

ACSA/AIAS New Faculty Teaching Award

2016-2017 Winner Submission Materials

AKI ISHIDA
Virginia Tech

PORTFOLIO

Submitted for
ACSA New Faculty Teaching Award

September 2016

Aki Ishida AIA, LEED AP

Assitant Professor
Virginia Tech
School of Architecture + Design



ON TEACHING

Aki Ishida

Since the goal of teaching is learning, I focus on what the students actually do, rather than what a teacher may say. Toward this end, I use the Socratic method to guide students by asking questions that allow them to develop their own intellectual positions and sensibilities as architects. I elevate their standards just beyond what they think they can achieve, and they surpass their own expectations, and often mine. To open multiple doorways to learning, I engage students in a range of activities, including a number of modes of drawing and modeling, interdisciplinary collaborations with engineers, and material experiments. Such hands-on, sensible learning is coupled with theoretical readings that challenge their preconceptions in architecture and debates around recently completed buildings. These activities recognize that discoveries occur in different times and contexts for different students.

Since beginning full-time teaching in 2012, my students have received significant recognitions, including three Henry Adams Medals and Certificates and employment in internationally respected firms. The 2015 SOM Prize (\$50,000) was awarded to my former student Nicholas Coates (B.Arch 2015) – a rare achievement for an undergraduate student. I was able to discover his potential by teaching him in a second year studio and fifth-year thesis. My recognition as one of 25 Most Admired Educators by *DesignIntelligence* in 2016 is an evidence of the impact my teaching has had on the students.

MATERIAL EXPLORATIONS: beyond disciplinary boundaries

Drawing upon practice experience of close collaborations with fabricators and manufacturers, I strive to unite studio speculations with the physical resistance of materials. I received my graduate education at Columbia University, immersed in

the paperless studios in the restless and exciting periods of the late 1990's. As I neared graduation, the discourse around novel uses of materials made possible by digital fabrication led me to seek out a practice already engaged with CNC milling and material innovations. My achievements are manifest in over four years of work at James Carpenter Design. Carpenter's studio collaborates in multi-disciplinary teams on material research, design, and fabrication centered around light and glass. There, I recognized the benefits of working in an environment in which architects, artists, and engineers continuously exchange ideas and learn from each other. This mode of inquiry-based design at the intersection of art and technology is a basis for my teaching and creative work.

SPACE INFUSED WITH TECHNOLOGY: studies of perception

I engage students and faculty from disciplines outside of design to collaborate in my creative work. The interactive light installations, including the award-winning Lantern Field at the Smithsonian's Freer Gallery and the Cloud in Ballston, Virginia, are immersive environments that explore perception of space through multiple senses and question how technologies, including electric light and sensors, alter our understanding of space and organization of our built environments. Often conducted in partnership with external organizations, these projects offer students opportunities to test their work beyond the academic context. With faculty guidance, they learn to navigate the complex external forces that shape the design, and in turn witness the impact of their design on people engaged with the work.

SPATIAL STUDIES IN JAPAN: a critical reflection

I developed and offered a two-week Japan study abroad course in January 2016. Witnessing a different thread of Modernism in a non-European

country is a lesson in diversity and a way to critically reflect upon the more familiar modern architecture of the West. The course offered an opportunity to see firsthand, under the guidance of a teacher born and raised in Japan, the influences that traditional Japanese architecture and landscape has had on the contemporary Japanese architecture. In its inaugural year, the course was offered to seventeen selected undergraduate and graduate students from Architecture, Industrial Design, Interior Design, and Landscape Architecture. Upon return, they exhibited their drawings, writing, and photographs in an exhibition. As a result of the positive responses by the students in the school, the Japan study abroad program will be offered every two years.



In these ways, my teaching has been built upon an inquisitive and experimental approach to design in my professional career and knowledge and wisdom gained from my multi-cultural upbringing. Teaching offers life-long intellectual growth for myself, which in turn motivates me to share my knowledge and passion for architecture and design with my students.

SKYVIEWING HOUSE

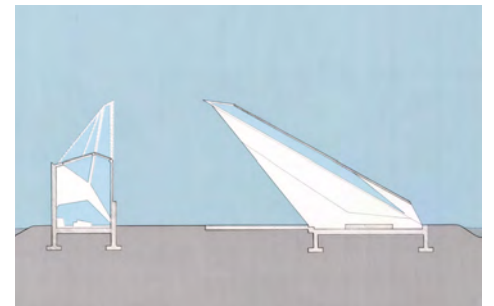
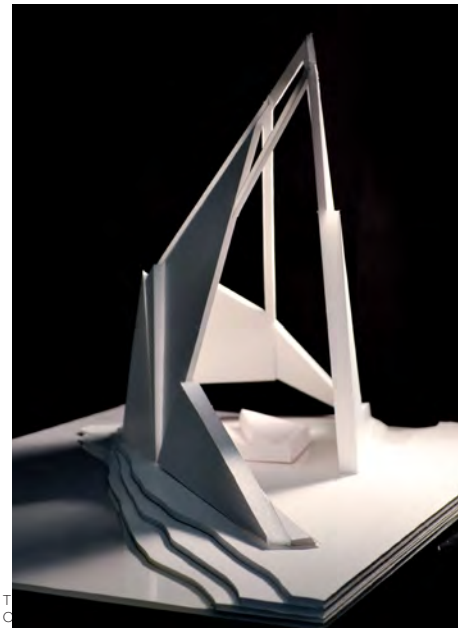
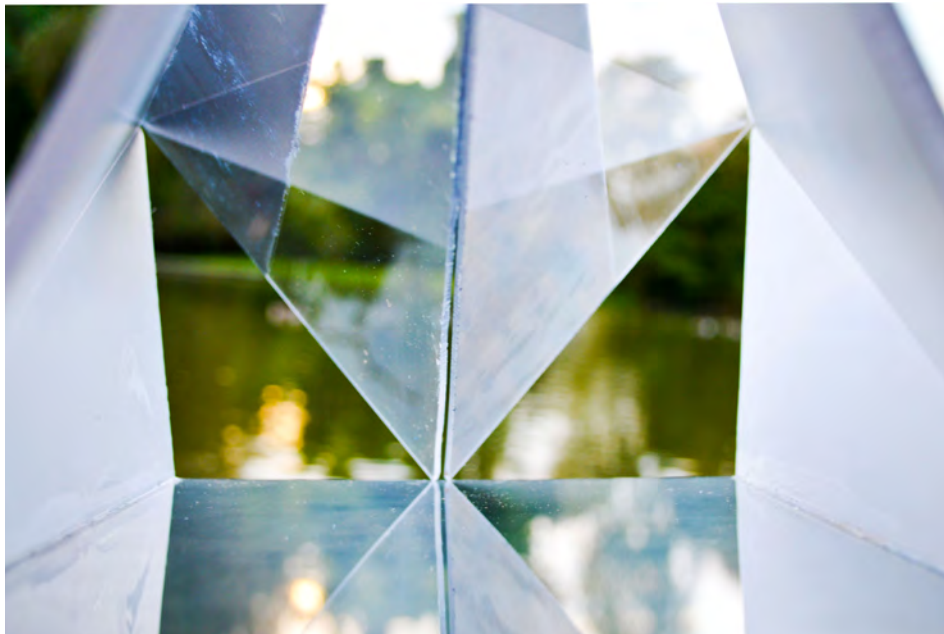
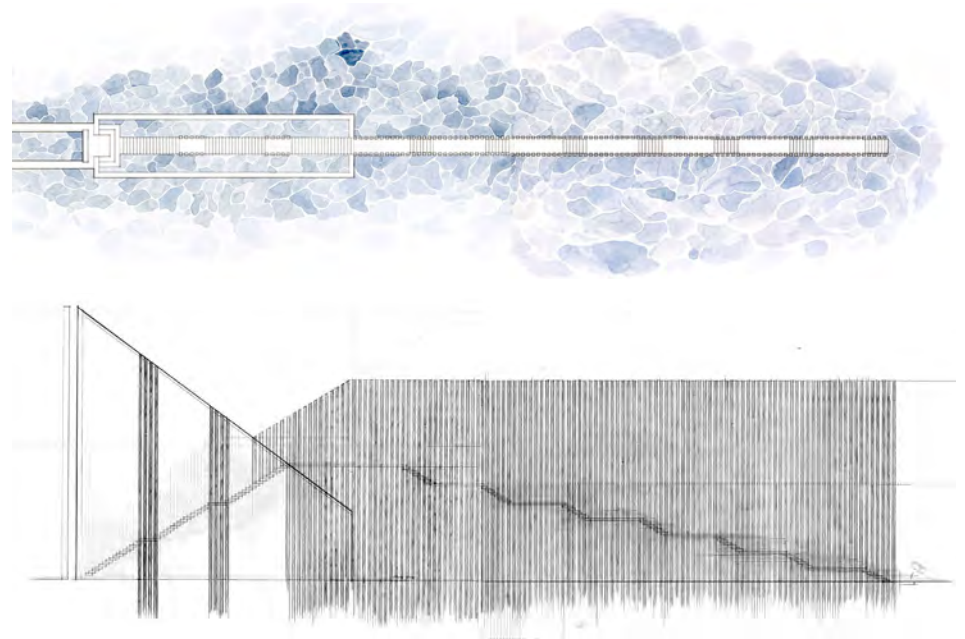
ARCH 2015: 2nd year BArch studio
2-week project
Fall 2014 to 2016

How does the building meet the sky?

