



# CONNECTION

THE ARCHITECTURE AND DESIGN JOURNAL OF THE YOUNG ARCHITECTS FORUM

## SCHOLARSHIP

Exploring how architecture leads to a career of lifelong learning.

December 2016  
VOL 14 ISSUE 06

## EDIFICATION

# CONNECTION

THE ARCHITECTURE AND DESIGN JOURNAL OF THE YOUNG ARCHITECTS FORUM

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*Image by Nicholas Banks, AIA*

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## CONTRIBUTORS



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After studying at the Architectural Association and practising in London, Seraji moved to Paris in 1989 to establish her studio where architecture is treated as both a cultural debate and a practice. Pursuing a simultaneous engagement in architectural practice, teaching, and research. She has lectured and exhibited her work widely in Europe and North America, as well as China and South East Asia. She was Dean Of ENSAPM in Paris 2006-2016, Professor and Chair of the Department of Architecture at Cornell University from 2001 to 2005 and has taught at Columbia University, the Architectural Association and Princeton University. She was the Professor of Ecology, Sustainability and Conservation at the Academy of Fine Arts in Vienna where she headed the department for 11 years. Architect of the award-winning Temporary American Centre in Paris, Seraji has since, completed many notable projects and is currently finishing a mixed use building complex for the Paris Transportation Authority she is the chief urban planner in the French cities of le Rheu, and Pau. A recent housing project brought the prestigious prize of Equerre d'Argent to her practice in 2014.



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### BRANKO KOLAREVIC

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### JENNIFER WORKMAN, AIA

is a registered architect and an Associate at GFF Architects in Dallas. Her most notable project at GFF was the Perot Museum of Nature & Science where she worked in Los Angeles, CA under Morphosis on design and construction documents and then in Dallas on the construction of the museum. She served for five years on the Texas Society of Architecture Board, including her role as Vice President of Member Services. Nationally she has served as the Regional Associate Director for Texas, Chair of the national Young Architects Forum, and was most recently elected for the 3-year term of At-Large Director to the AIA Board of Directors.



### ANN THOMPSON

has served on the AIA Committee on Design Advisory Group for six years and is currently the COD Communications Chair. Also a librarian, she is Head of Adult Services at The Essex Library Association in Essex, Connecticut.



### MITCHELL JOACHIM

is the Co-Founder of Terreform ONE and an Associate Professor of Practice at New York University. Formerly, he was an architect at the offices of Frank Gehry and I.M. Pei. He has been awarded a Fulbright grant and fellowships with TED, Mosh Safdie, and Martin Society for Sustainability. He was chosen by Wired magazine for "The Smart List" and selected by Rolling Stone for "The 100 People Who Are Changing America". Mitchell won many honors including AIA New York Urban Design Merit Award, 1st Place International Architecture Award, Victor Papanek Social Design Award, Zumtobel Group Award for Sustainability, History Channel Infinity Award for City of the Future, and Time magazine's Best Invention with MIT Smart Cities Car. He featured as "The NOW 99" in Dwell magazine and "50 Under 50 Innovators of the 21st Century" by Images Publishers. He co-authored the books, "Super Cells: Building with Biology" and "Global Design: Elsewhere Envisioned". His design work has been exhibited at MoMA and the Venice Biennale.

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is a third year student at Cal Poly San Luis Obispo working toward a Bachelor of Architecture (BArch). She is a vice president on the AIAS executive board and heads the events committee for the 2016-17 school year. She also is a student assistant for the Externals Relations Office.



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### DINA EL-ZANFALY, AIA

is a architect, designer, maker and educator whose research examines new ways of human-machine interaction in making and its implementation in creativity and design pedagogy. She is a doctoral candidate in the Design and Computation group in the Architecture department at the Massachusetts Institute of Technology in the United States, where she also earned her Master of Science in Architecture Studies (SMArchS) while being a Fulbright scholar. She is also a co-founder and co-director of Fab Lab Egypt, the first community maker space in the MENA region.



### NEO LEHOKO, M. ARCH

is an aspiring professional and alumnus of Andrews University. She is an advocate for community design projects and recently served as a studio critic on the "Ubuntu" Design Project for Durban, South Africa.



### CHIU-SHUI CHAN, PH.D.

is a Professor of Architecture and of Human Computer Interaction Program at the Virtual Reality Applications Center, and chairs the Digital Media Minor Program. His areas of research have been in the exploration of design thinking, phenomenology of designing and parametric modelling. He has developed various virtual models for the study of design cognition, visual perception, and applications of VR in architecture.



### THOMAS LOWING, AIA

a mentor, teaches Professional Practice at Andrews, and serves in appointed positions as an NCARB Licensing Advisor, an advisor for the University's International Development Program, and on AIA SFx Firm Practice workgroups.



### ALEX ALAIMO, AIA

currently serves as a Director at Large for the AIA National Associates Committee (NAC) where he promotes engagement among emerging professionals. Previously Alex served as Co-Chair of Emerging New York Architects of the AIANY chapter. Additionally, he founded Operation Resilient Long Island a post-Sandy resilience ideas accelerator. He graduated with a B.Arch at NYIT in 2013 and is currently employed by PBDW Architects in New York.



### ANNA DYSON

teaches design, technology, and theory at the School of Architecture at Rensselaer. She is the founding Director of CASE (2007-present) which hosts the Graduate Program in Architectural Sciences / Built Ecologies. CASE is committed to bridging diverse worlds by proposing a new collaborative model for building research that unites interdisciplinary academic research with building and development practices. The consortium attempts to achieve this collaborative model without the schism that has typically divorced building science pursuits from the aesthetic, social and conceptual aspirations of architectural design inquiry. Anna has been recognized with multiple awards for her designs and innovations, and her work has been exhibited internationally at venues including the Museum of Modern Art (MoMA), The World Future Energy Summit (WFES), The Center for Architecture and the Postmasters Gallery.



### JOSH DRAPER

received his BA in Classics from St. John's College and his M.Arch from GSAPP, Columbia University. He works at the intersection of computation and craft, with broad experience in digital fabrication, computational design and rapid prototyping. Joining CASE in 2014, Josh teaches Advanced Prototyping, Data Visualization and Research Investigations with CASE's Doctoral Students. Josh's research at CASE focuses on advanced forming technologies and agricultural by-products as building materials.

# REFLECTIONS

As 2016 comes to a close, so does my tenure as editor of CONNECTION. After four years of involvement and two at the helm, I turn the reins over to my capable successor, Yu-Ngok Lo, who I hope surpasses my efforts in every way. As with any ambitious project, I can't say that we accomplished every goal that we set out to do, but I can definitely say that we told meaningful stories of the issues that matter to the profession and specifically young architects.

One of my prime takeaways from my time here is that our demographic cares. We have guiding principles and issues that are non-negotiable -- and rightfully so. Issues such as diversity, equity, sustainability and resilience are part of a belief system that cannot be separated from who we are as people. No matter what regulations or denials come for us in the future, we will continue to stay true to our ideals and fight for justice for all.

I am proud to say that we were not only able to discuss these ideals on conference calls and in windowless boardrooms, but that we placed them front and center in our writing and sought them from our hundreds of contributors. We dedicated entire releases to them as well. Take for example our collaboration with Rosa Sheng, AIA, in Volume 13.02 or Illya Azaroff, AIA, in Volume 13.03. Each took a deep dive into the state of equity in the profession and provided a voice for emerging professionals pursuing resilience based careers, respectively. We ran recurring columns on advocacy that spoke about the NDSA, Good Samaritan Law, and the Flint water crisis. We are at the forefront of issues that matter and are poised to change the profession in innumerable ways.

So I ask that in the coming year that we don't stop raising the bar on expectations. We have a great slate lined up for 2017, but another one of our strengths is the ability to adapt and course correct as needed. We are as much listeners and executors. So please feel free to reach out about what to tackle next or how to get involved. The next issue, article or future editor could be you. ■

Jeff Pastva, AIA

Jeff is the 2015-2016 Communications Director of the Young Architects National Advisory Committee of the AIA, the Editor-in-Chief of YAF CONNECTION and a Project Architect with JDavis in Philadelphia.





## YAF REGIONAL SPOTLIGHT



*Milan Jordan, Assoc. AIA, is a manager at the American Institute of Architects. With a background in architecture and a passion for non-profit management and development, her career is at the intersection of mission-driven work and the built environment.*

### What organizations are you involved in as an emerging professional?

My interests and passions are widely varied, which often shows in the organizations with which I have been involved. I have volunteered with many causes as an emerging professional, from mentoring at-risk youth at a historic church to docent duties at modern home tours. Most recently, I co-chaired the Emerging Professional committee of the USGBC Atlanta Chapter. In that role, I helped build out programming for young professionals in the areas of sustainability, benchmarking, transportation, and development. Since relocating to Washington, D.C., I've been dabbling in various volunteer opportunities before deciding where I would like to focus my energies; museums, mentoring, and design education are all things close to my heart that I would like to continue to contribute my time and resources to.

### Please speak to your involvement with YAF.

Amongst my duties as a manager of the Center for Emerging Professionals, I am the Young Architects Forum staff liaison at AIA National. As the staff liaison, I work on everything from the budget to in-person meetings to next year's YAF Summit25. The projects are ever-changing and it is so interesting to see the pulse and flow of the committee evolve through its strong leadership, the climate of issues, and the matters of importance affecting young architects.

### What are some of the important issues young architects face in today's industry?

I echo the sentiment that many of the issues young architects face are not exclusive to our field: student debt to income ratio and work-life balance are things young architects struggle with alongside young professionals in many other fields. However, it becomes a larger issue for the profession when "brain drain" is highly possible and plausible for young architects equipped with skills that are easily transferrable to alternate industries that can offer more and different incentives. The industry cannot survive if the next wave of leaders pursue avenues askew from architecture and there is too much attrition of talent. If a young man or woman is more interested in UX or graphic design than architecture, I celebrate their transition into a field they love. However, if talent is leaving

the profession for its arcane practices, difficult paths to leadership, or difficulties providing for (or spending time with) family, then that is the industry's issue to bear as well.

### What advice would you give to young architects looking to get involved in their design community beyond working at a firm?

I would urge young architects not to limit their community involvement to architectural practice. Think of yourself as a whole person: the sum of all your interests, no matter how obscure. Research those interests; I guarantee an organization or outlet exists for all of them. Design, creativity, and philanthropy exist in so many different arenas: Creative Mornings is a free breakfast lecture series for the creative community in over 150 cities nationally and internationally, National Main Street Centers are revitalizing impoverished communities around the country with skills-based volunteers on their design committees, neighborhood planning units need leadership and participation from people who understand communities, policy, and development. The AIA offers leadership opportunities locally and nationally, but the opportunities are endless. I would urge every person, particularly young people, to find something that keeps their spark alive; you need something that will always ground and remind you why you chose the professional path you are on. Reconnecting with your core interests and passions can reignite you and inspire you to keep pushing.

## EDITORIAL COMMITTEE CALL

As 2016 comes to a close and we look toward to 2017, the YAF CONNECTION team will be undergoing a change in leadership. Editor Jeff Pastva will end his term and successor, Yu-Ngok Lo, will take over for 2017-2018. During this time, we are also looking for team members to join the editorial committee. While we welcome skill sets of all stripes, our current need is for a graphic designer. The position description is as follows:

**Graphic Designer / Editor:** Provide featured layouts (up to 6 per issue) based on written and graphic content from national contributors. Assist Editor-In-Chief/Creative Director and Senior Editors with magazine graphic direction. Must be able to work in a remote setting with the ability to balance publication deadlines with employment. Ability to attend a bi-monthly kick-off conference call with the potential for intermediate update calls.

Proficiency in Adobe Creative Suite (Photoshop, Illustrator, InDesign) and Google products required. Applicants' access to Adobe CC is preferred, but we can work around older versions. Please provide a sample page or link of prior work.

This position has immediate availability with a commitment of one year and the four issues of YAF CONNECTION in 2017. Position will be reevaluated at year's end based on need and performance.

If interested, please contact the YAF Communications Director (YAF CONNECTION Editor-in-Chief / Creative Director), Yu-Ngok Lo, AIA at [yungoklo@hotmail.com](mailto:yungoklo@hotmail.com) for more information.

## YAF RESOURCE GUIDE

### AIA's Young Architects Forum

YAF's official website

### YAF KnowledgeNet

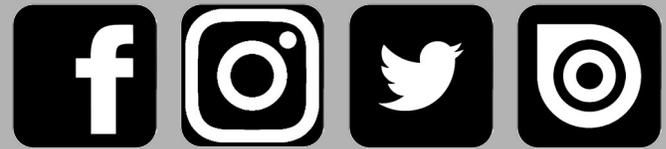
A knowledge resource for awards, announcements, podcasts, blogs, YAF Connection and other valuable YAF legacy content ... this resource has it all!

### AIA Trust

A free-risk management resource for AIA members.

### AIA College of Fellows

Check out the College of Fellow's reciprocal newsletter to find out more about what's going on.



### **Know Someone Who's Not Getting YAF Connection?**

Don't let them be out of the loop any longer. It's easy for AIA members to sign up. Update your AIA member profile and add the Young Architects Forum under "Your Knowledge Communities."

- **Sign in to your AIA account**
- Click on the blue "Add a Knowledge Community" button
- Select Young Architects Forum from the drop down and SAVE!

### **Call for News, Reviews, Events**

Do you have newsworthy content that you'd like to share with our readers? Contact the News Editor, Beth Mosenthal, on twitter - [@archiadventures](https://twitter.com/archiadventures).

### **Call for CONNECTION Articles, Projects, Photography**

Would you like to submit content for inclusion in an upcoming issue? Contact the Editor, Jeff Pastva, at [jpastva@gmail.com](mailto:jpastva@gmail.com).

# ARCHx

## THE PROFESSIONAL AND ACADEMIC CONNECTION

by Sharon Turek, AIAS

The AIAS at Cal Poly San Luis Obispo knows how important it is for students to understand what an architecture career will be after graduation, so, in September 2016, we started the first of a ten month experiential lecture series with the intent to bridge the professional and academic worlds of the architectural industry. We called it ARCHx. Our goal was to enlighten students by exposing them to a variety of practicing professionals and companies they may or may not have been introduced to yet. This provided students with insight into exciting projects, professional advice and tutorials, and a unique opportunity to network.

Students are often excellent designers and full of zest for the industry, but fall short of the professional knowledge needed to practice in the crucial years following college graduation. In the past, the AIAS has teamed up with organizations such as NAAB and NCARB to educate architecture students on intern development hours, licensure, exams, and more. However, there is only so much architecture students retain from their fellow AIAS leaders who act as a middle ground between professionals and students.

Instead of AIAS giving the presentation, we invited professionals ranging from technical designers of global firms to Cal Poly alumni to female activists in architecture. They inspire fellow architecture students and frequently are young professionals who are just beginning their own career path in architecture. This is in contrast to past lecture series, where we primarily featured professionals who were established in their careers and hard for students to approach. We believe that it is important for students to form connections with those who are still close to the mindset of college students.

Our second speaker of the series, Wyatt Frantom, AIA, of Gensler LA, spoke of his journey as an architect and his experiences in international practice. "Speaking with the students during the ARCHx lecture series was truly memorable. My own lecture occurred on the roof of the College of Architecture with views of the surrounding mountains. It was by far the coolest venue that I've ever had the pleasure of speaking at," stated Wyatt after his presentation. "As a forum for young practicing architects to share their early career experiences, I believe that the lecture series fills a necessary role in cultivating future generations of architects in our profession."



Left: Confluence lecture given by Wyatt Frantom, AIA, on his encounters with international practice. Right: ARCHx lecture held on the roof of Cal Poly's architecture building. Images courtesy of Maya Mashiach, AIAS.

