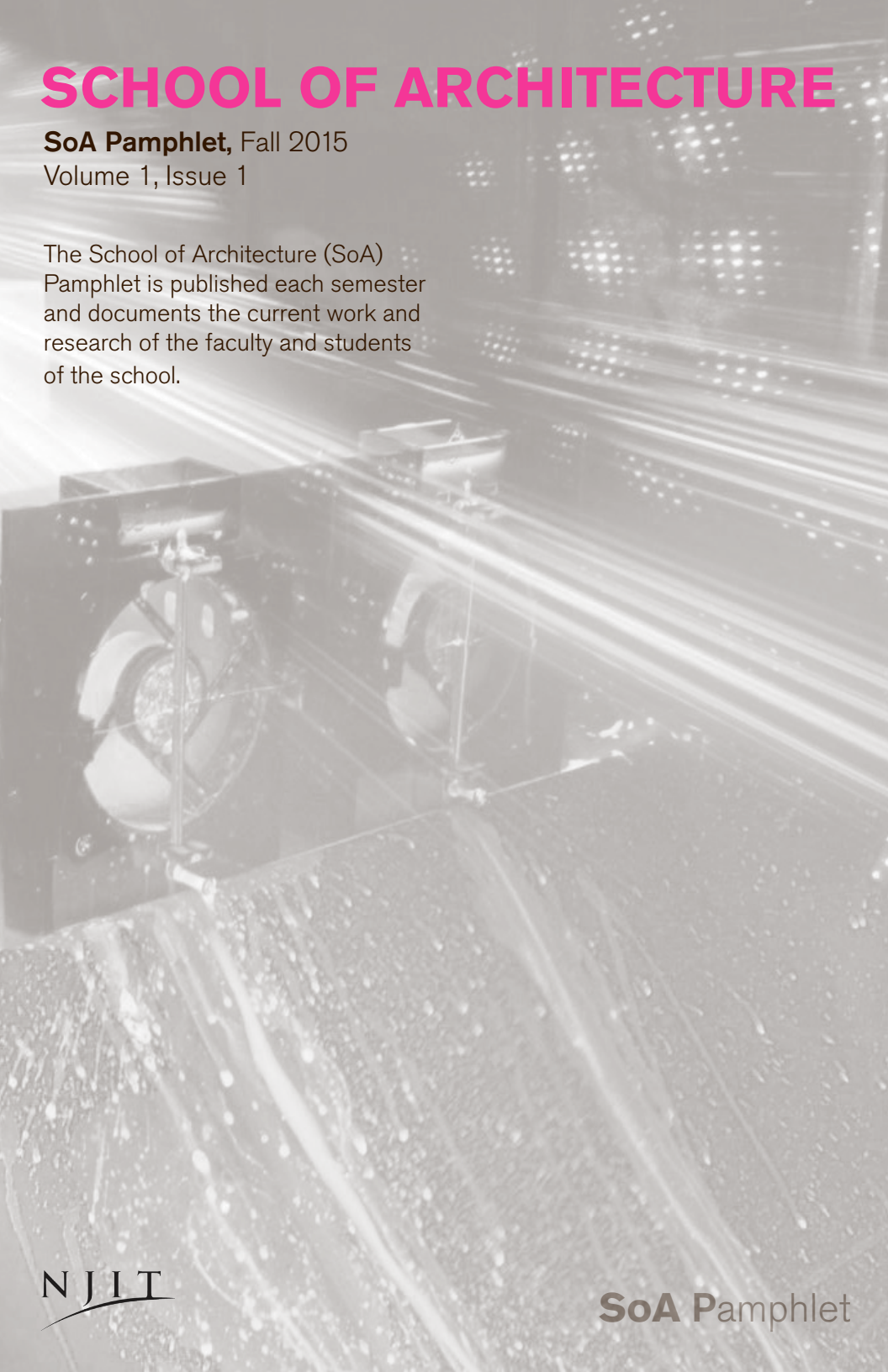
SCHOOL OF ARCHITECTURE

SoA Pamphlet, Fall 2015
Volume 1, Issue 1

The School of Architecture (SoA) Pamphlet is published each semester and documents the current work and research of the faculty and students of the school.



NJIT

The School of Architecture is an ambitious design school situated at NJIT, New Jersey's premier STEM institution, located just minutes from New York City. Our faculty and students have tremendous opportunities for broad engagement with the world through both conventional and experimental projects. Increasingly, faculty members are undertaking multidisciplinary research and applied design projects across the globe with students, engaging notions of architecture from the nano-scale to the urban and the regional, while adopting diverse modes of inquiry and work-flow.

As a way of stocktaking such a varied and growing body of work, we are very pleased to present Volume 1, Issue 1 of the School of Architecture Pamphlet, or SoAP. The pamphlet will be published each semester and showcase faculty, student, and alumni achievements of note, as well as other features of interest relating to the university.

Herein you will find international buildings and design projects, awarded competition entries, sponsored research, as well as books or other writing projects. I hope you will enjoy learning about these accomplishments and join me in congratulating our community on their continued success.

Richard Garber, AIA
Director

Cover:

Interactive Soap Bubble Installation, (2013)

Course: Interactive and Reactive Environments
Students: Leland Greenfield and Edward Perez

NJIT

SoAP

Initiator
Richard Garber

Designer/Editor
Larissa Eteson

Consultant
Alessandro Orsini

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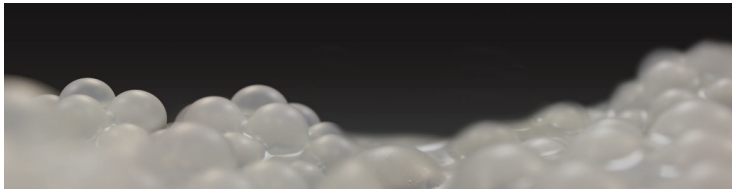
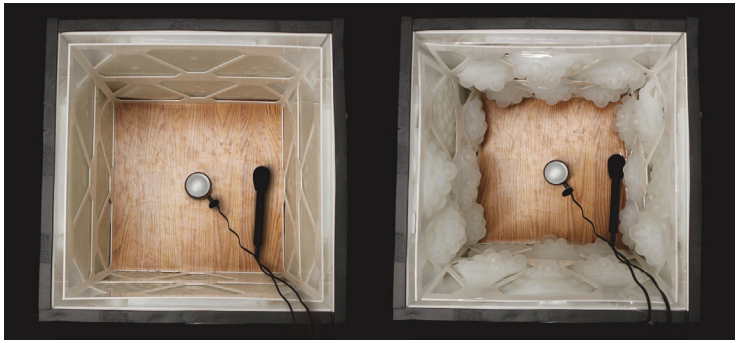
SOFT ROBOTICS



***Soft Acoustic Tile**, (2015)*

Credit: Material Dynamics Lab | Ryan Berg, Paulo Guerreiro, Jesus Vasquez

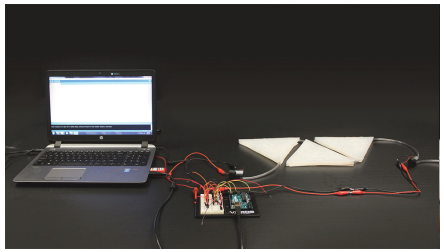


***Soft Acoustic Tile - Test Environment,** (2015)*

Deactivated and Activated System Credit: Material Dynamics Lab | Ryan Berg, Paulo Guerreiro, and Jesus Vasquez

Assistant Professor **Martina Decker**'s Spring 2015 studio allowed students to engage in soft robotics and emergent material research.

