ARC 334/634: **The Architecture of the Revolutions**

Professor Jean-Francois Bedard
MW; 12:45-2:05pm

History and theory of architecture in Europe, from 1650 to 1850, with a focus on France, England, and Germany. The course covers one of the most innovative periods in European architecture. It is designed to provide foundational knowledge on the origins of modernity in architecture and allied disciplines.

Conceptual framework: Students will be introduced to the idea of "revolution" in European episteme during the seventeenth century and the resulting critical thinking associated with the Enlightenment, which challenged traditional knowledge in science, technology, and the fine arts, including architecture. Key concepts covered are: Vitruvianism, humanism, antiquarianism, aesthetics, modernity, techno-science, sensualism, associationism, and reception theory.

Course goals/expectations/outcomes: At the end of the course, students will be familiar with the principal actors and the important debates in European architectural theory between 1650 and 1850. They will have examined the most significant buildings and unbuilt projects that paralleled these discussions. Graduate students will learn how to perform advanced bibliographic research, write a full research paper that follows the conventions of scholarly writing (footnotes, bibliography, illustrations, and captions).

The City in Architectural History

Assistant Professor Anna Mascorella | ammascor@syr.edu
Monday & Wednesday | 12:45-2:05pm | 108 Maxwell Hall
Prerequisite: ARC 134 or CAS 134 or HOA 105

Map of Cairo from *Book of Navigation (Kitab-ı Bahriye)* by Piri Reis, c. 1525.

The City in Architectural History offers a global study of urban form from ancient times to the present. This expansive history of urbanization will provide students with an understanding of the intertwined forces—social, political, cultural, economic, geographic, and environmental—that shape and are shaped by cities. The course will follow a flexible chronological format with lectures that consider transhistorical themes and continuities. Class sessions will focus on specific urban case studies while examining cross-cultural parallels, entanglements, and exchanges.

By interrogating the layered intentions, uses, and implications of urban form over time and across the globe, the course aims to foster criticality in students' own work as designers and historians of the built environment. How can **the city in history** help us confront the cities of the present and the future?

This lecture course challenges students to develop a critical framework to analyze the formal vocabularies and complex cultural roles of cities. We will read a wide selection of primary and secondary sources and engage with a variety of media as part of our investigation. Course projects, initially reflective and visual, will culminate in a research paper on a city of the student's choice. By the end of the semester, students will be able to understand the emergence of urbanization across the globe; grasp the key formal features of cities in their various formations; recognize and comprehend parallel, divergent, and entangled histories of urbanism; interpret the cultural contexts of a range of urban settings via their sociopolitical, economic, and environmental factors; and create original analyses of urban form.

> **"The urban is a collective project—it is produced through collective action, negotiation, imagination, experimentation and struggle."**
> -Neil Brenner & Christian Schmid, "Towards a New Epistemology of the Urban?" (2015)
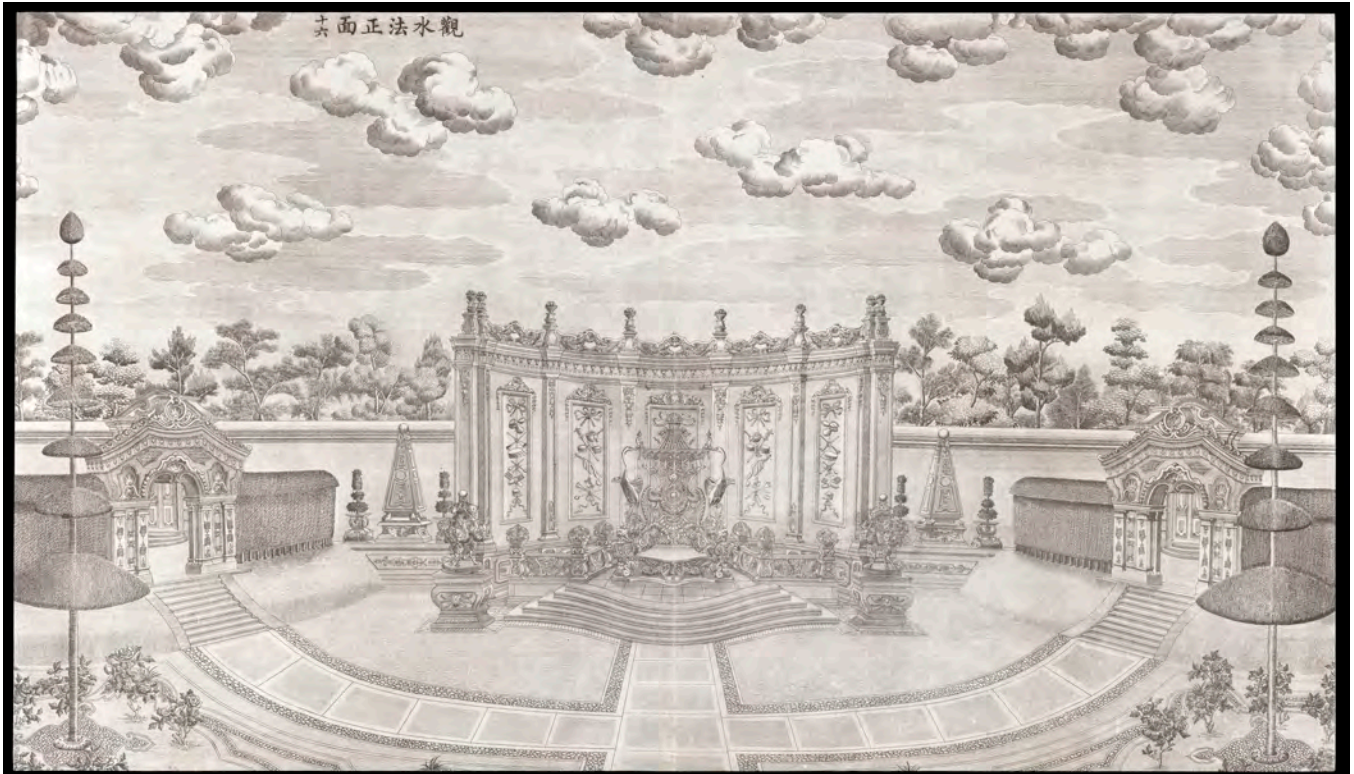
Chinoiserie

Exoticism and the
Imagining of the Self and
the Other in Architectural
Culture

Professor Bedard
Monday & Wednesday
2:15-3:35pm; Slocum 302

Although the term "chinoiserie" has historically referred to the particular mixture of "oriental" and western styles particularly popular in European courts during the seventeenth and eighteenth centuries, recent scholarship has pointed to the ways that, although this phenomenon exoticized, via European material culture, Asian—and also African and Muslim subjects, objects, and landscapes: it was also a form of self-representation at a critical turning point in world history. Furthermore, the taste for the "exotic" was not limited to the European aristocracy of the Baroque and the Enlightenment. Asian monarchs like the Chinese Qianlong emperor (r. 1735–96) and the Siamese king Chulalongkorn (r. 1868–1910) built palaces and gardens that imitated western models, a practice that has been named "occidenterie."