A typical 90-min. ARCHx lecture is broken into two parts: the presentation and the tutorial. The presenter shares his/her experience on a variety of topics, such as personal career paths, starting a firm, specific design processes, or new sustainable design methods in the first part of the lecture. Then, a tutorial and Q & A session is scheduled toward the end of the presentation. This is where the presenter provides advice on portfolio layout, common construction document errors, or self-marketing.

One of the things that distinguishes our lecture series from others is that we not only bring in designers and architects to present their projects, but also ask them to share the struggles they have faced throughout their professional career. It is a more personal and interactive approach to offer advice to the audience.

In the future, the AIAS Cal Poly chapter plans to expand the program by broadening the audience, including collaborating with AIA California Council in speaker selection. We also plan to work with other AIAS chapters to spread the ideas behind the creation of this lecture series to other campuses. Our main focus is enhancing the education of architecture students because, ultimately, we are the future of design. Whether it's a stronger focus on sustainability or public works or technology in the future, we all share the desire to advance the future of design for the greater good. Through the creation of the ARCHx lecture series, we hope to get there with the wisdom of successful professionals in the industry. ■



# MENTORSHIP: BUILDING BRIDGES IN LIFELONG LEARNING

by Thomas Lowing, AIA and Neo Lehoko, MArch

Anyone who has ever achieved greatness in building a legacy can credit at least one significant mentor. Mentorship stands as the original model of a one-on-one relationship that guides the trajectory of growth and development of a career over time. However, now is the time for mentorship in the profession to evolve. Media has saturated the market with a volume of data so large that vetting measures can barely keep up. This has made the process of filtering trustworthy information seem like finding a needle in a haystack. Since we don't know "what we don't know", mentors have an increasingly critical role for navigation in order to discern what is relevant to our success.

What is difficult to navigate is not just the volume of information, but the speed. It seems as if once the future has been understood, it has already become the past. Hanging on to the present has become futile and disorienting, which is precisely where a mentor can be a steadying force. When we get swept up in the chase from college to AXP, employment, examination, and licensure, a mentor can be a link to the past – explaining what has worked before, identifying tried and true practices, flagging mistakes to be avoided, and building a bridge to the future by drawing on their contacts, resources, and wisdom. As our mentors learn to understand us, they can acknowledge skills and supplement knowledge gaps. Even though we still won't know "what we don't know", mentors can point out areas of concern as we, hopefully, gain a mutual trust. A mentor's discernment is our GPS for mapping possible paths when a flood of possible choices overwhelms our senses.

Trust becomes the new big deal or deal breaker in appropriating relevant information for navigating new territories and collaborative responsibilities, especially regarding trust for strangers and the masses. The most successful businesses of our generation, such as Facebook, Google, Wikipedia, Airbnb, Uber, YouTube, and Autodesk, require a level of trust from the general population. Shared information, shared accommodation, shared transportation, and shared work space provide opportunities to move around in our lives as never before within more interactive, yet often isolated, human space. The apps that deliver these systems can be indirect mentoring channels, and they certainly suit us; like everything else in our generation they are faster, lighter, instantly accessible, and easy to use, but they only operate on what we tell them. An app will search where we send it, but a human mentor, unlike a robot, will operate on something only a human can generate: concern.

Perhaps we will see what Artificial Intelligence technology can deliver to augment Emotional Intelligence in the next decade. Until then – and I don't want to sound like a tech dinosaur here – we still cannot get a machine to naturally feel, express, or act on the concern that another human, even a stranger can feel. It takes a person to bring the best out of another person. As much as the friendship between Baymax<sup>1</sup>, the medical robot, and a little genius boy is refreshing and adorable, beyond the entertainment factor it is bound to have some unintended consequences. The sense of trust we need is provided by mentors who we believe are concerned about our success. We need someone who has a bird's eye perspective of our career path, and until the algorithms for search engines change from delivering information built on what we already prefer, we need someone to point out the important things we may be missing.

Established institutions and organizations like the AIA are filling this need with both traditional mentors and "virtual" mentors. Behind apps like AIA Kinetic<sup>2</sup>, are people from the professional world who would like to extend a hand to as many up and coming professionals as they can. In a sense, they create the rising tide that raises all the ships. Through blogs, vlogs, podcasts and magazines, individuals try to reach as many of us as they can. And, as with most media, some entertainment is required to capture us, "the audience", in order to make up for not being able to talk face to face. In this way they aim to deliver quality content to us through "virtual" mentoring channels, yet individuals in small firms can still take the journey all the way by stepping out and being the professional companion and guide of aspiring professionals like us, who are new to the industry and perhaps through the process even discovering someone who wants to do some great thing, and helping them pursue it. And then, mentors with mentoring channels in all forms help build legacies. ■

## References

1. Baymax is a character from the 2014 Disney film "Big Hero 6" and portrays the friendship between a boy and his robot after the death of his older brother, who acted as a mentor for him before his death. GeekDad writes an interesting article about it here: <https://geekdad.com/2014/11/big-hero-6-review>
2. AIA Kinetic is an app launched by the AIA Small Firm Round Table (SFRT) in May 2015, to equip emerging professionals for practice. A link to the app: <http://new.aia.org/pages/9831-aia-kinetic-the-architects-professional-primer>

# LIFELONG LEARNING WITH AIA EUROPE

by Tiffany Melançon, SIA, Int'l Assoc. AIA

**T**hey called themselves "AIA Europe," an international tribe of people very curious and hungry for new things. They met and shared their knowledge. The young learned from the old, the old learned from the young, the guests learned from the locals, and they all fell in love with the beautiful island called Cyprus.

This is how one AIA member from Los Angeles, California recently recounted her experience at AIA Europe's 42rd Architecture and Urbanism Conference held in Girne, North Cyprus last fall. It was her 15th conference with the Continental Europe Chapter (she started coming regularly from the US in 2001) and her simple text well describes AIA Europe's unique approach to continuing education.

Although Paris is the chapter's administrative center, AIA Europe has no center of power or activity as many US chapters do. Every six months, members and guests gather for the AIA Europe International Conference and Chapter Meeting, each time in a different European city. With over 250 members spread across 30 countries, it's the group's geographic diversity that makes this both necessary and possible; the conferences are conceived and organized by member architects living in the different conference locations. And since the first one in Geneva in 1994, the reach of programming and participants has continually expanded, each building upon the network of the last. Today, AIA Europe conferences invite students, interns, and seasoned professionals from an array of countries and cultures to participate in a form of "global-local" learning. US licensed architects may earn up to 18 Learning Units per conference.

AIA Europe conferences are an intensive, three-and-a-half day format of site visits, lectures, and tours where architects, planners, and government officials come together to present their city's latest projects and goals to attendees from around the globe. Each focuses on a particular local theme, but all generally ask how European cities are dealing with issues of growth, infrastructure, and housing and how architects are working cooperatively to build more sustainable urban environments. Coming from Eastern and Western Europe, the United States, the Middle East, and beyond, the participants further contribute their own knowledge to the conference themes.

Designed for an intimate group of 80 to 100 people, the compact program brings guests in close contact with the city subjects and their presenters, all high-level experts in their fields. Academics orient guests to the historical context of the city, planning directors introduce current and future urban developments, and new building projects are presented by the architects themselves. Before the construction site tour of the then stalled Elbphilharmonie Concert Hall in Hamburg in 2012, Herzog & de Meuron Senior Associate Nick Lyons gave a comprehensive presentation about the recently completed project ten years in the making. The industry leaders of AIA Europe's corporate sponsors, like Graphisoft, Laufen and Swisspearl, are also engaged, vital participants, sharing their expertise while helping to keep the registration fees affordable. Numerous cocktail and local dining events are included in the conference program and cost.

Because of their up close and personal quality, AIA Europe conferences build a well-connected international community that seamlessly combines the global with the local. As a series, the conferences create a valuable overview of contemporary Europe, while each one generates in-depth, English-language local content that is hard to find anywhere else. The organizers are proud to share their home culture's best practices and challenges with their colleagues, and they recognize that the exchange should benefit both guests and the city.

The organizers of the most recent conference in North Cyprus – *Girne/Kyrenia: Communicating Across Cultures* – integrated the full potential of that exchange into the conference program itself. In addition to the normal lectures, site visits, and tours, they planned a five-day student charette and competition concurrent with the conference. Sixteen AIA Europe student mentees from Austria, Cyprus, Germany, Spain, and Turkey were invited to design adaptive reuse projects for the municipality's Old Town Bazaar "Bandabuliyi." Together with professors from the Girne American University Department of Architecture, attendees acted as mentors for the charette.

The final projects were juried on the last conference day by attendees, local experts, and the public and then presented by the teams to the Honorable Nidai Gungordu, mayor of Girne. The mayor enthusiastically supported the students' proposals and stated his commitment to using the breadth of ideas and perspectives to help revitalize his city.

AIA Europe's two 2017 conferences will take place in Menton, France, on the Mediterranean coast near Monaco, this spring, and Prague, Czech Republic in the fall. The spring conference will focus on Menton's regional development and offer rare access to Eileen Gray's Villa E-1027, Le Corbusier's "Cabanon," and "Holiday Cottages," among other sites, with tours given by the architects responsible for the site restorations. Prague will be a bigger conference organized jointly with the AIA International Region, and will coincide with 2017 Prague Architecture Week.

AIA Europe conferences animate a dynamic network of design and building professionals who all share an international perspective in practice. Conferences are open to AIA members, non-members, and students, and US licensed architects may earn up to 18 Learning Units per conference. Visit [www.aiaeurope.org](http://www.aiaeurope.org) to see details of past and future conferences, and to learn more about the "international tribe" of AIA Europe. ■

#### COMPLETE LIST OF CONFERENCE CITIES:

Prague, Girne, Barcelona, Vienna, Milan, Paris, London, Düsseldorf, Lyon, Hamburg, Israel, Basel, Stockholm, Belgrade, Istanbul, Dubai, Manchester, Athens, Brussels, Udine, Helsinki, Paris, Porto, Bern, Berlin, Florence, Amsterdam, Budapest, Madrid, Copenhagen, Dublin, Vienna, Istanbul, London, Lisbon, Rome, Geneva

# OVERSEAS EDUCATION

## AN INTERVIEW WITH NASRINE SERAJI

by Yu-Ngok Lo, AIA

**Professor Seraji, you have taught in different countries, including Austria, England, and France. What are some of the differences (if any) you see between the education system in the US and the rest of the world?**

There are two major differences. The first is that architectural education has always had the design studio at its core as a method of teaching, testing ideas, and analytically absorbing knowledge. However, the issues/topics that are treated as the base of research and teaching vary between countries. This leads to very different types of debates. Another important learning method that we need to reinstate in schools around the world are the cultures of debate, investigation, questioning, and critical thinking, which need to be at the centre of our preoccupation. The other big difference is what architectural education costs. In American universities, a student pays anywhere from 34,000 to 60,000 dollars for his/her tuition. In Europe, students pay something between 540 and 1,400 Euros.

**You have just been appointed the head of the Hong Kong University Architecture Department. What are some of the things you would like to achieve during your tenure?**

Teaching at HKU is very different from teaching anywhere else. The students are bright, dedicated, extremely hardworking, and obedient. Some expect to be told what to do, but some are yearning to find their independence. Both categories of students show potential to have their minds opened further. I hope, with the help of the very young and willing faculty of architecture, to change the mindset of the students. We are changing the admissions procedures this year. I gave a lecture on the information day at HKU this year to allow parents and future students to understand that architecture is a mindset more than a profession.

**You worked on many large-scale master-planning projects. Do you think the urban planning curriculum should be part of an architect's training?**

I was never taught urban planning. I was taught that the city is an integral part of the architect's preoccupation. We were taught to think and do accordingly. We never designed without thinking; we never produced without asking "Why?" Urbanism, the city, the territory, and the environment are areas in which the architect intervenes. The curriculum of architecture has always had a very close relationship to urban matters.

Schools of architecture around the world work very closely with the questions of urbanism. I don't know why they are even separate departments in architecture schools in America. Perhaps it is because the urban is very rare in the US.

**You have also done many housing projects in Europe. How does your project experience help your teaching?**

My teaching is not related to my practice because I believe that teaching is an autonomous practice. I teach independently of what I practice and vice versa. There are ways of mixing the two, but teaching is about learning how to problematise urgent issues. In short, there is no direct relationship between my teaching and my practice. I am thinking though about heading a research platform to fold practice and teaching into one platform. More to come soon; it's a secret...

**Could you tell us a bit about the licensure structure in Hong Kong? How does Hong Kong University prepare students to become licensed architects upon graduation?**

I suppose it is like every other university in the world. Courses on law, business, management, etc., are taught at HKU in the last two years of the architect's education. However, these courses are conducted largely based on outdated corporate thinking and strategies. We need to change this, as the practice of architecture has changed, and practice is not only about large and conventional, long-established corporate offices. We need to look at some very exciting new ways of the young cooperatives (co-ops) that are doing much more interesting work than the classic corporate offices. These co-operative offices do not rely on the triangular structure of hierarchies but are flat structures of networks. The web is their analogy for a structure, not a mountain and its peak. The established architects are recycling their ideas as the younger generation is trying to prove that the world needs to look at change in an innovative way.

**The National Council of Architectural Registration Boards here in the US recently proposed an alternate path to licensure that allows architecture students to become licensed upon graduation. Have you seen a similar system in Europe? What do you think about this approach?**

Students in Europe are licensed very differently from graduates in the US. European students are still licensed according to the laws of each country in Europe. Germany, France, Austria, UK (unfortunately no longer in the EU), Italy, and Spain license architecture graduates very differently. So I do not know what this approach is. It all depends on the relationship of the job market and the need for freshly graduated architects. Licensure needs to be revisited, as its foundations are very corporate and not in the best interest of architects and their capacity to describe and construct the new world.

**What is your advice on how to become successful?**

Success is a word that is not in my vocabulary. Useful, restless, and persistence is more my line of practice. I would say read, never give up, never think that you are inferior, think of the world as a small place, think of architecture as a necessity, passion, and intellectual and cultural construct and not a vocation.

Think of women like Zaha, Lina BoBardi, Margarete Schütte-Lihotzky, Coco Chanel, Lilly Reich, Elsa Schiaparelli, Eileen Gray, Martha Argerich and, and, and...

I have given 35 years of my life to architectural practice and architectural education simultaneously and I would never change it for anything else. ■

# INTERN TITLING

## 10-YEAR REDUX

by Erin Nunes Cooper, AIA

*Editor's Note: Please see the following [link](#) to read the original article.*

This week marks the tenth anniversary of “[Let Them Be Architects](#),” a piece published in *AIArchitect* on December 8, 2006, in which I advocated abandoning the title Intern for any professional holding a degree in architecture, and prompted a discussion on opening the use of the title of Architect to pre-licensed professionals. It is with delight and enthusiasm that I reflect on the progress we have made since 2006, most notably the change in [NCARB model law](#) to sunset the title Intern.

### Intern Titling Round 1

Following the 2002 National Summit on Architectural Internship and 2005's *Designing Tomorrow's Architect*, the National Associates Committee formed a task force in March 2006 to develop titling recommendations for NCARB and the AIA. Members of the 2006 Task Force recognized the importance of licensure and set out to develop a title that would more accurately describe pre-licensed professionals *while maintaining a distinction between licensed architects*. After researching other regulated professions, such as medicine and law, and soliciting title suggestions from licensed and unlicensed professionals, the 2006 Task Force eventually recommend abandoning the title Intern and prompted a discussion of allowing the title of Architect for degree-holding professionals. The important distinction for licensed architects could be made by appellations (RA, AIA, NCARB) or using Licensed Architect or Registered Architect. The recommendation was met with controversy and was not adopted at the time. Ten years later, we have finally achieved pivotal success.