Robots in architecture have enjoyed great attention in recent years due to their advanced fabrication capabilities and they have been celebrated as the ultimate flexible manufacturing tool. Going beyond the current predominant approach of robotic assembly in architecture is the integration of robotics into the constructed environment. Adopting these elements into architecture for active and reactive environments



***Soft Acoustic Tile | Arduino Set Up,** (2015)*

Credit: Material Dynamics Lab | Ryan Berg, Paulo Guerreiro, and Jesus Vasquez

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***The Soft Frit Prototype**, (2015)*

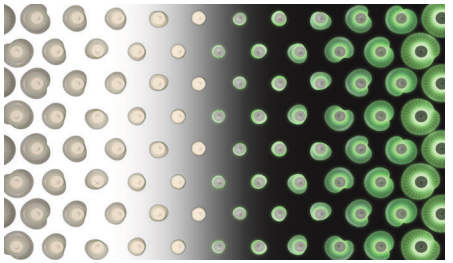
The prototype expands and contracts to modulate the transparency of architectural glazing to control solar gain, transmitted light, views, and privacy. Credit: Material Dynamics Lab | Jorge Cruz, Lauren McLellan, Anthony Morello, and

***Soft Frit, Actuator Design,** (2015)*

Credit: Material Dynamics Lab | Jorge Cruz, Lauren McLellan, Anthony Morello, and Anthony Samaha

can afford us a better control of the buildings' performance and user satisfaction. Especially the emergent study of soft robotics is contributing to the acceleration of this trend.

Decker's work aligns with current research being conducted at the Department of Physics as well as the Department of Chemistry and Environmental Science at NJIT. It is contributing to the development of flexible electronic devices and sensors. Her Spring 2015 studio had the unique opportunity to discuss these new inventions with the researchers who created them and integrated them into their own explorations.



The pneumatic actuator design of Soft Frit features photo-luminescent pigments that emit light in dark conditions.

ESTUDIO.ENTRESITIO'S #HOUSE#1.130

#House# 1.130, *(2014)*

It is an inhabitable porous enclosure, made by super-imposition of multiple layer with different density and permeability and therefore, different degrees of interiority.

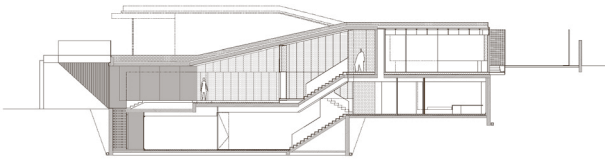
Maria Hurtado de Mendoza, Estudio. Entresitio

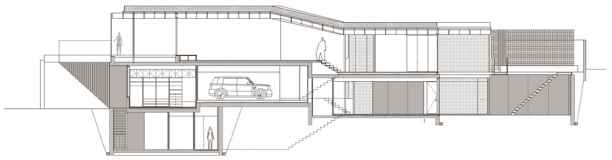
Associate Professor and Third Year Coordinator, **Maria Hurtado de Mendoza**'s firm, Estudio.Entresitio, received multiple awards for her project in Madrid, #House#1.130,

The awards include: the Design Faculty Award from the Association of Collegiate Schools of Architecture ACSA, 2014-2015 Architectural Education Awards, (January 2015); Honor Award from Boston Society of Architects, BSA's 2014 Housing Design Awards (January 2015); Listed in the 50 best houses of 2014 by ArchDaily, (December 2014); Best cladding, Azure Top 10 Houses, (December 2014); Winner of the 2014 WAN house of the year (October 2014); First Prize, Premio COAM 2014; and Best built Project in Madrid, (October 2014).

The project is a single-family house, but quite a large one, with over 5,000 square feet of space. The house's site is narrow and long, and sloped south with two different schemes superimposed one on top the other; a longitudinal one, based on spatial "forking", and the lower, based on a hand-finger-like configuration. As a result, it is a fractured mass, ruled by the rhythm of the roof structure.

url: www.entresitio.com

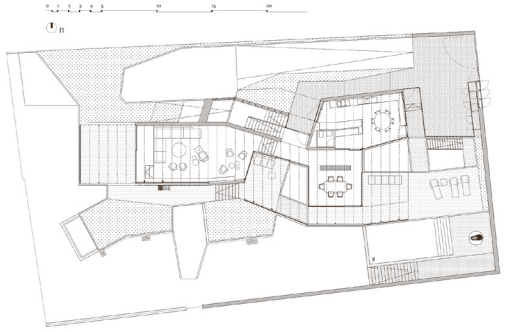




#House# 1.130, *(2014)*

Longitudinal sections

Maria Hurtado de Mendoza, Estudio. Entresitio



#House# 1.130, *(2014)*

Level 1 Floor plan

Maria Hurtado de Mendoza, Estudio. Entresitio

MIP STUDENTS ACCEPT GLOBAL SCHINDLER AWARD IN CHINA

Students of the MIP studio at the awards ceremony in Shenzhen, China

Associate Professor **Georgeen Theodore**'s Master of Infrastructure Planning (MIP) studio from Fall 2014 visited Shenzhen, China for five days as one of 12 finalists for the Global Schindler Award. The team ultimately was awarded the first honorable mention, the fourth prize in a field of over 250 international entries.

The design competition, sponsored by Schindler, called on top architecture and design students from around the world to present innovative mobility design concepts that would engage the specific spatial condition of Shenzhen, a special economic zone (SEZ) situated between mainland China and Hong Kong.

Over the course of six months, the students and their professor created a design which focused on the social, economic and environmental challenges presented by globalization; and delivered strategies to make the current urban landscape more livable, sustainable, and equitable.

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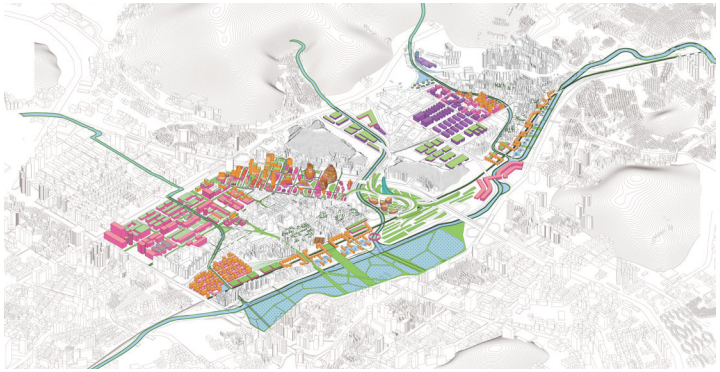
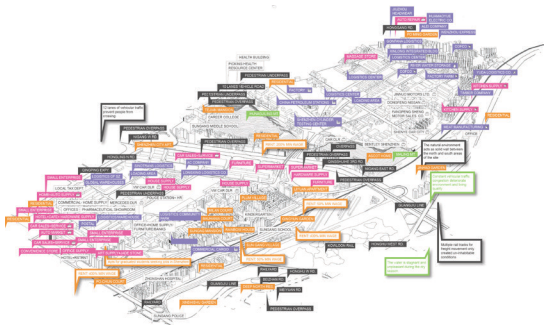


SEZ to EZX: Shenzhen Xroads, *(2015)*

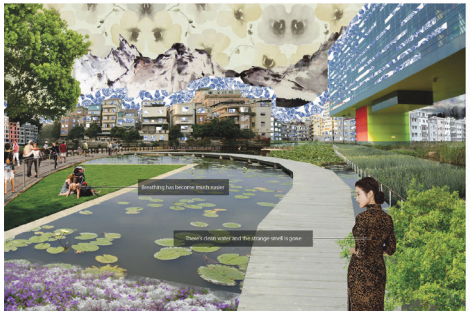
Axon and Tag Map of Sunngang-Qingshuihe (SQ)

Gabriel Antonio Canizo Perez, Vincess Jasmine E. Dimayuga, Grace R. Dong, Morgan Jones, Lauren E. Martin, Matthew J. McCabe, Monali V. Patel, Milena Popow, Matthew T. Potter, Eka Pramuditha, Esther Zipori



