2006-2007 Joint Study Award Winners

One of the traditions the **form•Z** Joint Study Program has established is the annual awards presented to deserving students for their exceptional work. This year 6 awards of distinction and 8 honorable mentions were granted. They are in 6 categories and they are displayed on the next 13 pages of this journal.

The Jury

The selection of the awards was made by four jurors outside of AutoDesSys, all experts or theorists of computer aided design. They are listed below, in alphabetical order.

- **Ruth M. Gless**, AIA, Principal, Lincoln Street Studio, Columbus, Ohio
- **John Staerk Hansen**, MikroGraph, as, Abyhoj, Denmark
- **Gregory McCambley**, Technical Illustrator and Graphic Designer, President, Pelican Graphic Limited, Calgary, Alberta, Canada
- **Mahesh Senagala**, Associate Dean for Academic Affairs and Research, College of Architecture, University of Texas, San Antonio, Texas

The Process

The nominated projects were sent to the jurors as Acrobat documents on DVDs. Names and school affiliations were not included. The jurors returned their selections for the awards and grades (0 to 10) for each of the other projects. Selection of a project for an award was considered equivalent to a grade of 15. The grades were averaged and the project from each category receiving the highest grade was selected for the award. Projects receiving a score of at least 8.5 were selected for the honorable mentions.

The Prizes

All Awards of Distinction received a **form•Z RenderZone Plus** license with one year technical support and updates. They were also invited, expenses paid, to attend ACADIA 2007, where the awards were officially announced. In addition, AutoDesSys, Inc. waved the costs of a 10-seat JS license for the school they attend, for next academic year. Honorable Mentions received one year licenses and diplomas acknowledging their distinction. This year's happy award winners that attended Acadia are pictured below:

From left to right are: **Arturo Nunez**, Award of Distinction in Fabrication, University of New Mexico; **Pawel Ostrokowski**, Award of Distinction in Visualization and Illustration, Temple University; **Julie Barghout**, Award of Distinction in Interior Design, University of North Carolina at Greensboro; **Juan Calderón**, Award of Distinction in Architecture Design, Universidad San Francisco de Quito; **Ming-Chieh Chen**, Award of Distinction in Product and Industrial Design, Tamkang University; **Bridget Hyde**, Honorable Mention in Animation, Ohio University; **Natalie Dibenedetto**, Award of Distinction in Animation, Ohio University.

Architectural Design

"Ocho Muros"

Juan Calderón : Fifth year, Thesis
Advisor/Principal Investigator: **Marcelo Banderas/ Marco Villegas/ Jose Atiaga**

Colegio de Arquitectura y Diseño
Universidad San Francisco de Quito, Ecuador

Summary description of project:

Ocho Muros (Eight Walls) is an architectural design project for an interactive museum in the Metropolitan Park at Quito. The investigation begins by setting a theoretical background based upon the notion of active learning and its possible implications in Architecture. Next, it analyzes the main programmatic and contextual conditions that will be considered during the process of design. Once these initial decisions are taken, it is possible to state a hypothesis and to establish a 'parti' for the project.

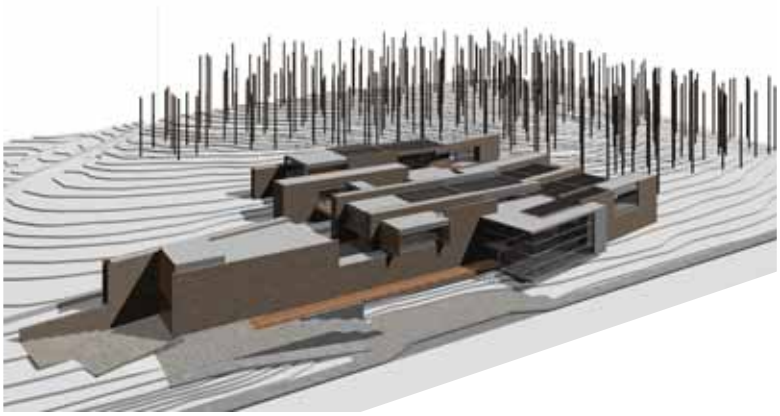
Reasons for the nomination:

In addition to the architectural resolution of the project, and its urban qualities, the design process emphasized the use of **form•Z** to test and visualize several design decisions. Although the final renderings express a clear control over **form•Z**, the software was constantly used in the process.