### The 35-Year-Old Intern vs. the 21-Year-Old Architect

The professional landscape of architecture was different ten years ago than it is today: women and minorities were less represented in architecture, the iPhone had yet to be released, Pinterest design boards were not a thing, and REVIT was in its relative infancy. The intern titling debate, while not new in 2006, had recently gained momentum. A familiar argument against the title Intern was that it was demeaning and did not accurately describe the roles and responsibilities of pre-licensed professionals, many of whom had years of experience and were making significant contributions to projects. At the time of that writing, I was a licensed architect, struggling to find appropriate titles for my team. The average age of intern architects had steadily risen, eventually peaking in 2009 before declining, and the average architect was in their early to mid-30s<sup>1</sup> before obtaining a license and earning the right to be called an architect.

Meanwhile, in technology fields, the titles of Software Architect, Systems Architect, Information Architect, and Database Architect had exploded in popularity. To address the matter, the AIA issued a Best Practices knowledge resource document called “[An Architect By Any Other Name](#)” in September of that year, clarifying that “architect” was a generic term for use in other industries, but reinforcing the prohibition of use by anyone without a license in our own profession. It was within this context that the 2006 Intern Titling Task Force pushed forward to advocate for the use of Architect, which was denied.

### Knocked Down and Getting Up Again

In the face of rejection, the conversation quieted in subsequent years, but it never died down completely. Resurgences occurred occasionally with roundtable discussions in 2009 and 2012, and more licensed architects joined in the argument. With more perspectives from later career architects, broader challenges to professional practice associated with employee morale, managing teams, leading a practice, and client relations made their way into the debate. Outside of the profession of architecture, the title of Intern still implies a student or non-degree-holding trainee, resulting in titling workarounds such as “job captain,” “architectural designer,” or “designer” to prevent clients and consultants from mistaking intern architects for students. Over time, the debate was no longer seen as interns complaining about their own title, and it was taken more seriously as an important consideration for the profession at all career stages.

### The Future Titling Task Force Achieves Success in 2016

In 2014, the AIA held the [Emerging Professionals Summit](#) and followed up with two surveys on titling. It was clear that the “I-word” no longer had support, and NCARB President Dale McKinney, FAIA, NCARB formed a new group: The Future Title Task Force led by Blake Dunn, FAIA, NCARB. It is worth noting the alignment between the AIA and NCARB and the inclusion of both established and emerging professionals on the task force likely contributed to its success. They took this on with careful consideration and investigation of more regulated professions, including law, medicine, and dentistry. The Task Force recommendation was to sunset the title of intern, to abandon any regulated titles for individuals pursuing licensure, and to “restrict the role of regulation to the title ‘architect’, which should only apply to licensed individuals.”<sup>2</sup> The recommendation was unanimously approved by NCARB’s board of directors in April 2016.

Philadelphia was host to the 2016 AIA Convention, and it was there that many of us heard the [formal announcement](#) by Dale McKinney, Blake Dunn, and Michael Armstrong of the NCARB model law change to sunset the title of Intern. NCARB’s model law change does not automatically remove Intern titles. Laws or rules regarding titles are controlled by each individual jurisdiction or state member boards. With model law changed, it is now at the discretion of each member

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board to consider adoption of the model law. Nation-wide adoption could take many years. At this point, there is no recommended title for pre-licensure, leaving title decisions to individual organizations. While it seems we are not ready to embrace a further change to allow the use of Architect, this is a giant step in the right direction. Suni Dillard, a Task Force member, emphasized that eliminating the intern title provides an opportunity to recognize a distinction between a student and a graduate of a degree program, which is an important milestone on the path to becoming an architect. In keeping with the decision, the Intern Development Program (IDP) was renamed the Architectural Experience Program (AXP), and a scan of the guidelines reveals that NCARB has indeed removed the title Intern from the document.

"Aspiring architect" has emerged as a descriptor for pre-licensed professionals in AIA and NCARB documents. However, I caution against applying this to our colleagues beyond a limited application. "Aspiring architect" has a certain sense of whimsy and ambition during a brief window of time for those about to take the exams, yet applying it in a professional environment can be just as stigmatizing as Intern. An architecture activity book for five to ten-year olds is titled "The Aspiring Architect," and when my local library held a Design Your Own Oval Office event for children, the facilitator referred to the children as aspiring architects. The model law decision allows individual firms and organizations to fashion appropriate titles that respect the contributions of pre-licensed professionals. Titles such as Associate Architect, Architectural Designer, Building Designer, may be options provided they are permitted by your state board. Some state boards do not yet allow derivatives of the word architect.

### **What You Can Do to Accelerate Change**

**Be informed:** Read your district or state board's rules regarding titling for unlicensed professionals. NCARB lists member boards with links to their websites [here](#). Use acceptable titles until a revision is adopted.

**Be an example:** Consider Intern "the I-word" and remove it from your own professional lexicon. Encourage your colleagues to do the same.

**Be vocal:** Is your office or organization still using Intern? Share [NCARB model law](#) and the transcript of NCARB President Dale McKinney, FAIA's [formal remarks at the AIA convention](#) with your firm or organizational leadership. Speak up and request a change – as long as it is legal.

**Be active:** Ask your local AIA chapter to communicate the decision broadly to the membership. Volunteer to lead a discussion. Contact your state board and advocate for the adoption of model law. ■

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#### *References*

- 1. The average age peaked in 2009. See 2012 NCARB by the numbers for information on the rise and peak. The 2016 NCARB by the numbers outlines continued decline.*
- 2. [http://blog.ncarb.org/2015/May/~media/Files/PDF/Special-Paper/AIA\\_Intern\\_Announcement\\_5-14.ashx](http://blog.ncarb.org/2015/May/~media/Files/PDF/Special-Paper/AIA_Intern_Announcement_5-14.ashx)*

# (EXTRA)CURRICULAR

## A DISCUSSION ON ARCHITECTURAL EDUCATION AND ENTREPRENEURSHIP

by Gabriela Baierle-Atwood, AIA

**C**ONNECTION moderated a roundtable discussion focused on architectural education and entrepreneurship. The goal was to explore how this relationship has been and can be approached by architecture schools and practitioners, what schools are doing to enliven this aspect in their curriculum, and why it matters that practice follows. Our guests were Beth Lundell Garver, AIA, NCARB, and Dina El-Zanfaly, and it was moderated by Gabriela Baierle-Atwood. Beth is the Director of Foundation Instruction in Practice at Boston Architectural College. A registered architect, Beth also leads the CityLab Intensive program at the BAC. Dina is a doctoral candidate at MIT's Design and Computation Group, whose research revolves around learning through making.

**GBA:** Currently, what do you see happening with architecture schools' curriculum in regard to supporting entrepreneurship?

**DEZ:** MIT has just created its own incubator called StudioX, with the first cohort starting next year. The architecture school at MIT is pushing toward how to develop marketable products and how to encourage innovation. It's focusing on product and culture, but at the same time, the classes in architecture tend to be very traditional since the university-wide, cross-disciplinary component is available to students.

**GBA:** Given that MIT is highly based on the principles of innovation, that makes sense. And it's interesting to me that it's developing curricula to fit the times by pushing more and more toward the product development concept.

**BLG:** Since 1889, the BAC has taken a different approach to architectural education by partnering with practitioners. It was founded by faculty from MIT and architects from the Boston Society of Architects, both of which were newly formed. Together, they developed this curriculum that gave workers an opportunity to go to school and gain skills that they would then apply back in their offices. Today, students still earn experience hours in both settings to complete their degree program and graduate. One way that we have adapted this curriculum is to include entrepreneurship.

Many students are freelancing or interested in product development. Our student body is focused on more than just becoming licensed architects. Recognizing an impact on the relevancy of design education, we are expanding how we evaluate learning by providing concentration tracks to guide students in practice. Practice Management and Design Entrepreneurship is one of those tracks.

I think architecture is by definition an entrepreneurial endeavor. Adding this concentration is one big thing that we have done to direct the path to entrepreneurship in architecture.

**GBA:** That's great. I agree that architecture, by definition, is entrepreneurial. But I find that sometimes people are not seeing that correlation directly. Do you think that there's motivation from incoming students to pursue this kind of knowledge? Do you see a lot of people fighting for those particular concentrations?

**BLG:** Yes. Students are excited about these ideas. The question becomes, where do they go to get involved? Or learn about financing or the legal elements of risk? Or begin developing their brand?

One of our core faculty, Jack Cochran, started an entrepreneurial incubator program at the BAC called Hatch. It is a series of workshops led by area experts in business strategy, leadership, organizational development, industrial design, and intellectual property law. Students use these workshops to design physical and digital platforms that address issues of home maintenance, climate change, affordable housing, education, nutrition, and energy efficiency for a range of audiences.

**DEZ:** The difference between this arrangement and MIT is that we have the business school (Sloan School of Management), and we have the university departments. For example, I founded a special enterprise and I had to learn specific things. That information wasn't available in my school of architecture, but classes could easily be accessed through the cross-disciplinary registration that MIT offers. So they do provide a lot of information related to economics and how to run your business, but I think the missing part becomes how to develop a product in terms of design, the product design process, or even choosing the product. I think it needs to be added to architecture schools. It is what I try to push in my classes.

**GBA:** I think it's fascinating that we live in a society where on one hand you have these entrepreneurs who are coming up with new solutions to already solved problems, and on the other hand you have all these problems that aren't solved, like sea level rise, and people are capable of tackling that, and they often lack the managerial skills. So, in a way, architectural education has this perfect opportunity to connect architects who are inherently already thinking of really big problems to a path where they can solve them, or at least expose them to this path.

**BLG:** Yes. When we talk about practice management — let's say more specifically business practice and operations — we want to see students actually experience this if they are interested in entrepreneurship. A lot of times, these skills are not discussed until a professional practice course, which is a more advanced class that students take near the end of their education. We are trying to encourage more practical exposure early on.

**GBA:** That's great. I want to sidetrack a little bit. Dina, you're from Egypt. Do you see these kinds of changes being made in the core architectural education curricula there?

**DEZ:** Not that much. Architecture schools' curricula are very strict. In Egypt, it's different because if you choose architecture, then you're just going to be an architect. But if you choose, for example, to be an engineer or to be a businessman, that's a different trajectory. The paths don't intersect.

Before coming to MIT, I was taught in Egypt; that is my past experience. The first time I was exposed to multidisciplinary learning was at MIT, so it's a different culture. And of course, I think multidisciplinary, like introducing students to partnership and opening their eyes to recognize that there is more than just the architecture studio. Somehow it makes you see new things every time. I think you learn to adapt more easily when you are exposed to this kind of learning.

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**BLG:** The value of being able to converse with people who have different skill sets is huge. What better way to learn about how to start a business than to talk to someone who is getting an MBA or launching a startup?

And that's a really good point about multidisciplinary, too. Many classes at the BAC, such as CityLab and Community Practice, are multidisciplinary. There is a common language that goes beyond a pure design focus — design thinking connects with engineering, fabrication, any type of business role, and so on.

**GBA:** I think you hit the nail on the head when you talked about finding a common language. I've looked into who is doing what and how are they approaching things, in terms of school and in terms of practice, and it seems like the pattern is about connecting people through their goals and through what design can offer.

For instance, Sci-ARC's curriculum is about assessing places in need. Columbia University has Studio X in several places throughout the world. But the pattern is expanding: Tulane University now has a minor in social innovation and social entrepreneurship. Oklahoma State University has a School of Entrepreneurship. It seems to me that it's about developing these kinds of relationships, which I think is connected to the core of what architecture is about.

**DEZ:** When I teach product design classes, I always ask my students to think about how they're going to sell their idea, how they're going to market it, whether they're going to have different products, to imagine what it would look like if you had the time to produce a whole line out of this product. Basically, I try to introduce the idea that you have to explain, to introduce your product. But I feel like entrepreneurship, as we speak of it, is a hype.

**GBA:** Do you think it's a buzzword?

**BLG:** I think in many ways it is a nicer way of describing failure. For example, the difference between an entrepreneur and an architect is that an entrepreneur can fail publicly and most of the best ones do. As an entrepreneur, you fail and then you try again. If you are an architect and you fail, you are worried about health, safety, and welfare or being sued. Calling the process "iterative" or "entrepreneurial" creates a safer space for prototyping something fast. While the word might be a hype, the benefit is that it gives us a place to become more comfortable with the productivity of failure.

**GBA:** It's kind of using the concept of "entrepreneurship" as a way to learn through failure.

**BLG:** And we all have to do that anyway. Look at venture capitalists for instance. One out of 10 companies they invest in may do well. So in their field, which does very well for itself, 90 percent of the time, they fail. The growth of our field stagnates when we neglect to take some risks.

**DEZ:** That reminds me of when I was an undergraduate student in Egypt. We had a class called Project Management and the professor was very progressive compared to others; she pushed toward entrepreneurship 10 or 20 years ago. She explained the role of the entrepreneur and stated that the role was present even if you were running an office. So I think that we can also say that architects are entrepreneurs, one way or another.

**BLG:** Absolutely. I completely agree. We, as architects, take risks all the time; we are always using new products or designing new construction details that have never been seen before.

**GBA:** By definition, I think there's nothing new in saying that an architect is an entrepreneur, right? There shouldn't be a difference there.

**BLG:** Perhaps this is about making safer spaces for us to test ideas or products and exercise an entrepreneurial spirit. It is a way to connect us with the world outside our proverbial bubble, which I think is a good thing.

**GBA:** Definitely. It's a huge advantage to be thinking in broader terms. And speaking of which, have you noticed that practice is following this entrepreneurial spirit?

It seems like VR is the next big thing, but it also seems like it's about finding the right extracurricular activity that a firm can do. For instance, NBBJ is now offering a service that transitions services to health care. So they're going beyond healthcare design and adding that to their expertise, to their set of skills. Populous is kind of the same way, in that they have been inserting themselves in large event planning and transportation.

**BLG:** Yes, we worked with them last semester in the CityLab course. We studied how Populous is expanding into the transportation sector. As architects and designers, they are thinking about re-envisioning bus rapid transit systems, airports, and networks of exchange for moving products. They are analyzing Amazon, and how their strategic purchasing of warehouse space next to key transit nodes across the country has enabled them to compete with FedEx.

**GBA:** That's great. So, specific still to each of their design focuses, these firms are expanding on their skillset. I thought that was really interesting. So that's why I feel like it's about this notion of extracurricular activity.

**BLG:** Well, you say extracurricular, but the thing is that it isn't anymore. At the BAC, we are building entrepreneurship and practice management into the practice curriculum for all architecture students. So for us, it is not extracurricular anymore. If we want to be able to continue to grow and thrive as a field, this kind of work has to be more part of what we do. ■

# EDUCATION UNLEASHED

## A NEW PATH FOR EDUCATION

by Alex Alaimo, AIA

The higher education system at large faces many problems in today's world. Architectural education in particular faces a mightier challenge, including competing with lucrative STEM majors. However, the issue central to the future of the profession is how architectural education prepares students for practice in an era when the idea of practice itself is being challenged. What we cultivate today undoubtedly becomes reality, so we must determine whether today's academic system is preparing students for a profession of tomorrow or of yesterday.

Part of the solution is bridging the divide between practice and academia. This was a knowledge gap that was traditionally filled in the field until the mid-20th century. Around that time, it morphed into what we see in the modern academic setting, one that is less about tactile building and more about theories and the abstract. It was further distanced from practice by a myriad of NAAB requirements that limited the freedom of the institution. Because of the stronghold of collateral institutions that have a stake in a changing profession, change to architectural education cannot occur without more freedom in the NAAB requirements. Frank Mruk and Harriet Harriss are two leaders in education with unique perspectives on the direction of architectural pedagogy that break the norm of the academic establishment and hope to unleash the potential of the architect.