This seminar critically re-examine the history of chinoiserie, understood in the broadest terms as a trans-regional appropriation of form, by attending to its associations with materiality and the global redivision of labor in the building trades, its embeddedness within burgeoning colonial networks of trade and their attendant spatialization of the concept of race, its translation of regional idioms into a universal formal grammar, and its merging of distinct categories of design (architecture, interior decoration, landscape design, and the fine arts) into *gesamtkunstwerke*.

This course will be reading, research, and writing intensive. In addition to a term paper, students will be presenting, throughout the semester, readings and the state of their research. A methodological component is designed to help students hone their research and perfect argumentative skills.

Frank Lloyd Wright: Buildings, Texts, Theory, and Media

Instructor: Dr. Peter Clericuzio, pjcleric@syr.edu
Fall 2024, MW, 2:15-3:35pm, 765 Irving (Marley Education Center)

Few architects have been studied and picked apart as has Frank Lloyd Wright, and none can claim as an extensive a bibliography. Still widely acknowledged as the greatest American architect and one of the greatest of all time, he is one of the few in the profession to have achieved household-name status and is one of the few that a large percentage of Americans today have ever heard of. Wright remains hotly debated and important, and there is a rich trove of material in all types of media that examines his life and work.

This course introduces students to the many ways that Wright has been examined and in which we in the 21st century approach and access his work across multiple media, including books, journals, magazines, films, websites, drawings and archival sources, as well as texts written by and video recordings of Wright himself. It will make considerable use of in-class visits to university library collections to see materials on and by Wright firsthand. As such, we will examine not only Wright's buildings and architectural theory but also his place within a larger personal milieu and global society, addressing issues of sex and gender, age, religion, and race. Students are invited to consider both how we should evaluate Wright today more than 60 years after his death and his future legacy.

Learning Outcomes:
At the end of this course, students will have learned:
* To identify and analyze major buildings designed by Frank Lloyd Wright
* To analyze Wright's place in contemporary society during his lifetime
* To understand how different media have been used to tell the story of Wright's architecture and life
* To use library resources in combination with analytical skills to describe and explain in writing the importance of objects and buildings related to Wright
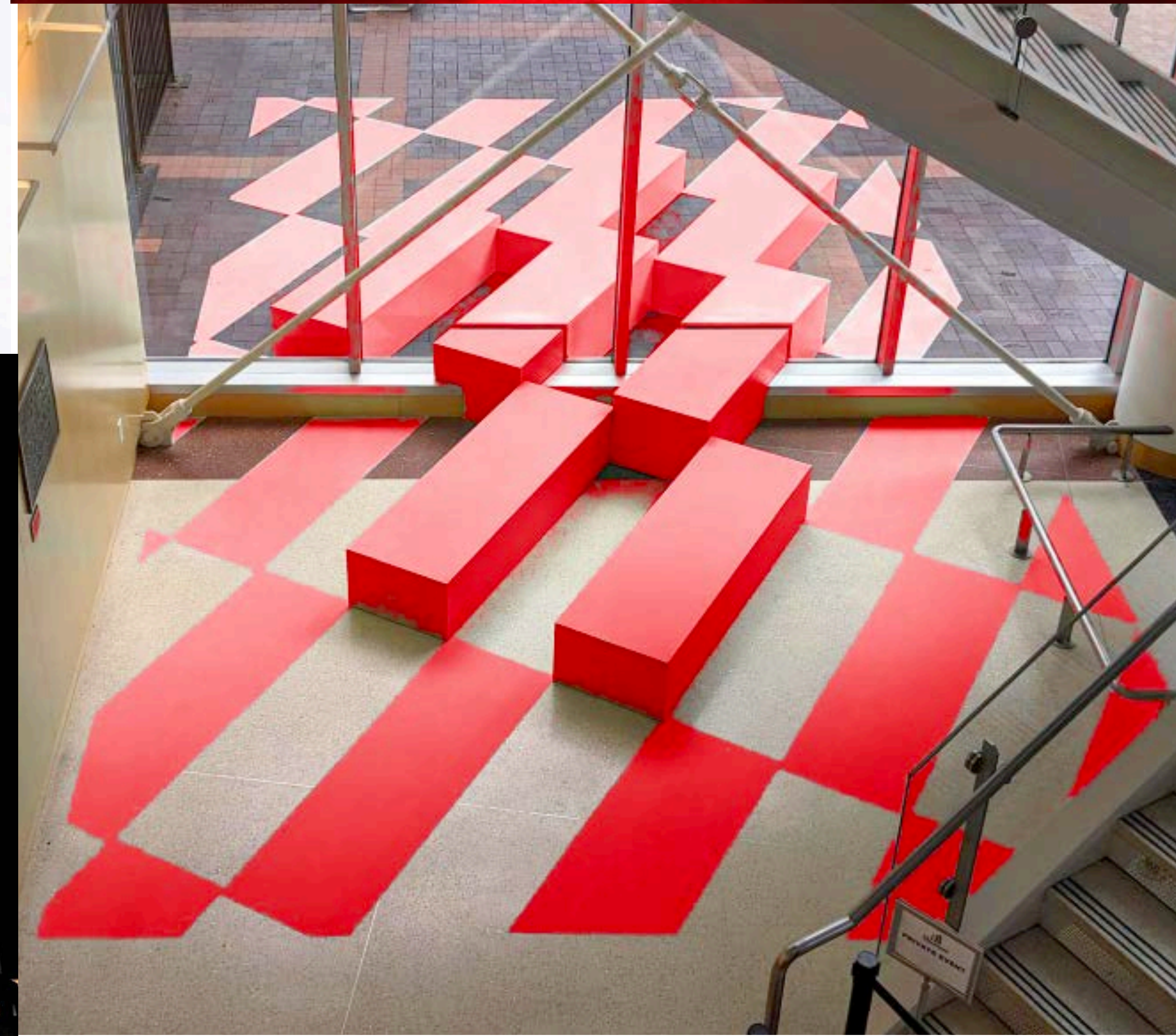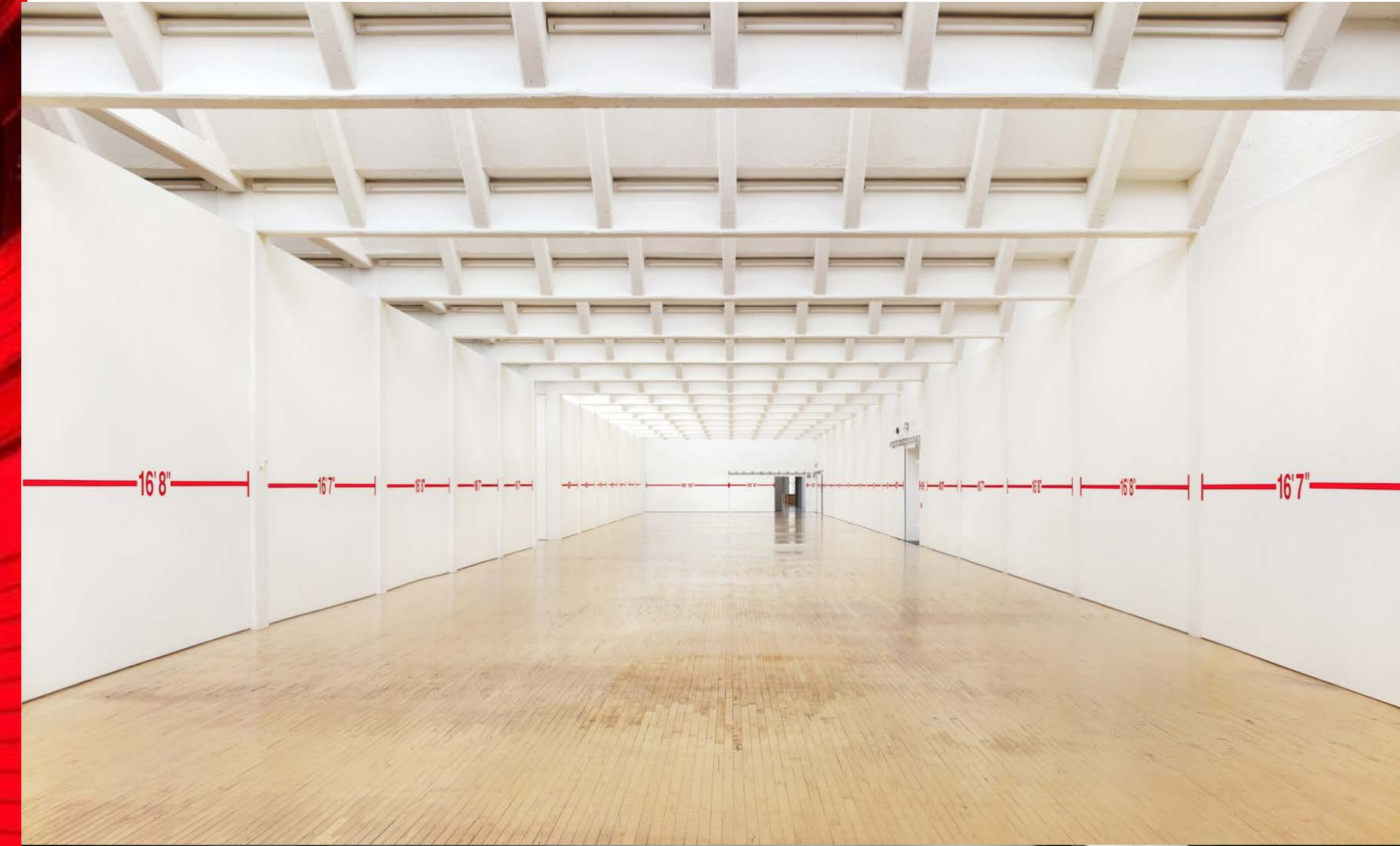
SUPERGRAPHICS: SYRACUSE SCENOGRAPHY
Erin Cuevas ARC 500 Fall 2024
Wednesdays 5:15-8:05pm
ercuevas@syr.edu

