EXPERIMENTS IN PEDAGOGY

September 2018—January 2019

— EARTH ON DISPLAY:
THE ANTHROPOCENE MUSEUM OF
NATURAL HISTORY
Rania Ghosn

— SPACE/DANCE STUDIO
Mark Jarzombek & Richard Colton
with the Neave Trio

— AGIT ARCH EXPERIMENTS
Ana Miljacki/Critical Broadcasting Lab with Ann Lui and
Mimi Zeiger; Luke Bulman; Felicity Scott and Mark Wasiuta

— FEAR AND WONDER:
THE SHAPE OF THE FUTURE
Liam Young

— CAPTIVATING CHARACTER
Architecture Design Core 1 Studio
with Joshua Longo

— STRUCTURAL UPCYCLING
Caitlin Mueller, Felix Amtsberg, Yijiang Huang,
Demi Fang, Paul Mayencourt, Daniel Marshall
with Jason Detwiler and the City of Somerville

— PAPER SPACE: CREATIVE WRITING
AND ARCHITECTURE
Sarah Wagner & Stratton Coffman with
Garnette Cadogan, Dorothea Lasky, Ken Urban

— VIRTUAL DESIGN STUDIO
Eytan Mann and Cagri Zaman

— MONUMENTS IN PERSPECTIVE
Erin Genia

— SELF/WORK
Rosalyne Shieh

— ARCHITECTURAL ACCESS: CODE AND CARE
Gabe Cira and Emily Watlington with David Gissen, Aimi Hamraie, Sara Hendren,
Wendy Jacob, Mara Mills, MIT Biomechatronics, David Mitchell, and Sharon Snyder

— VISUALIZING 150 YEARS OF ARCHITECTURE AT MIT
E Roon Kang and Richard The

— TRANSENSATIONAL OBJECTS:
A STUDIO ON INCLUSIVE DESIGN (IAP)
Maroula Bacharidou and Athina Papadopoulou

— ROBOTIC FORCE PRINTING (IAP)
Philippe Block and Philip Yuan

EXPERIMENTS IN PEDAGOGY

Department of
Architecture

School of
Architecture &
Planning

Massachusetts
Institute of
Technology

OVERVIEW
September 4, 2018, 2 - 4 PM
Course Preview

INFO SESSION
September 7, 2018
12 PM, Long Lounge

The Experiments in Pedagogy are tests and provocations. Selected from an open call, the Experiments allow students and faculty to take on topics and modes of inquiry that do not fit into the current curriculum. They are an invitation to students and faculty to investigate new models, formats, and topics of learning, design, and research.

Students can receive up to 12 credits (maximum 4 Experiments) over the Fall semester and IAP; this course can fulfill an open elective. Experiments range from 3 to 6 credits; meeting times vary widely though we have tried as much as possible to avoid overlaps.

All Experiments will have a public event or review open to all.

ELIGIBILITY
The Experiments are open to all students in the Department.

CREDITS
Students can register for up to 12 credits. Students can participate in additional workshops but cannot receive more than 12 credits (equivalent one course).

GRADING
Experiments will be graded Pass/Fail. Specific expectations are included in Experiment descriptions.

SIGN UP:
signup.mit.edu/experiments

Sign up by September 7; we will confirm participation soon after.

REGISTRATION FOR FALL TERM
All students should register for 4.S14, Experiments in Pedagogy, for the number of credits you plan to take no later than the Add Date, October 5.

Experiments range from 3 credits to 6 credits each and may include weekday, evening, or weekend meetings. Specific details on meetings times are included in the descriptions.

The IAP Experiments will have a separate registration period.

QUESTIONS
Faculty leads are Mark Jarzombek and J. Meejin Yoon. Irina Chernyakova, ich@mit.edu, and Danniely Staback, dstaback@mit.edu, are coordinating the Experiments. Renée Caso, yammie@mit.edu, can answer questions related to credit hours.

EXPERIMENTS IN PEDAGOGY

Department of Architecture

School of Architecture & Planning

Massachusetts Institute of Technology

SPACE/DANCE STUDIO

Mark Jarzombek & Richard Colton
with the Neave Trio

October 22–December 10

This studio explores the possibilities of dance within the interpretative language of Georges Perec. Student work, in collaboration with Professor Jarzombek, will be guided by the renowned choreographer, Richard Colton, with music provided by the acclaimed Neave Trio. The final project will be a performance by students with the Neave Trio.

Richard Colton is the Co-Founder and Co-Director of Co Lab: Process + Performance at The Institute of Contemporary Art/Boston. Co Lab supports the development of collaborative work between visual artists, dance makers, writers and contemporary composers. Richard was a leading performer from 1972-89 with Twyla Tharp

Dance, American Ballet Theater, Mikhail Baryshnikov's White Oak Dance Project, and the City Center Joffrey Ballet. His early performing at Judson Dance Theater with the James Waring Dance Company was a formative experience, and his love for experimentation in the arts was born there. Richard, in collaboration with Amy Spencer, is a four-time winner of the Massachusetts Cultural Council's Outstanding Choreography Award.

Neave Trio was formed in 2010 and consists of violinist Anna Williams, cellist Mikhail Veselov, and pianist Eri Nakamura. The group has earned enormous praise for its engaging, cutting-edge performances. Neave has performed at many esteemed concert

series and at festivals worldwide, including Carnegie Hall's Weill Recital Hall, 92nd Street Y, Chamber Music Society of Lincoln Center/La Jolla Music Society, Rockport Chamber Music Festival, and the Samoylov and Rimsky Korsakow Museums' Chamber Music Series in St. Petersburg (Russia).h Boston Musical Intelligencer included Neave in its "Best of 2014" and "Best of 2016" roundups, writing, "it is inconceivable that they will not soon be among the busiest chamber ensembles going," and "their unanimity, communication, variety of touch, and expressive sensibility rate first tier." In the fall of 2017, the Trio joined the faculty of the Longy School of Music of Bard College as an Alumni Artists, Faculty Ensemble-in-Residence.