SEZ to EZX: Shenzhen Xroads, *(2015)*

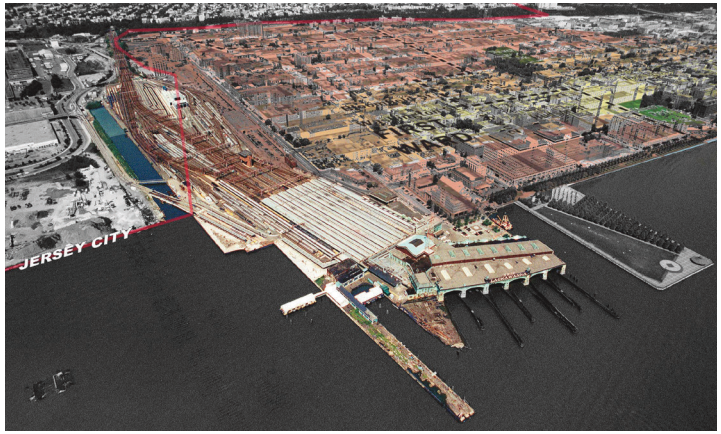
Collage Compilation



NJ TRANSIT FUNDS DESIGN RESEARCH

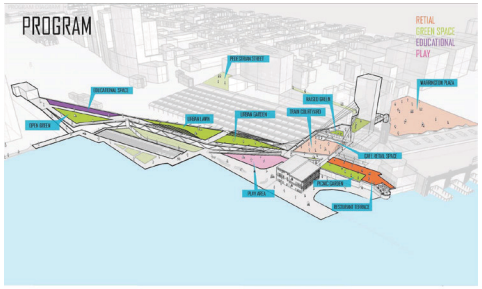
Existing Hoboken Terminal, Bird's-eye view, (2015)

Alexander Bruno, Jack Coyne, Genesis Cuevas, Larissa Eteson, Tony Giard



Perspective Section, (2015)

Alexander Bruno, Jack Coyne, Genesis Cuevas, Larissa Eteson, Tony Giard



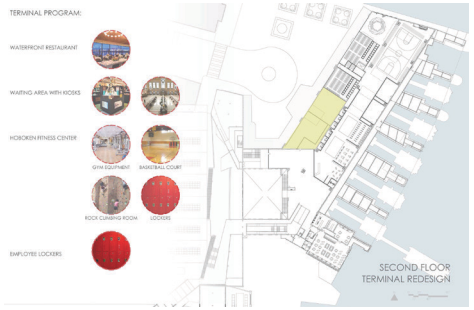
Axonometric Diagram, (2015)

Vanessa Batista, Ryan Eden, Morgan Jones, Joseph Scoccimarro-Greiner

Through a generous grant from NJ TRANSIT, the School of Architecture offered a Special Topics Design Studio that engaged the resiliency and expansion of Hoboken Terminal. The studio was taught by SoA Director, **Richard Garber**, with **Leo Argiris**, **Seth Wolfe**, and **Chris Taylor**, all of the engineering firm, Arup and adjunct faculty member **Brent Klokis**. The grant was administered for the school by the Founding Director of the Center for Resilient Design at NJIT, **Thomas Dallesio**.

The Hoboken Terminal, serving as a multi-nodal center with New York City access via train, PATH, and ferry; Hudson County access via PATH and Hudson-Bergen Light Rail; and broader state access via NJ TRANSIT trains, was severely compromised by Superstorm Sandy requiring the resilient adaption of the building. The studio investigated further resilient measures while expanding it with a new annex.

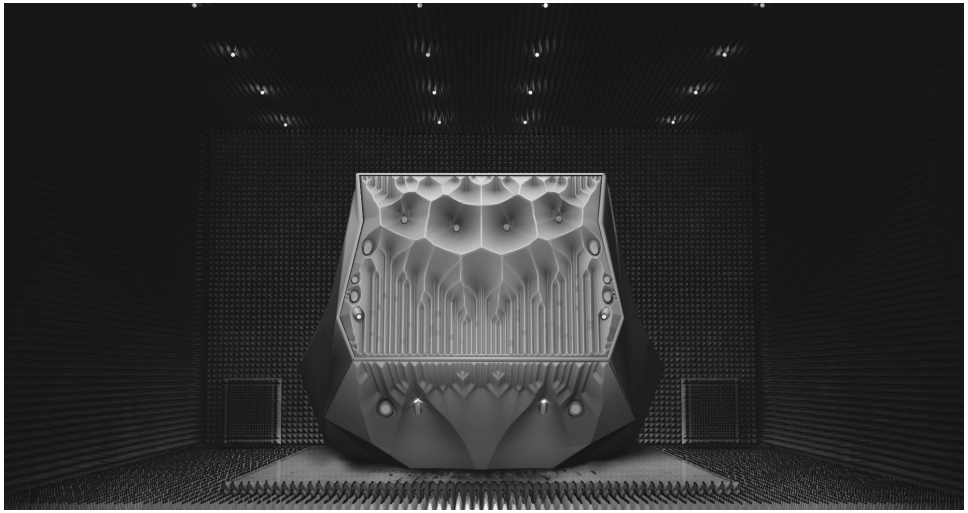
Above and beyond current recommendations to strengthen the historic Hoboken Terminal and transit facilities, the Special Topics Design Studio proposed strategies and solutions to better protect NJ TRANSIT's customers and capital assets while promoting opportunities for monetizing operations. Through an agenda of design research and experiential learning, NJIT students and faculty investigated in a systemic way various approaches to bettering the historic structure.



Proposed Program for Historic Terminal, (2015)

Jacob Chacko, Benjamin Kinghorn, Kristina Koon, Emilie Laforge

CERAMIC PROTOTYPES



***Soundscape: Acoustical Ceramics, Sound Chamber**, (2015)*

The architectural envelope comprises a two-part assembly using a precast concrete shell that is laminated with two varieties of acoustical ceramic tiles. The first type are vertical press molded ceramic runners, (vertical ribbing) which can be infilled with either perforated or solid sintered ceramic tiles (facing image) to meet the needs for absorption or diffusion.

Rhett Russo

Associate Professor and First Year Coordinator **Rhett Russo**'s ceramic prototypes including designs for ceramic Heap Tiles and the T-Stool will be featured in an exhibition entitled, 'Material Matters'. The exhibit will feature ceramic work that has been developed as part of a grant from the New York State Council for the Arts (NYSCA). The exhibition examines the ways that new materials are emerging through the synthesis of computation and material behavior. The exhibit will be held September 28th to November 8th, 2015 at the Cambridge Gallerie in Toronto Canada.

The acoustical ceramics of his firm, Specific Objects, will be featured in a upcoming book entitled FLUX, that examines how materials are being designed to respond to dynamic environments.

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***Heap Tile, Sintered Ceramic Prototype**, (2015)*

Heap Tiles have been prototyped using a process developed by Rhett during a research residency at the European Ceramic Workcenter. The tiles are the result of partnering contemporary software tools with new forms of ceramic chemistry.

Rhett Russo

Rhett will also be a panelist, where he will present his design work at the SCIARCNOW Symposium held September 25-26 in Los Angeles. The panel he will be participating in is entitled: Aberrations, Synthetics and Weird Nature.