The prompt was to make a place for a person or a group of people to view the sky from inside of a building. As the first freestanding building project of the semester, they are asked to situate the building on a site.

Begin with the roof. How does it meet the sky?
How is the presence of the sky made apparent?
Directly or indirectly?
How is the sky revealed?
In sequence, in concentration, slowly, or quickly?

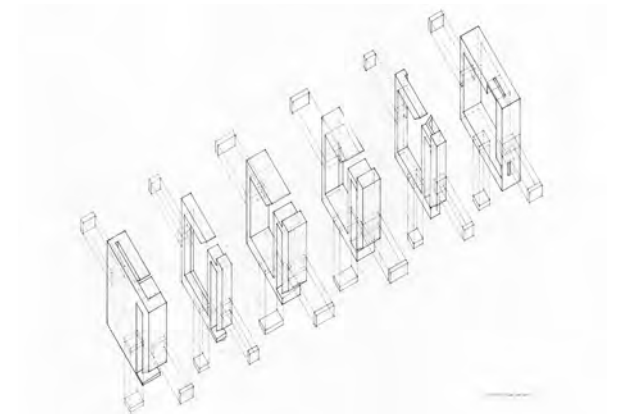
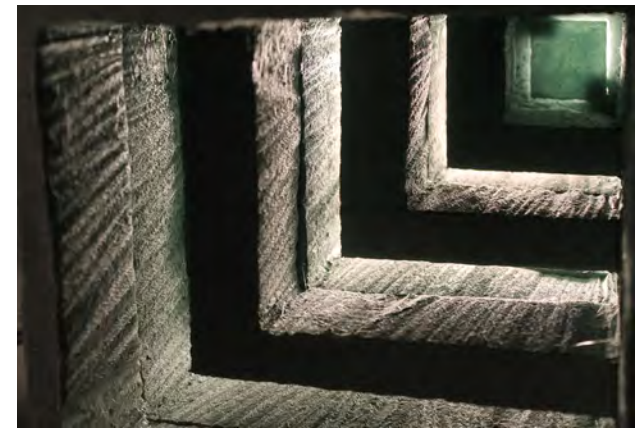
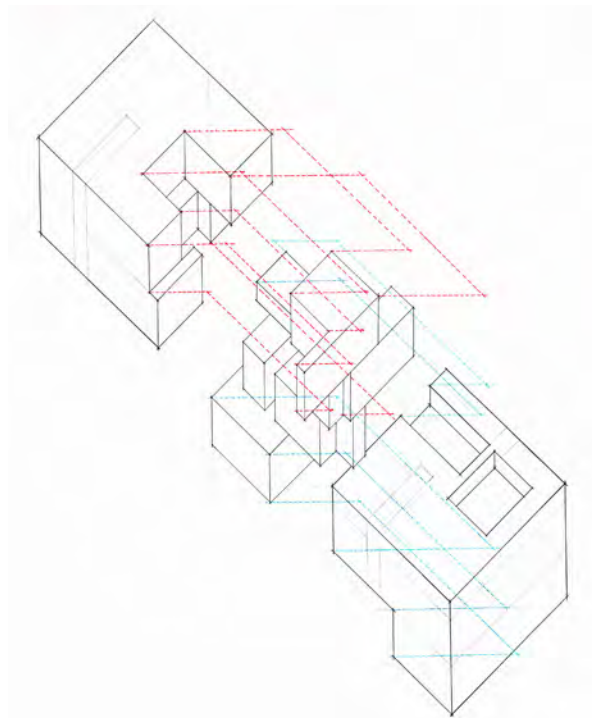
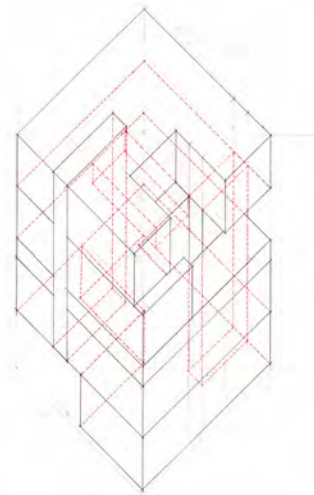
Left:: Ge Zhou (2014)
Top right: Zichun Holly Huang (2014)
Bottom right: Corey Crist (2014)



LIGHT PASSAGE

ARCH 2015: 2nd year BArch studio
2-week project
Fall 2012 to 2016

In this first project of the second year studio, the students were asked to create a solid foam using sheets of insulated foam; cut out a contiguous void which lets light pass through the solid; and draw plans, sections, and elevations. One year, they were to then construct the void using paper and basswood sticks at twice the scale of the foam, with an illumination source placed inside. In other years, the students were asked to cast the light passage in Rockite. This 2-week project is intended to give students an understanding of orthographic projection drawings, light and shadow, and relationships between solid and void and between drawings and models.



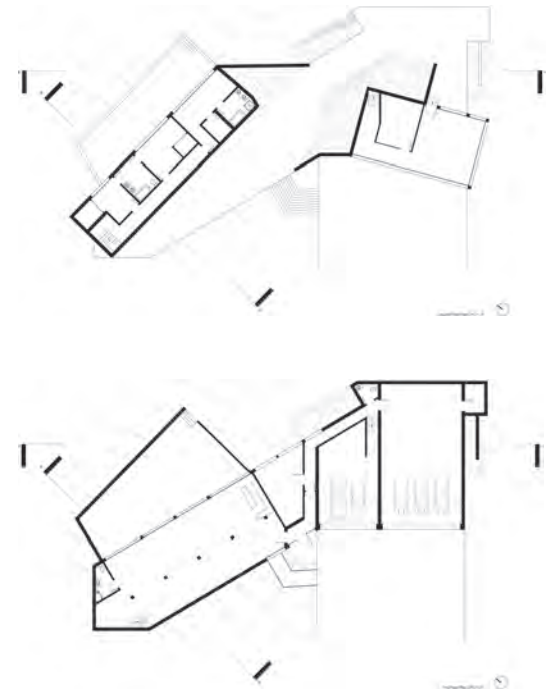
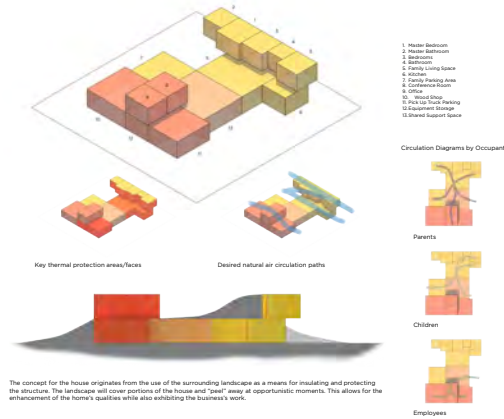
Left and center columns: Zihan Hafiz (2013)
Right, top two: Jeremy Jones (2012)
Right, bottom: Angela Zhang (2016)

HOUSE FOR A LANDCARING FAMILY

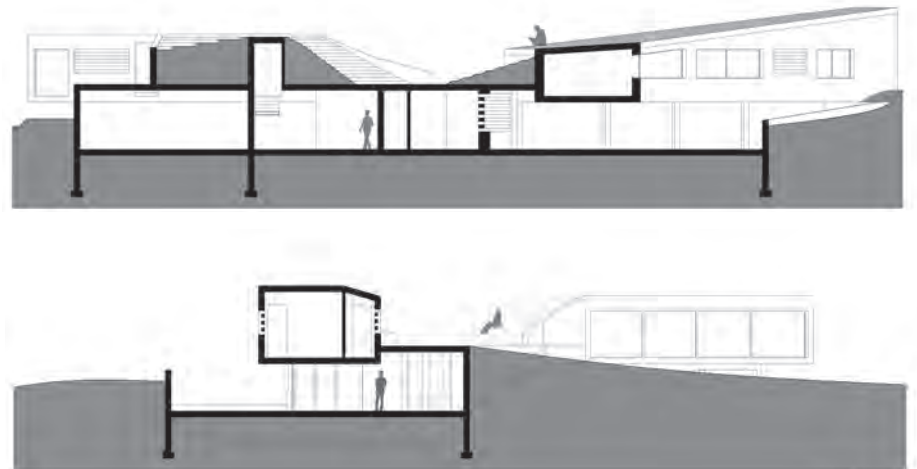
ARCH 2016: 2nd year BArch studio
4-week project
Spring 2013 & 2014

