



Studio 401_design matters

We make things better!

Welcome to Studio 401. We view architecture as a form of action and an optimistic way of speculating about a better world. At the intersection of architecture, ecology, and related disciplines, we look to environment, infrastructure, culture, materials, and fabrication as key drivers to inspire the imagination. As a studio, we focus on the prospect of architecture to build community by questioning existing power structures and notions of ownership. We look to the natural and social sciences to produce alternative architectural models and nuanced ways of thinking about our field. We balance experiential and theoretical approaches to architecture, and often make tests at large scale.

Studio 401 is dedicated to creative skill development that gives you agency in the world. We strive to make a **more equitable, resilient, and imaginative world**, and positively affect people's lives through design. The structure of the studio is a 'loose-fit' model to enable creativity and design exploration. Projects range from environmental provocations such as cloud makers and mine remediators, to new civic infrastructures, to urban insertions that positively impact social change. I serve as a guide and this class does not overlay a specific design doctrine or aesthetic.

We challenge conventional notions of education—and architecture, through storytelling, alternative site explorations, and making. Our approach is grounded in current and historic events, feminist studies, social and environmental justice as we question notions of authority and normalcy.

[Another plug for the imagination!](#)

"Imagination is more important than knowledge. For knowledge is limited to all we now know and understand, while imagination embraces the entire world, and all there ever will be to know and understand."

— Albert Einstein

Contact me if you would like to know more about the studio. dtcliffo@calpoly.edu

The Fine Print: The teaching method is not prescriptive, and it is helpful if you are prone to curiosity and motivated to think for yourselves, to think your way into, and out of a problem, and to invest time and energy to creatively address your thesis. The teaching | learning method is intended as a 'loose fit' model that is fluid and adaptable to new scenarios as they develop.



Pedagogy – It's about creativity (and curiosity)

Our studio is a human-centered, maker-thinker space, built upon curiosity, wonder and play. The studio is experimental and does **not** have a predetermined style or dogma. As a studio, we balance theory and practice, to make a difference through the creative and social enterprise of design. If you like developing ideas from making things through the equitable engagement of hand and mind – this studio is a good choice. 1:1 scale work is always an option, and we may choose to make full scale installations during the term. To foster depth and diversity of thought, we promote working reviews (these are working sessions where everyone has a pencil in hand) with outside experts. In a broad sense, I view teaching as a form of activism where we think critically, unpack assumptions, and consider alternative viewpoints. Together, we seek to challenge dominant ideologies, disrupt the status quo, and commit to the common good through design.

Networking – We learn a lot from others

We develop networks with interesting architecture, design, and engineering firms to build collaborative opportunities between studio and creative practice- relationships that often continue after graduation. Most recently we have been in contact with NBBJ, BCJ, Tei Carpenter, Jan Gehl's office, and TriPyramid to name a few. We have a network of students that enter offices and graduate schools that stay in contact with the studio to share skills and current experiences. We bridge research, academia, and practice, and set up a network for your prospects to become an active and engaged citizen.

Course Structure – Thinking and making

Term 1 is highly experimental, coupling theory with onsite field studies/expeditions, data collection and mapping, and 1:1 scale prototypes. The plan is to construct field instruments in our shops and then install them on site. The instruments are intended to be collaborative efforts but individual projects are possible. The term is 'radically relational' and the mapping techniques we employ produce hybrid drawings that tie data to experience. We get to know a place through storytelling and narrative; this situates our knowledge, and we look to the influence of non-human 'actors' on this developing story.

Terms 2 + 3 are dedicated to the design of the thesis project, which may be individual or collaborative, your choice. The plan is to increase design and representation skills and set you on a path to work in exceptional offices (good work and good culture), graduate school, or ride you van into the sunset.

We look into extreme environments and take an extended field trip to the Mojave + Sonoran Desert region which runs through the urban and rural areas of the West, Southwest, and Mexico. I am always sensitive to trip cost, and we will work out cost effective travel.



Site instrument to test the balance of human and natural forces.

On the creative practice of our studio building community

“The conditions in which we learn become the conditions we practice and reproduce.”