6 CREDITS

FIRST MEETING:
Week of September 10, Date TBD

MEETING TIMES: Weekday mornings and select Saturdays, to be determined with participating students.

WEEK OF OCT 22:
Introductions and reading and discussion of Georges Perec

WEEK OF OCT 29
Setting the stage

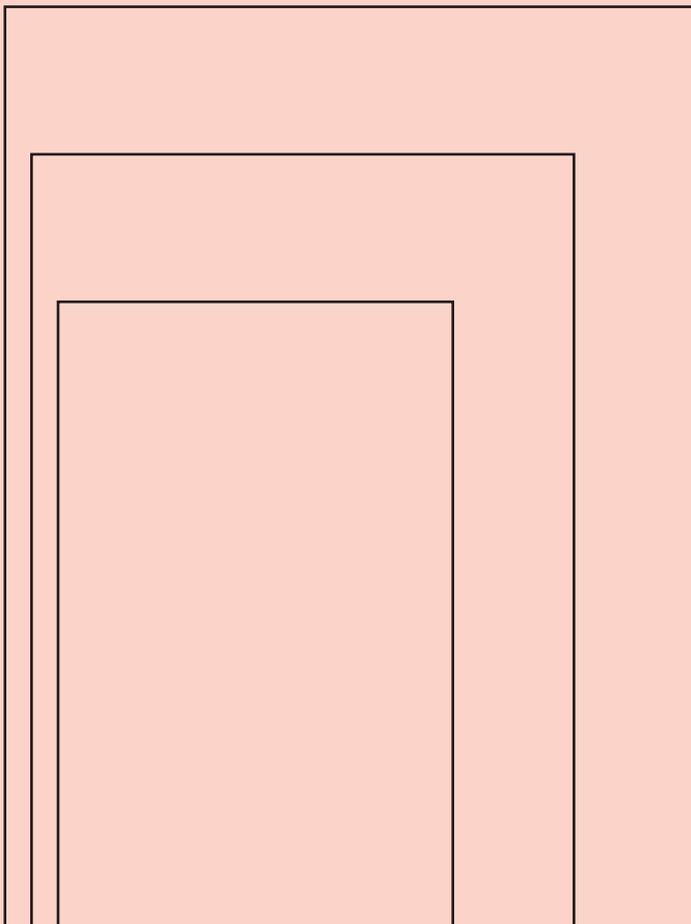WEEK OF NOV. 5:
Coordinating the elements

WEEK OF NOV. 12:
Design

WEEK OF NOV. 26
[holiday]

WEEK OF NOV. 26:
Review of elements

WEEK. OF DEC. 3:
Final preparations and rehearsal

WEEK OF DEC. 10:
Final performance

ANTHROPOCENE MUSEUM OF NATURAL HISTORY

Rania Ghosn / Harvard Museum of Natural History

September 10–November 5
Mondays, 10–1pm

How do we exhibit something as intangible and invisible as climate change?

The course springs from the conviction that climate change demands urgent transformations in the ways we sense, care for, and design the Earth. It engages the difficult (and necessary) quest for media and models that assemble the big picture of the Earth and of publics around that. To live in an epoch that is shaped by extensive environmental transformations is to be confronted with risks and uncertainties at a planetary scale. Paradoxically, we remain little mobilized, in part maybe because of our failures to comprehend and relate to a story that is both difficult to tell and hear. Climate change is not only as a crisis of the physical environment but also as a crisis of the cultural environment –of the systems of representation through which society relates to the complexity of environmental systems in their vast scales of time and space. Where do designers and cultural mediators stand in relation to the poverty of the environmental imagination at a time when climate change skeptics have such influence on public opinion?

The Anthropocene Museum is a means to reckon with the cognitive and affective dissonance of climate change, navigating between what feels like an individual concern and planetary collective consequences. According to Mike Hulme, art museums and artists have an important role to play in representing climate change. Hulme proposes that institutions and artists work with "the idea of climate change – the matrix of ideological functions, power relations, cultural discourses and material flows that climate change reveals as both a magnifying glass and as a mirror."1 In the nineteenth century, museums of Nature and their attendance to scientific disciplines– biology, geology, astronomy, and oceanography– capturing the public imagination as ways to make sense of the natural world and give visitors an appreciation of the scales and complexity of the planet for both scientific study and popular entertainment. While it is evident that the damaged condition of the planet bears little resemblance to the plethora of displays and dioramas still populating natural history museums, the museum has yet to adapt its affective communication strategies on climate change and to that in a language similar to that of enchantment that reigns across its premises. For people to make sense of the impacts of climate change, what is urgently needed is a renewed culture and media of learning and assembling.

The course is a design workshop in collaboration with the Harvard Museum of Natural History (HMNH) and in conversation with international key experts on the curatorial arts of "climate change" and the "Anthropocene". The students will analyze key precedents in art, architecture, and curatorial practices to speculate on appropriate strategies to engage the wicked problem of climate change. With the support of with the curatorial staff of the HMNH, and in particular geology, zoology, and herbatoria, the students will identify and stage artifacts and specimens that tell a story of anthropogenic environmental transformations. To coincide with the re-install of the HMNH Climate Change gallery, the final reviews will be installed on site, open to the public, and in conversation with critics and experts.

The course deploys research and design to stage the matters of climate change: how it is imagined, spatialized, experienced, and made public. It addresses some of these questions: How can research and university museums adapt their programming to address the disturbing realities such as climate change? What is the tone (if not apocalyptic or techno-fixing) and what are corresponding media of dissemination and communication that engages such trans-disciplinary issues? Beyond a series of digital screens and a language of gilt and techno-fixes, what artifacts of evidence –forms of knowledge and material evidence– can be channeled? What are the representational worlds –the Anthropocene "cabinet of curiosities" that make the concerns of climate change legible, knowable, sense-able, and actionable to broader publics?