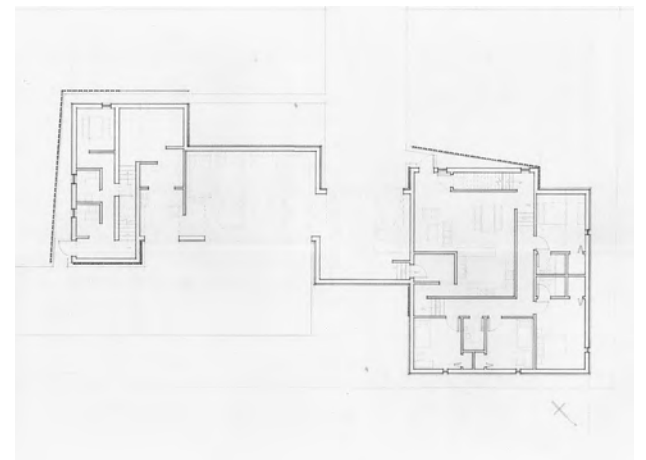
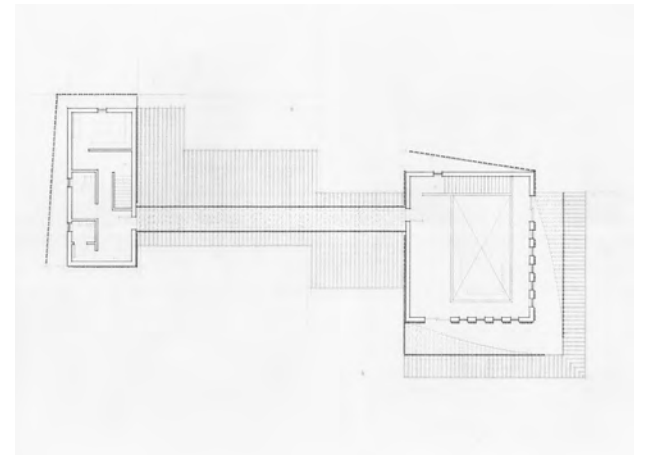
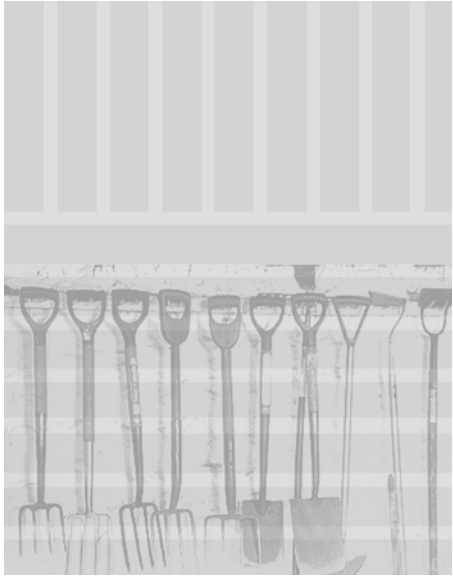
The prompt is to design a house for a family of four whose work is to care for other people's land for living. In spring, summer and fall, they provide lawn care and landscaping services. During the snow season, they provide snow and ice removal service and will occasionally cut down trees. Their house is designed to be a place for living and working specifically to meet their professional needs. The profession of 'Landcaring' is open for interpretation.

The objectives are to conduct an in-depth program and site analyses through diagrams, models, and drawings; gain an experience designing a building with greater complexity in the number of rooms and performance requirements at different times of the day and seasons; develop design strategies that respond to the specificities of the occupants and site constraints; and develop an understanding of the dynamics of bodies in relation to space.



This page: Forrest Bibeau (2013)





This page: Luke Dale (2014)



INSTITUTE FOR SLEEP IN NEW YORK CITY

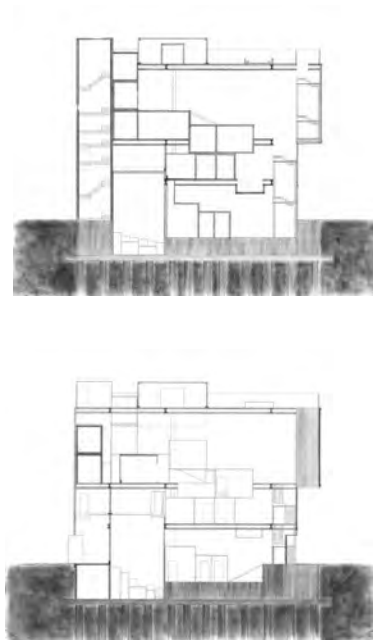
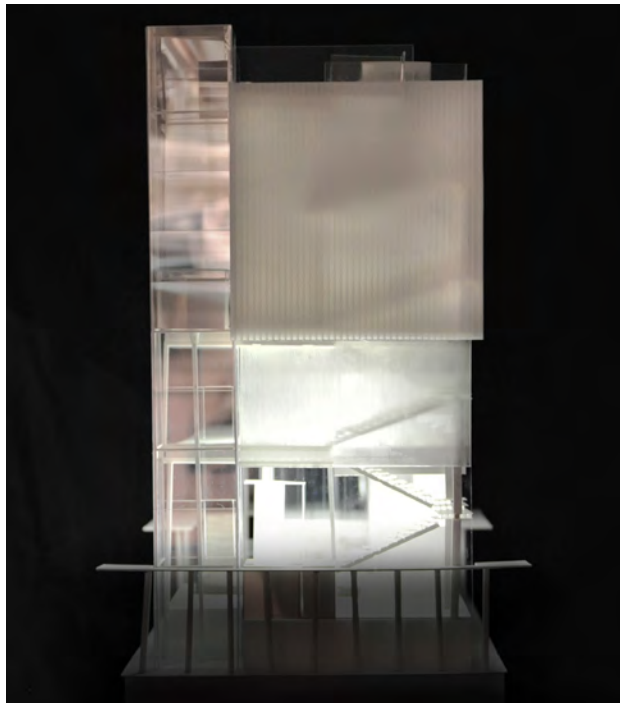
ARCH 2016 2nd year BArch studio
6.5-week project
Spring 2014 to 2016

The building for Institute for Sleep, site in Midtown Manhattan on East 49th Street, is a place for scientists and doctors to conduct research on sleep. It provides offices/labs, sleep rooms for research participants, consultation spaces, a reading room accessible to the public, and a 500sf on the ground floor with an open program.

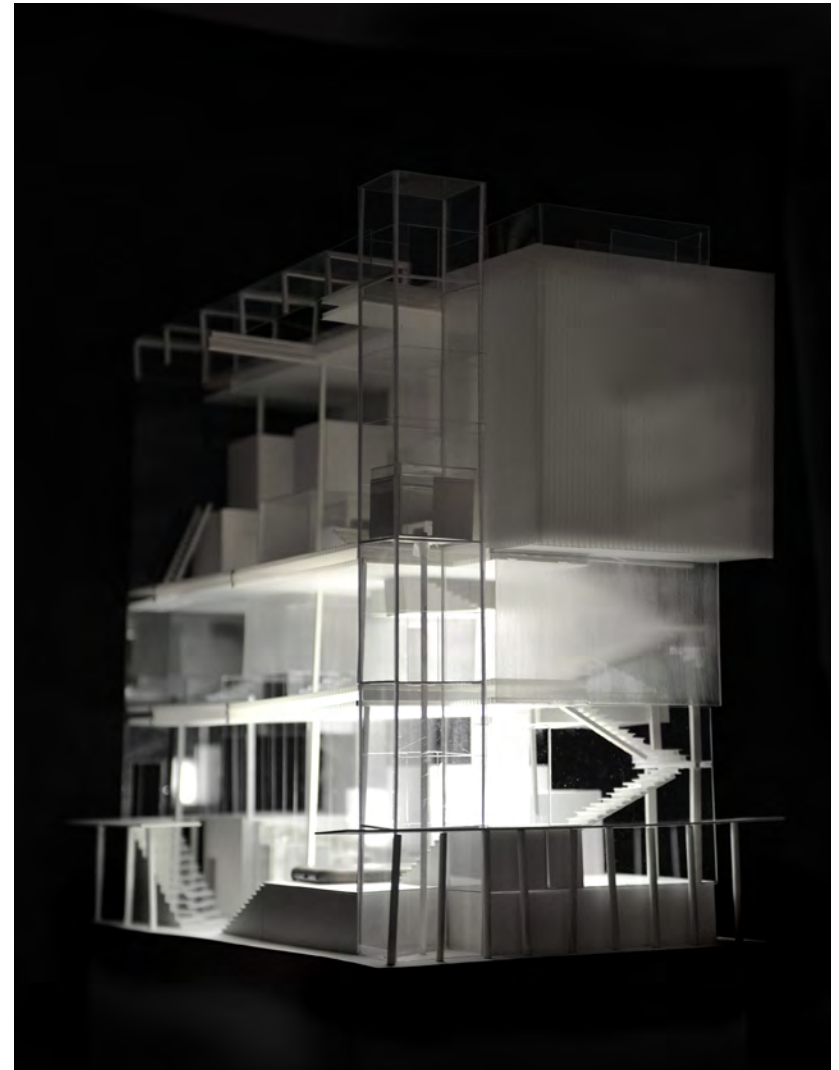
How does a building mediate light and sound?

