end are made of individual components that fit through a 3'-0" x 6'-8" door. I'll also throw in a lot of hot-wire anemometers. Contact <[johnsta@miamioh.edu](mailto:johnsta@miamioh.edu)> or 513.255.1472. 🖱

—Scott Johnston

## JOB OPS [CONT.]

UNIVERSITY OF TENNESSEE

### Design and Structural Technology

The School of Architecture seeks a full-time, tenure-track faculty member at the Assistant or Associate Professor rank in Design and Structural Technology, with the appointment starting Fall 2017.

In 2016, the school launched a building technology curriculum that integrates technology subjects with design studios and imaginatively activates technical knowledge within comprehensive education. Applicants are sought who will help develop this new and highly integrated curriculum while teaching its courses at the undergraduate and graduate levels. Effective design studio teaching is highly preferred. Ideal candidates will consider structures from both theoretical perspectives and in their physical manifestations.

For more information, contact Hansjoerg Goeritz, <[goeritz@utk.edu](mailto:goeritz@utk.edu)>. 🖱

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## MILESTONE

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### Ball State Shaves 20 Years Off Carbon Neutrality Date

In consultation with the institution's Sustainability Working Group, the interim president endorsed moving the carbon neutrality date from 2050 to 2030, made possible by the installation of a campus-scale, ground-source heating and cooling system and working with Chevrolet and the Climate Neutral Business Network to sell carbon reduction credits on the voluntary carbon market to fund further advancements. 🙌

—Bob Koester

## EDINBURGH FROM ARTHUR'S SEAT



photo: Bruce Haglund

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## SBSE CALENDAR

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### 2017

- Jun 8–10 BTES Conference/Des Moines, IA, USA
- Jul 2 SBSE Tool Day/Edinburgh, Scotland, UK
- Jul 2–5 PLEA2017/Edinburgh, Scotland, UK
- Jul 25–28 SBSE Retreat/Sublimity, OR, USA
- Aug 7–9 Building Simulation/San Francisco, CA, USA
- Sep 6–9 EAEA13 Conference/Glasgow, Scotland, UK
- Oct 5–15 Solar Decathlon/Denver, CO, USA
- Oct 9–12 ASES Solar Conference/Denver, CO, USA
- Nov 1–4 PLDC2017/Paris, France 🙌

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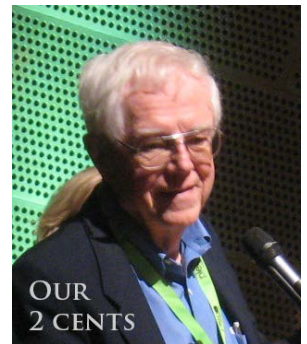
## SPRING ISSUE SUBMITTAL DEADLINE—MARCH 1

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SBSE NEWS  
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TO: SBSE MEMBERS & FRIENDS  
 PLANET-WIDE



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