6 CREDITS

Students enrolled in the Experiment enroll for 6 credits. Students enrolled in the workshop enroll for 12 credits and continue through the end of the term.

AGIT ARCH EXPERIMENTS

Ana Miljacki / Critical Broadcasting Lab with Ann Lui and Mimi Zeiger; Luke Bulman; Felicity Scott and Mark Wasiuta

October 12–14; November 2–4; November 16–18; December 2–3

The Critical Broadcasting Lab is compelled to present AgitArch, a series of micro exhibitions that instigate discussion and aim to critique and probe contemporary architecture and its political haunts.

In 1968, Hannah Arendt used Bertold Brecht's characterization of an era–dark times–as a framework for exploring lives and actions of a series of different historical characters. The men and women she studied had little in common among each other, except for their ability to respond to the "dark times" in a way that Arendt found worthy of exploring, and even admiring. "Dark times" on the other hand, she felt recurred in history in different forms, always trying public figures and their contemporaries, and compelling those that interested her the most to find courageous and constructive responses in their actions and attitudes. She proposed that "Even in the darkest of times we have the right to expect some illumination…" and in the collection of essays she introduces with these works, she indeed looked for illumination in lives lived and entire bodies of work. These are some of the premises of AgitArch series of workshops. That we may be living in dark times is still relatively easy to ascertain for we still remember things could be otherwise, but the workshop will provide a platform for discussing and describing what dark times might mean to its participants. AgitArch will be an experiment in both allowing us (as the participants in our own dark times) to produce seeds of the kind of sustained acts of illumination that guided Arendt's characters, and her own work. Some of our work, depending on the participants' interests and temperament might also focus on seeing and studying "illuminations" in things around us.

To do all of this we will stay at least loosely tethered to the realms of art and architecture and their intersection with political topics. The three workshops will explicitly cover a collection of related topics allowing room for others. Direction for doing so will be provided by a series of guests, all involved in curating and broadcasting architectural discourse. Critical Broadcasting Lab supplies the medium and the register for the final deliverables of this experiment, we will provisionally and generously call it: architectural exhibition, as we challenge and experiment with its efficacy in the contemporary architecture media complex from biennales to instagram.

Logistics
AgitArch will be developed over three workshops, each understandable as its own experiment, with its own final broadcasts, yet interrelated through participants' interests, and ending in a selection of works that will be mounted into an exhibition in the Keller Gallery. The first two workshops will begin with public lectures on the first day, and more intimate and intense production formats on the following two, while the third workshop will engage guests in a gallery talk of sorts. Each of these will take place over an extended weekend, Friday (lecture), Saturday and Sunday more studio like format.

All MIT Architecture students are welcome, the ideal size of this group is 12, but we will have to cap it at 20. Attendance is mandatory, as is active participation in the intellectual and literal production of the workshop.

EVENT #1: DIMENSIONS OF CITIZENSHIP
Citizenship has been paradoxically construed as based both in the rigid distinction between those inside and outside a legal national boundary, and more productively but less legally, as the ultimate project of sharing a common set of concerns. This event will staging a conversation with the curatorial team of "Dimensions of Citizenship," the US Pavilion for the 2018 Venice Biennale, and extending further their questions into areas that are of interest to the student participants.
—
Guests: Ann Lui and Mimi Zeiger
Dates: October 12, 13, 14

EVENT#2: (HACKING)
CLICK BAIT POLITICS
Maybe it is futile to think we can resist the flattening impulse of hashtag politics, maybe we should not try resisting, for they have an important organizing dimension, but that will be for us to debate as we embark on a deliberately slower mode of communicating. #metoo, #notourwall, #blacklivesmatter, #solarpunk. What are you committed to changing? What story needs to be told about it, and by what means will it resist the impulse for a simple resolution and opt for "illumination"? This workshop will invite the participants to develop and curate together a series of topics (they collectively deem important) on architecture in the dark times.
—
Guest: Luke Bulman
Dates: November 2, 3, 4

EVENT#3: POPULISM (AND/WITH/IN ARCHITECTURE)
There is no doubt that populism rising is in part a matter of design. Monuments, colors, history, heritage, architecture and font are part of its surge together with the unprecedented reach of social media (aided by some basic AI) and seriously destabilized democratic institutions. In this workshop we will examine architectural and other cultural artefacts that traffic in the production of populist narratives: the aesthetic elements that make up the imaginary world of populist America. Once we have identified these objects we will research their historical and symbolic depth, and then we will invent ways to hack them! (There is an option to continue the work from Events #1 and #2 in this instance and towards a more "baked" exhibition.)
—
Dates: November 16, 17, 18 (with Ana)

FINAL DISCUSSION
Guests: Felicity Scott and Mark Wasiuta
Dates: December 2, 5-7 PM, Review
December 3: 12:30-2:00 PM, Roundtable with Ana Miljacki, Felicity Scott, and Mark Wasiuta

6 CREDITS

STRUCTURAL UPCYCLING

Caitlin Mueller, Felix Amtsberg, Yijiang Huang, Demi Fang, Paul Mayencourt, and Daniel Marshall with Jason Detwiler and City of Somerville

September 8, 15; October 6, 13; Review: October 18

Merging Digital and Natural Materiality in the Design and Fabrication of Nonstandard Timber Structures

Reflecting on the past 150 years of Architecture at MIT also involves thinking forward to the major challenges and opportunities that the next 150 years will bring. Questions of the role of the built environment in global climate change and massive resource depletion are certainly part of this picture, as are those related to the next steps of the digital revolution. Structural Upcycling is a proposed experimental workshop that addresses both of these sets of questions.