***Heap Tile, Sintered Ceramic Prototype**, (2015)*

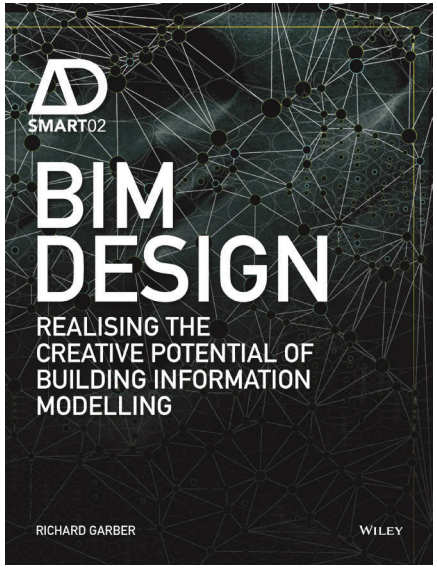
Each tile is produced using a perforated plate with holes and granular ceramic. As it drains through the holes the grains self-organize. Free of the need for molds an unlimited number of tiles can be produced to meet precise specifications.

Rhett Russo

BIM DESIGN'S CREATIVE POTENTIAL

***BIM Design**, (2014)*

Author: Richard Garber
Cover Art: Henry Grosman

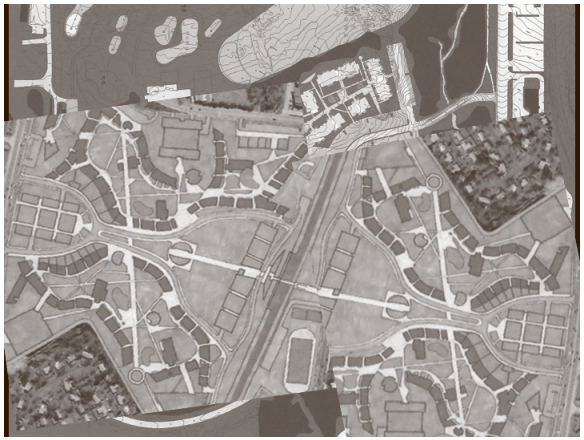


The NJIT School of Architecture Director and Associate Professor **Richard Garber** published a book through John Wiley & Sons titled *BIM Design: Realising the Creative Potential of Building Information Modelling*, (2014).

BIM Design seeks to answer how Building Information Modeling expands, rather than constrains, a designer's role in building delivery. The book focuses on architects and their work-flows as they move from design to construction. The book sets out to demonstrate how innovative firms exploit BIM technologies to shift design away from the utilitarian problems of construction.

Garber provides projects, at a variety of scales, to illustrate the creative application of BIM, showcasing work by firms executing projects from around the globe including SHoP Architects, Morphosis, Populous, Reiser + Umemoto, Gensler, UNStudio, and Garber's own firm, GRO Architects. The projects illustrate how day-to-day design operations are shaped by the increasingly generative and collaborative aspects of these new digital tools.

URBAN "STRING" THEORY



A speculative extension for the growth of Princeton using string theory.

Michael Mostoller

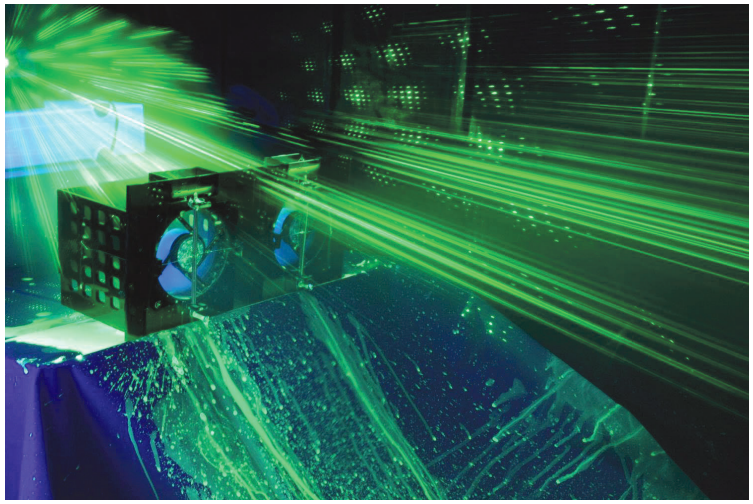
Distinguished Professor **Michael Mostoller** who serves as Second Year Coordinator, recently designed a series of speculative expansion projects using a concept he calls "string" theory, which he invented as an "urban pattern for the neo-sport generation".

Mostoller believes architects and planners should adopt an urban pattern that is both open enough for the excessive recreation of children, adults and the elderly; while closed enough to create an urban, town-like feeling. Mixed in with the strings are business incubators, offices, medical facilities, retail opportunities, religious facilities, cultural activities, schools, recreation facilities, playing fields, and mass-transit connections.

Conceptual project for the extension of the train station in Elizabeth - neighborhood 'quanta' are introduced - channeling the stream running throughout the site into reflecting pools and plazas.

Michael Mostoller

INTERACTIVE ENVIRONMENTS

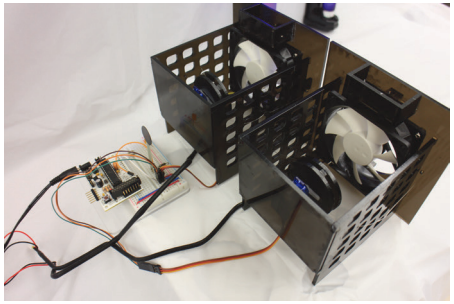


***Interactive Soap Bubble Installation**, (2013)*

The installation was designed to respond to ambient sound levels, or it could also be used for remote interactions with microphones as sound sensors to create elaborate soap bubble formations.

Leland Greenfield and Edward Perez

(This made the cover!)

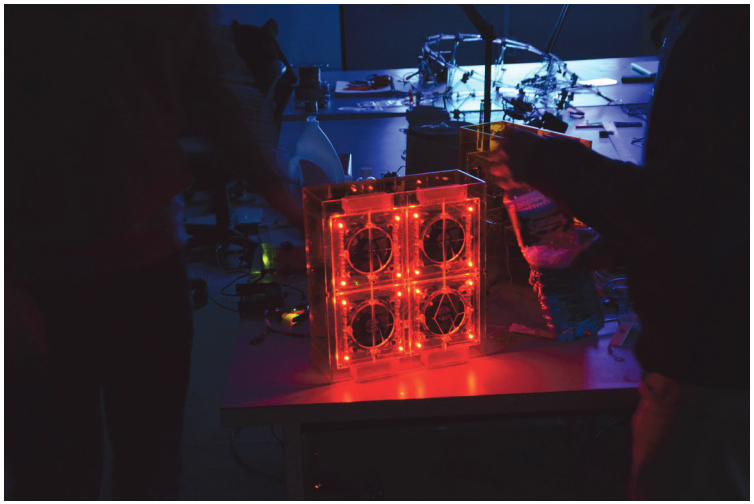


***Interactive Soap Bubble Installation**, (2013)*

Leland Greenfield and Edward Perez

Associate Professor **Andrzej Zarzycki** taught a course titled "Interactive and Reactive Environments" in Fall 2014 which initiated advanced research in digital technology. Such technology increasingly, and more and more seamlessly, bridges the physical landscape with virtual environments to form coherent narratives that are visually rich and emotionally engaging. Digital landscapes are becoming more interactive and reactive environments reflective of human relationships with each other. They are not merely spaces that we inhabit, but also participatory, impacting and reformulating the roles we play within them.

The course investigated contemporary attitudes toward digital public spaces, from mainstream media façades, interactive installations, and mobile apps to guerrilla-like techniques such as tactile media, activist gaming, and electronic civil disobedience.