Jury comments:

Ocho Muros is a deceptively simple project with fascinating spatial complexity. Through an intelligent amalgamation of gently skewed and interlocked cuboidal spaces and contextual considerations, the project frames poetic spatial experiences. Effective use of digital media has been demonstrated in the sensuous portrayal of materiality, movement, light, and scale. Moreover, the project seems to successfully engage the site in a matrix of relationships at all levels. The project demonstrates that formal exuberance is not a necessary attribute to achieve spatial and experiential complexity. **–Mahesh Senagala**

A convincing exploration of a simple idea turns this project into an inspiring visual experience. **–John S. Hansen**



Architectural Design

"A Satellite Automobile Production Facility"

Jeff Hammerquist
Advisor/Principal Investigator: **Thomas Fowler, IV**

Department of Architecture
California Polytechnic State University, San Luis Obispo, California

form•Z Joint Study Program 2007 HONORABLE MENTION

Summary description of project:

The satellite auto facility was designed to showcase and expose the production process of a 21st Century car. By focusing an audience on these transformations, it will help them quantify the volume of resources that go into the fabrication of a car. The formal vocabulary of the project evolved from an honest expression of programmatic requirements for car production, site considerations, and how to best express this in the structure and skin of building.

Reasons for the nomination:

Even though this student's use of **form•Z** was from two years ago, he did an excellent job using the software to provide spatial insights into his project that would have not been possible if he would have worked only with physical models. What I believe is most impressive about his project in the convincing qualities to the immersive views of space and the believability regarding the functional aspects of project along with the seamless integration of building into the context of the surrounding industrial environment of the site.

Jury comments:

The notion of transparency has been explored in this project in an intriguing fashion. Transparency in this project goes beyond the merely visual and embraces the conceptual, the procedural, and the programmatic aspects. Deep layering, spatial interlocking, and a commitment to restrained architectural dialectic make this project a compelling proposition. The project is driven primarily by a combination of programmatic concerns that aim to expose the process of production of the automobile "in the skin." **form•Z** seems to have been utilized quite effectively. The animation drives the designer's point home by revealing the inner spatial and programmatic complexity. **–Mahesh Senagala**

Architectural Design

"A Zero-Gravity Habitat"

Zachary Meade : Graduate, Thesis
Advisor/Principal Investigator: **Kurt Hunker/ Gil Cooke**

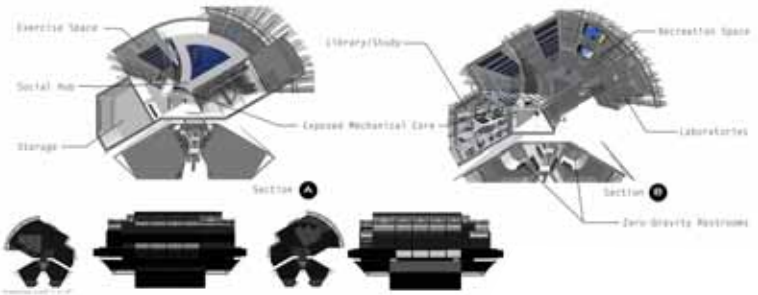
Department of Architecture
New School of Architecture and Design, San Diego, California

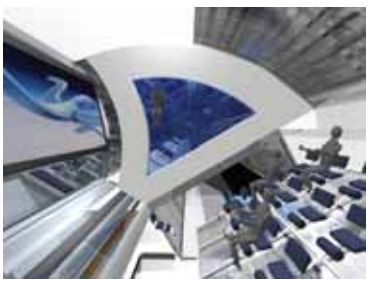
Summary description of project:

The project is a conceptual 20-person habitat that orbits the Earth. The design merges realistic limitations and conceptual ideals in order to produce an attainable organizational strategy. The form of the habitat is based on the shielding and filtering of light, the implementation of structure, and the projectile movement of users as they maneuver through the environment. The design process began with many physical experiments, drawings, and models. The final design was produced entirely in **form•Z**. This allowed for a thorough design analysis of the interiors of the habitat, as well as the creation of details such as furnishings, lighting fixtures, and structural members. Interior renderings explore the actual dimensions and quality of the habitat. The integration of background imagery allowed for the illustration of view corridors. The habitat is one of many possible design strategies of this type that may be explored. It successfully illustrates that realistic concepts for zero-gravity spaces are within reach.