In most of the twentieth century, progress in architectural design and construction, especially in terms of material systems and assemblies, was marked by standardization. Structural steel sections and rebars were standardized into catalogues of set sizes and shapes, and even natural materials like timber became commodified and industrialized. More recently, advances in computational design and digital fabrication provoked an interest in variation, diversity, customization, and complexity among designers and builders. In a parallel stream, modern culture more broadly has begun to rebel against mass production and global supply chains, favoring local and ethical sourcing in major consumer areas such as food and clothing.

In architecture, an emerging line of thinking links these two developments, connecting the computational power of digital tools with a renewed interest in nonstandard and locally sourced material systems. For example, in 2017, a long-span grid shell structure was built in Switzerland with recycled skis. Recent work in Singapore assembles locally sourced bamboo into large-scale structures with the aid of 3D scanning and 3D printed joints. In the UK, researchers at the AA are working with forestry experts to inventory a live forest through 3D scanning with drones, and develop digital design tools to develop structural assemblies that make use of this physical material catalog.

How should this thinking take form at MIT, a high-tech research institution located in one of the oldest urban centers in the US? The proposed workshop makes use of ongoing and established research in digital design and optimization produced by Prof. Caitlin Mueller and the Digital Structures research group, and a burgeoning relationship with the Urban Forestry division of the City of Somerville, headed by Dr. Vanessa Boukili. A growing digital inventory of Somerville street trees catalogues more than 2000 trees across more than 20 species, and includes many that need to be removed for various reasons. Typically, removed trees are chipped at the site of removal, with the resulting material used as mulch for municipal landscaping projects. However, a great amount of functional value is lost in this process, since high-strength fibers are cut and branching geometries with built-in potential for joints are destroyed. If used structurally, upcycled street trees offer huge potential for cost savings and environmental impact reduction compared to conventionally forested timber, if they can be sourced and designed with in a systematic way.

In the past, shipbuilders looked at tree geometries and branching structures to guide designs of vessels to be made from these natural material sources (as shown below). This workshop reimagines this process for the architectural scale, taking advantage of digital tools for design and digital fabrication methods for construction.

Working with inventory from the City of Somerville, students will source, design, and build a pavilion-scale structure on the MIT campus over a series of four weekend workshops that make use of a larger research framework underway at Digital Structures. They will learn and use a range of digital technologies, including 3D scanning, design optimization, structural simulation, and robotic fabrication. Principles of timber engineering and wood science will also be taught. In addition to technical learning outcomes, students will ideally finish the workshop sequence with a new appreciation for material sourcing streams in architecture and for the new potentials of digital tools and systems to harness them.

The workshop is offered as a Pass/Fail subject for 3 units. To pass the subject, students must attend all four Saturdays.

3 CREDITS

DATES: 4 Saturdays, 10-5 PM with ~3 hours additional work/week

EXPERIMENTS IN PEDAGOGY

Department of Architecture

School of Architecture & Planning

Massachusetts Institute of Technology

CAPTIVATING CHARACTER

Architecture Design Core 1 Studio
(Brandon Clifford, Jennifer Leung, and Hans Tursack) with Joshua Longo

September 13–October 11; Review: October 11

This workshop introduces students to the concept of character and expression through the design, development, and construction of a full-scale interactive object. The challenge being amplify empathy between public visitors and matter. The resulting artifact/sculpture/space will convey the expression chosen/discovered unto itself, but the ultimate goal is to gain the understanding of the spirit of the thing through interaction and experience. Students will be introduced to an emergent making process or making through play guided by their curiosity, intuition, and the inherent qualities of material chosen. This process will be an iterative one, challenging the students to discover ideas through three-dimensional sketching and the direct manipulation of material, creating a conversation between both the student and the sketch. This path will lead them to discover spirit, energy, and character not only in the material, but also the idea that will be translated and understood through the interactions. Students will breathe life into inorganic matter.

*No additional credits given beyond 21 units for 4.154. Open only to Core 1 students.
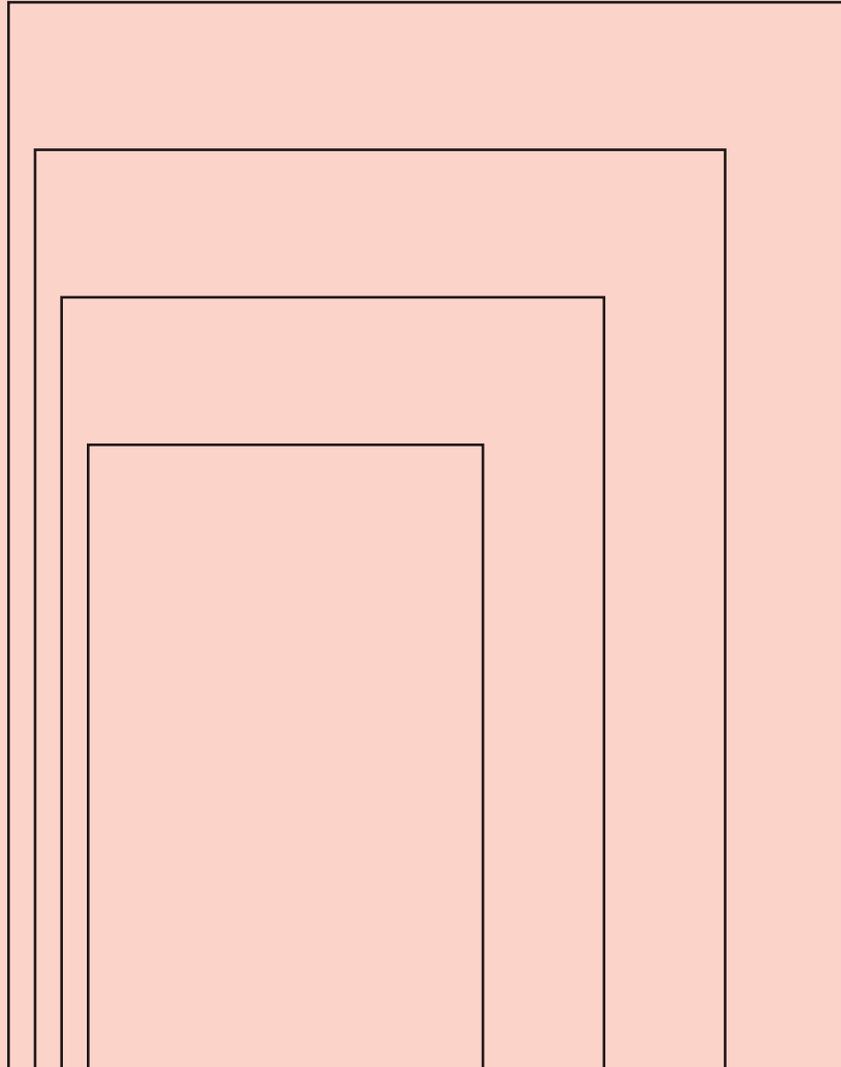
TRANSENSATIONAL OBJECTS: STUDIO ON INCLUSIVE DESIGN