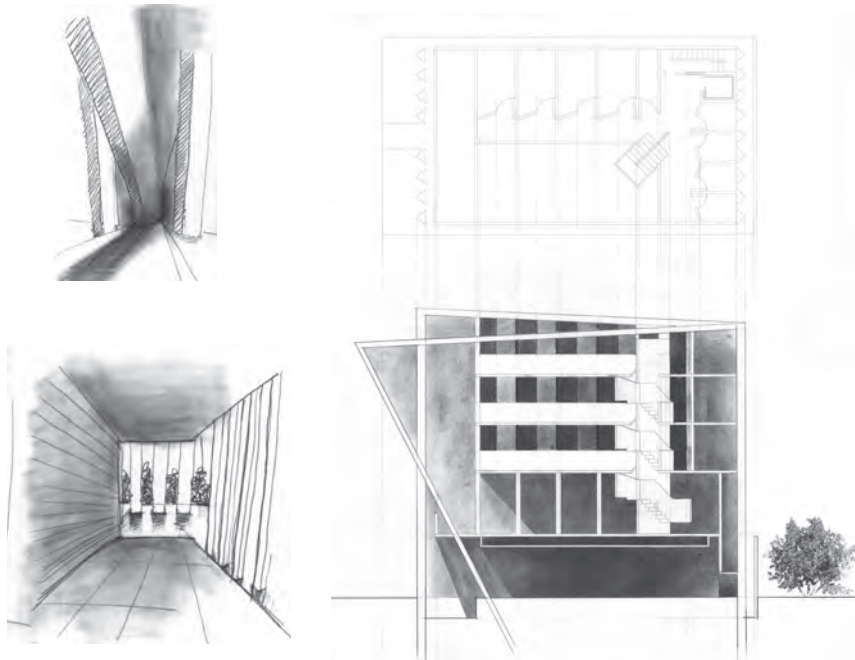
Through the building, how do the participants in sleep research transition from the streets of New York to rooms for sleep, and back to the city?

What could a building do to protect the sleep of its inhabitants while providing connections to the outer world?

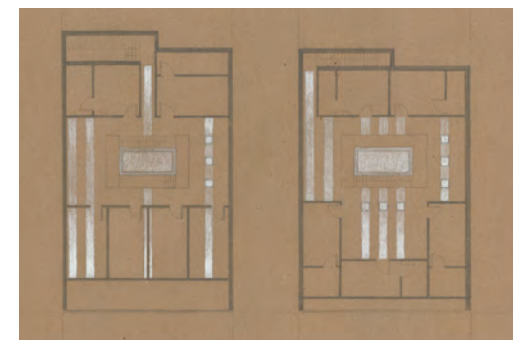
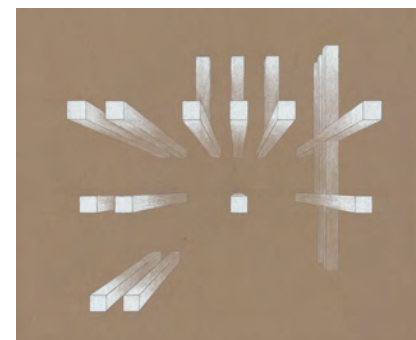
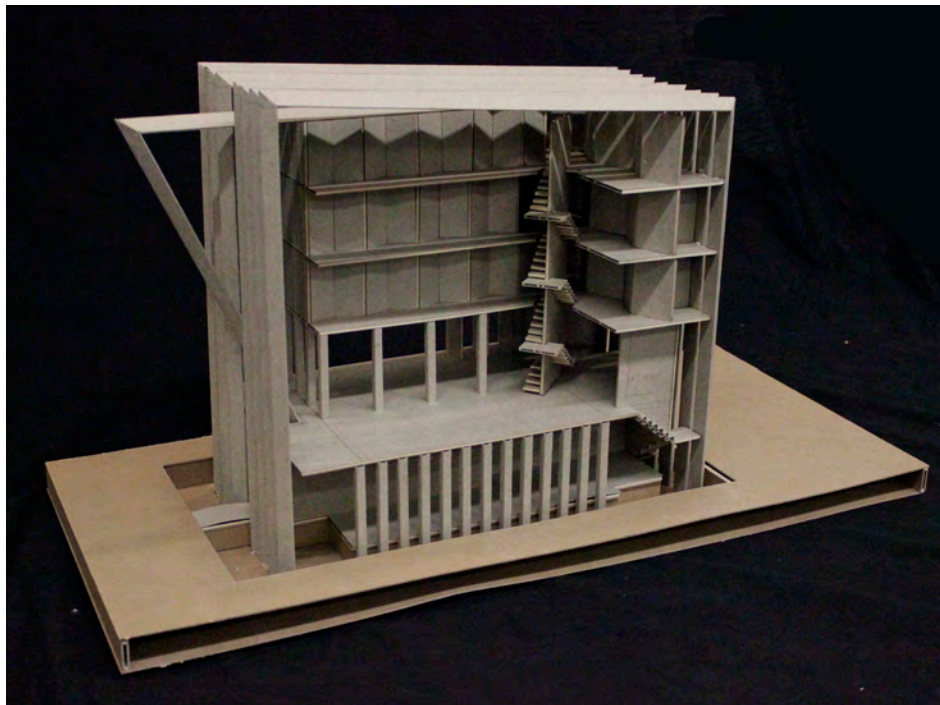


This page: Gogo Choo (2016)

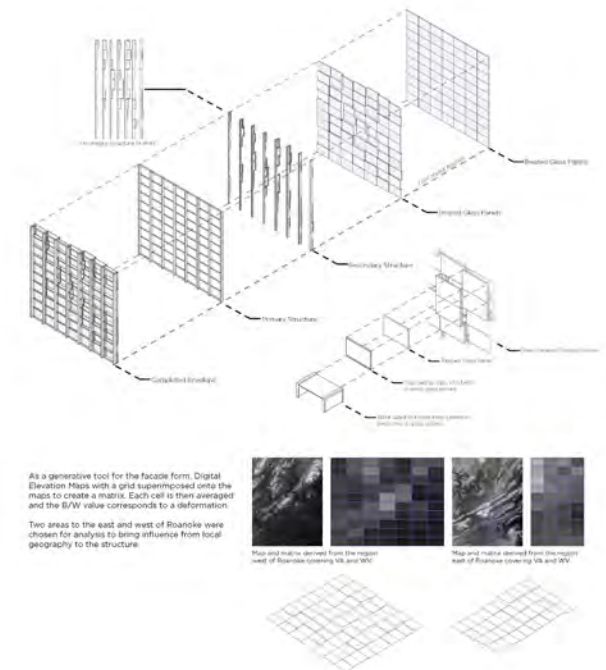


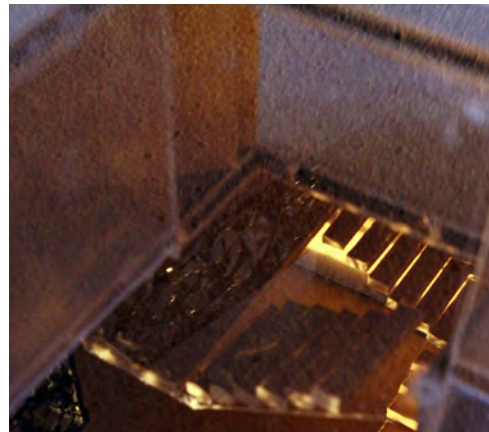
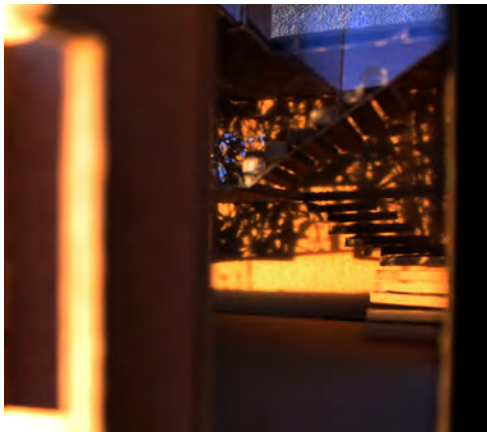


Left: Zichun Holly Huang (2014)
Right: Corey Crist (2014)

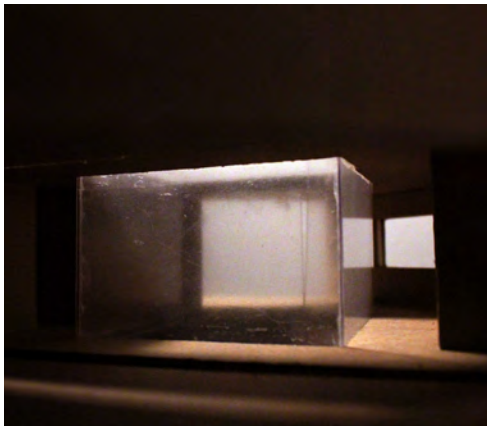


ARCH 2016: 2nd year BArch studio
4-week project
Spring 2013 & 2015





Right: Hannah McDorman (2015)
Left: Alisa Chirachaturaphak (2015)

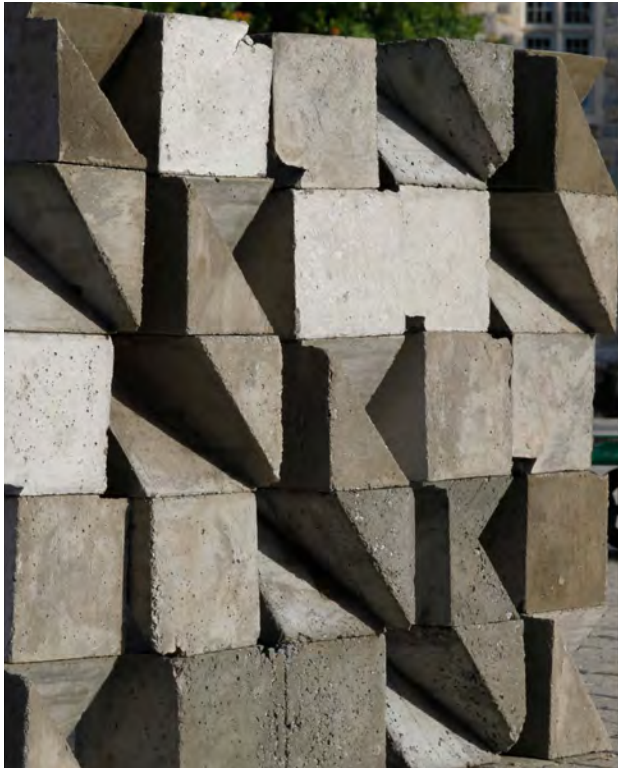


MODULAR CONCRETE BLOCK WALL

ARCH 2044 Building Materials
3-week exercise
Fall 2012 to 2016

The first course in the sequence of building materials and construction sequence for BArch curriculum, the class fosters an understanding of the attributes of the materials with which buildings are being built. The course is taught through lectures, factory visits, and hands-on projects.