Reasons for the nomination:

This project is an outstanding introduction for architects in a field hitherto yielded to engineers and industrial designers. The execution was superior in every area in the eyes of the faculty and exterior reviewers. The project could not have been fully appreciated were it not for the outstanding computer modeling in **form•Z**. This proved the right program to delineate the very complex elements that created both the total imagery and details required to "tell the story" of a rich and artful thesis.





Jury comments:

The project premise is utterly captivating. The notion of architecture without gravity, and as the designer proposes, without technological or logistical limitations, would have been very interesting. However, despite the claims made in the project narrative and nomination statements, the project falls short on some accounts. The notion that there is an "ideal case" without limitations of any sort other than the absence of gravity would have been interesting if the designer took a Stanley Kubrikesque stance. There can be no architecture without constraints. Choosing the right set of constraints would have led to a better design project.. **–Mahesh Senagala**

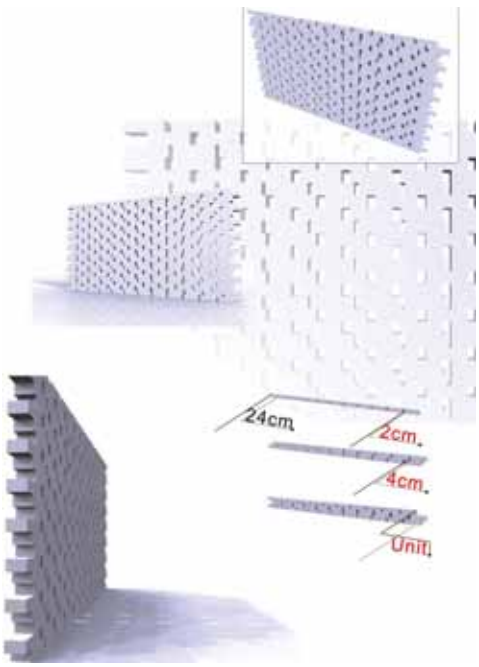
A thoroughly detailed design—well thought out, and beautifully presented. **–Ruth Gless**

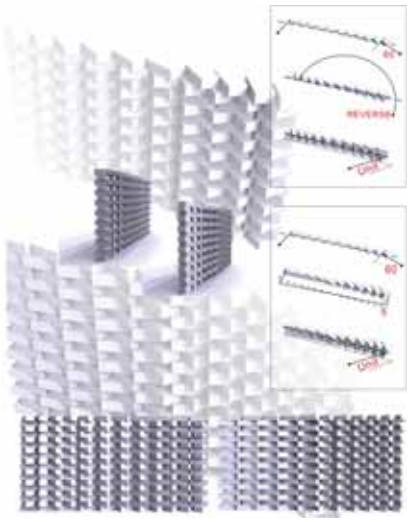
Architectural Design

"A Study of Brick Walls"

Ching-Hang Lee : Graduate, Thesis
Advisor/Principal Investigator: **Chen-Cheng Chen**

Department of Architecture
Tamkang University, Tanshui, Taiwan



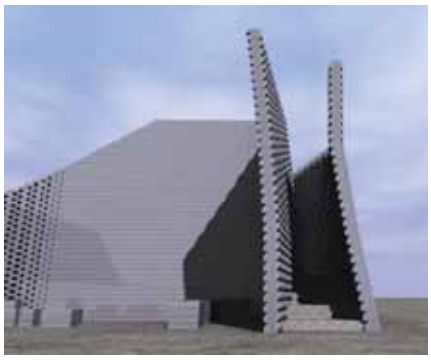


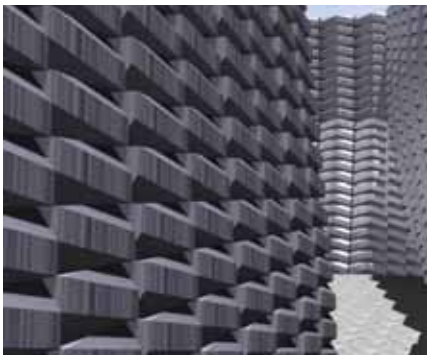
Summary description of project:

This student studies different possibilities for laying brick walls, which use methods other than plain texture mapping. The actual methods explored and discussed are based on the geometry or physical shape of bricks and the different ways in which they can be laid out and picked. These explorations produced some very interesting results. At the end of the project, these brick pavilions are designed near the ocean. They function as places from where one can observe the rain, the ocean, and the sky.