Womxn in Design on shifts in design pedagogy:

The quote above speaks to the importance of a productive environment, and as most creative practices, our studio supports a culture of experimentation, **knowledge exchange, confidence, and trust**. The studio is considered open-source, where ideas are freely exchanged and the momentum of the group benefits the individual. I believe creativity is learned and Studio 401 is a supportive environment of risk-taking combined with a playful and experimental attitude. These thoughts are structured on professional models I have experienced in multidisciplinary practice, specifically in architecture, biotech, and industrial design. As in the quote above, the learning environment that we shape, **shapes our future** practice. In this studio, students have a **voice** in the shaping of our learning environment. They are also shaped by my academic experience at Pratt and MIT, as both schools took a ‘sandbox’ approach where play and experimentation went hand and hand.

This studio supports alternate modes of thinking and is designed to inspire the imagination. As Ken Robinson notes, **‘creativity is as important as literacy,’** and our studio opens new conversations for idea development and creates a climate of possibility. We all have creative sensibilities, though our standardized educational system has made us fearful of making mistakes. Once fearful, the prospect to make discoveries is diminished. So, we draw, we make, we discuss, and **we make a lot of mistakes** as fast and as often as possible.

*And to try something new, I have set up a google doc where we can develop course directives and projects **collaboratively** in real time.*

https://docs.google.com/document/d/11Qr9fykoRk_qs6ZmV4sjp6jiiDcsKNiPj1N3XMydEhJgs/edit

Studio Show – The plan this year is to incorporate a design/build component into the studio where we construct our own gallery space for our studio show.

Check out some our work here: <https://calpolythesis.weebly.com/>

Studio culture

It's a loose fit

"There are no passengers on spaceship earth. We are all crew."

Marshall McLuhan

The structure of the studio is a 'loose-fit' model to enable skill building and design exploration. This means that we have a non-hierarchical model, and that we take all voices and ideas into account. We support creative thinking and skill development by working as a collective as we draw from the experiences and abilities of other disciplines and practice. The studio method draws from firms such as IDEO, Snohetta, and others that look closely at the opportunities afforded by design, materials, construction techniques and knowledge exchange.

As a collective, we focus on the creative development of each individual. Projects range widely in scale and content, may be static or mobile, may be material studies, guerilla installations, full-scale builds, or public interventions, though all have the common thread of addressing environmental/social/political issues through design. The studio is a tinker lab/ maker space where ideas are discovered, not preconceived.

It is a place where skills are developed and unorthodox ideas are nurtured. It's a bit nerdy, but with purpose. In this studio there is the opportunity to work individually or collectively on thesis coursework.

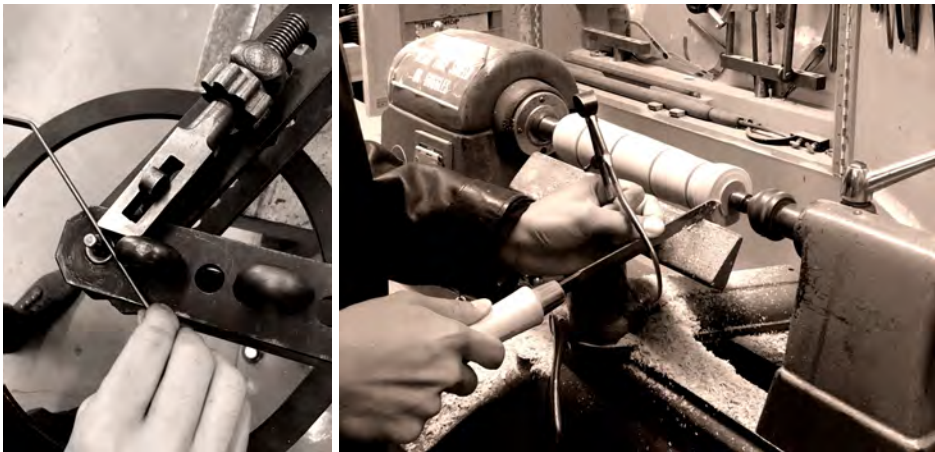
Feel like you don't fit into a precise mold?

Welcome to the studio.

"Art cannot change the world, but it can contribute to changing the consciousness ... of the men and women who could change the world." (Herbert Marcuse)

"I try to create a forum where everyone doesn't have to mold into the idea of what's expected ..."

Lindsey Adelman on how her experience at RISD influenced her approach to her office.