***Interactive Soap Bubble Installation**, (2013)*

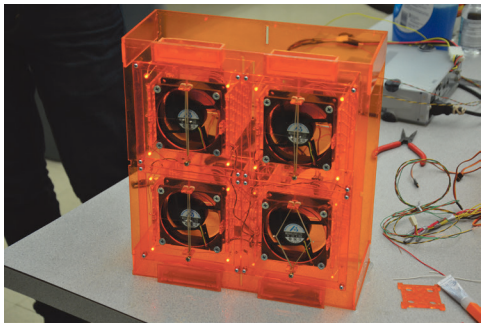
The development process involved constructing multiple working prototypes and testing kinetic and electronic assemblies. Each subsequent version focused on refining the prototype performance and soap flow, and fine-tuning sensors and actuators.

Leland Greenfield and Edward Perez

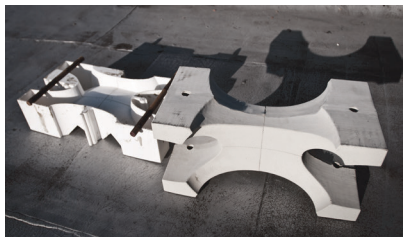
Students chose to develop a design for an interactive/reactive space, object, installation or an app. The course encouraged collaborative work between students of varying experience levels in digital media with the intent of fostering dialogue between students from different degree programs.

***Interactive Soap Bubble Installation**, (2013)*

Leland Greenfield and Edward Perez



THE BILLION OYSTER PAVILION



***Billion Oyster Pavilion**, (2015)*

Concrete "Reef Ball" components

Henry Grosman, BANG Studio

***Billion Oyster Pavilion**, (2015)*

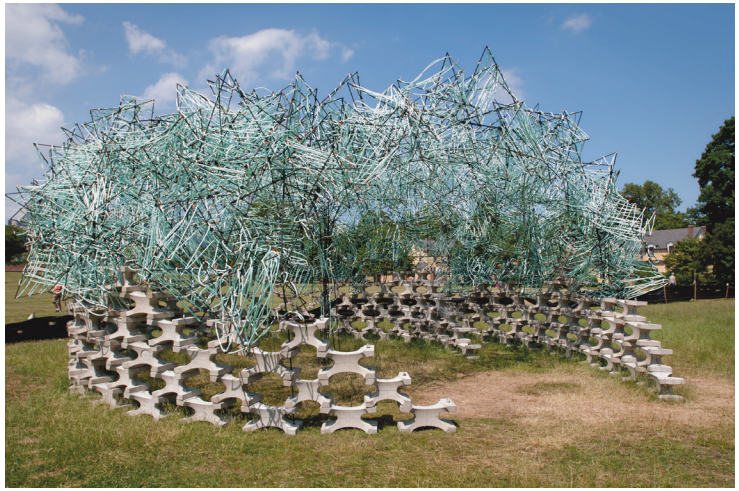
Rebar triangles and woven marine line form "Reef Condos", site assembly photo

Henry Grosman, BANG Studio

Henry Grosman, Adjunct Instructor and Second Year co-coordinator, completed the Billion Oyster Pavilion with his firm, BANG Studio, joining two of Governor's Island most exciting enterprises: Figment's City of Dreams and The New York Harbor School's Billion Oyster Project. The pavilion was constructed entirely from materials used by the Billion Oyster Project (BOP).

For the duration of summer 2015 the Billion Oyster Pavilion hosted various events related to the Figment arts festival. In the shade of the pavilion's filigree canopy, visitors to the island enjoyed performances, lectures and concerts. The curving geometry invited visitors in to linger and sit in the grass.

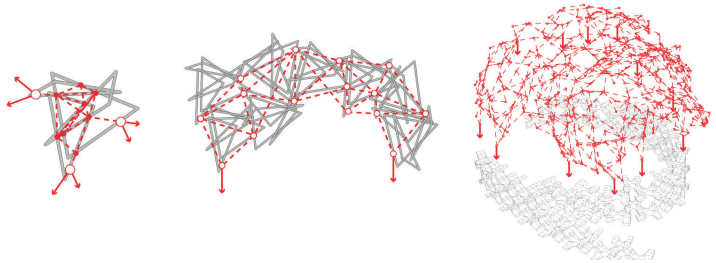
At the end of the season, all of the materials used to construct the Billion Oyster Pavilion were be reused directly on Governor's Island by the Harbor School's Billion Oyster Project in their effort to introduce one billion

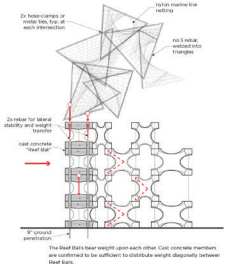


***Billion Oyster Pavilion**, (2015)*

Completed pavilion

Henry Grosman, BANG Studio





***Billion Oyster Pavilion**, (2015)*

Structure Assembly Diagrams

Henry Grosman, BANG Studio

oysters into New York's waterways by 2030. The woven canopy is constructed with over 600 steel triangles, which the BOP will use to fabricate "oyster condos," steel cages filled with recycled oyster shells used to build new reefs. The concrete "reef blocks" at the base of the structure can be covered with "oyster spat" grown at the Harbor School, and dropped directly into the water. The miles of marine line weaving through the canopy is easily re-purposed. By reusing materials on the island, Grosman eliminated the need to transport them a second time.

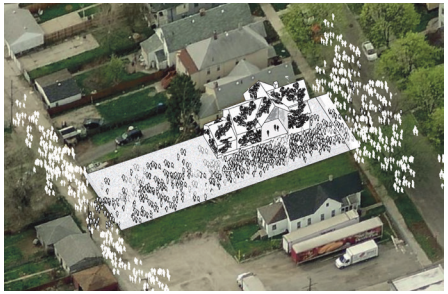
In addition to providing material, the pavilion brought publicity and awareness to the Billion Oyster Project. The public has the opportunity to learn about the work being done by the BOP in a fun and beautiful setting. The provocative structure challenges visitors to learn more about the important work being done on the Island.

ABANDONED HOUSE TO ARTS SPACE

***House Opera**,*
(2015)

Interior Demolition Process

Marcelo López-Dinardi



***House Opera**,*
(2015)

Aerial View with Side Opening

Marcelo López-Dinardi

Adjunct Instructor and Third Year co-coordinator, **Marcelo López-Dinardi** completed a project in Southwest Detroit, Michigan that transformed an abandoned house into a performance and arts space.

The project, called House Opera, was initiated by Mitch McEwen through a Knight and Graham Foundation grant, and by funding from individual donations and by the Michigan Economic Development Corporation. The project aims to be a catalyst, rethinking the urban condition of abandoned properties in Detroit by reconfiguring them and removing all the infrastructure that identifies them as houses. The project ranges from hands-on site clearing, design build, construction and events programming involving local participants. House

***House Opera**,*
(2015)

Rendering

Marcelo López-Dinardi

Opera was inaugurated in July 24-25, 2015 with Sigi Fest, a spirit and cosmos festival with performances, readings, live painting and music among others.

url: www.houseopera.us.