Maroula Bacharidou and
Athina Papadopoulou

January 7–31

Design pedagogies tend to prioritize vision over other senses. This vision-centric approach often neglects aspects of accessibility and inclusivity in the ways that we experience space. Transensational objects studio will act as a platform to explore how visual spatial experiences, inaccessible to the blind, can be expressed in non-visual modalities. Students will identify spatial problems related to the everyday lives of blind or visually impaired individuals: how does one orient herself in space? How do she experience everyday activities and objects? Using the campus of the Perkins School as a site of intervention, students will develop auditory and/or tactile design possibilities – trans-sensational objects – to address these questions.

The proposed trans-sensational objects can vary in scale and type: from an object, interface, or wearable device, to a spatial installation or architectural solution. The design process will be guided by the method of sensory correspondence: students will devise rules for translating visual properties into tactile or sound properties in order to design inclusive spatial experiences. MIT students will work together with students from Perkins to explore an inclusive making process. In addition, students will have the opportunity to obtain feedback from invited specialists on sensory perception beyond vision and inclusive design. The studio will culminate in a public exhibition and discussion, addressing broader questions of sensory engagement and accessibility in design.

6 CREDITS [Students will register for new IAP subject number]

MEETING TIME: 9-12 PM, Monday - Friday + 2 hours of office hours/ optional work session

LOCATION: MIT International Design Center (IDC), MIT Building N52

EXPERIMENTS IN PEDAGOGY

Department of Architecture

School of Architecture & Planning

Massachusetts Institute of Technology

ARCHITECTURAL ACCESS: CODE AND CARE

Gabriel Cira and Emily Watlington

November 6, 7, 15, 16

The Americans with Disabilities Act (1990) outlines requirements for architectural accessibility. While the adoption of this code was monumental for disability rights, serving as minimum requirements for architects who might otherwise not consider the needs of disabled people, it unfortunately frames "access" as an exclusively architectural concern while also inhibiting experimentation or negotiation.

As Marta Russell posits in her 1998 book *Beyond Ramps: Disability at the End of the Social Contract*, ramps—non-ambulatory access to buildings—have been privileged over other issues including socio-economic access. Further, the code has limited provisions that accommodate evolving conceptions of difference, disability, and neurodivergence shaped by the burgeoning output of disability scholars and activists of the past thirty years.

This two-week workshop will feature a series of themed duet-style lectures with a range of expert artists, theorists, architects, and activists. The events will be open to the public, and the students that are enrolled in the workshop will serve respondents. They will be assigned readings in the beginning of the semester that will equip them to do so, and debrief in two seminar-style workshop sessions. The themes are: Body Extensions and Environment Hacks, Technorealism, Code and Care, and Universal Access and Community-based Practice. Students will leave equipped with a critical vocabulary to incorporate disability concerns into their practices, and will be exposed to leading voices in disability design and theory. The workshop proposes vital unaddressed avenues of design thinking that should always be part of architectural pedagogy and practice.

3 CREDITS

TUESDAY, NOVEMBER 6:
Sara Hendren and Wendy Jacob
6-8 pm

WEDNESDAY, NOVEMBER 7:
David Gissen
5-7 PM

THURSDAY, NOVEMBER 15:
Mara Mills and
MIT Biomechatronics
6-8 PM

FRIDAY, NOVEMBER 16:
Aimi Hamraie, David Mitchell, and
Sharon Snyder
5-7 PM

Discussion times to be determined among participants.

PAPER SPACE: CREATIVE WRITING AND ARCHITECTURE

Stratton Coffman and Sarah Wagner with
Garnette Cadogan, Dorothea Lasky, and Ken Urban

September 15, October 20, November 18

Paper Space is a creative writing workshop that will investigate, through a series of open-ended prompts, how writing may be used as a medium of exploration in architectural production, both to resituate writing as a possible means of design and to reconsider design as the crafting of fictional, poetic, and real worlds. This will consist of three (3) workshop sessions with invited creative writers working in poetry, fiction, and nonfiction. Within the condensed scope of these sessions, workshop participants, drop-ins, and the wider SA+P community will be invited to produce written work in response to the prompts, provocations, and pedagogies of the visiting writer. In between these workshops we will hold three or four writing sessions for workshop participants to develop longer-term projects individually or collaboratively. The outcomes of both the workshops and writing sessions will be assembled and edited into a volume at the closing of the pedagogical experiment.