BRIEF
In this design seminar we will create large-scale graphic installations that transform sites in the school, campus, and city. Using minimally invasive and highly accessible tools ranging from masking tape and chalk lines to projectors and strobe lights, we will do more with less, leveraging our local context as a canvas for guerrilla scenographies composed of analog and digital mediums. Bridging environmental graphic design, performance dramaturgy, interactive technology, and installation art, this seminar will thrive off the collaboration of diverse skillsets and perspectives.

SUMMARY
Artists of the Supergraphics movement of the 1960s transformed architectural spaces by applying graphic designs directly onto surfaces using simple materials like paint and tape. These designs created optical illusions that reshaped environments by blurring boundaries, distorting scale, and encouraging movement. Originated by artists like Barbara Stauffacher Solomon, whose seminal graphics reskinned Sea Ranch, Supergraphics not only transformed physical spaces but also challenged perceptions, conveying personal and political messages. This movement has evolved into what is now known as Environmental Graphic Design (EGD), a design technique that leverages large-scale spatial graphics to transfigure spaces in retail, hospitality, landscape, and other sectors. EGD often offers a more efficient and sustainable approach to environmental transformation compared to traditional construction methods.

Simultaneous to EGD's growth, artists and architects continue to expand the boundaries of spatial graphic installations to foster social exchange. Artists like Barbara Kruger engage audiences with provocative text spanning architectural surfaces, prompting active dialogue among passersby. Audio-visual installations by artists such as Ryoji Ikeda and Es Devlin immerse audiences in dynamic, data-driven scenographies. Syracuse's own Molly Hunker and Greg Corso employ color and form to activate underused public spaces as hubs for community gathering. We will unpack these case studies and more, learning the capacity of media to serve as the message itself, as well as the platform for engagement.

This seminar will activate local communities through immersive installations that facilitate social exchange. Emphasizing hands-on creation, the course encourages iterative processes of discovery and refinement through prototyping and testing. Collaborating directly with local communities, students will select sites within the University and city for their installations, witnessing firsthand the transformation of ordinary materials into impactful public works.

Supergraphics: Syracuse Scenography kicks off the 2024-25 Boghosian Fellowship agenda striving towards more equitable spaces of performance. The seminar contributes to a broader exploration of scenography's inclusive potential through storytelling, site-specific community events, and accessible emerging technologies. I will be developing my own work in tandem with the seminar, to be exhibited together with the students' work in a culminating public event.

I encourage any interested students to please reach out to me with any questions you may have about the seminar.

SYNTHETIC IMAGINATION
PASTS AND FUTURES OF AI IN CREATIVE WORK

ARC 500   Fall 2024   Professor Mark Linder   Slocum 402   Tuesdays 2:00-4:50

This seminar is open to any student who is curious about how artificial intelligence is altering our understanding of imagination, aesthetics, creativity, and design. Readings and discussions will take us deep into recent discourses about the potential of *artificial imagination*, *machine learning*, and *synthetic intelligence* as well as the historical sources of imaging theories and technologies. Workshops will introduce some of the digital technologies and techniques that can be used to produce, distribute, manipulate, record, and activate *synthetic imagination* **(SI)**. We will develop sophisticated understandings and innovative uses of SI which challenge seemingly (but not actually) moribund issues such as authorship, authenticity, and representation.

We begin with the premise that SI is a new phase in the history of artificial intelligence and aesthetic practices. Yet its projective and affirmational operations and results often refuse or confuse established theories and practices which have fascinated artists for centuries--from drawing machines in the Renaissance and automatons in the Enlightenment, to science fiction and early computer and video art in the twentieth century, to today's large language and generative imagining models. But more recently, and in the near future, "intelligent" computational technologies have been and will be increasingly integrated into the "imaginations" of artists and designers in ways that fundamentally alter their creative practices, identities, and aesthetic concepts. SI is an extreme alteration in human culture and experience that engages and immerses us, as casual and expert users, in real-time human/machine collaboration and dialogue that is rapidly and furtively advancing in literature, the visual arts, and design fields.