***House Opera**,*
(2015)

Audience On Stage

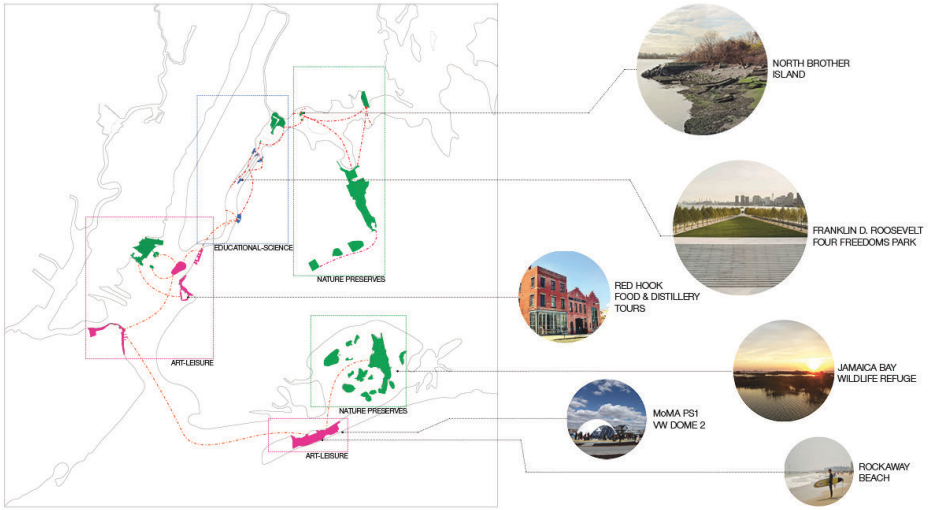
Marcelo López-Dinardi

***House Opera**,*
(2015)

Transformed View from the Street

Marcelo López-Dinardi

EAST RIVER HYDROLOGY ROUTE



New Routes: Stitching the Edges with Water, Sky, & Green, (2015)

Alessandro Orsini, Architensions

Alessandro Orsini, partner of Architensions and Adjunct Instructor, researched routes of escape within and outside of New York City's edges using natural habitats to inform routes for the Van Alen Institute.

As part of the research focused on urban fabric and social behaviors, the challenge was to identify and develop new routes of escape within and outside the city that would not depart from using the natural elements as the main infrastructure. Orsini identified the East River corridor hydrology as the main organizer of new trajectories to experience two important natural habitats: the coastlines and the green system.

Nature Preserves - Upper East River Section, rendering, (2015)

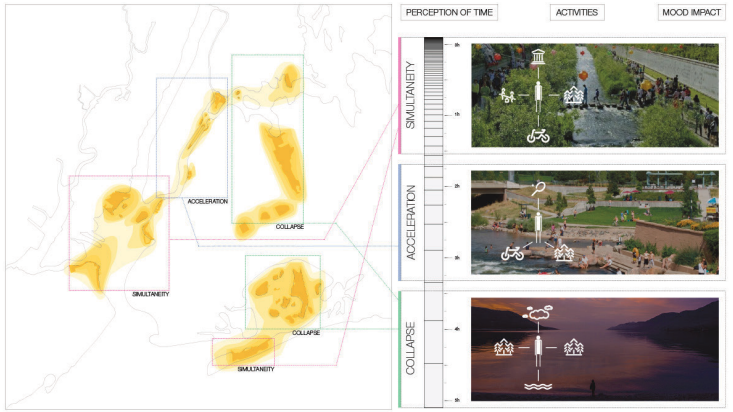
Alessandro Orsini, Architensions

Education & Science - Lower East River, rendering, (2015)

Alessandro Orsini, Architensions

The design for the network of routes connects the Upper New York Bay area through the East River with Long Island Sound to the north, and the Rockaways and natural reserves of Jamaica Bay to the south. Through the water, visitors access an archipelago of small islands that populate the East River corridor becoming points of attraction as parks and open-air art exhibitions. Green areas nestled at the border between Brooklyn and Queens complete the path connecting the north with the south.

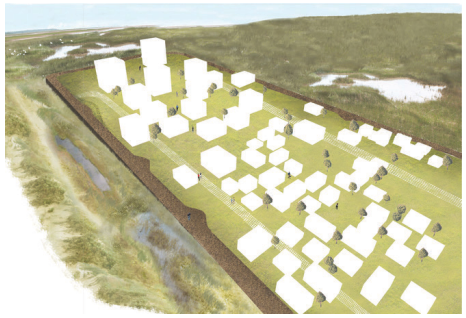
url: http://architensions.com/projects/vai-escaperoutes-newit-ineraries-sky-water-green/



Duration as Hierarchy: An Experience Through Space & Time, (2015)

Alessandro Orsini, Architensions

BUILDING FOR FUTURE WEATHER



Resilient Collective Housing,
(2015)

Design project by Taryn Wefer and Naomi Patel. Instructors: Keith Krumwiede and Martina Decker

Associate Professor **Keith Krumwiede** wrote an article for The Conversation, an independent news and commentary site that sources content from the academic and research community.

The article, titled "We need to change how and where we build to be ready for a future of more extreme weather", discusses problems and solutions for building resiliency in flood-prone regions. Krumwiede argues that rather than continuing to encourage shortsighted development practices, we should prioritize the development of denser, more compact communities. Such communities offer economic, environmental and social benefits that make them inherently more resilient than sprawling low-density developments. With their smaller footprint, such communities have lower infrastructure costs per capita and provide for the preservation, or restoration, of natural habitats and storm-buffering wetlands. When properly designed, such developments balance the individual needs of each household with the collective needs of the larger neighborhood, encouraging a sense of mutual respect and responsibility that is critical to the resilience of the community.

url: http://theconversation.com/we-need-to-change-how-and-where-we-build-to-be-ready-for-a-future-of-more-extreme-weather-41713

FEMINISM & ARCHITECTURE

Gabrielle Esperdy speaking at the College of Architecture and Design at NJIT.

In April, Associate Professor **Gabrielle Esperdy** participated in the symposium *Feminism & Architecture, Part 2: Women, Architecture & Academia* at Parsons New School for Design with a talk called "Rethinking Representation in a Curated Age: An Ungentle Manifesto." This long-overdue gathering brought together educators who exchanged ideas about fair exposure, opportunity and support for one another and women students.

In March, her essay "A Parley of Historians; or, A Learned Society in Public" appeared in *Journal of the Society of Architectural Historians.*

In May she received the NJIT Alumni Association's Robert Van Houten Award for Teaching Excellence. She's the first CoAD faculty member to receive the award—and one of only three women to win it since 1970! Also in May, Esperdy published "Future Archive: Douglas Haskell's Architecture and Popular Taste" in *Places Journal*, her first piece as a featured columnist.

urls:

Places article:
https://placesjournal.org/article/future-archive-architecture-and-popular-taste/

Feminism & Architecture Part 2 video of event:
https://youtu.be/SvnR6seFJZw

PARC OPENS BOSTON RUNBASE

***Boston Runbase**, (2015)*

Will Prince, PARC

Photography courtesy of John Gillooly.

Adjunct Instructor **Will Prince**'s firm, Parc, completed the Adidas Runbase in Boston. The project combines an interactive museum, an experience-based retail component and a clubhouse complete with lockers and showers.

The Boston Runbase is a prototype retail experience located a few feet from the finish line of the iconic Boston Marathon. The experience is a collaborative effort between Adidas, one of the marathon's major sponsors, the Boston Athletic Association, the race's organizer, and Marathon Sports, the local running store. The store design takes advantage of the joint venture, becoming a new center for Boston's urban running scene. A new merchandise display system places state-of-the-art running gear in a historical context, alongside vitrines containing artifacts from the race's storied history. An interactive database and leader board turn Boston's runners into a community, making the base a natural place to start club runs, extending the store experience into the city. The store also features lockers, showers, and a recovery area for runners and finishers.

The firm is currently working on similar projects in Paris and Berlin.

url: http://www.parcoffice.net/

***Boston Runbase**, (2015)*

Will Prince, PARC

Photography courtesy of John Gillooly.

***Boston Runbase**, (2015)*

Will Prince, PARC

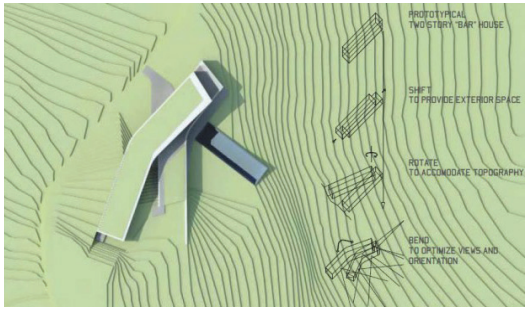
Photography courtesy of John Gillooly.