Reasons for the nomination:

Instead of applying texture mapping to describe brick walls, this project inserts the brick element one by one in the **form•Z** environment. Through simple manipulations on geometries and transformations, this project produces interesting patterns for brick walls.





Jury comments:

Here we see the intrinsic role of digital media in exploring what is essentially a shape grammar approach. Clearly, the explorations would have been onerous or downright dangerous if done with the actual bricks. Thus, the use of digital medium to conceptualize, develop, and concretize a material-based exploration is indispensable. The project pitches a plausible design proposition if we set aside the questions of structural stability, robustness of the system and the system of actual construction with or without mortar joints. I would have liked to see the project actually built either in a model form or as a proof-of-concept construction. It appears that the designer onerously built the digital models literally brick-by-brick, row-by-row, and operation-by-operation, which is ironic! A truly computational and algorithmic approach would have allowed the designer to generate and test far more number and types of possibilities.
–Mahesh Senagala

Interior Design

"Mullen Advertising Agency"

Julie Barghout : Fourth year, Interior Architecture III
Advisor/Principal Investigator: **Tina Sarawgi**

Department of Interior Architecture
University of North Carolina at Greensboro, North Carolina

Summary description of project:

Project Outline: The task of this project was to design a workplace environment for Mullen Advertising Agency that would reflect its core values and principles, encourage creativity and teamwork, and be impressive to its clients and visitors. The project involved designing workspaces for the five distinct areas in an ad agency, namely, the creative department, account services, media, accounting and human resources. Other spaces included reception, waiting area, large and small conference rooms, team rooms, media library, edit room and tape storage and mail/ copy/ print rooms.

Student's conceptual statement: As an advertising agency, Mullen's key role is to 'see' (observe) and create a visual identity for its clients. The inspiration for the design evolved from the desire to reverse the role of Mullen from 'seeing' to 'be seen', hence challenging the conventional notions of a commercial workspace environment. The proposed space puts the Mullen facility on display by enclosing all the departments in Mullen in a glass 'box', thus providing opportunities to the prospective clients, employees, and visitors to see and visually experience Mullen and all its unique qualities.

Reasons for the nomination:

This student's project is noteworthy due to the following reasons:

1. The project is conceptually strong and thought-provoking.
2. **form•Z** has been used convincingly to express the underlying design elements.
3. The project is thorough in its exploration of light, materials and colors.

Jury comments:

The project undoubtedly demonstrates the designer's mastery of the rendering medium. However, I am unsure if the digital medium played any significant role in the design of the space itself. The drawings that accompany the renderings show a more or less cookie-cutter approach to design that is driven more by two-dimensional design-thinking. **–Mahesh Senagala**

Excellent use of color, reflection and viewpoints to present a realistic, well informed concept to the client. All the design information required to deliver a solid presentation. **–Gregory McCambley**

An impressive total design of a workspace for creative professionals and an inspiring showroom for clients and prospects. Provoking in colors and forms, but on the right side of the edge to chaos. **–John S. Hansen**

Interior Design

"Escher's Relativity"

Sophia Chan : Graduate
Advisor/Principal Investigator: **Andrzej Zarzycki**

Department of Interior Architecture
Rhode Island School of Design, Providence, Rhode Island

form•Z Joint Study Program 2007 HONORABLE MENTION

Summary description of project:

The inspiration for the project was to take Escher's two-dimensional etching, "Relativity." My goal was to generate a three-dimensional space reminiscent of the limitless quality of Escher's spaces. I started by extrapolating measurements from the graphics to calculate the size of the interior space and then constructed the tectonic elements and generated the three gravities of the space. Consequently I constructed the space with realistic dimensions and applied materials to create the photorealistic environment. I then investigated the interior relationships between the gravitational orientations of the space and explored the connections between the building elements by rendering a series of light studies. Finally, I explored the seemingly impossible aspects of this space through animations and narrative tools.