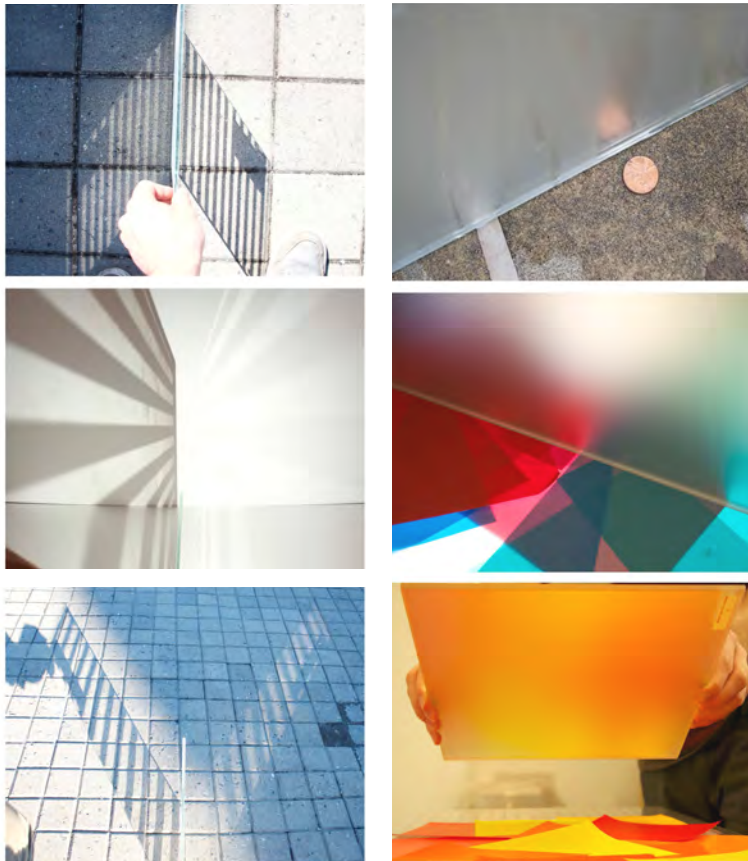
To learn about concrete, the students were asked to work in teams of 3 to 4 to cast modular concrete blocks to make a 24"x24" wall that transmits light. Proportions of aggregates to cement to water were adjusted and reinforcement materials were tested to achieve the necessary strength and desired appearance.



STUDIES OF GLASS: LIGHT IN TRANSMISSION, REFLECTION, AND REFRACTION

ARCH 2044 Building Materials
2-week exercise, Fall 2013 & 2015

This team project asked the students to experiment with glass sheets under different light conditions to understand the physical attributes of the material. Through photographs, the students studied and documented how the glass takes information from the space or objects around it, and re-presents it, and experiment under different light conditions (daylight, electric light, light source positioned differently relative to glass sheets). Glass samples, including colored, laminated, diffused, acid etched, patterned, were provided by James Carpenter Design Associates for educational purposes.



DRY-FIT WOOD PANELS

ARCH 2044 Building Materials
2-week exercise
Fall 2014

This exercise in wood joints was taught in collaboration with guest lecturer Alfred Zollner of Parsons the New School of Design in New York. Each team was asked to iteratively construct three wood panels 3'x3' and up to 6" thick. To encourage deeper understanding of the material of wood, the panels must be assembled using only dry fit joints, with no glue or mechanical fasteners.



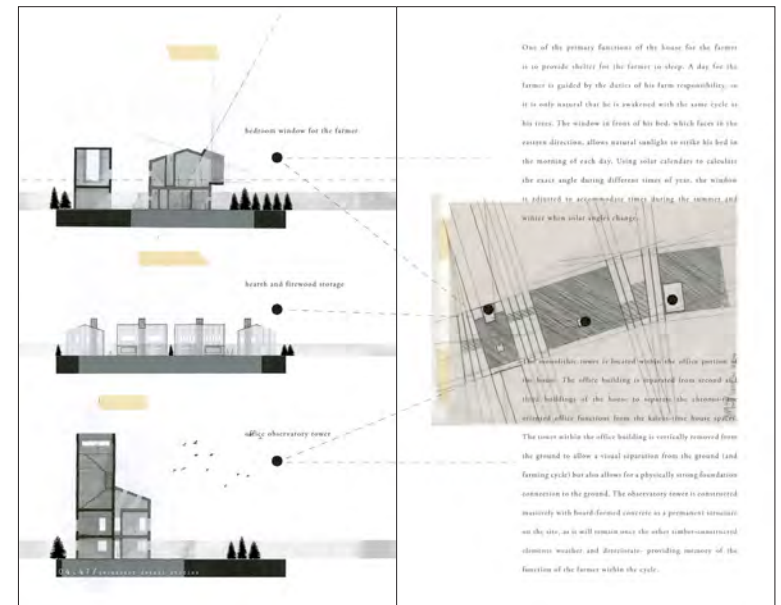
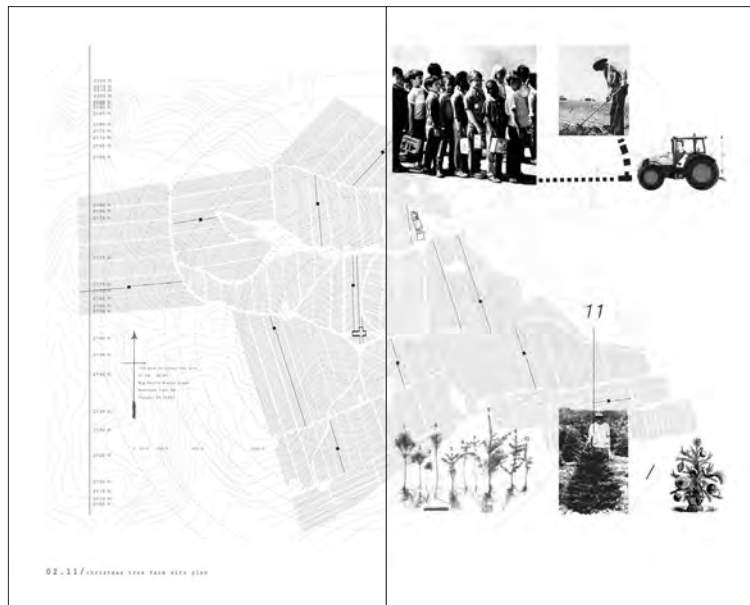
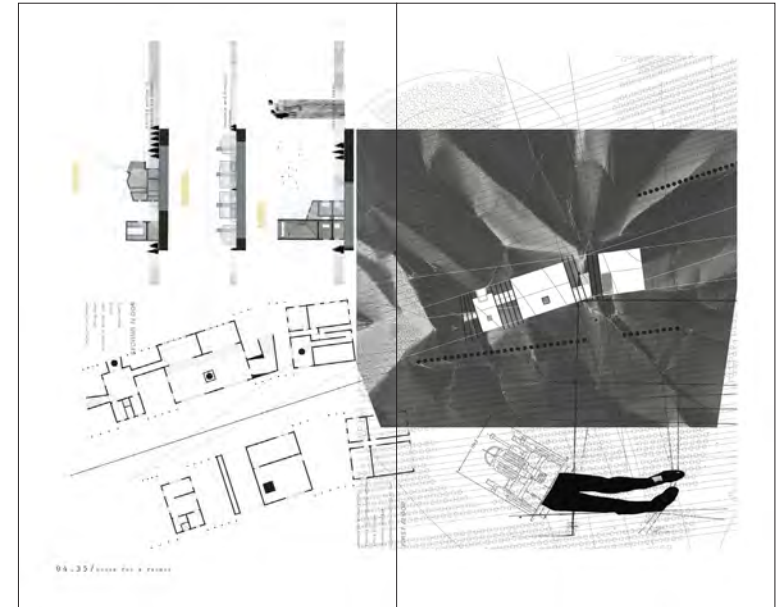
ARCHITECTURE & TEMPORALITY

Emily Hagen

ARCH 4515/16: B.Arch Thesis
Fall 2013 & Spring 2014

This thesis is a study of temporality and its relationship with architecture through chronos and kairos time. Chronos is a measured time, while kairos is a subjective time that is dependent on intersection of events. On a Christmas tree farm, three buildings are designed for differences in permanence within the eleven-year cycle of farming: House for the Tractor, House for the Farmer, and Shed for the Visitor. Architecture relates function to permanence. The cycle of Christmas trees suggests temporal connections between inhabitants and the farming cycle. The thesis questions how architecture exists in a place in which nothing is permanent and yet nothing is temporary.