OOAA RECEIVES SARA NY AWARD

***Casa Trasanquelos**, (2015)*

Massing Diagram

Andrew Varela, OOAA



***Casa Trasanquelos**, (2015)*

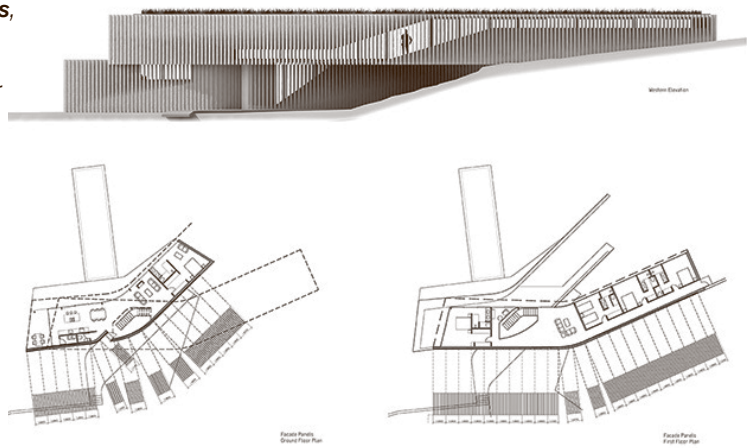
Exterior Rendering

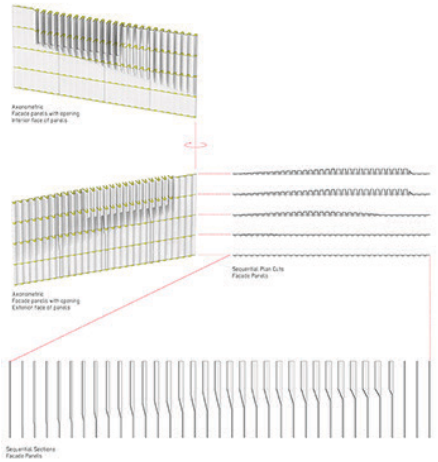
Andrew Varela, OOAA

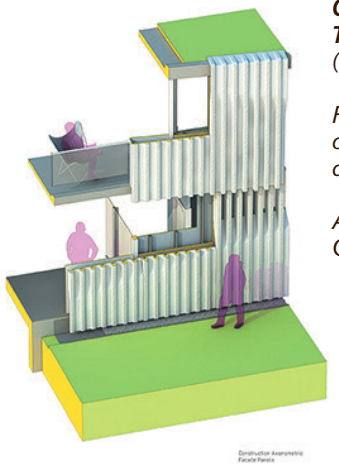
***Casa Trasanquelos**, (2015)*

Elevation and Floor Plans

Andrew Varela, OOAA







***Casa Trasanquelos**, (2015)*

Façade corrugation details

Andrew Varela, OOAA

Adjunct Instructor **Andrew Varela**'s firm, OOAA, won the SARA NY Award (Society of American Registered Architects NY Council) for the project Casa Trasanquelos in Galicia, Spain.

Giving figure to the ground, Casa Trasanquelos attempts to forge a direct relationship with its surrounding landscape while engaging in the transformation of the prototypical "bar" typology for a house.

The project is conceived as two bent tubular volumes – one stacked on the other – embedded into the existing slope of the site. The two tubes shift and bend to create exterior spaces, maximize the views and optimize orientation.

The house turns its back to the street with a massive, deep, corrugated façade that filters the views of the surrounding trees while providing privacy from the street. Conceived as a prefabricated cast wall with a varying depth of corrugation, the façade acquires a transformative quality as it responds to different performative requirements, whether they are programmatic, spatial, structural or iconographic. The corrugation is conceived to have a rougher, textured finish on the fixed outer face and a smoother finish it is varying inner groove.

url: http://www.oneofficearchitects.com/casa-trasanquelos-galicia/

ARCHITECTURE OF LOGISTICS

Jesse LeCavalier speaking at "5KL: Land Symposium", (2015)

Assistant Professor and Special Topics Coordinator **Jesse LeCavalier** presented his research on the architecture of logistics at a number of venues in recent months. He was part of a symposium hosted by the Architectural League of New York in conjunction with their project about resources and behavior: Five Thousand Pound Life.

LeCavalier also gave a lecture called "Walmart and the Architecture of Logistics" at the University of Toronto as part of the Daniels Faculty of Architectural Annual Lecture series. He participated in the international conference "After Empirical Urbanism" with his presentation, "Walmart Plots" and will be contributing to the forthcoming book of the same title.

LeCavalier presented new research on territorial form at the 103rd annual meeting of the Association of Collegiate Schools of Architecture (ACSA) where he also received the ACSA New Faculty Teaching Award. The jury for the national award, one of three given annually, commented on what they saw as a unique pedagogical approach and on the breadth of perspectives and modes of inquiry evident in his students' work.

url: http://jesse-lecavalier.com/

PRESERVATION AFTER SANDY

Susan Bristol, (2015)

Adjunct Instructor **Susan Bristol** gave two public lectures that included NJIT student work and research.

In March, she was a panelist and speaker for Preservation New Jersey's Coastal Resiliency Workshop. Her talk was titled "Going Up? or 'Un-building the Jersey Shore'". She discussed the repositioning of buildings in Historic communities affected by Sandy and included non-coastal examples of flood plain preservation in other parts of the state. She used her own interpretive graphics to explain what she calls the new "built topography" resulting from the FEMA Base Flood Elevation maps.

In July, at the annual meeting of the Bay Head Historic Society, Susan presented "Saving Place: Historic Preservation after Sandy (with a shout-out to the current Museum of the City of NY's exhibit Saving Place: 50 Years of NYC Landmarks)". Her talk was presented on the 10th anniversary of Bay Head's Historic District registry. Using a case study format, she discussed the issues of a changing streetscape, contextual coherence and relationship of buildings, therefore humans, to the ground and public realm.

INTERVIEW WITH GUIDO HARTRAY OF MARVEL ARCHITECTS

***NJIT Central King Building**, (2015)*

Rendering

Marvel Architects

Since 2011, NJIT has been committed to the substantial rehabilitation of a Victorian-era high school to a state-of-the-art academic building called the Central King Building (CKB) which will include laboratories, classrooms, offices, and assembly space. SoAP caught up with Guido Hartray, of Marvel Architects, to talk about his work on the project.

School of Architecture Pamphlet (SoAP): *How does Marvel Architects approach design problems?*

Guido Hartray (GH): *We try to approach design problems with an open mind. There are always ideas in your head, things you would like to try or things you have seen, but we try to pull as much information and direction out of the site, the client, and the program, before we start applying solutions. This is especially important working on an existing building in a campus and for an institution like NJIT. There is so much there to draw from, it can add a lot to the design you develop.*

SoAP: *Have you executed academic buildings before and if so how has your work at NJIT compared?*

GH: *We have done work for Dartmouth, UGA and for NYU, but the project that most prepared us for working on the Central King Building was the renovation of Higgins Hall for Pratt Institute, another historic high school being adapted to new uses for higher education. At the same time the Central King is a different building and NJIT is a different client so the design has its own language which addresses different problems and conditions.*

***NJIT Central King Building**, (2015)*

Marvel Architects

© Barkow Photo

SoAP: *How long has Marvel Architects been working on the CKB? What is your role in this process?*

We have been working on CKB since 2011. I was involved in drafting our initial proposal and every step of the process since then. The project stated with a concept plan and evolved through façade restoration and building infrastructure packages before we got a chance to start to put some of our architectural ideas to work on the building itself. Through the early stages the team on the project was small but once we got into the bigger interventions we had a team of five or more people working on the project. Each of those people have made their own contribution to the project, but two who I would like to mention specifically are Jennifer Olson who is the Associate in charge of the project and has been responsible for coordinating our efforts and those of our consultants, and SoA graduate Karen Cilento, who has been working on the project since her graduation from NJIT and played a major role in developing the a new classroom typology.