Frank Mruk believes that the future of education is in leadership development and the application of strategic thinking. As a former associate dean at NYIT, he turned leadership development from the weakest NAAB area into a strength by implementing a program called Student Led Architecture Build (sLAB), which empowered and supported students with real projects. The key to its success was that it gave students the opportunity to lead at an early stage of their development. The sLAB projects came to fruition with design competitions, design build projects, and a grassroots student advocacy group. Frank sees this model as the key to developing future leaders in the industry that can break through the boundaries of the profession.

Frank asserts that the profession is going through a phase of deprofessionalization where the scope of the highly skilled professional is being replaced by less knowledgeable workers. This is happening in a number of ways, including technology, automated work, and scope lost to general contractors. Therefore, architects need to expand their horizon or take on new scopes of work to remain viable. He believes that leadership development exposes students to a level of strategic thinking that is key to claiming the new agency the profession needs. The scalability of this strategic thinking is critical, as it can be applied beyond design problems to economic, societal, and political ones as well.

Ultimately, Frank calls for architects to create new markets using the competency of strategic thinking. He thinks that architects are uniquely qualified for this type of abstraction because of the critical relationship between creativity and innovation. Other business programs that have adopted design thinking into their curriculum lack the creative talent that architecture inherently attracts. When architecture schools realize this, it will not only give them a competitive advantage over competing professional and business schools, but also enable them to capture the market of developing leaders now monopolized by the elite expensive institutions.

Harriet Harriss has an additional plethora of ideas on education and the profession that are carefully rooted in the history of architecture education. She is a professor at the Royal College of Art in London who founded her thinking on the premise that architectural education is under-theorized and therefore not fully understood. She believes that it went wrong when it turned from apprentice-based learning to institutionalized conceptualization. The latter produces formally interesting projects but often results in sterile, bland, and therefore unoriginal projects across the world that miss a larger opportunity for architecture. At the core of her writing is the concept of bridging academia and practice through diversity and a global perspective. She aspires to take the objectivity out of education and more closely relate ourselves and a collective responsibility.

In her first book, Harriet looked at the pedagogy of "live projects" or "design-build projects" as they are more commonly referred to in the US. She examined the fact that live projects are much more effective than the traditional paper studio. She attributes this to the fact that students face a number of multidimensional problems to solve. Design-build projects give students the opportunity to experience practicing, budgeting, working with a client, and timing. Live projects rely on failure-based learning instead of content-based learning, leading to a better understanding of risk and developing skills missing from the NAAB accreditation list but vital to becoming a practicing architect.

The critical thing about the power of live project, is that it gives students an opportunity for what she calls "proto-practice." The earlier students experience this practice with training wheels and the necessary failures that accompany it, the better suited they will be to go into real-world practice. This is important because her major critique of architectural education is that it is too exclusive. Data from a RIBA study in 2014 indicated that a fraction of students who enter architectural programs will graduate and become registered architects in the UK. Educators are essentially leaving out the vast majority who have participated. She challenges schools to consider the fact that the skills learned are transposable and to reimagine how the architect's qualification would bring out the latent power of architectural education. This will lead to more risk taking and a new diversity of practice.

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Her grand vision is a “Free Architecture School” that has even more disruptive potential. Her plan is to correct the greater misgivings of an institutionalized higher education system. She believes that, by delivering a more relevant and better education through the power of design-build, failure-based learning without the institutionalized bureaucracy, quality education can be made affordable. Essentially, the power of this renewed concept of practice-based architectural education is used to revolutionize higher education at large.

This heroic vision at the core of both Frank’s and Harriet’s theories on architectural education is the idea that new pathways need to be developed in the education system. These new pathways will lead to a more diverse architectural service economy with new markets and roles for the architect. If this is achieved, the full potential and value of architectural education can be unleashed. This freedom should be spurred by practitioners to provoke the education institution into challenging the norms. Academic institutions, as well as the AIA and AIAS, must then challenge the NAAB requirements to enable more freedom for alternative paths and programs to develop in schools to create the architects of tomorrow.

Fortunately, there is evidence of a grassroots movement in this direction. At the annual AIANY Dean’s Roundtable, there was a fairly wide indication that energy and demand were coming from the students toward providing these desired pathways. More design-build and leadership development programs are taking root across the nation. NAAB will have to recognize the impact and importance of these programs and evaluate them accordingly. To date, architecture schools have been excellent at producing critical thinking and rigor in the design process, but now it needs to embrace new paths to reform the relationship between academia and future practice. This transformation has already started and young alternative practices need to serve as role models for current students so the students of tomorrow can fully unleash the potential of the profession. ■

# THE EXPECTATIONS GAP

## AN INTERVIEW WITH BRANKO KOLAREVIC

by Phillip Anzalone, AIA

*Phillip Anzalone, AIA interviews Branko Kolarevic about the relationship between his administrative and academic roles and the related future of the architectural profession.*

**B**ranko Kolarevic holds the Chair in Integrated Design and co-directs the Laboratory for Integrative Design (LID) at the University of Calgary. Prior to his appointment at the University of Calgary, he was the Irving Distinguished Visiting Professor at Ball State University in Indiana. He has taught architecture at several universities in North America, most recently at the University of Pennsylvania, and in Asia, in Hong Kong. He has lectured worldwide on the use of digital technologies in design and production and has authored, edited, or co-edited several books, including the recently published "Manufacturing Material Effects: Rethinking Design and Making in Architecture" (with Kevin Klinger), "Performative Architecture: Beyond Instrumentality" (with Ali Malkawi), and "Architecture in the Digital Age: Design and Manufacturing." He is the past president of the Association for Computer Aided Design in Architecture (ACADIA) and is the recipient of the ACADIA 2007 Award for Innovative Research. He holds doctoral and master's degrees in design from Harvard University and a diploma engineer in architecture degree from the University of Belgrade in the former Yugoslavia.

**PA:** Branko, please tell us about your academic experience.

**BK:** I received my undergraduate degree in architecture in 1986 at the University of Belgrade, in what was then Yugoslavia. After working in one of the largest design, engineering, and construction firms in Yugoslavia, I came to the United States in 1988 for my post-professional education, receiving a master's and a doctoral degree at Harvard's Graduate School of Design. Computer-aided design was a new thing then, and I decided early on to specialize in this area after I started using AutoCAD in 1987. The firm I was working for back in Belgrade developed its own solid modeling and rendering program running on state-of-the-art graphic workstations. All of that was pretty amazing for me as a young professional.

While I got a taste of teaching back in Belgrade, it wasn't until my second year at Harvard GSD that I discovered my interest in academia. My academic career spans over two decades at several universities on three continents, in different cultures, and in both state and private institutions. I started teaching 26 years ago as a teaching fellow at Harvard GSD, working alongside the late Bill Mitchell, who was my mentor and role model. I taught then in different capacities at Northeastern University in Boston, Calpoly Pomona, University of Miami, University of Hong Kong, University of Pennsylvania, NCSU in Raleigh, and Ball State in Indiana before joining the University of Calgary in 2007, where I am now a professor and where I held a chair in integrated design until this past summer. I have taught both undergraduate- and graduate-level courses and design studios in architecture and have supervised master's and PhD students at several schools. I should add that I was recognized twice for teaching excellence early in my career, first at the University of Miami and then at the University of Hong Kong.

**PA:** Which administrative and leadership roles have you held?

**BK:** I held elected leadership positions as President of the Canadian Architectural Certification Board (CACB), which has a broader mandate than NAAB, and as President of the Association for Computer Aided Design in Architecture (ACADIA). I have also served a two-year term as an elected Secretary of the Canadian Council of University Schools of Architecture (CCUSA), which brings together the directors of eleven schools of architecture in Canada. At the University of Calgary, as an associate dean (academic) I had overall responsibility for the functioning of our professional master of architecture program; I served in that role for a three-year term, from 2010 to 2013.

Early in 2016, I was elected the future President of the Association of Collegiate Schools of Architecture (ACSA). I joined the ACSA Board of Directors as 2nd Vice-President on July 1, 2016. I will then serve as First Vice-President/President-Elect in 2017/2018 and as President in 2018/2019, and finally as Past President in 2019/2020. It's a four-year term of service and I look forward to working with the board members. It is interesting to note that it was only the second time in the history of ACSA since its founding in 1912 that a representative from a Canadian school of architecture was elected to lead the organization.

**PA:** What are your thoughts on the education of future architects?

**BK:** The current practice does now, and future practice will, require new knowledge and skills. How we prepare graduates for success in our evolving and expanding discipline is critical to our collective futures. What to teach and what needs to be learned – and where – is a constant subject of conversations in both academia and the profession.

It is worth pointing out that the education of architects starts in schools, but it doesn't end there. It continues in professional offices, where young graduates acquire the necessary experience and eventually become licensed architects. And the learning does not stop there – it is a lifetime process as continuing education.

In 2014, I had the honor of delivering opening remarks at the Education of Future Architects conference organized by the Canadian Architectural Certification Board (CACB), the Canadian equivalent of NAAB. (I was President of CACB at the time.) That event brought together leaders from academia and practice to discuss what should be learned, when, and where, recognizing that the roles of architects and the face of the profession are changing.

At CACB, we recognized that it was time to take a fresh look at how the delivery of architectural education at schools and the expectations and requirements of post-graduate internship could be better related

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and how collaboration between educators and those in professional practice could support a shared outcome. Seeing the education of architects as a partnership between academic and professional institutions, the intent was to create a forum for general discussion of the architectural education and practice and the challenges they may face in the future.

A similar agenda, with a focus on the future, is often present at the annual gatherings of ACSA, AIA, AIAS, NAAB, and NCARB. The collateral organizations, however, rarely meet under one roof to look at the educational process in its entirety, holistically and collectively. NAAB's periodic Accreditation Review Conference (ARC) does bring together representatives of the collateral organizations but with a singular focus on accreditation and possible changes to it. After attending the 2013 ARC held in Utah, I believe the conversation needs to be broadened to cover the entire educational journey from what is learned in schools and then in internship, followed by continuing education after licensure. This should be done initially in a single forum that would bring together all of the collateral organizations; ACSA should play a leading role in that conversation – after all, it is the schools that first teach future architects how to think and learn.

**PA: You have a considerable voice in the area of computational design and manufacturing. How do you see education service students who want to pursue non-traditional architectural fields such as fabricators or builders?**

**BK:** Those who have computational skills could consider working as design consultants. I did some of that work early in my career. Young professionals who started CASE offer a good example of how that could unfold. Engaging in fabrication and then coming up with some interesting business models, as Drura Parrish did, is another possibility. Design-build is also a promising trajectory. I have a colleague in Calgary who is a licensed architect, a licensed contractor, and a licensed real-estate broker, offering a broad range of services to potential clients. His name is John Brown and he also teaches the professional practice courses in our architecture program in Calgary, where he shares his atypical professional journey with our students, encouraging them to be open to new ways of practicing.

**PA: Do you feel the traditional field of architecture needs to change to incorporate these new trajectories in the practice?**

**BK:** I think that architects are discovering these new trajectories on their own. Our responsibility in the schools is to encourage our graduates to enter the profession, but we can also point out that there are many different ways in which architecture could be practiced.

**PA: As future president of the ACSA, what are your goals for the organization and how can it work with the AIA?**

**BK:** Although it may seem obvious to us in academia that the schools can't teach everything that graduates need to know to practice, many of our colleagues in the profession don't share such a view. To address this "expectations gap," we at ACSA intend to work closely with the collateral organizations representing the profession to determine what is best learned in that context so the schools could focus on what they excel at.

As a member of the leadership team at ACSA, I intend to work with the board members in exploring how best to engage our practicing colleagues and the collateral organizations in such a conversation. For example, together with our colleagues at AIA, AIAS, NAAB, and NCARB, we have established a five-collateral Education Coordinating Council (ECC) to explore and make recommendations to improve and coordinate the continuum of architectural education from K-12 through continuing education. We see the ECC in the long run as a forum for ACSA to help lead discussion and initiatives around education's fundamental role for a better future for the profession.

I was recently appointed to NCARB's Experience Advisory Committee as the ACSA representative, which is part of NCARB's efforts to better understand the role that experience plays in the education of future professionals. So, the entire educational journey is on the minds of many in our community.

Another significant initiative that was launched recently is the studyarchitecture.com website, which is aimed at young people who are interested in becoming architects. As advocacy groups, both AIA and ACSA need to do a better job of promoting architecture within the society – and of enticing young people to pursue architecture as a professional calling. ■

# YOUNG ARCHITECT AWARD SPOTLIGHT

## CREATING A CONNECTED CURRICULUM

by Erin Carraher, AIA

Architects go through many formal stages of education throughout their career – graduating from a professional degree program, completing the AXP (internship) program, passing the Architecture Registration Exams, and fulfilling annual continuing education requirements post-licensure – in addition to the informal learning that happens through mentoring and on-the-job experience. However, architects are rarely if ever taught how to teach. While architecture professors are extremely capable at teaching students the skills and abilities needed to become creative practitioners, they often do so without critically examining the underlying pedagogical approaches and project types that are more or less effective. This is in no way a critique of contemporary educators, but a call to action to examine the structures, strengths, and limitations of the curricula they currently deliver.

Contemporary architectural education is rooted in centuries-old traditions that date back to the transition from a master/apprentice model to the first formalized degree programs. Though influenced by many complex forces over time<sup>1</sup>, most programs in the US can trace their structure to the Bauhaus model thanks to the influx of its exiled faculty to the country during WWII. Almost a hundred years later, despite the undeniable social, environmental, technological, and economic changes that have taken and will continue to take place at an increasingly rapid rate, very little has fundamentally changed. The Bauhaus was founded as a radical response to Beaux Arts traditions and forces of modernity; so too do we now need new models of education geared toward our post-Postmodern times.

Both practice and education have identified many issues that need to be addressed, such as technological advances, race and gender inequality, engagement with emerging countries, and design for the social good, and many thoughtful faculty members across the country are working to curate unique educational experiences for their students in response to these forces. While I think all of these issues are important, I'd like to focus on a topic that I feel is one of the most neglected skillsets that must be addressed if we wish to regain relevance as a profession – collaboration.

As an architect and a full-time faculty member at the University of Utah's School of Architecture, where I coordinate the freshman through junior studios, I have been studying the topic of collaboration in education and practice for the past several years. Currently, my department is undertaking an effort (with rare full faculty buy-in) to radically reconsider our entire curriculum. Based on the college and school's mission statements<sup>2</sup>, the new curriculum will be built around fundamental ethics and values rather than around a set of traditional disciplinary silos to foster a more integrative approach to learning. This curricular design problem seeks to create a

framework for innovative pedagogies, ranging from design-build projects to integrated professional experience and internships to community-engaged learning experiences. Though this work is exciting in its promise once fully implemented in 2018-19, efforts are currently underway to address the college's aims immediately.

My work focuses on beginning design education and collaboration and leadership in architectural practice, particularly bridging the traditional 'teaching-research-service' categories of academia by developing design and research projects that engage students and practitioners in areas of community engagement, collaboration, and leadership. Most would agree that the "starchitect" phenomenon has passed and that successful practices and projects – even those helmed by a charismatic and talented person – are the result of partnerships across multiple disciplines. Academia, however, still primarily educates students in the "lone genius" model rather than directly addressing the skills needed to develop creative collaborators. We are working to change that approach in a meaningful way.