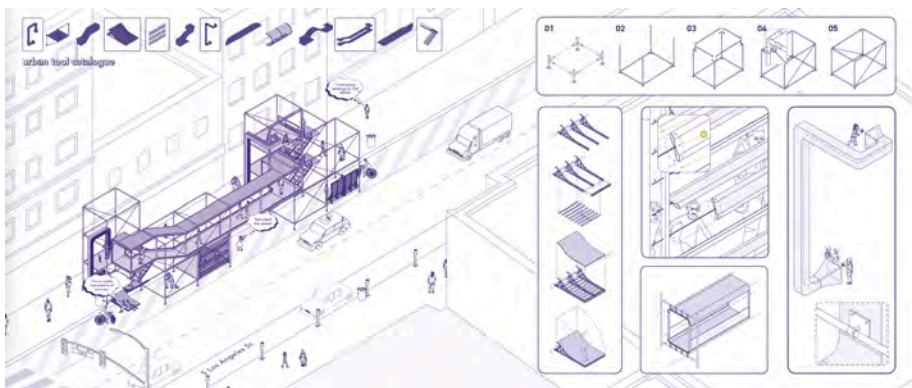


Students often begin with tools and materials as a means to develop project ideas.

Want to make a difference?

Our projects are linked by the idea that we can positively impact the world through good design and that small changes can lead to big effects. The studio is a creative platform where ideas are discussed and developed - it is a place to incubate good ideas and launch them into the world.

Larissa Muller's project looks at the approaches of tactical urbanism and giving people agency to make positive change in their environment. We look into what Atelier Bow Wow calls Architectural Ethnography - an in-depth study of the people of a place, and how **the built environment can support culture and build community**. Larissa is now getting a master's degree at UDelft in the Netherlands. I encourage students that are interested in graduate study to consider a number of schools abroad as they are excellent in terms of academics and they are often far lower in cost (some are free) than schools in the US.

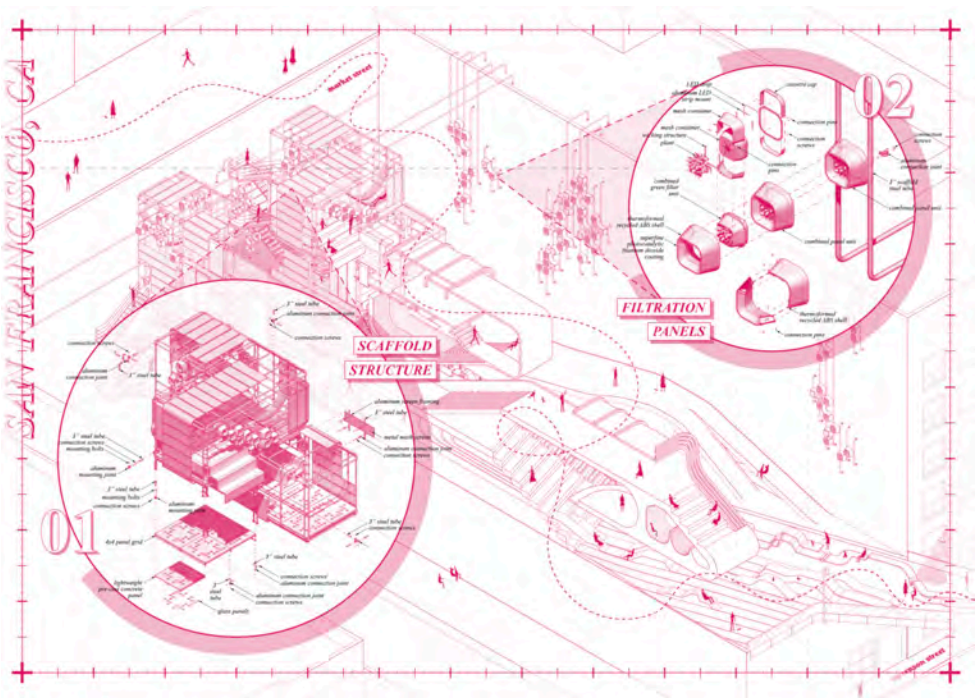
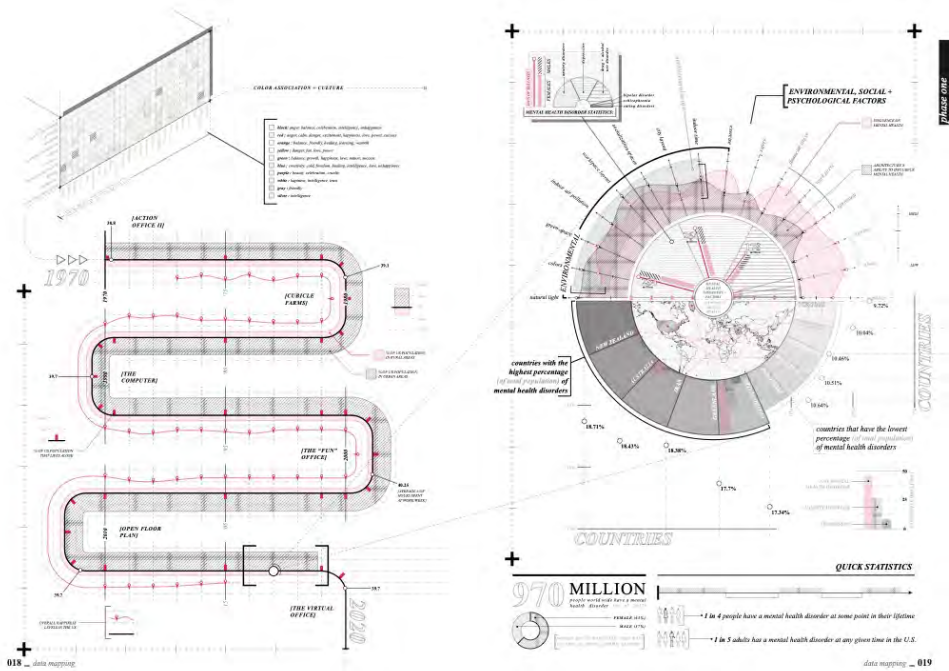