SoAP: *Your firm was chosen over several other noted firms, what was your concept for the building and why did it resonate with our university?*

GH: *We looked at the building closely and were able to be specific in our*

***NJIT Central King Building**, (2015)*

Marvel Architects

© Barkow Photo

proposal and interview about challenges and opportunities, and show from our experience how we might find solutions. One of those was a connection from the Summit side of the building through to MLK. What form that connection would take only became clear after work, but as some of the interior partitions that made up the maze of the building's lower floors get demolished we can finally start to see it take shape.

SoAP: *What are the programmatic goals for the project and the challenges of achieving them in an older building?*

GH: *The building's existing arrangement has been both an obstacle and an inspiration to achieving programmatic goals. The structure of the building has relatively short spans which can make it a challenge to accommodate the larger classrooms that allow multiple arrangements of furniture. On the other hand, the building's central court provides daylight to circulation spaces which allowed us to create what we call the "break-out hallway", a continuous ribbon of individual and small group study spaces that ring the center of the building. These were a response to a programmatic imperative that CoAD Dean Urs Gauchat expressed in an early meeting: the hallways should be given the same consideration as learning environments as the classrooms.*

SoAP: *How has adaptive reuse figured into the scope of work? The historic façade will obviously remain, are there other components that are being restored on the building's interior?*

GH: *We try to make the most of the existing building fabric and reveal the relationship between existing and new in the finished spaces. The brick, iron, and terra cotta of the existing building have a texture and an identity that is hard to find in new materials. Especially for a campus like NJIT's that is made up mostly of recent buildings, celebrating historic architecture and seeing new additions in dialogue with the context into which they are placed is very important.*

SoAP: *As a STEM university, the intersection of design and technology has been highly important to us. How would you say the building synthesizes design and technology, especially within its historic envelope?*

GH: *The building's exterior is the product of an emerging technology that was creating new formal freedom when the building was built in 1912. The hybrid of steel and masonry allowed for the extensive use of terra cotta which could not bear significant weight but could be cheaply shaped into elaborate forms and repeated in molds. Most of the damage which we have been repairing on the façade is the result of locations where the hybrid between steel and masonry was not clearly worked out and non-load-bearing terra cotta began to bear weight. Where we have had to replace terra cotta elements we have done this with a glass fiber reinforced concrete - a contemporary material with the same form making properties as terra cotta.*

SoAP: *What are the sustainable features or qualities of the project? Are there opportunities to use the building as a teaching tool for architectural coursework?*

GH: *Rehabilitating an existing building is inherently sustainable because of all the materials that it reuses - although there are no LEED points for this. In our intervention we worked hard to make the lighting systems efficient and take advantage of natural light. The system starts from a very low wattage and lights dim whenever daylight is available. This and a number of other measures put the floors we have completed on track to get a LEED Gold rating.*

SoAP: *The west-facing façade is a fitting end to NJIT's quad, especially with the planned landscape improvements to Summit Street. MLK Jr. Blvd. Is a different story, how are you treating the building's east-facing façade? What will its relationship to the boulevard be?*

GH: *The pool and gym volumes that were added to the building in 1969*

replaced a grand entry stair that had been the building's connection to MLK Boulevard and the city. Our strategy has been to take advantage of the gym's clear span structure but open up the volume to create a new connection to the Boulevard through transparency of materials. At the same time we are insulating and re-cladding the exterior with a very simple metal skin that plays up the intricate articulation of the historic façade of the CKB behind. The connection between building and street is supported by the programing strategy developed with NJIT which will place iLabs for collaboration between NJIT and outside enterprises in this space. The visual connection between NJIT and the city will house a program designed to build the same connections between research and development.

SoAP: *Describe your work-flow in the design process. How do you engage university officials and how has this process gone?*

GH: *The process has evolved with the project. We started out with a very open process touring the campus and talking to anyone who was interested because it was not clear what programs the building should house. Everyone agreed that the activities it would bring together should represent NJIT to visitors as well as to students and faculty who might be focused on the work in their college but unaware of interesting work happening elsewhere on campus. We brought the results of that study back to the administration and it has been an iterative process from there. As specific programs have been identified we have worked with the faculty, staff and students relative to that program. The program has had to adapt based on space needs on campus but I think the final mix stays remarkable close to the original goal of spaces and uses that represent and support innovation at NJIT.*

SoAP: *We have been told the Central King Building will contain 21st century laboratory spaces. What design considerations go into such laboratories and how will they be different than other lab spaces on campus?*

GH: *The 4th floor of the building houses labs for the Biology Department. They contain all the state of the art equipment the biologists need against the backdrop of a 1912 building. This overlay of innovation and history is probably the biggest difference between the labs at CKB and elsewhere on campus. It is also the underlying dynamic that we have tried to carry through the whole project.*

***NJIT Central King Building**, (2015)*

Marvel Architects

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FALL 2015 LECTURE SERIES

Sept 17: **David Ruy**
Associate Professor, Pratt Institute

Sept 24: NJ TRANSIT - The Future of Hoboken Terminal Final Presentation
Held at NJ TRANSIT's corporate headquarters, time TBD

Oct 12: **Randy Deutsch**
Associate Professor, University of Illinois at Urbana-Champaign

Oct 19: **Sarah Watson**
Deputy Director, Citizens Housing Planning Council, New York City

Oct 26: **Scott Sindorf**
Co-founder, UVPHACTORY

Nov 2: **Maria-Paz Gutierrez**
Associate Professor, University of California, Berkeley
Lecture begins at 4:30 PM

Nov 4: NJIT Honors College Forum

Nov 12: **Lee Moreau**
Principal, Continuum, Boston

Nov 16: **Maria Hurtado de Mendoza**
Associate Professor, NJIT

All lectures begin at 5:00 PM in Weston Lecture Hall 1, unless otherwise noted, and are open to the public. The Fall 2015 Lecture Series is registered with the AIA Continuing Education System (AIA-CES) and offers learning units which may be self reported. The School of Architecture at NJIT is accredited by the National Architectural Accrediting Board (NAAB) and is in compliance with all criteria standards.

Lecture Series Co-Chairs: Martina Decker, Keith Krumwiede, and Andrzej Zarzycki

SoAP
Volume 1, Issue 1

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Student

Ryan S. Berg
Student

Susan P. Bristol
Adjunct Instructor

Alexander Bruno
Student

Gabriel Antonio Canizo Perez
Student

Jacob Chacko
Student

Jack Coyne
Student

Jorge Cruz
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Genesis Cuevas
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Thomas Dallessio

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Paulo A. Guerreiro
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Guido Hartray
Founding Partner, Marvel Architects

Morgan Jones
Student

Benjamin Kinghorn
Student

Brent Klokis
Adjunct Instructor

Kristina Koon
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Keith A. Krumwiede
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Jesse LeCavalier
Assistant Professor

Emilie Laforge
Student

Marcelo López-Dinardi
Adjunct Instructor

Lauren E. Martin
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Libertad McLellan
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Maria Hurtado de Mendoza
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Michael Mostoller
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Alessandro Orsini
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Georgeen Theodore
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Seth Wolfe
Adjunct Instructor

Andrzej Zarzycki
Associate Professor

Esther Zipori
Student

Alumni/alumnae, we'd like to hear from you. Tell us about the projects you have recently completed or are currently involved in. We will selectively publish work by SoA graduates in the next issue of SoAP.

Please send descriptions to Tracy Bermeo, Assistant to the Dean, via email tbermeo@njit.edu no later than December 1, 2015.

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