Along with many talented and thoughtful colleagues, I have been working to create an academic model for our first-year undergraduates that fosters skill development and experience in collaboration. Studio projects are curated that require students to work together on real-world projects with community partners, resulting in built work. The projects, while important, are considered only one aspect of a holistic experience supporting the underlying efforts. Students also take part in a teambuilding camping trip, study collaboration theory and principles through exercises and case studies of successful project teams, and develop their "soft skills" – such as empathy and an awareness of privilege and bias – that are necessary to enable a reciprocal, co-creative design process rather than a superficial engagement with these topics.

*Top Left: Students in the Fall 2016 M1 studios gather at Monument Hill in Green River, Utah during a camping trip to watch the sunset.*

*Top Right: Epicenter staff lead an urban design charrette with the M1 students to begin developing proposals for the Rural and Proud Initiative.*

*Middle Right: Three completed cabins for the GSU's Trefoil Ranch camp combine vernacular typologies with solid wood panels made of beetle-killed pine. Image courtesy Nicholas Steffens.*

*Bottom Right: Cabin interior featuring communal table designed and fabricated by graduate students in a course on digital fabrication from the University of Utah. Image courtesy Nicholas Steffens.*

### References

1. For a much more nuanced history of the complex forces that shaped architectural education in the United States, see *Architecture School: Three Centuries of Educating Architects in North America* (ACSA: 2012) edited by Joan Ockman.

2. See <http://www.cap.utah.edu/visiongoals/> and <http://soa.cap.utah.edu/vision-and-mission/>



Examples of such projects include:

- **Project: Architecture:** a partnership between the Girl Scouts of Utah (GSU) and the College of Architecture + Planning meant to raise awareness of career opportunities for women in the built environment. The first project to result from the partnership was a two-year outreach and education program that paralleled and informed the design and construction of three cabins for the GSU's Trefoil Ranch camp. The project, co-directed and designed with Associate Professor Jörg Rügemer, has won local and national awards for both outreach and design.
- **Library Sculpture Garden:** a partnership between the Fine Arts and Architecture Library and the first-year undergraduate (M1) studios to develop designs for a proposed sustainable sculpture garden on an unused terrace adjacent to the fine arts and architecture collection. In part because of the students' involvement and design ideas, the project director of Fine Arts and Architecture librarian Luke Leither's proposal for the project received full funding for an expanded scope of work. After the initial studio project phase, project funding and university teaching grants supported a group of multi-disciplinary student interns to further develop the proposals to meet the additional parameters.
- **Rural and Proud Initiative:** the M1 studios were awarded a competitive contract as part of a National Endowment for the Arts Our Town grant to design and construct a series of creative placemaking installations in downtown Green River, Utah (population 953). In partnership with longtime collaborators from Epicenter, a rural community design center located in Green River, the students worked with community members to envision and realize installations that would activate abandoned spaces along Main Street and Broadway in an effort to capitalize on community initiatives and interest as well as catalyze economic development.



As a profession, we are only going to be able to remain and become even more relevant in contemporary society if academics and practitioners begin to clearly articulate the role of each, if faculty are willing to let go of the "teach the way you were taught" approach, and if students are willing to engage with education as a process rather than an on-demand skill delivery service. Despite the challenges we seemingly face, I truly believe that architecture education is uniquely suited not only to cultivate the type of creative, collaborative, and syncretic thinkers needed to address the complex issues facing current and future generations, but also to self-diagnose and reimagine its own form and function. ■

# THE POWER OF LIFELONG LEARNING

BY ANN THOMPSON



COD reception at the home of the Swiss Ambassador to Cuba, design by Richard Neutra. Image courtesy of Ann Thompson.

*Information. Knowledge. Wisdom. Converting information into knowledge and knowledge into wisdom is a process. One way to stimulate that process is to immerse oneself in an environment where the key ingredients are shared intensively. Enter the AIA's Committee On Design (COD), where the value of good design is taken as gospel and a commitment to visiting architecture and hearing from the designers is the priority.*

*Attendees at COD's conferences have myriad differences in their backgrounds and practices, but they all are passionate about lifelong learning. The following are comments from some active COD participants on the relationship between practicing architecture and lifelong learning.*



#### **MARK SIMON, FAIA, CENTERBOOK ARCHITECTS**

My favorite professor at the Yale School of Architecture, Peter Millard, told me that architecture was something learned slowly and that, in fact, it took a lifetime to approach mastering it. He said that there were so many different elements and skills to absorb that it took years of practice to harmonize them into coherent buildings.

I got involved with the AIA's Committee on Design relatively early in my career and I have been grateful ever since. It helped me immensely in my lifelong quest to make cohesive places. First, I met many national design leaders, heard about their practices, and learned how they were run to make great buildings. Then I saw wonderful architecture with these leaders. During this time, I gained their insights about real places in real time, noted how things were built and made, asked how places functioned, and saw how parts become a whole. We often found ourselves listening to talks together and discussing topics after; an education in itself.

#### **MIKE MENSE, FAIA**

As an architect, I want to continue to learn about the effects of geometries, materials, textures, and colors. Photographs and text can only approximate the characteristics of architecture. Often, a carefully composed photograph is actually misleading. Being there is the real test of what will remain after the photographs, criticism, and theory are forgotten. COD experiences are enriched because one is traveling with friends and colleagues who share an interest in design and are thus enthusiastic about discussing the places we visit. Also, we are often accompanied by the original designers and hear about their intentions. I find that they show me new ways to read architecture that I can then use on other projects.

#### **STEPHEN EHRLICH, FAIA, EHRLICH YANAI RHEE CHANEY ARCHITECTS**

In architecture school, one of my professors advised me to "open my eyes and plagiarize." Years after graduating, I discovered the full meaning of what he meant. Living and working for six years in North and West Africa, I learned from indigenous builders who exist in sustainable harmony with the land, usually with minimal resources. Their building practices and forms reflect the particularities of culture and environment in a meaningful way. This experience profoundly shaped my approach to my

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own architectural practice and also made me an avid lifelong traveler. I believe that open-minded observers find wisdom and inspiration in the built environment, often in unexpected places.

#### **RALPH JOHNSON, FAIA, PERKINS + WILL**

Even now that I have been in practice for more than 40 years and am fortunate to be leading the design of challenging projects, learning continues for me. Learning happens through collaboration with others, including listening to younger architects' ideas and working with creative consultants such as engineers and landscape architects. Traveling is another passion of mine, and it has enriched my work throughout the years. Traveling with colleagues is especially rewarding, such as the conferences sponsored by the AIA Committee on Design. Experiencing other cultures and settings and seeing how other architects respond to unique contexts help broaden my horizons. The main thing to remember is always to challenge oneself.

#### **MARLENE IMIRZIAN, FAIA, IMIRZIAN ARCHITECTS**

Knowledge acquired by studying systems, products, assemblies, and research is one of the most enduring and important aspects of architectural practice. The Committee on Design provides unique in-depth analysis of projects through conferences at which buildings and sites are visited and evaluated to provide learning opportunities. Project design teams provide on-site reviews of the project, often with detailed lectures that explain the systems and tradeoffs made in design. Recently, a conference in Berlin brought together professionals from Germany to discuss city planning, the regeneration of neglected portions of the city, and innovative approaches to multi-family housing.

#### **JIM LORD, AIA, KGA ARCHITECTURE**

The practice of architecture is a lifelong scholarship. There is a continual need for an ever-expanding basis of facts or ideas acquired by study, investigation, observation, and experience. And unlike many other professions, much of an architect's learning occurs outside the formal methods of classrooms and textbooks. COD gathers in locations around the world to experience architecture up close, in the actual environment, and in the critical time frame of today. The COD's studies are further expanded through dialogues with the creators of the buildings both today and in the past. In today's world of the two-second sound bite, the COD strives for total immersion. Moreover, enrichment comes from the COD group itself.

#### **REIULF RAMSTAD, HFAIA**

Social values, technology, and the state of our climate are a process, rather than a fact, as society today is in constant change. Most professions have to actively adapt to or reject the development regarding some of these themes. Apart from that, architecture is a profession that is engaged in both the physical and psychological needs of humans. As architects, we can choose to adapt to the trends of society or we can approach society as an external factor. Either one opens for us the possibilities of questions and threats. Architects thereby have to relate to and understand the development of social, technological, and climate changes to either adapt to or reject them. In that way, our profession is part of a constant learning process.

#### **GEORGE MILLER, FAIA, PEI, COBB, FREED & PARTNERS**

New ideas, new observations, new knowledge, and new learning opportunities present themselves to us every day. In every walk of life, there is more to learn, more to absorb, and more to share. To me, the importance of lifelong learning cannot be understated. For me, the premise of lifelong learning offers many rewards. These rewards are the opportunity to explore new materials and construction techniques and new advances in the profession. The knowledge may be related to new ways of using known technology, or it might be something completely new. Today, my interests are piqued by new composite materials, 3D rapid prototyping, elevators that can move horizontally, curved escalators, and new fabrication and installation techniques. Continuing education and lifelong learning are critical to success as a professional. ■



Peter Bohlin, FAIA speaks to COD attendees at a house designed by BCJ in Rhinecliff, New York. Image courtesy of Ann Thompson.



Siv Helene Stangeland of Norway's Helen & Hard speaking to COD attendees about housing they designed outside Stavanger, Norway. Image courtesy of Ann Thompson.



de Island.



The housing by Helen & Hard. Image courtesy of Ann Thompson.

# TERREFORM ONE'S CRICKET SHELTER AND FARM

RESEARCH THAT INVOLVED EATING BUGS  
TO IMPROVE THE ARCHITECTURE OF  
SURVIVAL

INTERVIEW WITH MITCHELL JOACHIM  
BY PHILLIP ANZALONE, AIA

Project: Cricket Shelter: Modular Edible Insect Farm

Office: Terreform ONE

Date: 2016

Size: 580 sq. ft.

Principal Investigator: Mitchell Joachim, Ph.D.

Research Team: Maria Aiolova, Melanie Fessel, Felipe Molina, Matthew Tarpley, Jiachen Xu, Lissette Olivares, Cheto Castellano, Shandor Hassan, Christian Hamrick, Ivan Fuentealba, Sung Moon, Kamila Varela, Yucel Guven, Chloe Byrne, Miguel Lantigua-Inoa, Alex Colard.

Sponsor: Art Works for Change.

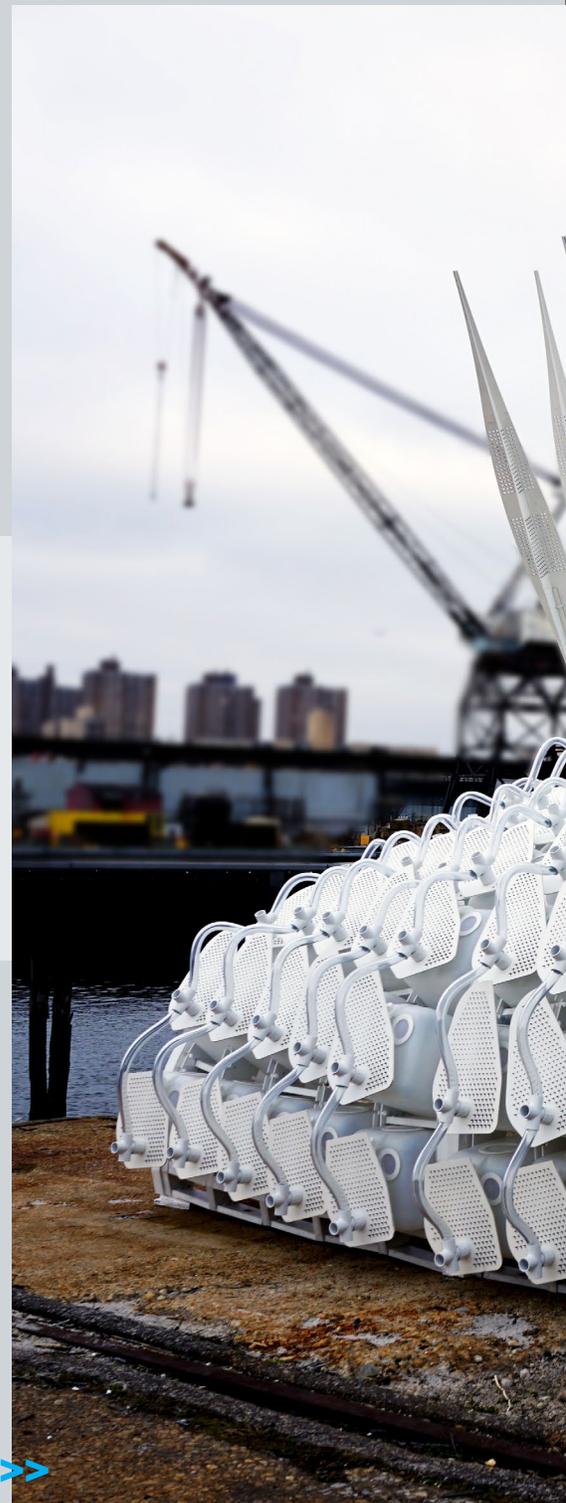
Site: Dry Dock 4, Brooklyn Navy Yard, NY

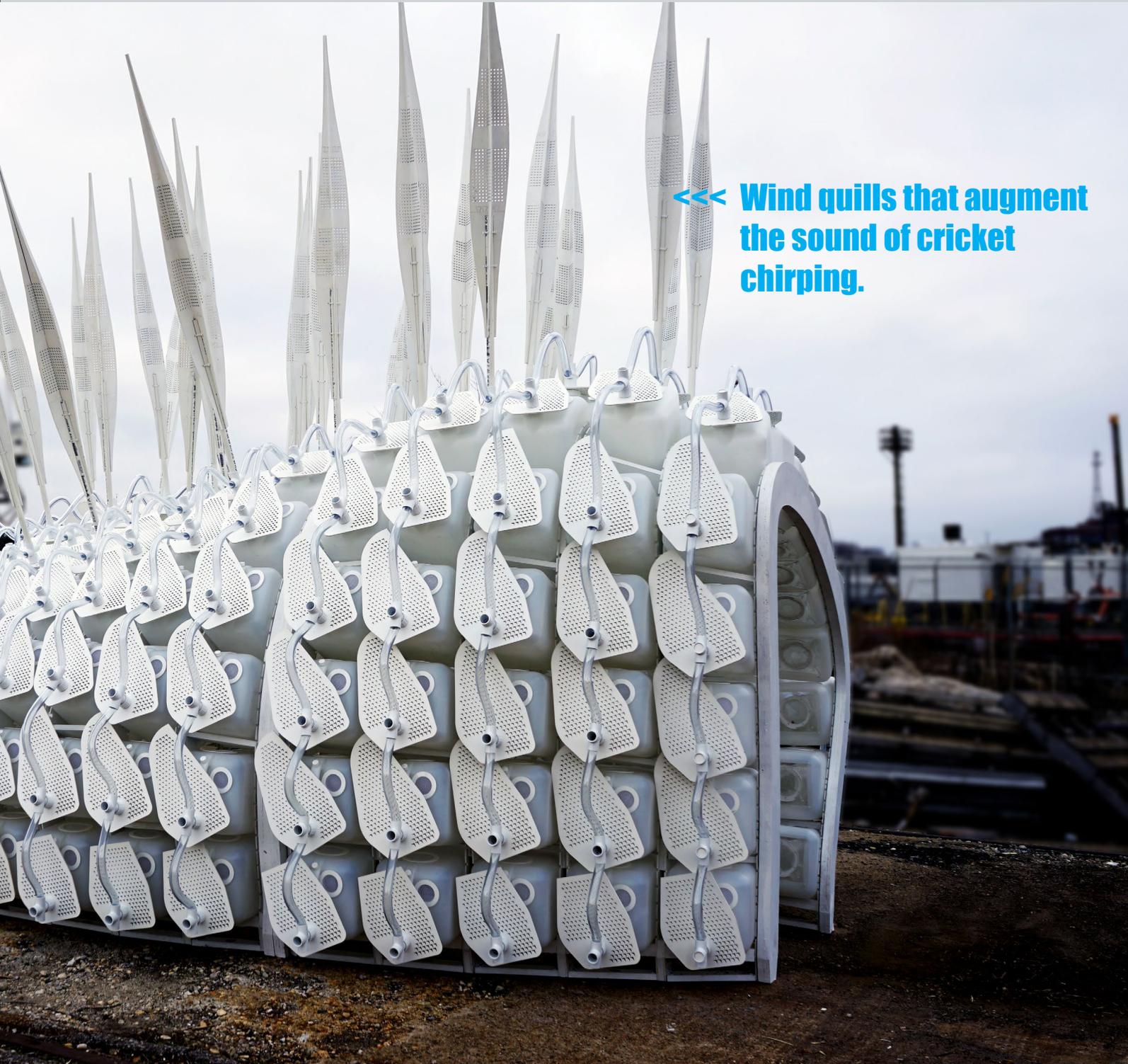
## PA: WHAT DID YOU INITIALLY SET OUT TO DESIGN?