- Emily Hagen



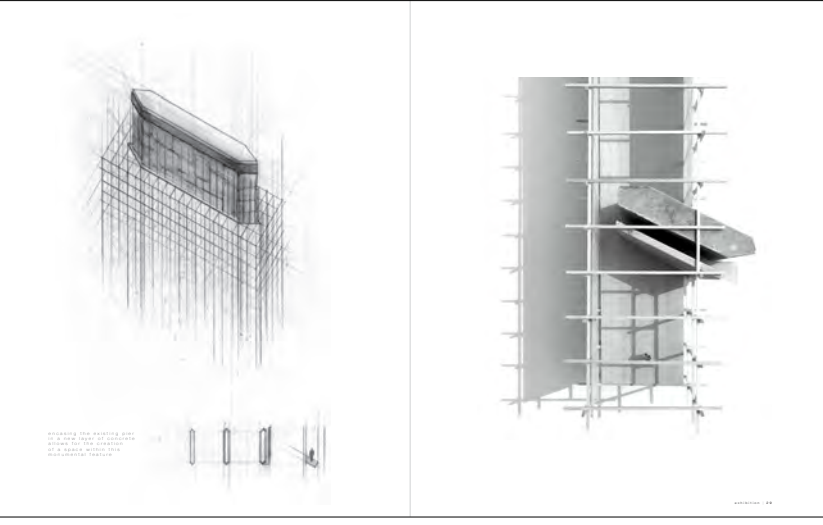
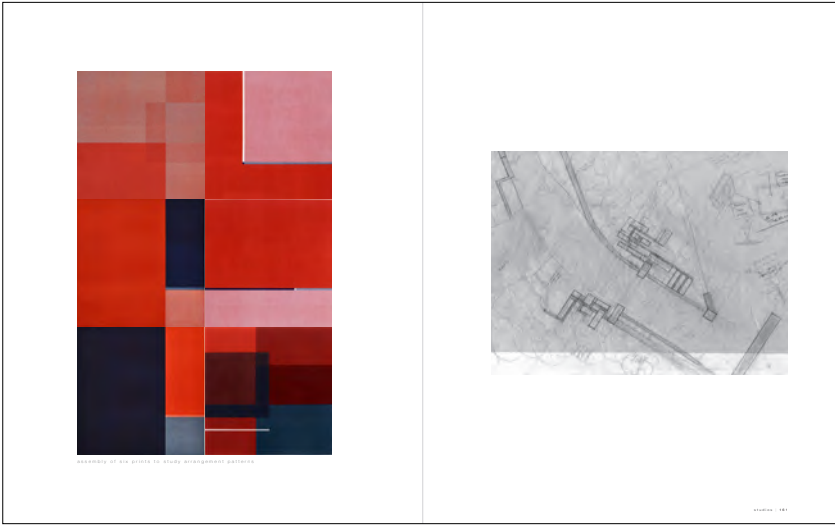
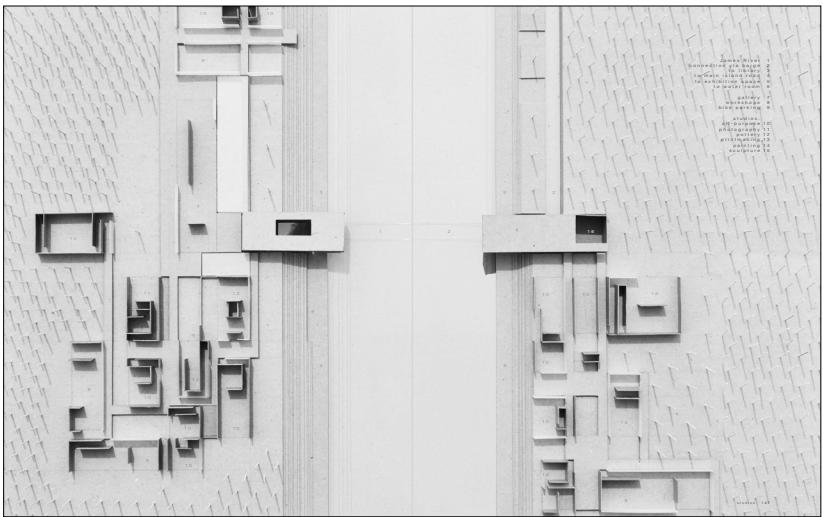
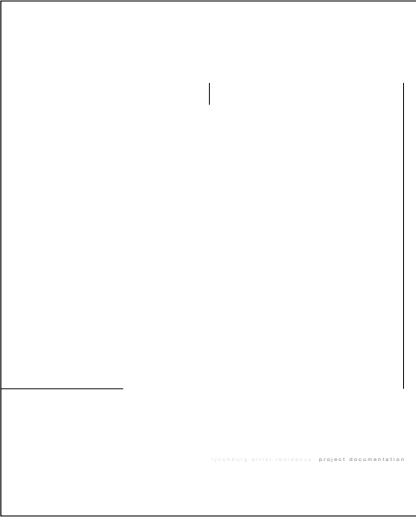
LYNCHBURG ARTIST RESIDENCY:
STUDY OF A PATH

Nicholas Coates
ARCH 4515/16: B.Arch Thesis
Fall 2014 & Spring 2015

How can the path be the architecture, not simply points A and B. How can architecture be a journey, a place to lose track of time? How can this journey pull apart our surroundings, carefully reconstructing these fragments as we move through spaces?

This thesis is a study of path. The path creates the framework for what we see, experience, and uncover. The site, a cluster of islands in the James River, allows the sequence of arrival to be thoroughly constructed. Traveling from downtown Lynchburg, a boxcar frames scenes before the visitor, with speed quickly revealing and concealing the woods, rivers, and pieces of the architectural intervention. An artist residency is spread amongst the site, with the path being the thread typing together these elements. The result is an architectural proposition that reveals itself slowly, one that uses curiosity as a driver for movement to discover architecture.

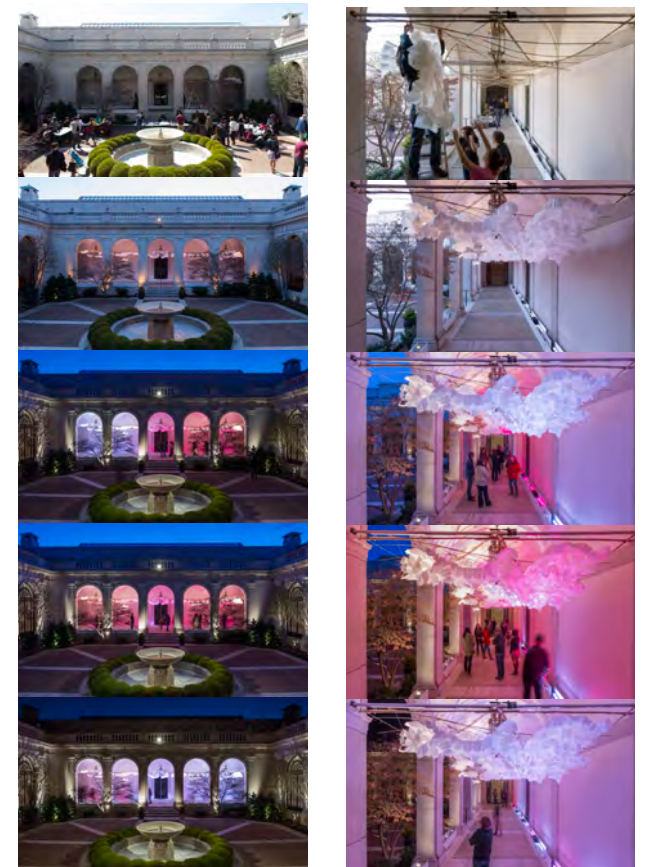
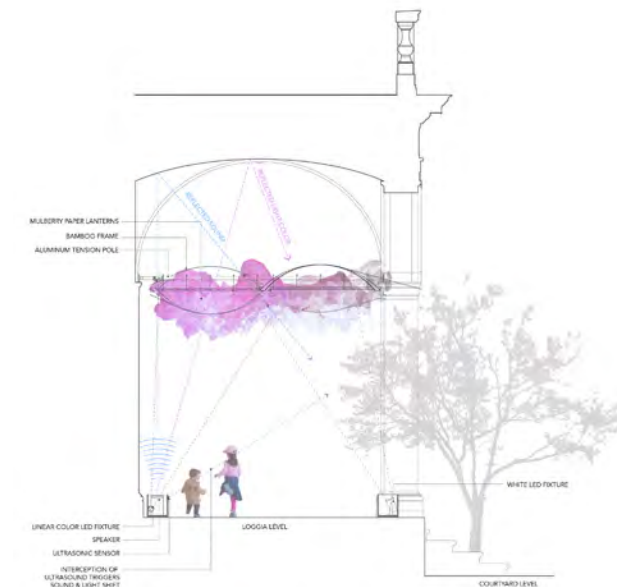
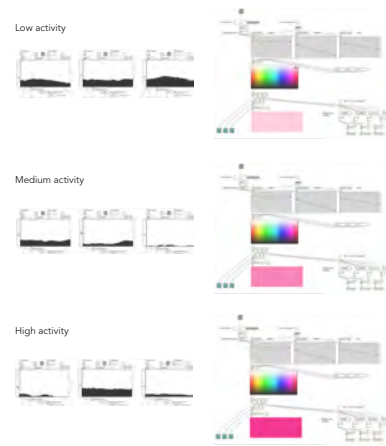
- Nicholas Coates



LANTERN FIELD AT THE SMITHSONIAN

ARCH 2015 Second year B.Arch studio
Washington, DC
Fall 2013 and Spring 2013

A digitally interactive installation led by Aki Ishida, *Lantern Field* engaged architecture and engineering students in design and fabrication over two semesters. The work consists of folded mulberry paper illuminated with LED and daylight, creating a multi-sensory space that responds to people's presence and behavior. Inspired by traditional Japanese lantern festivals and cherry blossom viewing, the installation creates an ephemeral place of gathering through light. As the ultrasonic sensors capture presence of people entering the space, they activate the shift in light hue and sound. At the same time, change in hues of the LED fixtures along the floor is projected onto the field of paper lanterns overhead. The students ran a day-long public workshop to teach the visitors how to fold the lanterns and add to the bamboo grid frame. The museum received over 22,000 visitors to the gallery over the weekend of the exhibition. The project was recognized internationally with a 2013 Design Award: Special Citation in Community Engagement with Lighting from the *Architectural Lighting* magazine.