While all workshops and writing sessions are open to those not wishing to be burdened by academic credits, we offer the workshops and writing sessions in combination as a 3 credit Pass/Fail course. For this course, we only expect your time and genuine effort. With the usual exceptions of excused absences, we expect (1) attendance and participation in the three workshops and three writing clinics, including contribution to discussion and peer reviews, and (2) the production of personal work, individual or collaborative, with no limitations other than those of language itself.

3 CREDITS

WORKSHOP #1:
Garnette Cadogan
Essayist and journalist
Date: Saturday,
September 15, 2-5 PM

WORKSHOP #2:
Dorothea Lasky
Poet, Assistant Professor
Columbia University
Date: Saturday,
October 20, 2-5 PM

WORKSHOP #3:
Ken Urban,
Playwright and Senior
Lecturer, MIT Music and
Theater Arts
Date: Sunday,
November 18, Time TBC

Writing clinic dates to be decided amongst participating students.

VIRTUAL DESIGN STUDIO

Eytan Mann & Cagri Zaman

October 13–14; Oct 20–21; Review: October 30

How can we use immersive technology to imagine the future of design education? The Design Studio 2.0 workshop explores novel sensory and material experiences enabled by virtual reality. The workshop aims at developing formal design methods that are informed by sensory experiences and bodily interactions within immersive digital environments. During this two-week workshop, we will present a multisensory design framework that include photorealistic immersive visualizations, digital lighting and material design, and spatial sound design. Going beyond traditional representations, students will imagine and create novel architectural experiences and narratives using cutting-edge virtual reality tools.

WEEK 1:
October 13-14
Introduction to Virtual
Reality for Design

During the first week of the workshop, we will introduce the virtual design workflow. Students will gain working knowledge of virtual reality tools that will enable them to prepare 3D models and export it to virtual reality engine. Emphasis will be made on photo-realistic material preparation and lighting for architectural models.

WEEK 2:
October 20-21
VR Design Challenge

The second week of the workshop will be organized as a design hackathon. Students will work in small groups to iterate over an existing architectural design of their choosing. We will explore how perceptual, sensory and material qualities inform design process and become integral parts of architectural representations in virtual reality. The design hackathon will run 8 hours/ day.

WEEK 3:
October 30
Final Presentation

At the end of the workshop each team will present their virtual reality narratives in a final exhibition.

3 CREDITS

SELF/WORK

Rosalyne Shieh, Marion Mahony Fellow

Mid-October–December

I used to believe up until that point that there should be some radical separation between self and work—a separation that of course was theorized. I don't totally understand this anymore. I don't completely know why or how this is the case.
— Craig Owens (1983)

The personal is political.
— rallying feminist cry of the 60s and 70s

In this workshop, we will start with the personal. The personal doesn't have to be confessional, but it can be. It doesn't have to be autobiographical, but it can be that as well. It can be radically idiosyncratic or radically unremarkable. What makes something personal is a connection between the teller and the story, the cartographer and the map, or the asker and the interviewed. What makes it personal is that it matters to you. As filmmaker John Akomfrah said: "You capture something because you want it to live."

Keeping it personal, the course will proceed through weekly prompts to create a set of interrelated documents that collectively build an image of place, space, or things. These documents will be comprised of visual and written material and may include prose, excerpts, notes, maps, as well as found and made imagery. The final project will be to assemble these documents into a format that can be shared and distributed, such as a book, a zine, a small installation or a projection.

There are no pre-requisites. Participants need only to bring their thoughts, memories, and ideas, and a willingness to listen, engage, and share. You are to start from where you are, to recognize and implement the knowledge and skills you already have.

This is not so much a "class" as an extended group exercise, the centerpiece of which is a weekly working session in which participants will be guided in an alternative form of criticism, one that favors reflection and the expression of experience and curiosity. What you make, you will rarely talk about; you will,

however, engage fully in the work made by your peers. Workshopping (loosely adapted from a process used by writers) is a participatory process that shapes content. An aim is by the end of this course, all participants will have developed a heightened and more expansive means of engaging the work of others. Think of it as group performance-cum-practice.
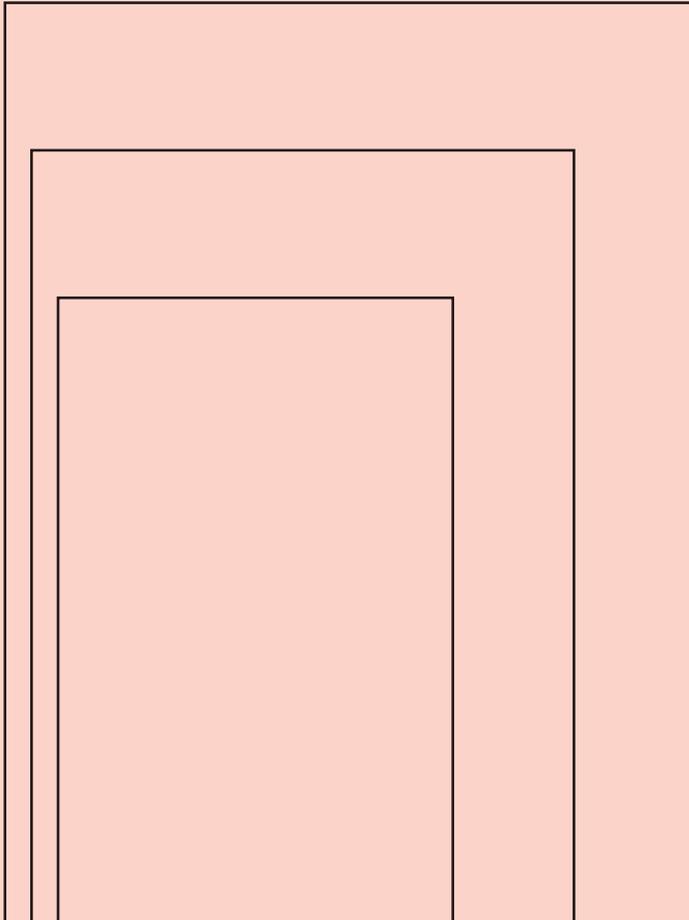
Apart from a handful of introductory readings for the first week, there are no required readings, case studies, or screenings. All references (readings, films, art) for your project will be recommended on an individual and participatory basis.