Students in this seminar should have a deep and intense interest in the problems and potentials of SI, but do not need to have expert skills in any specific form of digital media. The aim of the course is to begin to understand **how to do SI with AI**.

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1   **Mike Tyka**, *I see you,* **2017**
2   **Sondra Perry**, *Double, Quadruple, Etcetera, Etcetera 1*, **2013 (video still)**
3   **Ai-Da the robot artist (www.ai-darobot.com)**
4   **Trevor Paglen**, *From 'Apple' to 'Anomaly'*, **2019 (installation view)**

Adventures in Audiosocial Space

Welcome to the newest mutiny...

Spring Semester
Professional Elective ARC 500
Wednesdays 10:35am-1:30pm, Slocum Hall Room 307
Non-Architecture students must request permission to
register contact Jess Myers, jmyers09@syr.edu if interested

[Sonic Fiction] moves through the explosive forces which technology ignites in us, the temporal architecture of inner space, audiosocial space, living space, where post-war alienation breaks down into the 21st C alien. – More Brilliant Than the Sun, Kodwo Eshun, 1998

In More Brilliant Than The Sun, Kodwo Eshun's love letter/manifesto/epic poem to Black improvisational music in the 1990s (But not always. But also, always, because what is time?), he coins the term audiosocial space. He, more or less, only uses it once, only in the introduction, and only to get to another concept. But in this somewhat abandoned little term, we will find the motivational impulse of this seminar. Audiosocial space is the unbroken soundscape that we find ourselves in with others and our environments. It offers a record of our relational occupation of built space. It reveals the power plays, negotiations, and cultural collectives we mundanely join and abandon on a moment-to-moment basis. Although for the most part we have trained ourselves to ignore it. In this course we will enliven our own ears, sensitizing them to the sound of audiosocial spaces and architecture's place with in them.

Eshun tenderly dedicated More Brilliant "for the newest mutants," which is to say to those who found themselves utterly culturally displaced but through bonds with technology, music, and imagination created worlds in their own sonic-image. In this course, I invite you to the newest mutiny. Rather than projecting architectural analysis through the visual we will commit a small revolt in closing our eyes and considering the built environment's aural language. We will consider the audiosocial spaces that we already occupy, the many negotiations of occupancy that we navigate on a daily basis, the ways that other partitioners have made these spaces audible to us, and finally we will create audio environments ourselves.

This work will require a renewed commitment to research and in so doing a new commitment to observation. You will be asked to venture out into familiar buildings and observe them deeply. But rather than showing your colleagues the results of your inquiry, you will ask them to listen.

COURSE GOALS
- Students will advance their understanding of sound studies.
- Students advance their competencies in field recording and sound design.
- Students will develop a strong understanding of audio as a form of architectural representation and audio essay as a means of expressing critical thought.

INTENDED LEARNING OUTCOMES
- Students will advance their ability to make well developed and articulate research proposals.
- Students will demonstrate their capacity to work respectfully and effectively in groups.
- Students will demonstrate the ability to develop aural language and representational approaches that are unique to their arguments, experimenting beyond standard architectural representation.

Living *Otherwise*: Rethinking the Architecture of the Collective

Syracuse Architecture / Professional Elective / Fall 2024 / Wednesdays / 2:15-5:00pm
Instructor: Assistant Professor Marcos Parga, mparga@syr.edu

Dwelling space has been, and probably will continue to be, a highly contested space.

The economic, the political, and the social coalesce around it, and the tensions between these three forces have been shaping the material construct of our homes throughout history.

The current domestic landscape is characterized by an increasing gap between, on the one hand, the rise of major demographic shifts in most industrialized countries - that results in the production of new forms of cohabiting, and on the other hand, the reassuring and often celebrated clichés of traditional family life - an ideological blanket that hides the structural changes that society undergoes. This means that, while the housing market all too often continues to replicate old stereotypical mono-functional urban developments of the post-war era, more and more people are actually living in very different circumstances, and "exceptions" have become the norm.

So, if given the actual strain of resources and land, and the dissociation between provided living space and current socio-economic conditions, houses as we know them today will no longer be economically or ecologically viable, what should take the place of these inherited dwelling structures that dictate and confine? And how alternative urban living environments will look like in order to enable and support?

This Seminar is based on the premise that this crisis is a unique call for a radical reinvention of the idea of housing and explores the current renaissance of collaborative forms of living and the architectures that emerge from them as a possible answer for those questions.

Since the advent of industrialization, co-living has come to reference a distinctively different and unique way of life considered unconventional for many. This marginal condition allowed these experiences to play a significant role in the overall history of housing by providing the opportunity for reflection: over the last 150 years, collective living models have been witnesses to their era, revealing a great deal about how each epoch perceived lifestyles, lived together, operated their households, understood property and ownership, and excluded or integrated productive/reproductive labor into their cohabitation spaces. In doing so, they became critical antidotes to the fundamental logic of our capitalistic society, challenging existing gender, biopolitical and territorial hierarchies.

This elective will look closely at those historical models that often included a critique of the prevailing conservative ideas of living and housing, and revealed social processes through spatial expressions. From the French social utopias of the 19th century and the Garden Cities of early modernism, to hippy communes and squatter movements of more recent decades, the aim is to reveal how these previous experiences inform contemporary cooperatives, autonomous housing projects and architectures of sharing that are emerging across the world as an important part of a seismic shift towards a socially responsible architecture that seeks to respond to the key social challenges of our time.

The course will be a combination of lectures, student-led reading discussions, screening sessions followed by related conversations led by students, project presentations and reviews, and will culminate in a proactive investigation into housing alternatives and urban/non-urban futures conducted from a tangible perspective, evaluating the role of architects in the redefinition of a new form of life together, and the importance of the architectural expression in giving consistency to the political claims of ways of living *otherwise*.

ARC 500 | **Checkmate** 3 credit hours   class meeting time: Wednesday 12:45 - 3:35

Checkmate

Tools + Toys of Metaphor in 20th C. Modernism
Playing the Architectural Game of the Linguistic Hybrid

Barbara Kruger, Zaha Hadid, Alexander Rodchenko

With a focus on the architectural language of Le Corbusier, projects compare and contrast Le Corbusier with Terragni | Aalto | Wright | Moretti | Rietveld | Stirling | Hadid | Koolhaas |

Position | Strategy | Tactics | Material

How does one decide what an architecture could look like? For some, this is both the most daunting and most important question facing the architect. The development of an evolved architectural language remains, for many, an elusive challenge in the attempt to find expression, character and meaning in the construction of architectural form. The ability to craft an identity of linguistic consequence can be thought of as the defining achievement that distinguishes **architecture** as a poetic and rhetorical endeavor from simple acts of construction and utility. To address the issues of visual and disciplinary literacy, this course, which is not interested in the game of chess, the ability to play chess or any understanding of the game of chess, will use games, including chess, as the structural framework for creating translations of architectural language into new forms of novelty, strategy and tactical correspondence. We will engage in close readings of the work of selected architects in an effort to identify, isolate, extract and decipher the fundamental characteristics that comprise the linguistic components utilized by that architect. This will include a focused examination of the strategies of syntax that typify a body of work - that is, the rules of the game - the rules of formal, material, and tectonic engagement and the underlying sensibilities that inform the 2D and 3D compositional and conceptual constructs.