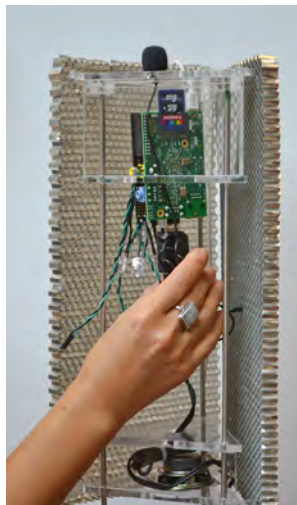
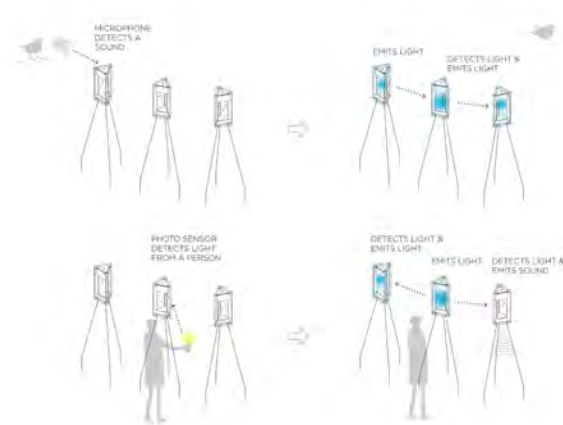


CLOUD IN BALLSTON

ARCH 4984 Special Study
Public art installation in Arlington, VA
Fall 2014 and Spring 2015

Cloud is a networked sculpture that brings together technology and the arts for an interactive, community-created experience. The cloud consists of 50 cloudlets, which of each emits light and sound in response to the light and sound generated by other cloudlets, people, and the environment. Each cloudlet's aluminum honeycomb and acrylic vessel contains a Raspberry Pi microcomputer, light sensors, microphone, multi-color LEDs, and a small speaker. These components are driven by a custom version of Virginia Tech laptop orchestra *Pd-L2Ork*'s free open source software for audio, video, and graphics processing.

Ivica Ico Bukvic, associate professor in the School of Performing Arts, and Aki Ishida, engaged a team of students from architecture and engineering on the design and fabrication of the *Cloud* over two semesters. The team also ran a community workshop in which 170 participants, from middle schools to local businesses, customized the light and sound behaviors of each cloudlet. The work was commissioned by Ballston Business Improvement District, selected by a jury that included Steve Dietz, former curator of new media at the Walker Art Center.

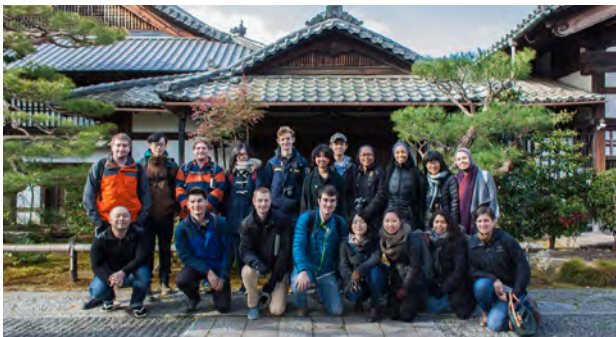
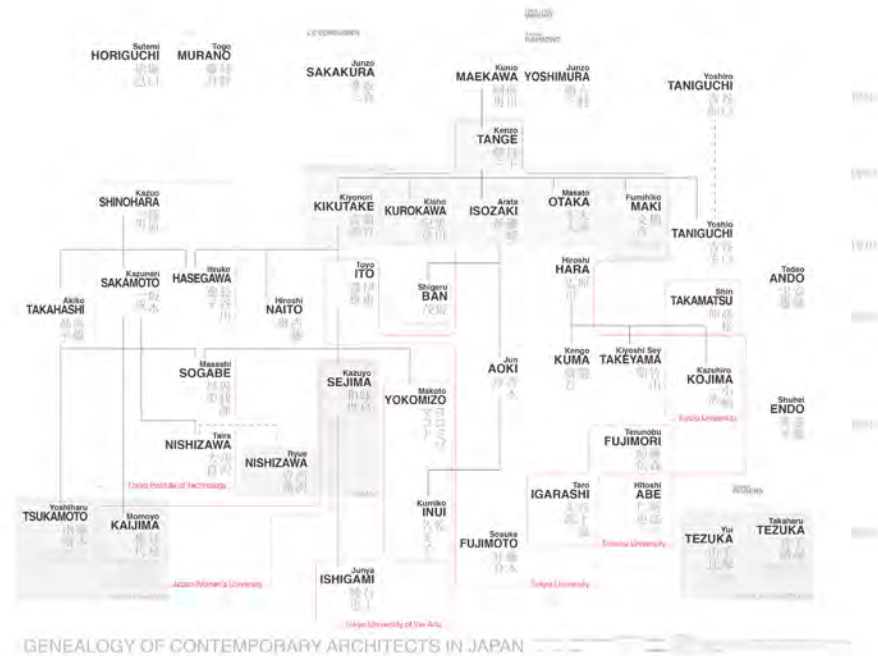


JAPAN STUDY ABROAD

ARCH 2984 & 4984: Streets, Buildings, and Gardens: Japanese Culture in Constructed Artifacts

2016 Wintermester 2-week study abroad program with undergraduate and graduate students in Architecture, Landscape Architecture, Interior Design, and Industrial Design

The course offered an opportunity to see firsthand, under the guidance of a faculty born and raised in Japan, the influences that traditional Japanese architecture and landscape has had on the contemporary Japanese architecture. The students observed and began to identify how the Modern Japanese architects, following the destructions of World War II, endeavored to reconstruct Japan by reexamining the European Modernism and generating an architectural language that was distinct from that of the West. Upon return, the students organized an exhibit in the school lobby to present their discoveries and insights to foster discussions in the school.

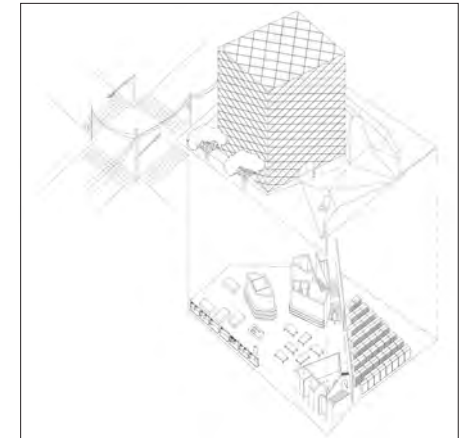
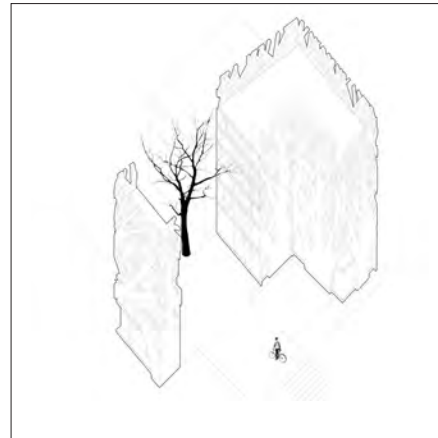


Reem Bukhamseen
 Yifang Deng
 Matthew Dougan
 Kevin Gilmour
 Teresa Hamm
 Brian Heller
 Saron Iasu
 Esther Jeong
 Zichen Liu
 Landy Niu
 Natsumi Oba
 Randall Rehlfuss
 Genesis Solano
 Andrew Stepka
 Marilou Veillard
 Linjie Wang
 Matthew Young