Jury comments:

At first blush, the interior exploration based on Escher's etchings looks simplistic. However, the challenge of translating a masterly two-dimensional world into a measurable three-dimensional one is daunting at the least. Although the renderings do not even approach the visual and intellectual mastery of Escher's works, they are interesting enough to draw the viewer into the designer's mind. A commendable effort!
–Mahesh Senagala

Reasons for the nomination:

Some designs may look complex and imaginative (involving NURB surfaces, morphed objects or metaball **form•Z**), however, their appeal is often based on visual novelty rather than on intellectual innovation. In contrast, there are other designs that look relatively straightforward but contain sophisticated ideas that are intellectually persistent. I propose that the visual space of the Escher's Relativity etching is an example of this: a simple but expressive design. This student in the Interior Architecture Department, undertook the challenge of delineating it in three dimensions. She was able not only to produce a three-dimensional model for the space, but also used various narration techniques to successfully express through her imagery and animations the main theme in Escher's etching: relativity. She took her explorations a step further and explored what is outside Escher's Space. Her imagery visually speaks for itself…

Interior Design

"Vernissage: A Guide to the Culinary Avant-Garde"

Katie Longenecker
Advisor/Principal Investigator: **Murali Paranandi**

Department of Architecture and Interior Design
Miami University, Oxford, Ohio

Summary description of project:

Vernissage is a magazine publication for the culinary avant-garde, each month showcasing the latest and greatest chef from around the world. In addition to highlighting this selected chef in each new issue, the company invites the chef to come and showcase his work in a specially designed culinary exhibition space.

Situated in the center of the United States greatest culinary hub, San Francisco, the design program consists of the company's studio headquarters on the upper floors and below, a restaurant exhibition space open to the public. To emphasize the idea of cuisine presented as an exhibition in the same way as artwork, individual structures are designed to convey three different interpretations of a "frame." The design of the main staircase exaggerates a perspective frame, the show kitchen is displayed through a picture frame, and the office is developed through a flexible frame and panel system for the evolving working space. The restaurant features space for traditional dining with an open show kitchen, as well as tasting galleries featuring bars of appetizers, desserts, and wine and cheese. As one way to connect all six floors of the program, natural light filters down from a skylight on the top floor all the way to the ground level to highlight a vertical cable system running the entire length of the building. Colorful cupboards and shelves move along the cable system as functional artwork that can be visible from all locations within the space.

Jury comments:

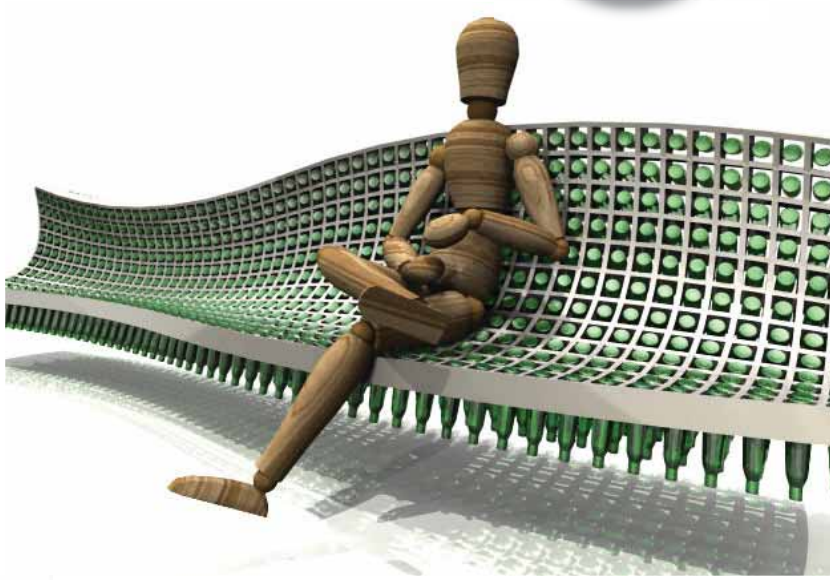
A thorough design—the author created a tension between hand and machine drawing. **–Ruth Gless**

Product and Industrial Design

"Benches for the Plazas of Tanshui"

Ming-Chieh Chen : Graduate, Studio
Advisor/Principal Investigator: **Chen-Cheng Chen**