3 CREDITS

MEETING TIMES:
First meeting/info: 9/13, 12 PM

Experiment will meet once/week, for 7 weeks, beginning in October. Meeting time to be determined with participants.

EXPERIMENTS IN PEDAGOGY

Department of Architecture

School of Architecture & Planning

Massachusetts Institute of Technology

MONUMENTS IN PERSPECTIVE

Erin Genia

October 27-28; Rain Date November 3-4

What hidden histories lie under a housing development, a parking lot, public park, or strip mall? What pieces of human and natural history have been glorified or erased from a given location over time?

From mound cities in the Midwest to mountains and middens in the East and beyond, innumerable sites of cultural importance to the original inhabitants of this continent – Indigenous people – remain largely unknown. We will consider the role historic monuments play in shaping public opinion, perpetuating colonial attitudes. or coloring public perspectives towards those who have been marginalized, with a specific focus on Indigenous peoples in the United States. Course content will include discussions on methods for creating urban

areas, monuments, built environments and art which are sensitive to these issues, and how the ethics of memory of our shared past can be honed in order to influence a positive future.

Through field trips around the Boston area, students will explore questions of site-specificity in public art and monuments. Would public monuments marking sites important to Indigenous peoples encourage respect for the cultures of this continent which have existed here for thousands of years? What mechanisms can artists working in the public sphere, architects building infrastructure in sensitive places, landscape architects creating public interfaces, urban planners, designers and others employ to create site-specific work which incorporates

the historical, cultural, ecological and perhaps intangible elements of a place?

The course will take place on one weekend. The class will consist of site visits to local places of cultural and historic significance to Native American tribal people of this region. Local tribal experts will provide a cultural and historic tour of each location. Students will have the opportunity to consider their own related research interests within the structure of the course content.

OPEN PROGRAM, NOT FOR CREDIT
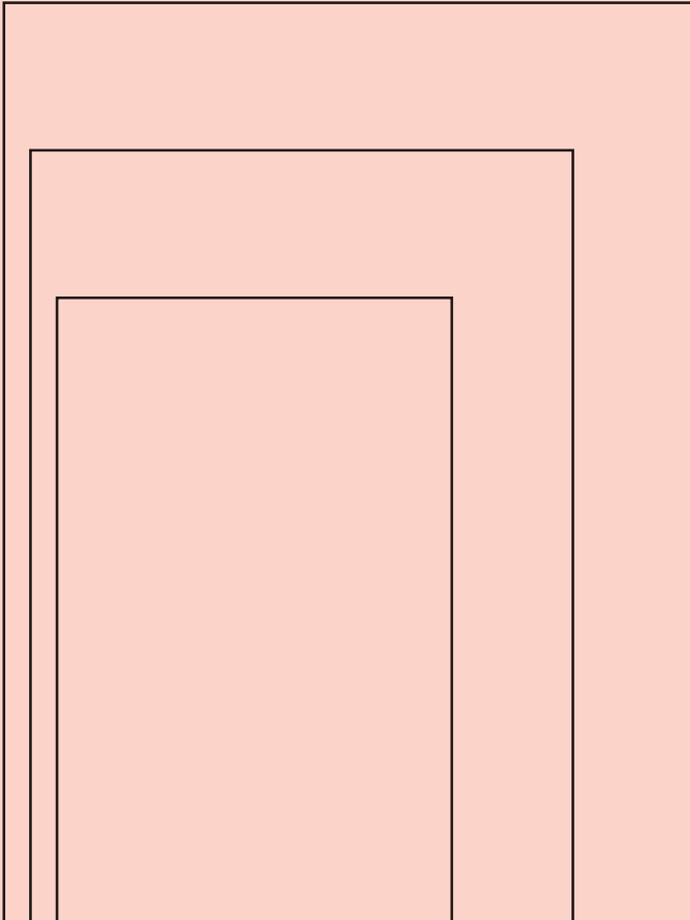
FEAR & WONDER: THE SHAPE OF THE FUTURE

Liam Young with Alexey Marfin

September 28-30; October 26-28; November 16-18

Everything is becoming science fiction. From the margins of an almost invisible literature has sprung the intact reality of the 20th century.
— JG Ballard

Our perception of the world is often shaped through visions of the future. These extraordinary imaginary worlds are the vehicles through which we exchange ideas and engage with our environment. It is impossible to underestimate the importance of media in the production of culture. In film, video games and literature we have always imagined alternative worlds as a means to understand our own world in new ways. Such Fictions play a significant role in the construction and understanding of space and in this way worldbuilding can be considered a critical act of architecture. The imaginary worlds of fiction embody the hopes and dreams, horrors and anxieties of the time in which they are made. These worlds are mirrors of ourselves, fraught with our own contradictions, spaces of utopia and dystopia, landscapes of Fear and Wonder.