Structure | Production

Class meetings will consist of lectures by the instructor, interactive in-class dialogue, limited assigned readings and the ongoing review of analysis and design exercises. Each student will work on a single continuous project for the semester that will focus on the oeuvre of an architect and will culminate in the 3D fabrication of a game, its necessary instruments and equipment, that will provide a sophisticated translation of the formal and symbolic essence of ideas endemic to that architect's work. Note that we will **not** make chess pieces with little Villa Rotundas or Villa Savoyes on top but rather we will transfer, transform and transfigure the linguistic essence of the work through the clarifying lens of abstraction - our works will not 'look' exactly like the references but they will instead 'act' and 'speak' like them.

Glossary | Terms

Syntax, Grammar, Structure, Expression, Materiality, Style, Lineage, Assembly, Transformation, Translation, Transmutation, Essence, Abstraction, Grid, Content, Rhetoric, Symbolism, Character, Meaning, Craft, Logic, Position, Tactics, Strategy, Analysis, Formalism, Elemental, Conflict, Leisure, Black, Queen, Checkmate

Brand and Architecture
Case Study: "Pop Ups"

Instructors:
Michael Speaks, Dean and Professor, Syracuse Architecture
Erin Cuevas, Boghosian Fellow, 2024-2025, Syracuse Architecture
Ian Wang, Fashion and Graphic Designer, Shanghai
Ji Won Shin, Architect Principal, Studio Shinoh, Seoul

Room:104 Slocum Hall
Time: Tuesdays 2pm-4:50pm
Workshops: TBD Saturdays / Sundays 10am-5pm

Description
This seminar will examine the relationship between brand and architecture by focusing on the "Pop Up," a specialized building typology that emerged in Los Angeles the 1990s, and which has since been deployed around the world to: launch new products; test new markets; and create more robust, interactive customer experiences not possible in traditional retail store environments or online. "Pop Ups" have also been deployed by non-commercial organizations, including non-profits, and by a variety of educational and explicitly political organizations, all of which, just as with more overtly commercial organizations, seek to expand their brand presence and increase market share.

Structure
The seminar will be structured around classroom discussions on brand case studies and a series of weekend design workshops led by experts in brand experience design, pop-up shop design, and garment and product design. Each workshop will focus on one aspect of a "Pop Up" coffee shop design that we will build, install and operate in the Marble Room in Spring 2025. The first workshop, led by Erin Cuevas, who has worked most recently as an art director for Nike, will focus on brand collaboration, development and deployment. The second workshop, led by Ji Won Shin, whose firm, Shinoh, has designed numerous "Pop Up" shops in Seoul, and are currently designing a Pop Up in SoHo NYC for TirTir, a Korean cosmetics brand, will lead a Pop Up Shop design workshop. Ian Wang, trained as a fashion designer and currently a brand designer, will lead a workshop on product and garment design. Each of these workshops will produce designs that will be incorporated into a design-build workshop in Spring 2025 led by Ji Won Shin to build and operate a Pop Up coffee shop in the Marble Room.

Brand, Identity and the Design Frame
Brand Project: Levi's

Instructors:
Michael Speaks, Ph.D., Dean and Professor, Syracuse Architecture
Nan Wang, Brand Professional and Fashion Designer, Shanghai, China
Room:104 Slocum Hall
Day/Time: Tuesdays, 2:00-4:50pm

In Fall 2024 Syracuse Architecture will organize a sponsored studio at SCIARC in downtown Los Angeles focused on developing new retail typologies for Levi Strauss and Co. These will include pop-up shops as well as specialized shops to make bespoke denim products, including jeans, jackets, totes, backpacks, etc. In combination with this studio, we will organize "The Brand Project: Levi's" which will include a seminar taught in Slocum Hall and one taught in Los Angeles. The seminar in Slocum Hall will focus on brand and its relationship to architecture and will review recent work by OMA, Virgil Abloh and others. The seminar will focus on Levi's and its brand history, and produce, in conjunction with the LA-based studio, brand concepts and prototypes, including denim products. The seminar will travel to LA for a workshop with the team there and with Levi's brand team at the "Haus of Strauss."

This course will deal with three topics as they relate to architecture understood as a cultural practice: Brand, Identity, and the Design Frame. We propose that Brand is an adhesive used to bind together a variety of material and immaterial elements to create an Identity. All identities are designed, and we will be concerned with that design process, especially with what we call "The Design Frame," an explicitly editorial process that selects, frames and binds together these various elements to create an identity. The viability and longevity of any identity ultimately depends on the degree to which it is open to change and adaptation. And this degree of openness is dependent entirely on the flexibility of the design frame and on the malleability of the brand which literally holds everything together.

The course will meet weekly and consist of class discussions and presentations drawn from the readings listed below as well as films, videos, ad campaigns, and other materials, including newsletters from Jing Daily, Business of Fashion, The Lyst Index, and other industry publications and platforms. We will also read case studies in the Magazine B series by Joh, including, among others: Snow Peak (no.3); Mason Margiela (no.54); Leica (no.34); Rimowa (32); Tsutaya (no. 37); G-Shock (no.77); Arc'teryx (no.89).

FABRICATING VOCABULARY
seminar
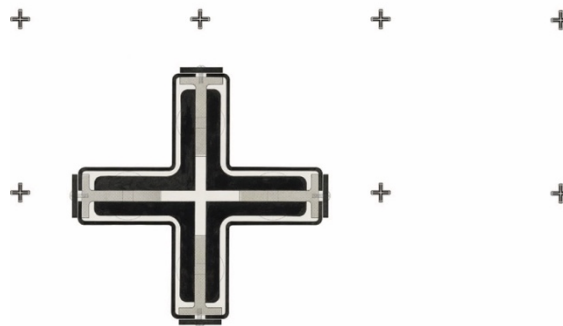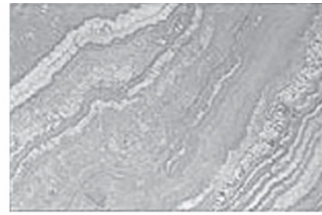
Barcelona Pavilion Column, Mies van der Rohe

How do we 'make' space? What is the role of material choice, character, and assembly in architectural form? And what about building structure? Does form precede building? Or is form derived from building? Or from the express manifestation of structure? Are material and structure fundamental aspects of architecture, or simply occasional requirements? Do we construct tectonic ducks? Or decorate sheds, whose material make-up is otherwise determined? The answer to all this is, of course, yes. Attitudes and arguments regarding the relation of design-form to constructed form vary widely and have been present in architectural discourse throughout the history of our discipline.