About our design methods

The following is walk through our (partial) project sequence. All projects started simply, then gained in resolution, complexity, and relevance. In our studio, drawing and modeling are viewed as a means of research and as an extension of thinking.

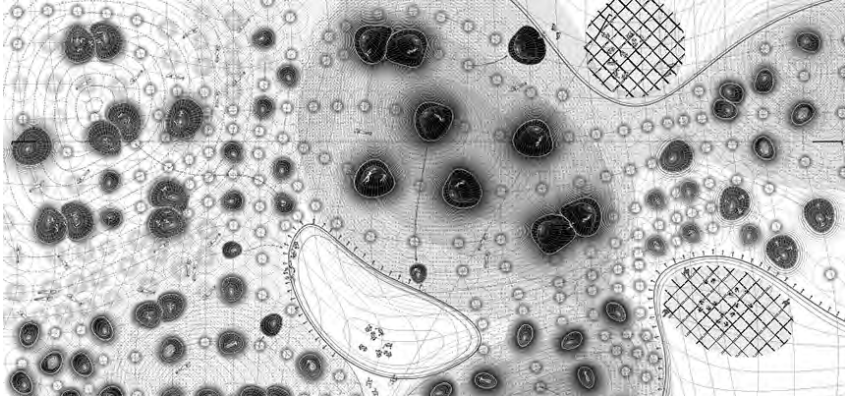
[Data mapping] Getting to know a place

We study a diverse range of information and search for new relationships. The study below by Claire Mitchell looked into the relationship of income levels, mental health, happiness levels, average hours worked, and country of origin. She uncovered fundamental social and economic issues behind the architectural questions. The image at the bottom of the page is an outcome of her design process.