Faculty Leader: Aki Ishida

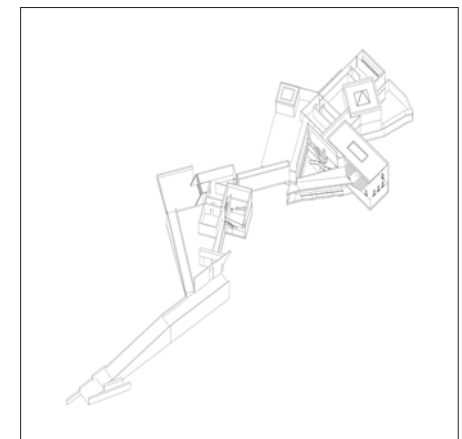
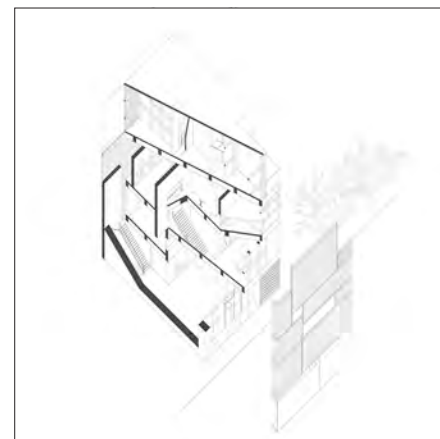
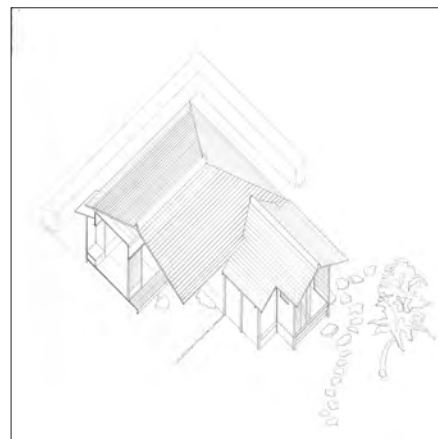
Japan Study Abroad
 Wintermester 2016
 March 3 to 5, 2016

Congli Lobby
 Tea from Kyoto served
 Thursday 4 to 5pm and Friday 12 to 1pm

Clockwise from above

Exhibit poster by Linjie Wang, 3rd year B. Arch
 Reem Bukhamseen, 2nd year B.S. Interior Design
 Matthew Dougan, 2nd year B. Arch
 YiFang Deng, 3rd year B. Arch
 Landy Niu, 3rd year B. Arch
 Esther Jeong, 4th year B. Arch
 Marilou Veillard, 2nd year M. Arch III



STUDENT RECOGNITIONS

(These recognitions were received as students in my studio)

Ge Zhou (B.Arch 2017, student in 2nd year and thesis year studios and advisee for this grant)

- 2016 ACC Creativity and Innovation Fellowship, \$2,000 grant for "Probing medical architecture: A study of human-centered design"

Nevin Ounpuu-Adams (B.Arch 2017, student in 2nd year studio and advisee for this scholarship)

- 2014 University Honors Sophomore Scholarship, \$3,500 for self-designed travel program to study mass housing architecture in Tallin, Estonia

Forrest Bibeau (B.Arch 2016, student in 2nd and thesis year studios)

- 2016 Henry Adams Medal for the highest ranking student in the graduating class of 87 students
- 2016 Phi Kappa Phi College Medallion for the highest ranking student in the College
- 2016 Finalist for Pella Thesis Prize (5 out of 87 students)
- 2015 Institute for Creativity, Arts, and Technology Science, Engineering, Art and Design Student Grant
- 2015 'Best of School' award in Virginia AIA Student Competition

Bryce Beckwith (B. Arch 2015, student in thesis year studio)

- 2015 Matthew Krahe Fellowship awarded for outstanding collegiality and service to the school

Nicholas Coates (B.Arch 2015, student in 2nd and thesis year studios)

- 2015 SOM Prize, \$50,000 awarded to a single undergraduate or graduate architecture student in the country
- 2015 Henry Adams Medal for the highest ranking student in the graduating class of 89 students
- 2015 Phi Kappa Phi College Medallion for the

highest ranking student in the College

- 2015 Alpha Rho Chi Medallion for Outstanding Leadership
- 2015 Finalist for Pella Thesis Prize (7 out of 89 students)

Carolina Cohen Freue (B.Arch 2015, student in thesis year studio)

- 2015 Finalist for Pella Thesis Prize (7 out of 89 students)

Emily Hagan (B.Arch 2014, student in thesis year studio)

- 2015 Finalist for Pella Thesis Prize (4 out of 94 students)

Hanna Cao (B.Arch 2013, student in thesis year studio)

- 2013 Henry Adams Certificate awarded to second highest ranking student in the graduating class

STUDENT CAREERS

(These are limited to students whom I had in studios, not lecture or seminar courses)

Corey Crist (B.Arch 2017)

Summer intern at Selldorf Architects, New York

Siyu Zhang (B.Arch 2017)

Summer intern at Kengo Kuma & Associates, Tokyo

Forrest Bibeau (B.Arch 2016)

Architectural Designer at The Miller Hull Partnership, Seattle

Abigail Allen (B.Arch 2015)

Architectural Designer at Kieran Timberlake, Philadelphia

Carolina Cohen Freue (B.Arch 2015)

Junior Architect at Steven Holl Architects, New York
Summer intern at Rogers Partners, New York
Summer intern at James Carpenter Design Associates, New York

Justin Dennis (B.Arch 2015)

Full-time intern architect at Olson Kundig, Seattle

Emily Hagen (B.Arch 2014)

Architectural Designer at Mithun, Seattle

Hanna Cao (B.Arch 2013)

M.Arch graduate from University of California, Berkeley

Tyson Phillips (B.Arch 2013)

M.Arch candidate in SUPRASTUDIO at University of California, Los Angeles
Architectural Designer at Morris Adjmi Architects, New York

TEACHING EVALUATIONS

(All comments submitted anonymously)

ARCH 4515 Architecture Design V, Thesis

(every semester from spring 2012)

"With a thesis, the study should be one chosen and explored by the student, with the professor providing guidance and a careful prod here and there to allow the student to get the most out of the year of study. Aki was phenomenal in this regard. She allowed me to learn an incredible amount by knowing when to intervene and question and just as importantly, when not to." (2015)

"I appreciated all the dialogue and conversation we had whether it be about studio and thesis related, or if it was trying to figure out how to tackle the job hunt. I think she excels in her ability to bring her knowledge of the profession to an academic level." (2014)

ARCH 2015 Architecture Design II

(every semester from spring 2012)

"She is very organized and has a degree of professionalism that I respect very much. I feel she never let her personal feelings get in the way of how I think about architecture. Looking around at other studios, it is sometimes easier to tell which professors have influenced their students in a way which might hinder them from exploring past a different style. I think Aki's approach to teaching made my personal development grow on its own which I know will help me in the later years." (2016)

"She provided feedback in a way that didn't guide me straight to an answer but offered ideas/thoughts that made me think more deeply about things I may not have thought about." (2015)

"I really appreciate the push that this class gave me to further my work and it has really made me more interested and excited about architecture as a whole. I really enjoy it when Aki gets a book or two out from the library and shares something from it with us. These are some of the most exciting moments for me. It

allows you to look at your work in a different way and helps you understand what is most exciting to you and then apply it." (2015)

"Aki's approachability helped create a learning atmosphere that felt less student-teacher and more person-to-person, something that made it easy to ask for advice and help without worrying about having your work torn apart or being scrutinized." (2014)

"Critical advices and extremely helpful tips ALL the time. A lot of references, interesting readings. From ideas, model making, photography, drawing, she fosters this environment from which everybody learns from each other. She also emphasizes the role of the thesis students, and I think that is extremely beneficial." (2013)

ARCH 2984 Streets, Buildings, and Gardens: Japanese Culture in Constructed Artifacts

(a new study abroad program in Winter 2016. Included undergraduate and graduate students in architecture, landscape architecture, industrial design, and interior design)

"She provided readings and films that promoted discussions between classmates that we brought back into the realm of architecture and the Japanese culture. Taught us cultural norms that helped us during the travel period to help us transition into Japanese society. Told us what to look out for while traveling that would help prepare us for writing the paper and the exhibition."

"Professor Ishida's immense amount of preparation for this class was evident throughout. We as students were consistently amazed at how much we were able to see in Japan in such a short period of time. The professor's passion for the sites we saw showed through the amount of learning we were able to do as well."

"I have never been on a study abroad before, but after this trip I see the value of these courses. This course

in Japan has helped me see a new culture, a new way of living, and most importantly, view Japanese architecture a completely different way. Having our professor Aki gave us the opportunity to see Japan through her lens. I hope this course continues, to benefit other students just the way it has benefitted me."

ARCH 2044 Building Materials

(every fall from 2012 to present)

"She brought materials to class to show us and relate to what we were discussing at that time. She showed numerous examples of buildings and structures during class, which really helped me to see how a specific material (or way of building) would look on a structure. Ultimately she used multiple resources (field trips, group projects, videos, showing us materials, etc.) to teach us, and it helped greatly!" (2015)

"Aki is an amazing professor. I am so glad I took this class from her. She does an outstanding job of using technology exceptionally well in her presentations. The samples she brought into class, the videos in her power points, and the architecture projects she features were fantastic! She also does a great job of speaking from personal experience during her career. I loved this class. It is a shame that it only lasted 50 minutes." (2014)

"She was open to our interest and further exploration. If we wanted to get more information on a topic, she was more than willing to work with us to connect us with the right material or people." (2013)

"I really enjoyed your class because it took materials beyond facts and figures. The readings you assigned not only provided a commentary on innovative uses of materials, but also theoretical approaches towards material decisions that provided me with a stronger grasp on my study and practice of architecture." (2012)