In 1982 Blade Runner presented the future world of LA. Modelmakers and visual effects artists crafted the cavernous streets of a vertical city, drenched in the rain of a scorched climate and glowing with Japanese. Like most classic sci fi we shouldn't see this film as just some failed prediction of 2019 but rather it operates more powerfully as a visualisation of the political and economic climate of the 80's. At the height of the personal electronics boom, while we were all dancing to the silent beats of a Sony Walkman, and watching pirated films on home video cassette recorders Japan was seen as the next global superpower. The aesthetics of futures of the time all played out this hybrid future, a cultural collapse of American and Asian aesthetics. As the Hollywood machine has now rolled out Blade Runner 2049 this workshop asks what do the imaginary worlds of film and fiction have to say about us now? If we were to remake the Blade Runner cityscape what trends would we exaggerate, what problems would we solve or accelerate. If we were future archaeologists what could the imaginary worlds of fiction and entertainment tell us the contemporary city, what would they say about our values or our relationship to technology. If these fictional worlds are a primary window through which we see ourselves then what do we look like. If we airbrushed out the action hero, the damsel in distress, or the gameplay of games then what do these environments say about ourselves and the time in which they were created.

WORKSHOP STRUCTURE
These futures are often not produced with some grand directorial or conceptual vision in mind but in model workshops and outsourced visual effects houses. They are kitbashed together from old plastic model kits, surface greeble, biscuit tins found in skips, readymade 3D assets and shared collections of digital objects. In this workshop we will explore the process through which the aesthetics of our future is actually produced. This 'greeble' or surface detailing give scales to the structures of tomorrow and is born out of the efficiencies and constraints of production yet plays such a significant role in the conceptualization of futures. Like forensic detectives we will tour the imaginary landscapes of iconic film, video games, graphic novels to reverse engineer the processes through which these visions evolved and what they say about the time in which they were made. Armed with this knowledge we will apply the same processes to visualise a constellation of our own imaginary worlds, stage sets for a science fiction film that doesn't exist. We will apply digital and physical processes borrows directly from visual effects to create short animated sequences through our future cities, surfaces and fragments. Your architectures exist in the thickness of the screen and the animated frames of cinematic visual effects.

Architects once speculated on the impacts of industrialisation and then mass production. Given the vast array of media available, it is urgent to widen the scope of architecture beyond buildings alone. In this workshop we don't just design singular buildings but rather we animate scenarios, narrate stories and visualize speculative worlds in which we can project new cultural trends, environmental, political and economic forces.

6 CREDITS

DATES:
1: September 28-30
2: October 26-28
3: November 16-18

VISUALIZING 150 YEARS OF ARCHITECTURE AT MIT

E Roon Kang and Richard The

September 20–21

This is a workshop on information design and aesthetics using the history of the department as case study. Though not perfectly catalogued and nor comprehensive, the department's 'archive' includes theses, course syllabi, enrollments, articles, photographs, etc. In this experiment, students will be in conversation with E Roon Kang and Richard The to explore these sets of materials and methods of visualization, information design, and narrative research. The work will be discussed in context visualizations for the 150th exhibition, which opens at the MIT Museum in February 2019. Students interested in continuing to work on the project can enroll for 3-6 credits in Fall 2018 and will work closely with faculty as well as museum archivists and curators.

CREDITS: Variable, up to 6

DATES:
September 20
6-9 PM

September 21
9-5 PM

Additional time to be determined amongst participants.

Richard The is a designer, artist and educator. His work, ranging from graphic design to installations to user interfaces, investigates the aesthetic and cultural implications of an increasingly technology-driven society. After having studied at University of the Arts Berlin and the MIT Media Lab he has worked at Sagmeister Inc., led a design group at the Google Creative Lab and is co-founder of the transdisciplinary design studio TheGreenEyl. He is an Assistant Professor of Art Media and Technology at Parsons School of Design. His work has been recognized by international design institutions such as D&AD, Art Directors Club New York, AIGA, Communication Arts, Type Director's Club Tokyo and Ars Electronica, Linz and he has taught at NYU ITP, School of Visual Arts and MIT School of Architecture.

E Roon Kang operates Math Practice – an interdisciplinary design and research studio in NYC, with interest in studying, evaluating, and criticizing complex systems and its pursuit of efficiency. E Roon is a TED Fellow, was a research fellow at SENSEable City Laboratory of MIT, and received Young Guns award from Art Directors Club. His work has selected as an inaugural project of LACMA's Art + Technology Lab, received by NSF Science and Engineering Visualization Challenge, and shown in places including MoMA, New Museum, and Architectural League of New York. He gave talks and lectures at MIT, TED and Cannes Int'l Festival of Creativity, among others, and taught at institutions including Bauhaus-University Weimar, NYU ITP, and Rutgers University. He holds an MFA in graphic design from Yale, and currently an Assistant Professor of Interaction Design at Parsons School of Design.

EXPERIMENTS IN PEDAGOGY

Department of Architecture

School of Architecture & Planning

Massachusetts Institute of Technology

ROBOTIC FORCE PRINTING

Philippe Block, Philip Yuan, Juney Lee

January 2019

Robotic Additive Manufacture and Assembly of Novel Shell Structures

Over the course of three weeks, participants from both Massachusetts Institute of Technology and Tongji University will work together to design, develop and build a full-scale robotically manufactured shell structure in Shanghai, where they will be developing hands-on skills to integrate programming, structural design exploration, digital fabrication, and robotic assembly. The workshop explores novel shell structures leveraging advances in additive manufacturing and robotic fabrication, equilibrium-based methods of structural design and assembly, and the design opportunities enabled by their integration.

Participants are expected to possess a good handle on 3D modeling and computational design, preferably with working knowledge of Python, and experiences in digital fabrication and prototyping. Participants of all levels of expertise in structural design and analysis and robotics are welcomed. Students will be exposed to computational tools, techniques and workflows to engage with the robotics-enabled design exploration using the open-source COMPAS framework.

Instructors:
Philip F. Yuan, Tongji University, Shanghai, China

Philippe Block, ETH Zurich, Switzerland

Registration for this workshop will happen independent of the Experiments and will require an application process. This a workshop with travel component and limited enrollment. Stay tuned for more details.