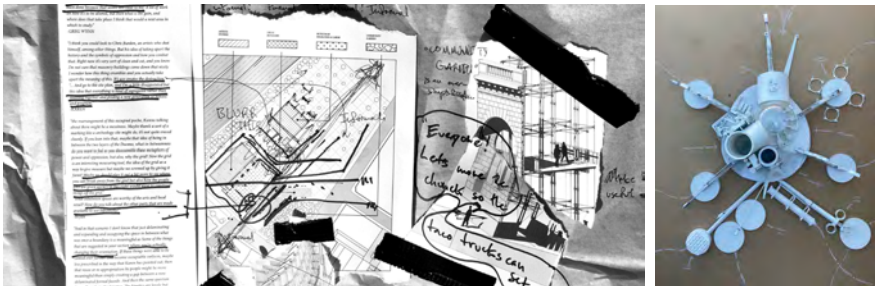
[Site mapping]

We look at site as a series of dynamic conditions, rather than a static entity. The project below by Sean Lally is an example of visualizing normally unseen relationships. We also support alternative methods of getting to know a place, through storytelling, interviews, and other creative means. Have a look at this article if you are interested in the transformation of the normative site survey into participatory design. http://field-journal.org/wp-content/uploads/2016/07/Site-Seeing_Butterworth-Vardy.pdf



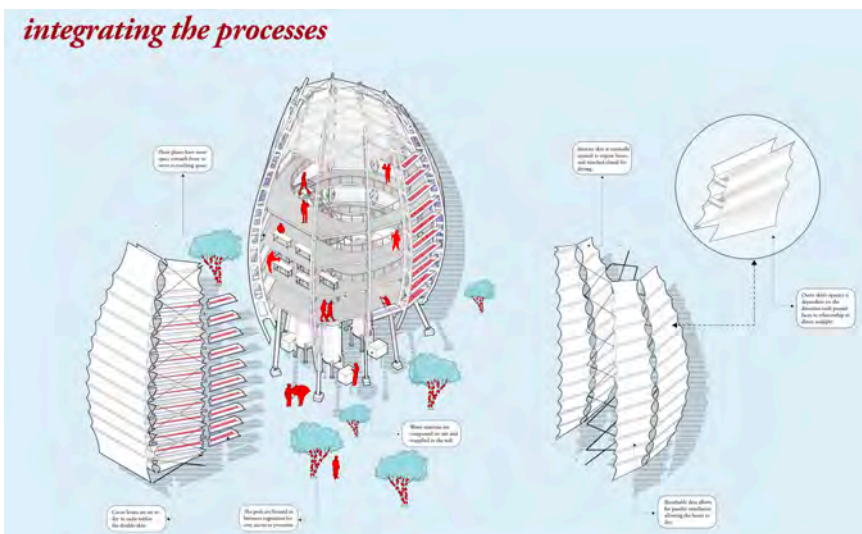
[Process] sketch and collage

We use a wide range of methods to create dialogue, uncover creative possibilities, and spur the imagination. Liam Lautze, adaptive reuse project in Oakland and Jake Baldouf, sea urchin harvesting facility somewhere in the Pacific.



[Drawing] we make great drawings!

We spend a lot of time on conveying ideas through drawing. Guaranteed, you will make amazing drawings in the course. Don't worry if drawing is not your strong point at the moment - **we will learn together**. The plan is to use **drawing as a means of discovery**, and as a means of developing ideas. Antonia Angel's thesis combines aspects of structure, environmental design, and community building in an effort to provide stable income for displaced farmers in Columbia.