**MJ:** We investigated emergency shelters on a commission from the nonprofit Artworks for Change. Most existing survival architecture structural topologies are primarily shaped to immediately deploy and provide temporary security from the elements. But our Cricket Shelter and Farm provides an additional advantage: we thought we could combine shelter with a continual source of food. The modular structure contains 224 modified 22-litre chambers for producing edible crickets – the insects are a progressively stylish source of dietary protein. We created a multilayer structure based on their life cycle to be integrated into a simultaneous shelter for people in a crisis zone. Our project combined two programmatic building types: deployable shelter and vertical subsistence agriculture.

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**Cricket Shelter + Farm has over 300 >>>  
bio-units that produce 50,000 adult  
crickets every six weeks.**





◀◀ **Wind quills that augment the sound of cricket chirping.**

**PA: TELL ME ABOUT THE ARCHITECTURE OF “SEX PODS”...**

**MJ:** Built directly into the Cricket Shelter wall system are "sex pods" for breeding and seven plastic mini-birthing chambers, where female crickets lay their eggs sometime after fertilization. After hatching, the crickets move through calibrated transparent tubes into the mesh-lined living bio-habitats, where they mature until they are ready for harvesting. The design uses high-resolution 3D-printed Voronoi pattern geometries to segment the pod into cricket bedchambers. It's the only time I've found a use for Voronoi generators, as they almost always seemed largely decorative and non-functional. In this case, the crickets loved the exceedingly variable apertures and partitioned quarters for their mating ritual.

**PA: HOW DOES YOUR PRACTICE OPERATE?**

**MJ:** Terreform ONE specializes in environmentally salient projects including city planning, smart transportation systems, synthetic biology, waste and water management, and, of course, living tree homes. It is a non-profit architecture group that promotes smart design in a myriad of universal applications and scales. Through our creative projects and outreach efforts, we aim to illuminate the ecological possibilities of New York City and stimulate solutions in areas like it around the world. We operate as a unique laboratory of specialists with diverse disciplinary backgrounds that explore and advance the larger framework of socio-ecological design. By default, we do not work for private clients or affluent developers. We are, in a sense, our own clients – a kind of architect's architect. This ensures that our work is relatively pure and unbounded by the arbitrary constraints and whims of others.

**PA: DID YOU WORK WITH OTHERS ON THIS PROJECT, AND IF SO WHO?**

**MJ:** Yes, as a team, Terreform ONE worked directly with all kinds of designers, biologists, fabricators, machinists, entomologists, specialist urban farmers, sociologists, and local chefs. All their individual inputs and critical insights helped formulate the final prototype.

**PA: WHAT WAS THE MISSION OF TERREFORM ONE FOR THIS PROJECT?**

**MJ:** To start, the scheme has a multipronged focus on international hunger solutions, sustainable food distribution methods, and modular compact architecture. A project of this type is built for areas in calamitous need in both the present and future. We understand that our role in the complex system of global cooperation is to seek holistic solutions that integrate interdisciplinary knowledge and citizen participation in shelter and subsistence farming. It is essential to understand the physical, social, and cultural substrate of developing territories in which food and refuge are simultaneously critical.

**PA: WHAT WERE YOUR BENCHMARKS AND MOST DIFFICULT CHALLENGES WITH THIS SPECIFIC PROJECT?**

**MJ:** The United Nations has mandated insect-sourced protein as a major component in solving global food distribution problems. We needed to harvest about 50,000 crickets within a six-week timeframe. Planning the shelter had its wicked challenges. If the insects had too many friends near them, the crickets would go





into a homicidal frenzy and swarm. We mistakenly killed thousands of them to understand their optimal free-range habitat. However, the completed structure is far more humane than traditional sources of edible insect production - habitually large industrialized farmhouses in developing economies such as Thailand.

**PA: WHAT'S THE BIG ADVANTAGE TO MAKING A BUG FARM?**

**MJ:** Raising cattle, pigs, and chicken for meat products requires immense amounts of fresh water. Harvesting insects for food typically takes 300 times less water for the same amount of protein. Our project aims to maximize access to nutrient resources and to deal with and support local communities in anticipation of post-disaster scenarios. This also targets societal upgrading strategies in both developed and developing countries, as the temporary shelter easily converts to a permanent farming system/eatery after the crisis has passed.

**PA: TELL ME MORE ABOUT THE STRUCTURE AND THE FABRICATION.**

**MJ:** Structurally, the shelter can be minimized into easily manufactured and replicable elements, such as a simple CNC plywood archway with linked off-the-shelf plastic containers as infill surface. The current version of the structure is more customized to account for solar orientation, airflow, and varied spatial programs internally. A computational model was used to parametrically align all the individual containers to match the archway splines. Each pre-ordered container was modified to add ventilation screens, flexible insect sacks, locally controlled louvers, and permeable feeder ports with rotating locking mechanisms.

**PA: WHAT'S WITH THE SPIKEY COMPONENTS ON TOP?**

**MJ:** Those are elongated ventilating ports turned into simple instruments, called wind quills. Here, the wind quill ventilation component magnifies the sound of cricket chirping in columns of vibrating air. You can hear the shelter produce amplified chirps when the male crickets are happy during stridulation.

**PA: WHAT'S NEXT FOR YOU AND THE TEAM?**

**MJ:** There has been interest from big cricket farms. After harvesting, the crickets are ground up into powder – essentially flour. Terreform ONE has collaborated with local food entrepreneurs in Brooklyn, and is studying ways to spin the design into its own company. This is a colossal trend in fine cuisine called: sustainable entomophagy. I'm considering making cricket bagels full time in Brooklyn. ■

**<<< Sex Pod units are designed to distribute the insect gene pool and encourage mating.**

IMAGES  
All images courtesy of Mitchell Joachim

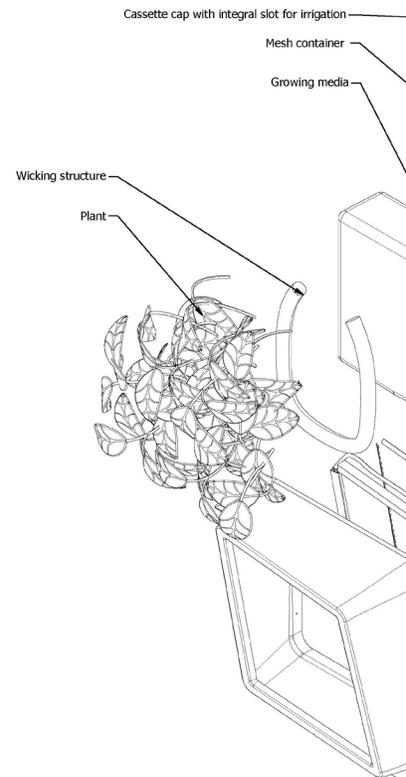
# RESEARCH IN ACADEMIA & PRACTICE

INTERVIEW WITH

ANNA DYSON CASE

JOSH DRAPER CASE

BY PHILLIP ANZALONE, AIA NYS REGIONAL DIRECTOR OF THE YAF



Exploded Cassette Assembly  
Scale 2"=1'-0"

Above: The second AMPS prototype scaled up the system to test efficiencies. The system was designed for manufacturing emphasizing modularity and serviceability. Image courtesy of CASE.

Phillip Anzalone AIA spoke with Anna Dyson and Josh Draper of CASE about the relationship of research in academia and practice.

**PA: Explain how CASE is poised to be a model for a new academic-industrial partnership.**

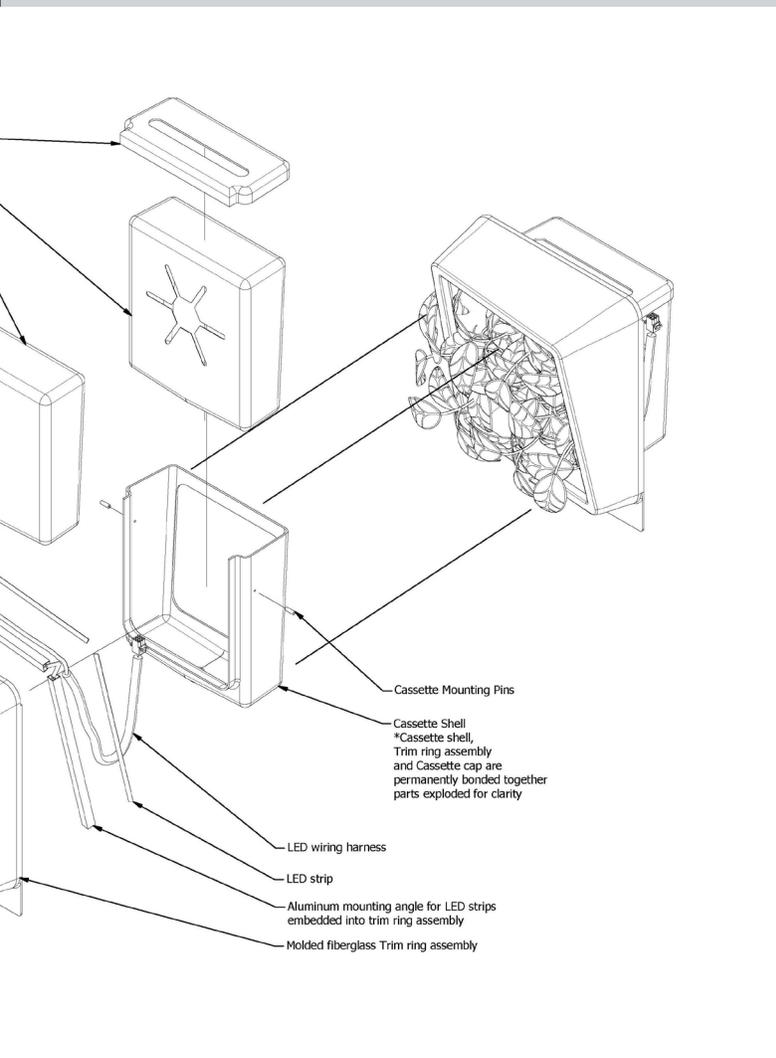
**AD/JD:** A new academic-industrial alliance is required to accelerate a more aggressively experimental process that leads to development of new systems that produce a paradigm shift in the way that our future cities metabolize energy, water, and resources. The Center for Architecture Science and Ecology (CASE) is addressing the need for accelerated innovation of Built Ecologies through the development of next-generation building systems. A multi-institutional and professional research collaboration co-hosted by Rensselaer Polytechnic Institute (RPI) and Skidmore, Owings & Merrill (SOM), CASE is pushing the boundaries of environmental performance in urban building systems on a global scale, through actual building projects as research test beds. CASE unites advanced architectural and engineering practices with scientific research through a unique and intensive collaboration between multiple institutions, manufacturers, and professional offices within the building industry. Rensselaer's School of Architecture frames its advanced degree program in Built Ecologies focused on fostering the next generation of researchers, who are able to provide performance-driven building technologies in support of clean, self-sustaining built environments around CASE.

**PA: Tell us about one of your current clean-air projects.**

**AD/JD:** Cities of the future will perform as "constructed ecologies" with systems that harness, amplify, and support the natural environment. Active phytoremediation is a holistic approach to the development of aesthetically pleasing, paradigm-shifting technologies that dramatically improve the health and wellbeing of occupants while reducing the energy footprint of buildings' mechanical systems. The Active Modular Phytoremediation System (AMPS) is a bio-mechanical hybrid system that produces "fresh air" from within buildings. Active plant-based air remediation strategies amplify the air cleaning capacity of plants by up to 200 times by mechanically moving air through the root environments of hydroponic plant systems. A potential of up to 60% reduction of fresh air requirements and associated energy expenditures from HVAC systems has been demonstrated by precedent systems. The AMPS improves upon its predecessors through a design that minimizes materials and maintenance while maximizing exposure to root rhizomes and flexibility of installation.

Phytoremediation systems like AMPS may have significant implications for our increasingly indoor lives. The average time spent indoors has risen to 80-90%. Pollution levels in some buildings fitted with very sophisticated HVAC systems are up to 100 times higher than outdoors. Productivity and well-being among occupants are affected by Indoor Air Quality (IAQ). Indoor air pollution poses widespread acute and chronic health risks.

**CONTINUED >**



**PA: What is the mission of CASE and how does it operate?**

**AD/JD:** Buildings account for over a third of the total energy consumption in the United States, and nearly 40% of U.S. carbon footprint. As new construction projects increase at astounding rates to keep up with global population and economic growth trends, it becomes urgent to accelerate the pace of architectural innovation, and to press the implementation of sustainable built ecologies and energy technology. At CASE we understand that progress is accomplished not solely within any traditional discipline of architecture, engineering, or environmental science, but rather requires interdisciplinary team to provide collaborative solutions that meet social, environmental, and technical needs head on. By providing a setting that supports the immediate need for innovation, CASE is able to incorporate next-generation architectural technologies into new and retrofit building projects. AMPS is among CASE's most advanced systems, having successfully made the leap from lab to full scale test bed in a new facility, the Public Safety Answering Center II (PSAC II), in the South Bronx. The journey of AMPS development captures CASE's mission and methods.

**PA: Can you explain the steps involved in detail?**

**01\_Lab Research**

Beginning in the lab, AMPS modules were placed in a two compartment prototype testing chamber to measure phytoremediation of different plant species and growing media. Phytoremediation is the use of plants and plant processes to extract, contain, immobilize or degrade contaminants from soil, water and air. CASE students tested the ability of different plant species to remove common indoor pollutants such as formaldehyde, a Volatile Organic Compound (VOC). VOCs are the largest and most important class of contaminants in the indoor environment originating from wood-based products, wall coverings, rubber, paint adhesives and electronic equipment. Experiments showed that living plants in the AMPS cassette play a significant role in removing formaldehyde, possibly both by digestion via microorganisms in the root rhizosphere and photosynthesis.

**02\_Parametric Design**

Parallel to lab experiments, a parametric design process with minimal surfaces investigated a host of interrelated system criteria at multiple scales: At the module and system scales, minimal surfaces offered many advantages: symmetrical parts for maximum fabrication cost efficiency, minimum material to area ratio and maximum weight to strength ratio; bi-continuous space partitioning for enhanced airflow capacity and highly stable and dense packing. At the architectural scale, AMPS was evaluated as volumes, partitions and complex habitable spaces.

A rigorous parametric design process investigated architectural morphologies of AMPS as volumes, partitions and complex habitable spaces.