It will be a contention of this seminar that becoming informed on this topic – i.e., the relation between material assembly and spatial form – is a necessary aspect of architectural education. This is not to say that only architectural design founded on the articulation of material assembly and structural manifestation can be good or 'true'. Rather, it is to say that, in-as-much-as buildings are built, or are intended to be so, it is important to understand possible relationships between materials, structure, and form. To passively accept conventional practices and/or resort to a narrow default is to likely forfeit design opportunity.

The nineteenth century saw radical, large-scale shifts in politics, culture, economics, and international relations. Situated within these expansive contexts, architecture likewise convulsed. Interestingly for us, and this course, in this period of flux much energy was devoted to articulating arguments concerning the sources of architectural form and the relevance of the discipline. Beginning, then, with the mid-nineteenth century, this course will explore these arguments by tracing the arc of topic discourse. We will move between Gottfried Semper, the British gothic revivalists, the French gothic rationalists, and Weimar Germany and the Bauhaus. Through this focused exploration we will see strongly held and distinct positions concerning the role of building and structure in architectural form emerge.

Once understandings of these arguments are established, we will then use them as lenses through which to view, to analyze more precisely, the works of various 20th and 21st century architects. Our objective will be to develop conceptual, formal, and theoretical interpretations of their building design work, and, in turn, better inform our own.
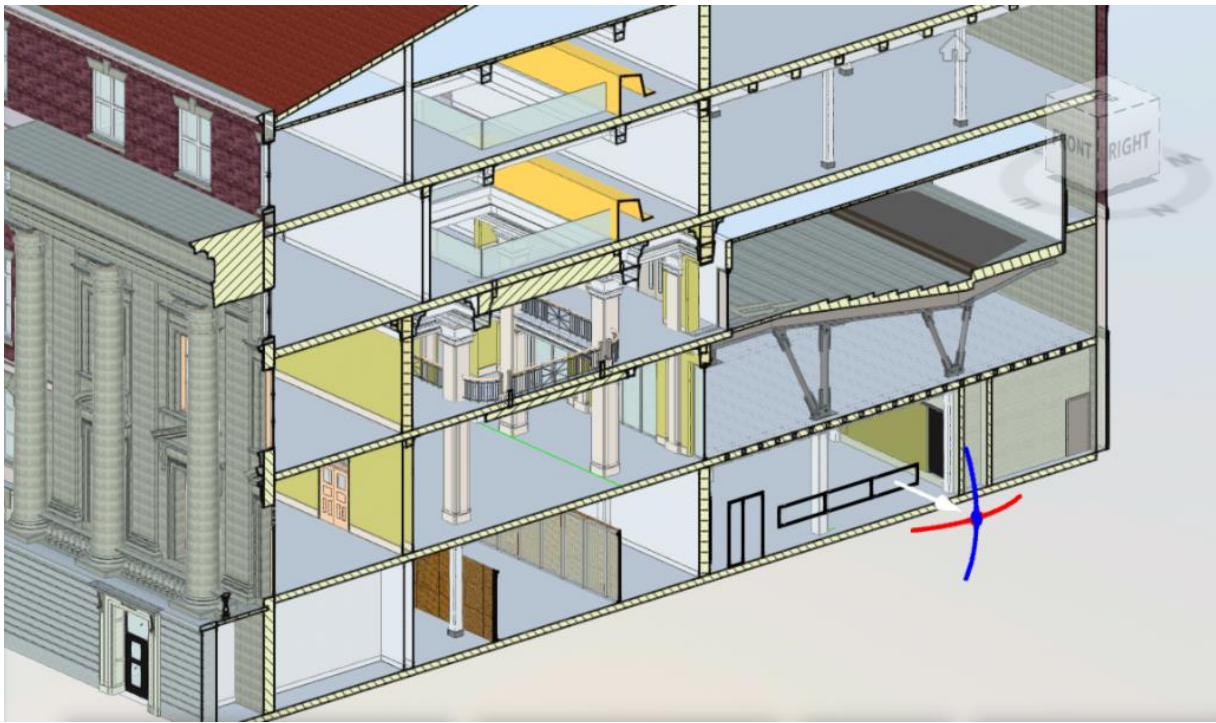
ARC 555- Intro to Building Information Modeling (BIM)
Mondays: 5:15-8:00 Slocum computer lab

This course will give the student an in-depth look at Building Information and how it is used for coordination, visualization and production in the architectural field. The primary software will be Autodesk Revit. The area of emphasis will focus on how well students can produce buildable construction documents while being able to relay their design through perspectives, isometric views, and data output such as door and window schedules. Once complete the students will be competent in the use of Revit and the understanding of Building Information Modeling. This class will be live, interactive hands on training, in both the built environment and the specific technical skills required to achieve competency in the field of BIM. Each area of Revit will be covered as it relates to architectural building systems such as wall systems, floor systems, roofing systems, and stairs/ramps. Also, this class will cover structural systems, and the relation of architecture to mechanical, electrical and plumbing (MEP) systems. The class deliverable will consist of each student creating a building model on their own. This model can be commercial or residential. It can be a real building, or a made up design of the student's desire. Grading will be judged by the construction documents produced. Plans, elevations, sections enlarged dimensioned details are the most important. Effort plays a critical role, as does classroom attendance and participation. Reading material is Revit Architecture No Experience Required. As always, this will be furnished for free by the instructor.
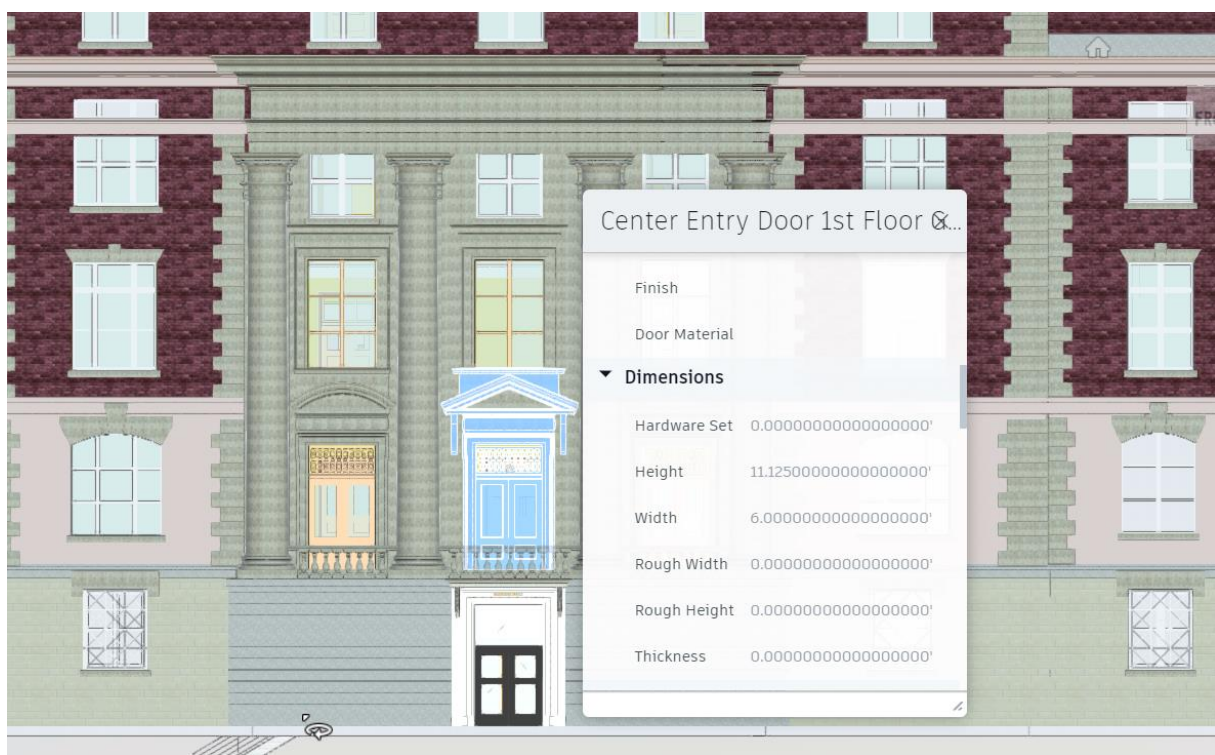
ARC 558- Advanced Building Information Modeling (BIM)
Wednesdays: 5:15-8:00 Slocum computer lab