Department of Architecture
Tamkang University, Tanshui, Taiwan

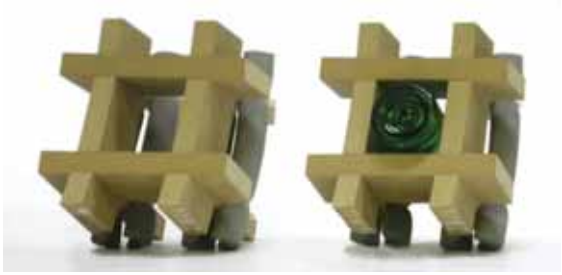


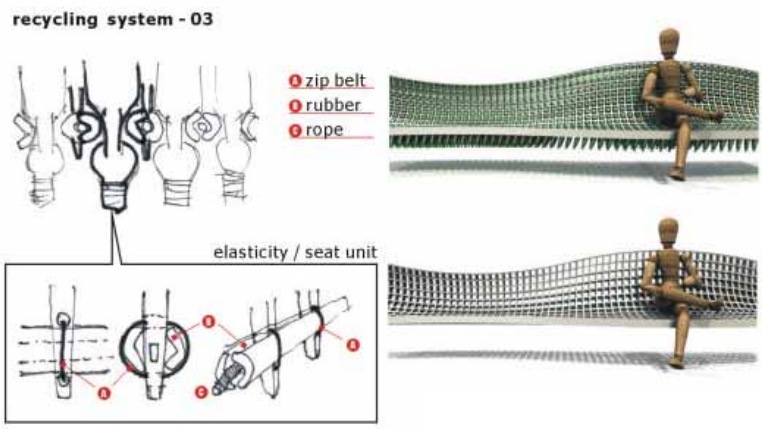
Summary description of project:

After on site observations, street lamps and benches are designed. They are intended for tourists to place the bottles of the famous Tanshui soda water, which results in interesting street furniture for the plazas of the town.

Reasons for the nomination:

In this project, the designer deliberates very carefully about which **form•Z** commands would best accommodate the different modeling requirements. After the bench is modeled in the software, part of it is also fabricated in one-to-one scale.





Jury comments:

The designer's passion to elevate the soda bottles of Tanshui to the level of art is commendable. The main idea of a bench for tourists is an intriguing one, albeit underdeveloped. It is a plausible idea. If we ignore the fact that as presented, the bench seems to defy gravity and float in the air, the modeling skills have been well-demonstrated. **–Mahesh Senagala**

A well-considered use of seating and soda water bottles, combined with the extended use of **form•Z** to generate a unique and innovative design. **–Gregory McCambley**

Quirky—universal yet local in its ties to place and products. **–Ruth Gless**

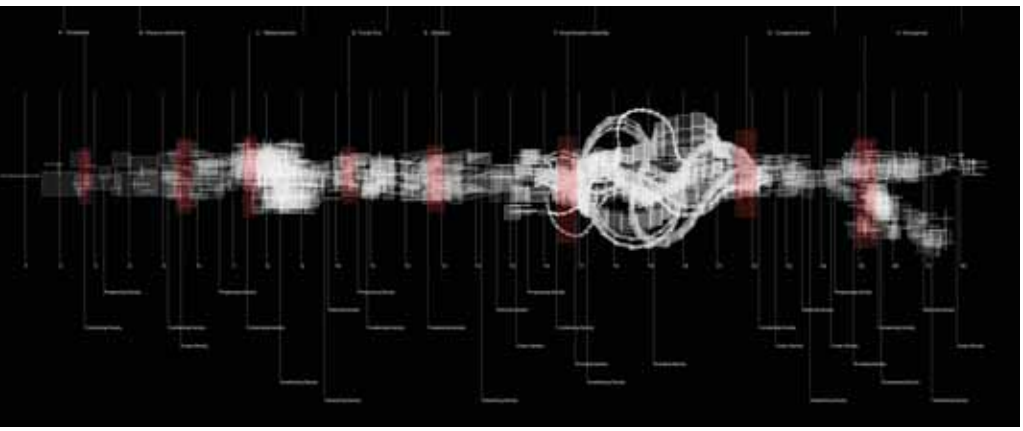
Visualization and Illustration

"Investigations"