**03\_Prototype**

Prototyping is an essential step in all CASE research, providing the critical feedback of material and systems performance. An AMPS panel was fabricated with integrated planting cassettes, growing medium, LED lighting, and drip irrigation. The prototype was used to test air flow, lighting and irrigation systems, gauge plant health and

performance and develop maintenance protocols. This prototype was completely fabricated at CASE and the School of architecture and currently sits in SOM.

**04\_Prototype - Design for Manufacturing**

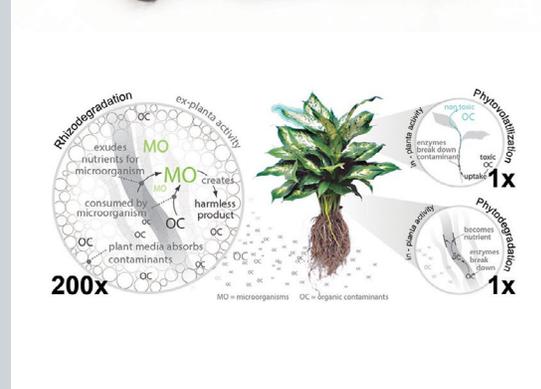
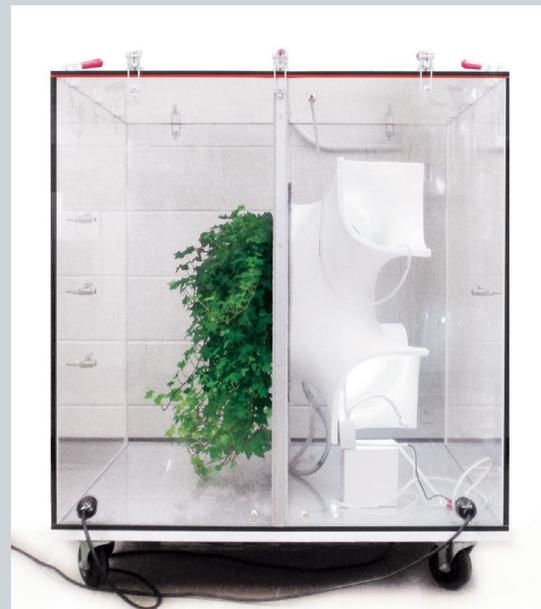
The second AMPS prototype scaled up the system to test efficiencies. Designed for manufacturing and emphasizing modularity and serviceability, the two AMPS walls consisting of 30 plants modules are installed at the Center for Biotechnology and Interdisciplinary Studies (CBIS) at RPI.

CASE is currently working with a diverse group of industrial and academic partners testing the wall's effectiveness with CO2 remediation and its cognitive effects.

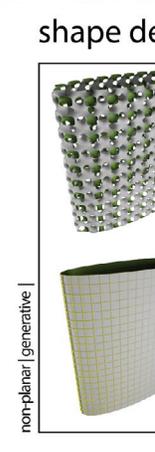
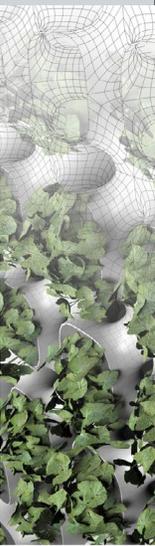
**05\_PSAC II - Building Integrated Test Bed**

The AMPS prototype for CBIS formed the basis for a refined, manufactured system licensed and produced by Fresh Air Building System (FABS), a company that emerged from CASE.

*AMPS modules are placed in a two compartment prototype testing chamber to measure the air-cleaning power of different plant species and the overall effectiveness of the system. Based on NASA hydroponics research, AMPS can boost the air purifying properties of plants of common plants by two hundred times. Image courtesy of CASE.*



*The initial AMPS design investigated a non-planar generative shape to enhance air flow through the partitions and complex habitable spaces.*



In 2016, FABS installed and maintains a 288 plant module AMPS wall at the Public Safety Answering Center (PSAC II) in the South Bronx. The wall is directly connected to the building's HVAC system and delivers air to a classroom used to train emergency responders. An identical classroom, without AMPS-enhanced air, is next door. This unique arrangement embeds experimental controls in the architecture and lays the groundwork for a broad range of study. CASE students are essential to the design, execution and study of the Center's building integrated test beds. Test beds like PSAC II provide a unique opportunity for multi-scalar in situ experiments. Epidemiological studies are currently being planned at PSAC II to assess the green wall's effect on air quality, health and executive function.

**PA: So what is next for CASE?**

**AD/JD:** Architectural systems like AMPS require a broad range of expertise and interdisciplinary collaboration. At the heart of that collaboration is the gathering, analysis and sharing of data and metadata to evaluate and iterate. Working with the Gates foundation,

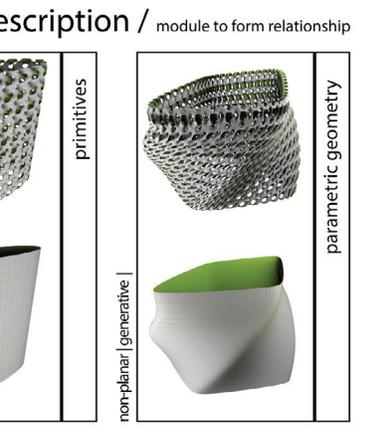
CASE is developing "Data Journey" a visualization platform for health data analytics with a global audience of researchers. One day, Data Journey and its backend, Human Aware Data Acquisition (HADATAC), may evolve into Building Managements Systems (BMS) of the future.

As our efforts at real time data acquisition from spatialized sensor networks and advanced simulation become realized, all CASE systems, including AMPS, will talk to each other through HADATAC and other tools, enabling a holistic, tunable exchange of energy and material. In turn, a diverse range of owners, architects, researchers and scientists will gain new insight and agency through the monitoring, analysis and collaboration features of Data Journey. These efforts all work towards CASE's overarching goal of healthy, affordable and appropriate architecture made with clean materials, providing clean air, water and energy. ■

*signs leveraged the properties of minimal surfaces through the root rhizosphere, produce high strength dense packing. A rigorous parametric design pro- architectural morphologies of AMPS as volumes, ex habitable spaces. Image courtesy of CASE.*

*The first building scale standalone AMPS unit tested airflow, lighting and irrigation systems. This prototype was completely fabricated at CASE and the School of architecture and currently sits in SOM. Image courtesy of CASE.*

*A CASE student works on the AMPS wall at PSAC II, an emergency call center for the city of New York. AMPS is connected to the building's HVAC system delivering fresh air from within. Images Courtesy of CASE / SOM / © dbox.*



# EXECUTIVE DIRECTOR SPOTLIGHT

## INTERVIEW WITH JOEL POMINVILLE, ASSOC. AIA

by AJ Sustaita, AIA

**J**oel Pomerville, Assoc. AIA is an Emerging Professional leading through design and advocacy. Pomerville places community and people at the core of his work. As a product of his unique professional development, Joel has developed a sensitivity to the importance of design in communities. In 2016, Joel was selected as the Executive Director for the New Orleans chapter of the AIA.

**YOU ARE UNIQUE IN THAT YOU'RE AN EXECUTIVE DIRECTOR OF A COMPONENT CHAPTER WHILE ALSO BEING CLASSIFIED AS AN EMERGING PROFESSIONAL. PLEASE GIVE US SOME BACKGROUND ON YOUR EDUCATION AND CAREER PATH UP TO THIS POINT.**

I received my Bachelor of Arts in Architecture and Minor in Business Administration from Clemson University. To be honest, I had no idea what architecture was at all and was much more sure of my decision to minor in business than major in architecture. Balancing design and business in school turned out to be quite the challenge, but really worth it, especially now. While I was in school, I was also very involved in the American Institute of Architecture Students (AIAS) at the local level and served as the National South Quadrant Director. When I graduated, I moved to Raleigh with a friend to pursue a startup. After arriving in Raleigh I found several interesting ways to occupy my time which included milking cows, working part-time as a designer for Community Food Lab, slinging lattes at a local coffee shop and getting involved with the local chapter of the AIA. Ultimately, the start-up that I relocated to pursue... never actually did start up. So, I made the decision to move to Vermont as a designer for a small firm I had previously worked for.

That fall, I was elected as the National Vice President of the AIAS, a full-time job based in Washington, D.C. My year in D.C. with the AIAS was incredibly instrumental to my professional growth, because I worked closely with Nick Serfass, the Executive Director, to better understand how the AIAS runs as a non-profit. Toward the end of that term (March 2016), I was called about a job opening in New Orleans. The opportunity to lead the chapter as well as the New Orleans Architecture Foundation was something I couldn't pass up. I've gotta say, life is good in the Big Easy!

**HOW DOES BEING AN ASSOCIATE AIA MEMBER INFORM HOW YOU MANAGE AIA NEW ORLEANS?**

I do not think that being an Associate AIA member informs how I manage the chapter. However, my working knowledge of our profession and practice certainly helps me connect and relate to our members, perhaps more than someone strictly



with a management background. Several things are important to me and I was fortunate to come into a chapter already moving in that direction. Among colleagues our age, there is a misunderstanding that the AIA is still lacking diversity and is unaccepting and unapproachable as it may have been in the past. Although we're far from finished with our work towards equity in our profession, AIA New Orleans is certainly a chapter that leads by example. It is my honor to help lead the movement to bring equity to architecture.

**WHAT ARE SOME OF THE IMPORTANT ISSUES YOUNG ARCHITECTS FACE IN TODAY'S PROFESSION?**

Flexibility and trust at all levels. A couple years ago, I was on a panel with another designer who expressed her disappointment with the studio culture of architecture. She noted how not only businesses, but also business schools are becoming more and more like the studio environment we are all too familiar with. If you look at any major growth company, Airbnb, Google, Netflix, they have a culture of "freedom and responsibility." You're able to work where, when, and how long you need to in order to get the job done... but the job better get done. Young mothers and fathers may need to stay home to care for a child, they may see an opportunity for marketing

or professional growth at a non-architecture conference, or they may simply work better in a different environment. If architecture practice were to accept these principles, I really think we could be facing a new renaissance in our field. Flexibility, hand-in-hand with trust, could go a long way with the current and rising generations of young architects.

**AS A LEADER OF A GULF COAST CHAPTER, DO YOU ADVOCATE FOR ANY SPECIAL CONSIDERATIONS ON BEHALF OF YOUR MEMBERS AND/OR REGION?**

The AIA New Orleans chapter received the AIA Presidential Citation after their hard work post-Katrina. Natural disaster, flood recovery, and rising sea levels are not foreign subjects to our city or chapter. Additionally, New Orleans is a very progressive city nestled in the significantly more conservative south. We seek out partners to collaborate on initiatives focused on sustainability, resilience, civic leadership, and social equity. Our city leadership is also focused on an agenda

of constructed and social infrastructure as two key vehicles for driving New Orleans into a new era. I am working with those leaders and our membership to ensure that our voice is present where it is needed the most.

**WHAT ADVICE WOULD YOU OFFER YOUNG ARCHITECTS THAT HAS HELPED YOU ALONG YOUR WAY?**

Understand your passions. And then pursue them. I believe that passion is what drives us, especially creative individuals. It's doesn't need to be confined to architecture; it could be tinkering, serving people, painting, civic leadership, whatever. When you figure it out, you have to give it an outlet. Some people are able to fold it into their practice, some create side jobs, others get involved in other local organizations or government. I really believe that success is when you're maxing out what you have to offer... and for me, that's driven by my passions. ■



# #yafchat



**AIA YAF**  
@AIAYAF

Follow

Q1: Why do you think it's important to keep learning even after graduation? #YAFchat

2:07 PM - 16 Nov 2016

1



**YAF Indy**  
@YAFIndy

Follow

A1 If you don't learn new stuff you aren't growing. If you aren't growing you're standing still. If you're still, you're dying. #yafchat

2:09 PM - 16 Nov 2016



**Deane Madsen**  
@deane\_madsen

Follow

A1: All should keep learning regardless of profession, but esp. architects, to keep up with tech, R+D, sustainability #YAFChat

2:10 PM - 16 Nov 2016

1 3



**AIA YAF**  
@AIAYAF

Follow

Q2: What are some ways that you keep yourself up to date and continue learning? #YAFchat

2:13 PM - 16 Nov 2016

2 1



**YAF Indy**  
@YAFIndy

Follow

A2 blogs, interwebs, #AIA meetings, conferences, etc. Info + fun = I'm in. #yafchat

2:16 PM - 16 Nov 2016

2



**Stephanie Silkwood**  
@StephSilkwood

Follow

A2. Attending AIA meetings and conferences, reading articles, and discussing trends with my peers. #yafchat

2:21 PM - 16 Nov 2016 - San Jose, CA

1



**AIA YAF**  
@AIAYAF

Follow

Q3: What's a cool conference or meeting you've been to lately where you learned a lot? #YAFchat

2:24 PM - 16 Nov 2016

1 1



**YAF Indy**  
@YAFIndy

Follow

A3 some of our members are at #AU2016 - looking fwd to hearing what they learn. And #AIAL16 is Friday! #yafchat

2:26 PM - 16 Nov 2016

2



**Stephanie Silkwood**  
@StephSilkwood

Follow

A3. AIACC's Monterey Design Conference is the most amazing experience. Great minds convene in a peaceful, relaxed setting. #yafchat

2:27 PM - 16 Nov 2016 - San Jose, CA

2 4

Moderated by the 2016-2017 AIA YAF Public Relations Director Lora Teagarden and hosted by the AIA Young Architects Forum (YAF). The yafchat for the month of November focused on **#ContinuingEd**.

3,843 Twitter Followers

AIA YAF Monthly Tweet-up  
16 November, 2-3:00pm Eastern Time

Theme: **ContinuingEd**  
Hashtag: **#YAFChat**



**AIA YAF**  
@AIA YAF

Follow

Q4: Do you think there's specific categories that we should be required to learn about as a part of continuing ed? [#YAFchat](#)

2:32 PM - 16 Nov 2016

1



**YAF Indy**  
@YAFIndy

Follow

A4 With 2030 commitment, and general state of the globe, sustainability (materials, planning, infrastructure) knowledge is a must [#yafchat](#)

2:34 PM - 16 Nov 2016

1 1



**Stephanie Silkwood**  
@StephSilkwood

Follow

A4. No. We are stretched too thin. We need to allow architects to choose their own specialization (as long as HSW is maintained) [#yafchat](#)

2:40 PM - 16 Nov 2016 · San Jose, CA



**AIA YAF**  
@AIA YAF

Follow

Q5: Progress is important and learning means little without doing. How do you take what you've learned and implement it? [#YAFchat](#)

2:40 PM - 16 Nov 2016

1



**YAF Indy**  
@YAFIndy

Follow

A5: seminars where employees share what they learned at conferences, action plans with follow-up, blogging, live-tweeting [#yafchat](#)

2:42 PM - 16 Nov 2016

2



**Stephanie Silkwood**  
@StephSilkwood

Follow

A5. Partner with clients and builders who also want to be progressive. Successfully trying new things is a team effort! [#yafchat](#)

2:43 PM - 16 Nov 2016 · San Jose, CA

1



**AIA YAF**  
@AIA YAF

Follow

Q6: What do you think are ways we'll learn or share knowledge in the future? [#YAFchat](#)

2:47 PM - 16 Nov 2016

1



**YAF Indy**  
@YAFIndy

Follow

A6 Future has more remote/virtual sharing, I think. [#yafchat](#)

2:49 PM - 16 Nov 2016

3



**Stephanie Silkwood**  
@StephSilkwood

Follow

A6. Probably some technology we can't even imagine! It's changing so fast! [#yafchat](#)

2:53 PM - 16 Nov 2016 · San Jose, CA

1 1

# ONE OF OUR OWN

## AN INTERVIEW WITH JENNIFER WORKMAN, AIA

by AJ Sustaita, AIA

*Jennifer Workman is a registered architect and an Associate at GFF Architects in Dallas. Her most notable project at GFF was the Perot Museum of Nature & Science where she worked in Los Angeles, CA under Morphosis on design and construction documents and then in Dallas on the construction of the museum.*

*Jennifer served for five years on the Texas Society of Architects Board, including her role as Vice President of Member Services. Nationally, she has served as the Regional Associate Director for Texas, Chair of the national Young Architects Forum, and was most recently elected for the 3-year term of At-Large Director to the AIA Board of Directors.*

*Her interests have earned her a 2013 national AIA Young Architect Award and 2014 Building Design + Construction's, 40 under 40, and the Texas Society of Architects William Caudill Award for Young Professional Achievement. Her efforts are also published in GA Document, Architect, AIArchitect, Texas Architect, and Columns magazines.*

### AJS: What spurred you early in your career to get involved with the AIA?

**JW:** Like most, I was invited to join a committee by a fellow AIA member. I was then introduced to other committees, where I realized that there were few people who looked like me (age, gender, race). Sometimes I felt lost in a sea of people who didn't think or act like me. I began to voice concern or thoughts about issues affecting people like me and soon realized I was being listened to as a voice for Emerging Professionals. This voice was missing in upper leadership positions, so I sought out ways I could be heard. This manifested in a series of positions representing Associates and Young Architects at the local, state, and national levels.