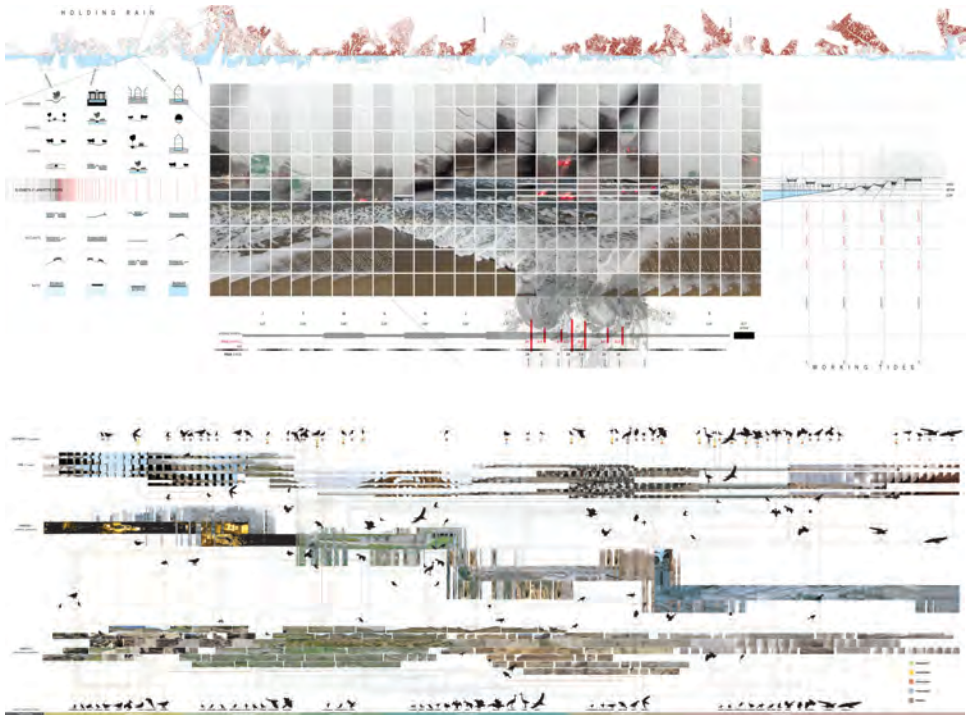


[Media] photography, hybrid drawing and collage

We often take field trips to interesting sites. The one below is the Moss Landing Power Plant. Photography became a way into **Robin Johnston's** thesis on industrial materials, ephemerality, and space. Hybrid drawing techniques are an important way to synthesize data and observations, and a skill-building workshop is being planned for Fall term on mapping and collage techniques (images at bottom of page).



Mapping techniques (below, Dilip da Cunha) are essential to the studio. In project 1, we build recording instruments to gather experiential data, and use this data for mappings that position us nearer to the natural world. We then apply hybrid drawing techniques to uncover hidden associations and locate 'shared ground' where we speculate on new ways of building that sensitively engage the built and natural environments.

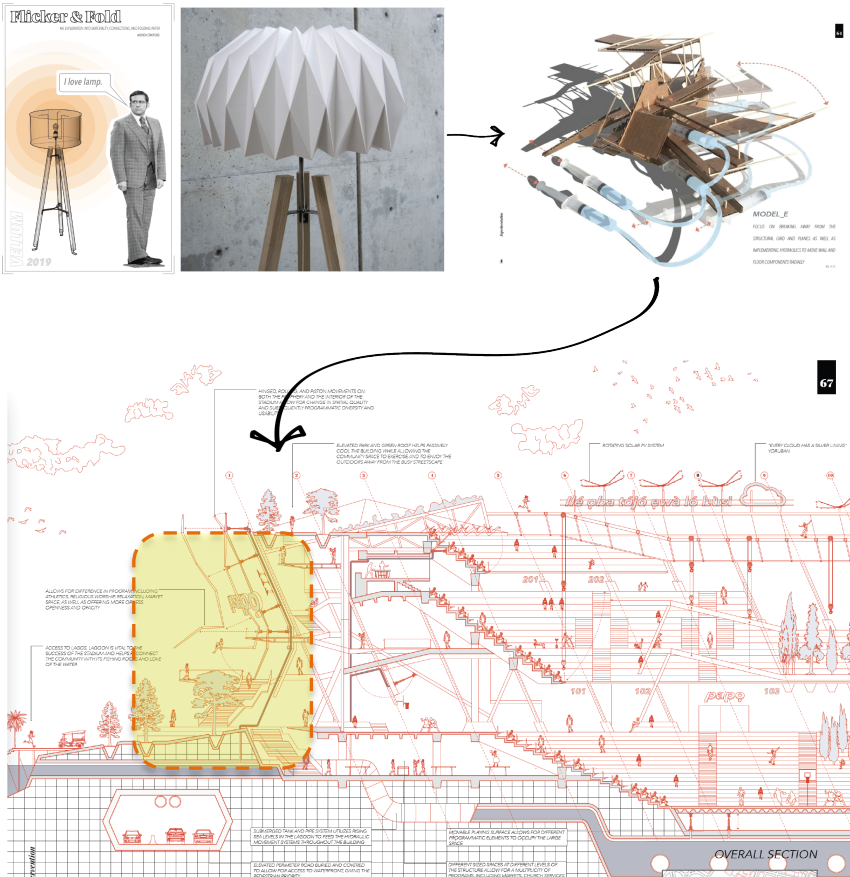


A NEW SHARED GROUND // THE ELEMENTS OF THE KIDRON

The overlay of movements of resident and visiting birds on our photoworks become a new ground for two drawings that explore the generative potentials of intersection between nature and culture, as well as elements.

