# PORTFOLIO

## ACADEMIC

#### **Un-House for Two Inhabitants**

Design II | Fall 2011 Professors Pablo Lorenzo-Eiroa, Katerina Kourkoula, James Lowder

#### Library

Design III | Spring 2013 Professors Michael Young, David Allin, Lydia Kallipoliti, Mersiha Veledar

#### Secular Autonomous Oratorium

Design IV | Spring 2014 Professors Diane Lewis, Robert Estrin, Daniel Meridor, Peter Schubert, Daniel Sherer, Mersiha Veledar

#### Interdunal Architecture

Thesis | Fall 2014-Spring 2015 Professors David Turnbull, Pep Avillés, Hayley Eber, Teddy Kofman, Elisabetta Terragni

#### Surface-to-Air Missiles

Casting Techniques | Spring 2015 Instructor Andrew Wilhelm

## PROFESSIONAL

### Wooster Street Apartment

Model | 2016-2017 Built for Diane Lewis Architect PC

Work Sample Renderings | 2015-2019 Blatt Billiards Un-House for Two Inhabitants Design II | Fall 2011 Professors Pablo Lorenzo-Eiroa, Katerina Kourkoula, James Lowder



The un-house is an exploration in the development of architectural form via topological deformation. A 30'x30'x30' matrix, organized according to a nine-square grid, was transformed into a dwelling through the introduction of horizontal and vertical planes, as well as linear structural members. The logic behind the composition of these elements is based on the topological idea of the displacement of one corner of the 30' matrix to the opposing corner, the "pulling through" of an exterior corner through the interior. Thus, this dwelling follows the courtyard typology, in which the most central space is also the most exterior.









Library Design III | Spring 2013 Professors Michael Young, David Allin, Lydia Kallipoliti, Mersiha Veledar



A public library sited on 9th Avenue between West 38th Street and 39th street in Manhattan. This library is a still-life composition of postured forms within a narrow lot. Individual figures converge and diverge and varying points throughout their sections. Several of the figures are uninterrupted by any horizontal surfaces for much of their height. This hollowness engenders a sense of silence that provides a necessary reprieve from the bustle of the neighboring Lincoln Tunnel entrance adjacent to the site.

Model of library and adjacent buildings.













Secular Autonomous Oratorium Design IV | Spring 2014 Professors Diane Lewis, Robert Estrin, Daniel Meridor, Peter Schubert, Daniel Sherer, Mersiha Veledar





A project that began with investigations of the role of individual autonomy in the Possessions at Loudon and of the emancipatory nature of the Commedia dell'Arte. The oratorium program was reappropriated from its religious origin into a machine for the expression of the self. Twenty oratoria are regularly spaced between two oases in the Egyptian desert. By traveling between the oratoria, one is able to depart society to develop oneself in an asectic environment. The conclusion of this journey through the desert rejoins the inhabitant with society: the reconstitution of the individual into "the group" is the opportunity to apply the results of hermetic self-investigation.









All models for this project were photographed in a *teatrino*. Based on Aldo Rossi's *teatrino* scientifico, architectural elements were staged in a cubic volume with framed faces, an apparatus to explore composition and siting.



Exploration of the siting of the initial Oratorium, its location on an island in the Bahariya oasis, and the trajectory of Oratoria, twenty structures spaced in intervals of 20km, leading to the Siwa oasis.

#### Interdunal Architecture

Thesis | Fall 2014-Spring 2015 Professors David Turnbull, Pep Avillés, Hayley Eber, Teddy Kofman, Elisabetta Terragni

This thesis investigates the relationship between architecture and care in the context of a desert ecology. Architecture is capable of actively participating in its site, of becoming a part of its surrounding ecosystem. Synonymous with this participation is the incorporation of the inhabitant into the site ecology: a quality transferred from architecture to inhabitant. Here it is proposed that this incorporation into site ecology opens an opportunity for care to occur, an opportunity for a site to project itself into its architectural and human inhabitants.

The architectural program that embodies this idea about care is retreat. The retreat is a program of repose and psychic healing. It roots its visitors in a place that is otherwise uninhabited. It is also a program that anticipates its own obsolescence to its inhabitants. Thus, this retreat is an uprooted, transient architecture that reflects the nature of its site and its inhabitants. No elements are fixed. Directors and visitors work together to assemble the structures they will proceed to inhabit with a vocabulary of simple, lightweight structural members and textile membranes: minimal enclosure conditions. Participation in this act of mutual space-making engenders community, an essential component in the provision of care. This architecture seeks to provide opportunities for care and psychic healing at multiple scales through multiple methods, all of which ultimately seek to establish a symbiotic relationship between human, architecture, and site ecology.



Clockwise from top left: sketches of structural members, sketch of fabric-wrapped structure, indexical sketch of endemic flora, sketch of freebody diagram, sectionnal sketch through structural members and fabric.



The site on which these relationships are explored is the White Sands National Monument, a gypsum sand sea in the New Mexican desert. The sand dunes in White Sands are active, blown by the wind up to 30 feet per year. Plant and animal life has adapted to move with them: no site condition is static, though all are operating on different scales of movement and time. The sand sea is an idiosyncratic phenomenal landscape, one that has temperamental relationships with time, distance, and the horizon. With few fixed spatial markers in the landscape, one's experience of time is predicated on the distance between these points in the field of the site. The horizon, under certain conditions, visually melds with the dunes and foreshortens one's perceptible world to within oneself: the site projects itself personal ecology of its inhabitant. This occurrence is a moment at which a mutual caring begins: site for inhabitant and inhabitant for site.











Top: Site map. The blue area represents the dune sea, red the adjacent Hoffman Air Force Base, and yellow the nearby town of Alamagordo. Below, continuing to opposite: studies representing different textile wrapping operations for the same rigid structural condition.

Clockwise from top left: annotated example column section deployed in the demountable structural system, photomontage of structure with textile skin, model photographs.



Surface-to-Air Missiles Casting Techniques | Spring 2015 Instructor Andrew Wilhelm

A series of bronze castings representing various surface-to-air missiles designed to either intercept or deliver nuclear warheads. The castings are subjected to chemical decay and heavy patination, so as to render the weapons of the present as ancient artifacts. This project not only models the missile-objects, but the process of the passage of tim. The *modeling of time* is achieved through the application of the patina: the castings are buried in a chemically saturated dust and subsequently excavated. A phenomenon that naturally occurs over tens of thousands of years is compressed into the span of several days: time is represented through an accelerated material transformation.



Wooden forms used for casting. These forms were themselves cast into investment media and incinerated in a kiln, leaving voids into which molten bronze was then poured.



Wooster Street Apartment Model | 2016-2017 Built for Diane Lewis Architect PC



A working model built for Diane Lewis Architect PC. This model was used as a presentation tool for the client as well as a design tool for the architect, and was developed thoughout the design process with demountable elements to represent current drawings.

























Work Sample Renderings | 2015-2019 Blatt Billiards















From top: Shuffleboard Table (original design, black lacquer finish); Pool Table developed in collaboration with George Nakashima Woodworkers; Pool Table (original design, rift-sawn white oak)