Following the Introduction to BIM course, this course takes a deeper dive into the inner workings of BIM and Revit. This course is intended to expose the students to the collaborative environment that is now taking place and is a demand throughout the industry using Building Information Modeling software. To start the course, we will review legal documents that outline a BIM project that serves as a reference to specific terminology, project guidelines and BIM protocols. This course also covers advanced modeling techniques needed to really make Revit work for an architect. Because most firms are fully on Revit, it is a prerequisite that new hires not only know the program but know it well. This course will give SoA students a unique opportunity to gain an upper hand in the workplace. We will start with learning how to operate in a model within a collaborative, multi-user environment. Then we will learn parametric design using advanced family creation. Phasing (renovation) will be next followed by creating design options. We round it all off by creating massing elements and non-linear wall, roof and floor systems.

ARC 566/HOA577 - INTRODUCTION TO HISTORIC PRESERVATION

Ted Bartlett, Instructor

Fall 2024, Class/Lecture: Monday & Wednesday, 8:00 AM – 9:20 AM

ARC 566/HOA 577 is an introductory course into American Historic Preservation, it's philosophy, history, workings, and practice in the United States. The course is projected to provide the students with:

- The ability to recognize when Historic Preservations may be part of a project even if not identified at the onset,
- To understand why Historic Preservation is a critical tool for community and design planning and why it should be a fundamental part of daily practice,
- An understanding how to avoid Historic Preservation pitfalls by including Historic Preservation questions at the very beginning of every project scoping,
- A basic understanding of how Historic Preservation developed in the United States in the 19th and 20th centuries and the impact of its history and themes on modern Historic Preservation philosophy and practice,
- An overview of Historic Preservation Federal, State, and Local policies, guidelines, and public reviews that are a daily part of the design profession,
- An overview of the professional tools and programs available to assist planners and designers implement Historic Preservation in their practice,
- Interaction with Historic Preservation professionals in different areas of Historic Preservation as quest lecturers,
- Visiting several current Historic Preservation projects to see first-hand how Historic Preservation impacts projects and is implemented in the field,
- An overview of several appropriate Historic Preservation approaches to historic materials,
- An open forum to discuss any aspect of Historic Preservation,
- Understanding how important the mantra "When it's Gone, It's Gone" is to our collective built history, and
- Why Historic Preservation folks can be ever so passionate about preservation.

Course Structure

ARC 566/HOA577 is a lecture-based survey course with related site visits designed to introduce the class to the field of historic preservation as practiced in the United States. The course will cover the development of historic preservation as a social, political, economic, and aesthetic movement. The relationship of historic preservation to the environmental movement, the philosophical tenets and mechanics of American preservation and the application of preservation to the planning and design practices will be covered. The course is divided into several units; each unit is defined by its own set of goals, objectives and responsibilities--and will be characterized by a combination of lectures, readings, class discussion, field trips and projects. Special guest lectures, presented by noted authorities in the field of historic preservation, will also be scheduled during regular class meeting times throughout the semester. The content of these presentations will enhance and supplement the subject matter being covered in the units as presented by the instructor. Content and materials presented by guest lecturers and obtained during site visits will be considered as regular class information.

650 Research Workshops – '24-'25 Academic Year

Crafting with Machines:
Imagery, Coding, and Material as Generative Instruments
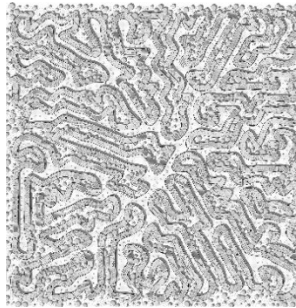
M.Arch Design Research Workshops

The Master of Architecture Research Workshop 1-2 Credit courses are an opportunity for students to gain exposure to guest professionals and critics who are invited to conduct an online and in-person workshop in Syracuse. The workshops provide a view into research methodologies and how they provide leverage into emerging processes and practices that typically lie outside traditional architectural production. This is a fantastic opportunity to see how design research bridges practice and to create productive partnerships that expand one's knowledge of the field of architecture. Each year, we establish a new theme for the workshop series that capitalizes on the latest and most intriguing topics and conversations currently influencing the field of architecture.

2024-25 Design Research Workshop Series Synopsis

The theme of the workshops this '24-'25 academic year, "*Crafting with Machines: Imagery, Coding, and Material as Generative Instruments,*" is a set of inventive and speculative workshops and exercises that highlight the increasingly pervasive combination of traditional craftsmanship with modern technology, where machines are not just tools but active participants in the creative process. The aim of the workshops is to see how learning and crafting, in tandem with machines, can enhance the design processes and enable more complex and innovative solutions to architectural problems using imagery, coding, and materials as potential generative instruments for design. By using advanced technologies, architects can explore unconventional design solutions that might not be immediately achievable through traditional methods. Crafting with machines creates a framework for innovative forms, structural components, and representational strategies that integrate emerging technologies, such as AI, robotics, CNC milling, 3D printing, and much more, into the design process to create aesthetically rich and innovative architectural design solutions.

Workshop #1 – Katie MacDonald and Kyle Schumann, After Architecture, October – November

Workshop #2 – Andrew Kudless, matsys, February – March

Workshop #3 – TBD

Graduate Pavilion Team – Fall '24 and Spring '25

Workshop #1
Manufacturing Material

Instructors: Katie MacDonald and Kyle Schumann of *After-Architecture*, *Professors – University of Virginia*
1 Credit, Fall Workshop, October – November

Professional Bios

Katie MacDonald is a licensed architect in Virginia and Cofounder of After Architecture. Recent works include a memorial in Washington D.C., and installations for the Oslo Architecture Triennale, the Knoxville Museum of Art, and Exhibit Columbus. MacDonald is Assistant Professor of Architecture at the University of Virginia where she codirects the Before Building Laboratory, leading material research and development. MacDonald pioneers new biomaterial assemblies with the aim of creating sustainable building material systems. Current projects focus on rapidly renewable biomaterials, including wood, bamboo, grass, various invasive plant species, and hemp. In 2023, MacDonald was awarded the Architectural League Prize for Young Architects + Designers and named Educator of the Year in Metropolis Magazine's Planet Positive Awards.