[Vellum] Making at 1:1

Vellum is a good excuse to go to the shop. The work below shows **Andrew Stratford's** progress through Vellum (study of light/space/folding patterns) to a study model made of flexible components, to a kinetic façade design that responds to changes in venue.



[Large Scale?] Interested in experimenting at 1:1

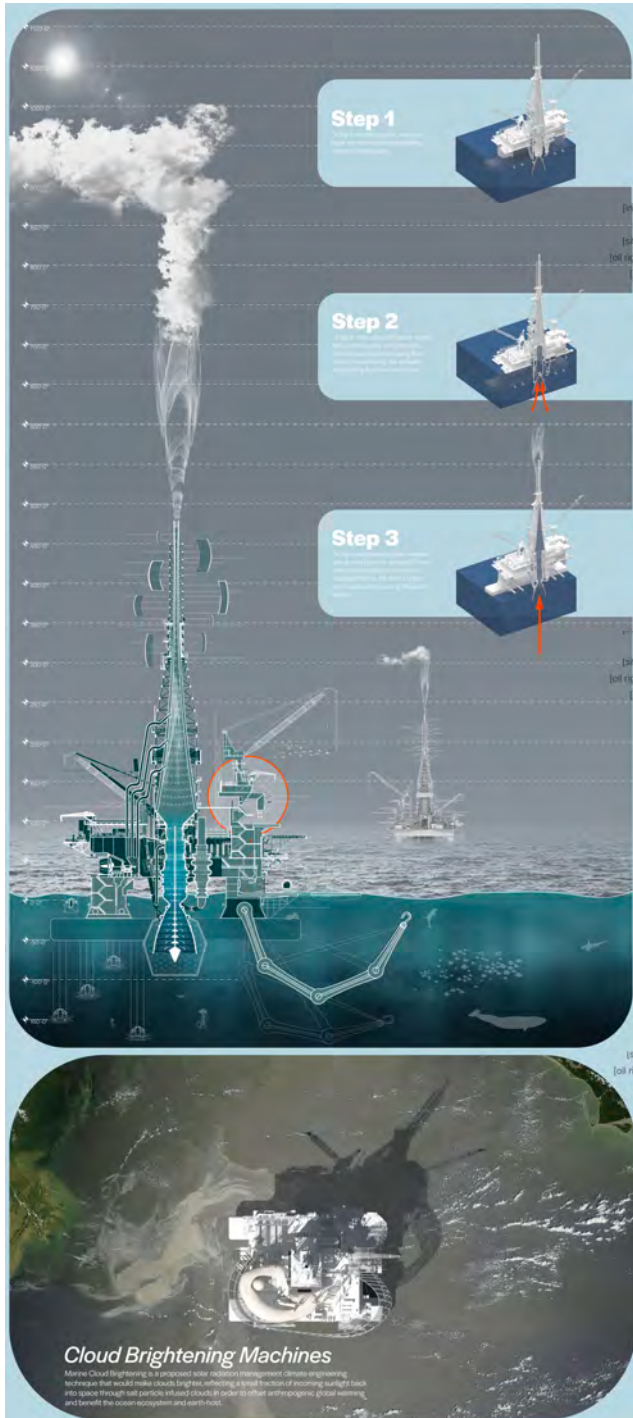
It's likely that we can construct a series of experimental constructions at large scale. It's possible to do this as a studio and individually. I am researching companies that can donate materials and technology, and if successful, we can organize a studio build. The projects below are similar to some of the projects I have built recently in Poly Canyon and show the prospect of larger scale thesis work. (Mariana de Delas and Liliana Krzycka)

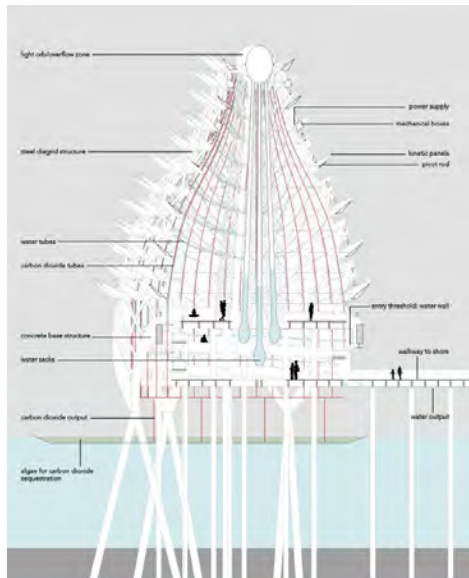


[Environmental Instruments] We'll make some!