### AJS: Did you or do you rely on mentorship along your career path thus far?

**JW:** My relationship with my mentors is continually crucial to my success within the profession and the AIA. When I felt I wasn't being treated fairly in one of my first jobs, it was my mentor who helped me see that I should consider a new environment. I had only been at this job for a year and I was so afraid that it would look like I was a job hopper. I chose a new firm and I have happily been there for 12 years. When it came to the AIA, I found multiple mentors who helped me navigate the waters. They have encouraged me to take positions, been my sounding board when I didn't think a position was right for me, and been there to support my bid for one of the Director roles on the AIA National Board of Directors.

### AJS: What past positions have you held that you feel prepared you to run for the AIA Board?

**JW:** My positions on the YAF AdCom really helped me feel capable of running for the AIA Board. It was in my role as Communications Advisor, where I felt connected to other EP members around the states, which allowed me to advocate on their behalf. When I became Chair, I was responsible for managing the team that led Summit20. One of the great outcomes from the Summit happened when the AIA leadership reviewed our design boards and said we were facing the same

issues they were. I believe the Summit allowed others to identify with our issues instead of being recognized as only a younger group with different problems. Additionally, I believe that staying active at all levels of the AIA simultaneously helped me connect and understand current issues from multiple levels.

### AJS: How would you encourage other EPs who may have similar aspirations?

**JW:** I would encourage others to stay involved. When you hear or see something that you don't agree with, use it as an opportunity to voice your concerns and reach out to those who can help. There's a chance that those listening might recognize that you could be a good candidate for other positions that will allow your voice to be heard on more levels.

### AJS: Tell us about the campaign process you went through when running for a position on the AIA National Board of Directors.

**JW:** Nothing I had been through in my life could have prepared me for the campaign. After I decided to run, I learned I would have to do two public speeches and answer questions in varied public forums. In my diverse AIA roles I had become comfortable with public speaking, but my audience was limited to smaller groups. This was also the first time in my life where I needed to convince a very large group of very smart people to put their trust in me.

### AJS: Did you need to overcome any obstacles to run or during the campaign?

**JW:** As a young architect who looks younger than many other members in the leadership positions I surround myself with, I felt like I needed to overcome some discrimination based on my youth. My platform, to the day I decided to run, was that I was a voice for emerging professionals. Many people, however, did not believe that a seat on the board should be created just for someone who was young. Some also believed that a younger member on the Board may not have enough experience. After I was laughed at for telling someone I hoped my decision to run might encourage others in my demographic to run in the future, I decided my platform was clear. Based on the way I appear, it was obvious that I was young,

female, and of Hispanic origin; isolated, these things did not make me a better candidate. I began to speak only of my experiences and beliefs and rarely made mention of the obvious.

**AJS: What were you prepared for that didn't happen?**

**JW:** I was prepared to win a one year term at best. I was incredibly surprised to hear my name called for the three-year term.

**AJS: Did anything happen that you didn't expect?**

**JW:** Though I had been to seven national conventions, I had never attended a caucus. I walked into my first caucus and I felt like I did my worst of the entire campaign. I couldn't understand the moderator, I couldn't gather my thoughts, and I believe I sounded completely unprepared. Funnily, after I won, someone commented to my husband (not knowing he was my husband) that, based on my caucus, they were shocked I won. Based on that one snapshot of the campaign, I couldn't agree more. Fortunately, membership and the delegates have numerous opportunities to meet the candidates and hear what we had to say in multiple ways. For many, I was not judged solely by my worst appearance.

**AJS: What was the most interesting takeaway?**

**JW:** I tried to contact as many chapters as possible to speak with them about their issues. Many never returned my call, but the few who took the time to speak with me gave me great insight on their environments. This was one of the best parts about running for office, but I wish it had been a dialogue that continued with leadership after the election was won.

**AJS: You are one year through a three-year term; what has serving on the board been like?**

**JW:** The board is in a great position to have meaningful conversations now that it is a smaller entity. Everyone gets a chance to be heard, there is less politicking, and people are quite candid about their beliefs. I am very fortunate to have the three-year term, which allows me time to accomplish more.

**AJS: Are you championing any particular issues?**

**JW:** I want to see the relationship with the Board of Directors and the Strategic Council strengthen so that each is positioned to help the other be the strongest it can be. The Strategic Council is the link back to the regions and they sometimes know more about issues affecting our profession or ways to solve them.

**AJS: Have you met any interesting people inside or outside the profession?**

**JW:** Everyone I have met has provided something new or interesting to me, but sometimes "futurists" are added to a board or panel and they have a pulse on the latest and greatest things going on in the whole world. It is amazing to hear statistics and the foretelling of how our professional and home environments are going to change; only time will tell whether they are right.

**AJS: Thoughts about work/life balance or equity in the profession?**

**JW:** As a new mother to a six-month-old, I am now more than ever concerned about work/life balance and how to maintain my desire to "want it all" and actually get it all. I can now see why many parents leave a working environment all together. In my opinion, a firm of any type can do several things to help. One is to offer flexible work time. I am so incredibly fortunate to work in a firm that allows me to tend to my daughter's needs and get my work done in a timely manner, albeit not always in an "eight to five" period. Until I had my daughter, I had also never heard of "nursing rooms" or "mother rooms." Most people ask why a restroom doesn't work for this purpose – don't even get me started. My firm provides a private room with a computer so that I can work at the same time. That allows me to leave work on time to pick my daughter up from daycare instead of having to work late to make up time I would have missed. This has been invaluable and simple to provide. ■

# CONNECTION

THE ARCHITECTURE AND DESIGN JOURNAL OF **THE YOUNG ARCHITECTS FORUM**

## 2017 EDITORIAL CALENDAR

### APRIL SHELTERING

This issue focuses on housing affordability issues across the country. We will also look at how different communities all over the world address the homelessness problem and the global housing crisis.

CONTENT DUE 2/01  
PUBLICATION 1Q 2017

### JUNE JET SET

This issue focuses on the global issues that affects the architecture profession here in the US, such as climate change and the global economy. We will also look at how firms across the country and overseas tackle these issues.

CONTENT DUE 5/01  
PUBLICATION 2Q 2017

### SEPTEMBER DESIGN WITH CONSCIENCE

This issue focuses on the humanitarian work done by architects and look at their firm structure and business model. We will also report on topics such as building resiliency and disaster readiness.

CONTENT DUE 8/01  
PUBLICATION 3Q 2017

### DECEMBER ACRONYM SOUP

This issue focuses on the theme of Certification and specialty credentialing. We will discuss the Pros and Cons of this heavily debated topics from different perspectives. We will also take a look at the professional development within architecture and the continued education.

CONTENT DUE 11/01  
PUBLICATION 4Q 2017

### CALL FOR QUARTERLY SUBMISSIONS

### WE ARE CURRENTLY SOLICITING CONTENT

**CONNECTION** welcomes the submission of ARTICLES, PROJECTS, PHOTOGRAPHY and other design content. Submitted materials are subject to editorial review and selected for publication in eMagazine format based on relevance to the theme of a particular issue.

**CONNECTION** content will also appear on AIA.org and submissions will be considered on a rolling basis.

If you are interested in contributing to **CONNECTION**, please contact the Editor-In-Chief at [yungoklo@hotmail.com](mailto:yungoklo@hotmail.com)

CLICK HERE for past issues of  
**CONNECTION**

## SUBMISSION REQUIREMENTS

All submissions are required to have the attachments noted below.

### Text

Submit the body of your text in a single, separate Word document with a total word count between 500-1000 words.

Format the file name as such:  
[yourlastname\_article title.doc]

### Images

Submit all images in JPEG format at a minimum resolution of 300 dpi RGB mode. Include captions to all images in the body of your e-mail transmittal.

All images must be authentic to the person submitting. Do not submit images with which you do not hold the rights.

Format the file name(s), sequentially, as such:  
[yourlastname\_image1.jpg]

### Author Bio

Submit a brief, two-sentence bio in the following format:

[ yourlastname ] [ AIA or Associate AIA or RA ] is a [ your title ] at [ your company ] in [ city, state ]. [ yourlastname ] is also [ one sentence describing primary credentials or recent accomplishments ].

Format the file name as such:  
[yourlastname\_article title.doc]

### Author Photo

Submit a recent headshot in JPEG format at a minimum resolution of 300 dpi grayscale in RGB mode.

Format the file name as such:  
[yourlastname\_portrait.doc]

### WHAT IS THE YOUNG ARCHITECTS FORUM?

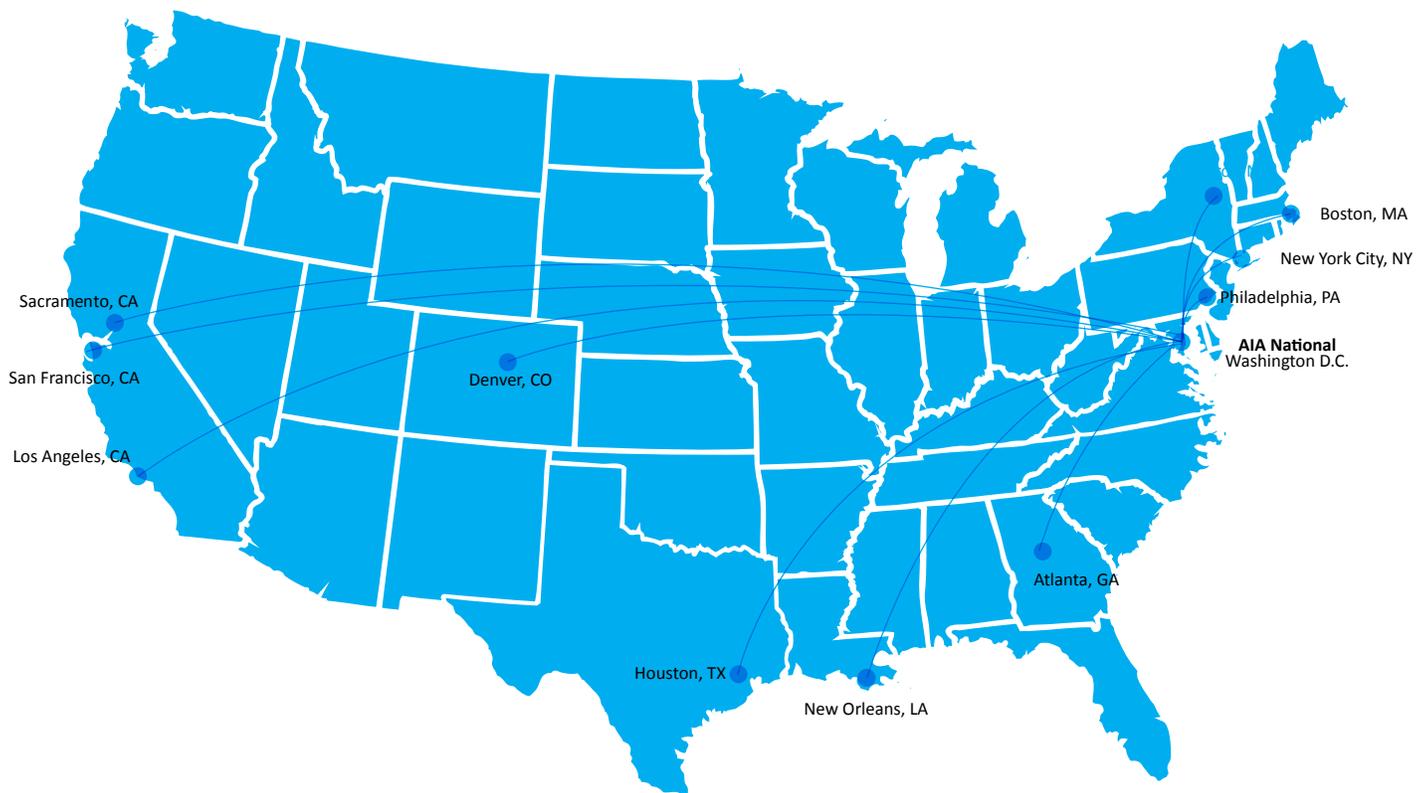
The Young Architects Forum is the voice of architects in the early stages of their career and the catalyst for change within the profession and our communities. Working closely with the AIA College of Fellows and the American Institute of Architects as a whole, the YAF is leading the future of the profession with a focus on architects licensed less than 10 years. The national YAF Advisory Committee is charged with encouraging the development of national and regional programs of interest to young architects and supporting the creation of YAF groups within local chapters. Approximately 23,000 AIA members are represented by the YAF. YAF programs, activities, and resources serve young architects by providing information and leadership; promoting excellence through fellowship with other professionals; and encouraging mentoring to enhance individual, community, and professional development.

### GOALS OF THE YOUNG ARCHITECTS FORUM

To encourage professional growth and leadership development among recently licensed architects through interaction and collaboration within the AIA and allied groups.

To build a national network and serve as a collective voice for young architects by working to ensure that issues of particular relevance to young architects are appropriately addressed by the Institute.

To make AIA membership valuable to young architects and to develop the future leadership of the profession.



## GET CONNECTED PUT YOURSELF ON THE MAP

THIS ISSUE FEATURES CONTRIBUTING ARTICLES FROM THESE MAPPED LOCATIONS.



Jennifer Rhoades, Assoc. AIA  
Member Since 2012

Sam Garcia, AIA  
Member Since 2009



## Elevate your career path.

As an AIA member, you have access to professional resources that provide the tools you need to enhance and sustain your practice at every stage of your career. Whether it's government advocacy to back your practice, continuing education programs to keep your skills and knowledge current, or the invaluable support of a professional network of more than 81,000 colleagues, AIA membership is an essential investment in your career.

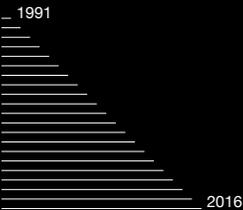
Seize the opportunity and see what happens.

[www.aia.org/join](http://www.aia.org/join) • [www.aia.org/renew](http://www.aia.org/renew)

Tamarah Begay, Assoc. AIA  
Member Since 2005



**YAF**  
GET CONNECTED



**YOUNG ARCHITECTS FORUM**  
CELEBRATING 25 YEARS OF ADVANCING THE CAREERS OF YOUNG ARCHITECTS