Kyle Schumann is Cofounder of After Architecture, an architecture firm named to convey the built environment's impact on cultures and ecologies. Schumann is Assistant Professor of Architecture at the University of Virginia where he codirects the Before Building Laboratory, leading robotic fabrication research and development. Schumann seeks to advance the accessibility of digital fabrication, leveraging democratized technologies as well as inventing and building low-cost ground-up fabrication and imaging systems. His work spans analog processes in woodworking, metalworking, casting, ceramics, and textile production, to advanced and novel digital fabrication technologies, robotics, and machine visioning. In 2023, Schumann was awarded the Architectural League Prize for Young Architects + Designers and the Design Build Award from the Association of Collegiate Schools of Architecture.

Workshop Title: **Manufacturing Material**

Workshop Description

This workshop draws from pre-industrial wood construction techniques, land art practices, and conventional sawmilling methods to frame and introduce alternative approaches to transforming logs into architectural elements. Workshop instruction will include design, coding, and file preparation in Rhinoceros and Grasshopper, leading to a two-stage robotic fabrication process:

Part 1 (off-site): In Virginia, student-designed elements will be rough sawn from storm-felled logs using the workshop instructors' robotic sawmill. Students will prepare cut files and G-Code for the sawmill via Rhino/Grasshopper.

Part 2 (on-site): At Syracuse, students will refine their rough-sawn elements via robotic routing, transforming their material into finished timber and introducing strategies for texturing, surfacing, and joining. Elements will be assembled and displayed in or around Slocum Hall.

Learning Objectives
- Understand design and material considerations from log to lumber to architectural assembly.
- Deploy novel robotic fabrication methods through a robotic sawmill and robotic arm routing.
- Consider questions of craft and material agency through design and digital processes.

Workshop Equipment
The workshop will make use of the instructors' robotic sawmill in Virginia and the following at Syracuse:
- Routing via tabletop 6-axis KUKA robotic arm
(3-axis CNC routing may also be possible)
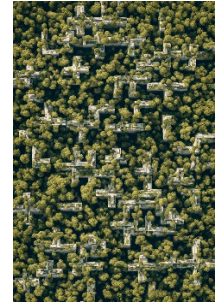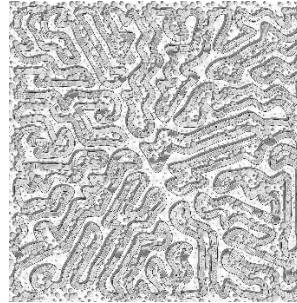- Analog woodshop tools (drills, saws, sanders, etc.

Workshop #2

Drawing Codes: Experimental Protocols of Architectural Representation

Instructor: *Andrew Kudless, Professor at Univ. of Houston, Director - Craft Lab, Founder, matsysdesign*
1 Credit
Spring Workshop, February – March

Professional Bio:

Andrew Kudless is a designer based in Houston, Texas where he is the Bill D. Kendall Professor at the University of Houston's Hines College of Architecture & Design as well as the Director of the Construction Robotics and Fabrication Technologies Lab (CRAFT Lab). In 2004, he founded Matsys, a design studio exploring the emergent relationships between architecture, engineering, biology, and computation. The studio is the recipient of several awards including the 2019 AIA Honor Award of Architecture for Confluence Park. Kudless holds a Master of Arts in Emergent Technologies and Design from the Architectural Association and a Master of Architecture from Tulane University. The work of Matsys has been exhibited internationally and is in the permanent collections of the San Francisco Museum of Modern Art, the Centre Pompidou in Paris, and the FRAC Centre in Orleans, France.

Workshop Title: **The Exquisite City: Collective Form in the Age of Generative AI**

Workshop Description:

This workshop explores the combination of two powerful design technologies, parametric modeling and generative AI, to develop and visualize speculative urban forms. Each student will construct a set of rules that parametrically produce urban plans. These rules will first be tested through quick sketches and visualized through the collective encoding of existing urban patterns found within generative AI models. The opportunities and challenges of these models, including cultural, historical, and technological biases will be discussed as students learn to critically engage generative AI in the design process.

Students will then select specific patterns and develop generative logics that can be encoded within a parametric environment. The contrast between the bottom-up emergence of generative AI with the top-down constraints of parametric modeling is a central focus of the workshop. While both allow for exploration, they operate in different design modalities. Generative AI is more like a freehand sketch, quick and loose, able to suggest directions without overly determining the destination. On the other hand, parametric modeling is more like building a machine able to precisely produce an unlimited number of variable but narrowly defined results. By learning to iterate between these technologies, the designer expands their imagination and capabilities.

The workshop will conclude with the printing of a large-scale collective drawing of the generated city and its associated diagrams and generative AI image and video visualizations.

Workshop #3
Title: To be determined...

Instructor: *TBD*
1 or 2 Credits
Spring Workshop, January - February

Due to an unforeseen circumstance with one of the guest instructors, they will not be able to join us this year. We hope to have them back in the future. But we do anticipate there being a third workshop available in the Spring for potentially 2 credits and we will inform students as soon as we know more.

Graduate Pavilion Team – "Crafting with Machines"
Independent Student Design Research Project

Advisors: *Professors Roger Hubeli and Britt Eversole*
1 Credit, 3-5 students
Fall, 14 weeks – 1 Credit

Each year, a group of graduate students work together to design and construct the Graduate Pavilion for the Grad Open House in Spring. This year we are making this available to count towards the ARC 650 credits. As in previous years, the pavilion aim is to offer students the opportunity to do underlined independent design research and construct a full-scale graduate pavilion that is completed by March, Spring '25. This is a unique and rewarding experience, as the work is driven and executed completely by the students, with support of faculty advisors. The goal each year is to start with the annual Workshop Theme, in which case this year's theme is, "*Crafting with Machines: Imagery, Coding, and Material as Generative Instruments,*" to then use as a catalyst for a design investigation. Students will be asked to focus on strategies, such as coding, scripting or machine learning to generate formal, material and constructive logics for the pavilion. There will be an invited guest joining in the Fall to support students with ways to translate 3D formal intentions into scripting, tool paths, and output to machines like 3d printers, robotic arms, CNC milling, etc. It is highly recommended that those participating in the Pavilion Team also take Workshop #1: *Manufacturing Material* with 'After Architecture' on material and coding.

Students interested in participating need to contact Julie Larsen. We are looking for approximately 3-5 students who are highly motivated to take on an independent design research project and see it through to construction in Spring '25. Students who participate this fall will receive 1 credit towards the ARC 650 credits and should expect to commit to participating through the Spring semester, till the Graduate Open House.