The above projects, 'Cloud Machine' (relates to our first project) by Karolia Sobeka and Instrument for Blank Architecture by Didier Faustino comment on the human proclivity to use technology to both manipulate nature and get to know the natural world. These projects inspired Ben Will's thesis about retrofitting aging industrial infrastructure, such as a network of oil rigs, to make large-scale geoengineering proposals. His **Cloud Brightening Machine** is designed to reflect solar radiation back into the atmosphere.





Velum entry that led to the design for a water treatment facility, by **Kristen Fauske**. The project studied the strategies succulents use to store water. Work from her thesis became the winning student entry in the Biomimicry Design Challenge and her team is competing for the final \$100,000 prize. A recent team won the \$100,000 prize and formed a start-up business making water collection devices. **Ryan Daley** on the deck of Bldg 5 with his model for a mobile lab to increase soil health in agricultural areas depleted by pesticides.



Why make things interactive and responsive?

American author, marine biologist and conservationist, Rachel Carson stated "the control of nature is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man." Carson went further and identified the complex, interactive and interdependent network of life and made clear that human action disproportionately impacts the network. The control of nature has been a fundamental underpinning for architecture and engineering and they might well be added to the disciplines in Carson's list. We have entered a more responsive age of architecture, biology, politics, environmental engineering, and computation where the boundaries of our discipline are being redefined.

Advances in computation, technology, and philosophy (among other disciplines) have enabled designers to conceive of a built environment that is in continuous exchange with the local environment. Currently, there is a shift in building design toward systems that adapt to environmental variations such as in humidity, temperature, light, and pollution. Adaptive architectural design varies in its underlying strategies, from the computational and electronic to more passive material-based systems that are reactive to environmental stimuli. An equally important aspect of adaptive architecture is to engage the senses and appeal to the imagination.

More Fine Print: Our plan is to engage with practicing designers and experts from other fields to make more creative and relevant contributions to our own field. This studio is less about naval gazing and more about setting up the prospects to make creative contributions to society.

Here's a short story to help you decide if this studio is a good, loose fit.

about me

I came to architecture through commercial fishing and ships carpentry. From commercial fishing, I learned the benefits of teamwork, especially in adverse weather conditions. From ships carpentry I learned a respect for materials and craft. From sailing and study of nature, I realized there is a correlation of form and performance that we intuitively recognize. This observation has led me to value the intuitive and emotive processes of design in tandem with more rational methods of thinking.

On the academic side I studied installation art, industrial design and architecture at Pratt Institute in Brooklyn. At Pratt, I learned to value the visual arts and diversity of thought. These studies led me to graduate work at MIT where I studied design thinking and learned to value the humanity of technology. Most recently, I have directed the CoDe Lab at Carnegie Mellon University where I worked with architects, artists, and computer scientists to explore the poetic, tangible, and social implications of design and technology. This 'creative sandbox' experience has influenced my understanding of the design studio. On the professional side, I have been a project designer with industrial design firm IDEO, worked with Cambridge 7/CSP on the east coast, NBBJ on the west coast and have a small design practice.

CURIOSITY. I bring to thesis an interest in creativity drawn from my experiences from working with various disciplines that include the arts, biology, industrial design, and computer science. I also bring a strong interest in design experimentation at 1:1 scale and developing ideas through playful making and testing. As a teacher, I am interested in encouraging curiosity, learning, and innovation. As an architect, I am interested in bringing thoughtful and socially relevant architectural experiments into the world.

(from page 1) The point of thesis is to develop skills that give you **agency** in the world, to make a more equitable, resilient, and imaginative world, and positively affect people's lives through design.

I believe that small things make big differences and that great things start from the bottom up. So, I look forward to what we will achieve **together**.

Contact me if you would like to know more about the studio. dtcliffo@calpoly.edu