Pawel Ostrokowski : Digital Media

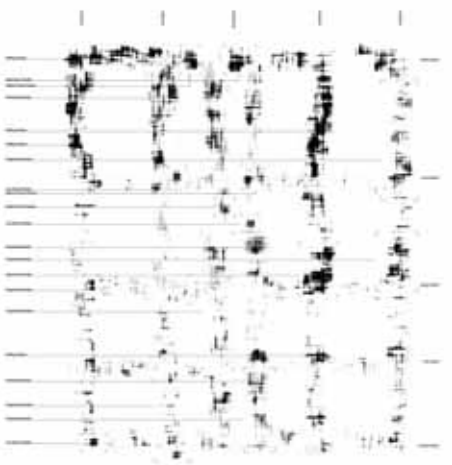
Advisor/Principal Investigator: **Robert Trempe**

Department of Architecture
Temple University, Philadelphia, Pennsylvania



Summary description of project:

Treating the computer as a tool for exploration and investigation, students were able to take seemingly abstract systems developed around the idea of an event (the accumulation of instances) and dissect/analyze them. Through this analysis students took part in the evolution of a basic idea from initial investigation through to final site intervention, deploying digital media techniques coupled with formal, scalar physical models and digital composites that forced students to test these results in more architectural terms throughout every step of the process.



Jury comments:

A truly genuine effort to exploit digital media's capability to synthesize myriad formal "notations" is commendable. The result of the qualitative mapping is a visual feast. Though it is unclear how these explorations translated into the architectural project shown in the photo montages, I am impressed enough by the conceptual explorations and their visual presentation. **–Mahesh Senagala**

Nice use of analysis and concept evolution to deliver the site model. **–Gregory McCambley**

Three investigations of communicating a new perception of time and space. **–John S. Hansen**

"Spaceport" (for Spaceport America, Virgin Galactic)

Jonathan Lim : Third year, Cooperative Education Program
Advisor/Principal Investigator: **Gensler and Associates/ Thomas Seebohm**

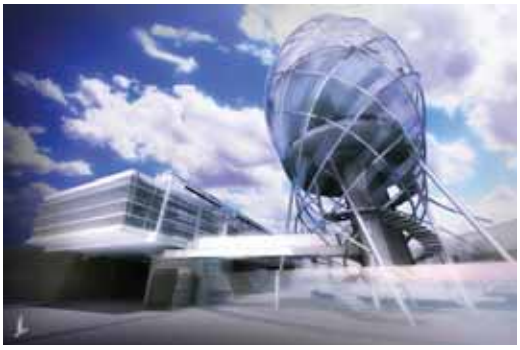
School of Architecture
University of Waterloo, Ontario, Canada

form•Z Joint Study Program 2007 HONORABLE MENTION

Summary description of project:

The intent of the design was to create a "heroes journey" through the New Mexican desert as the future of space travel provides the public with a chance to take off into space. The renderings map the points of arrivals and gathering spaces for both tourists, and potential space travelers. The circulation of the design was designed for multiple users (the astronaut, the tourist, the administrator). The whole circulation of the design was based on our story of the "heroes journey," and at the end of the whole journey, the circulation ends at the OASIS, the space where history will be made as the first public space travelers take off into orbit.

The 3D modeling process included the use of REVIT plans (massings). From there, details were added in **form•Z** using mainly box modeling techniques while Nurbz were seldom used except for the cloud like mission control structure. The fence like structure around the Oasis space was also a nurbz surface formed with thickness and through texture mapping in Max, it became the mesh that it is presented on the renderings. For some details for the cloud structure, Maya was also used. 3D Studio Max's FFD modifier helped with the details of the curtain wall as we modeled a flat version of the curtain wall for the cloud in **form•Z**, and using the FFD modifier, we were able to shape the details along the same curvature of the cloud shape. The student was working on both the design and the modeling part of this project, which was designed completely in 3D, with one or two sketching sessions.



Jury comments:

The renderings have ethereal and other worldly quality to them, which is very apt.
–Mahesh Senagala

A sumptuous presentation—very beautiful, and the images created support the design.
–Ruth Gless

Reasons for the nomination:

At our school, all students are enrolled in a cooperative education program where students alternate terms of study and work in offices, which is considered an integral part of their education. This project was done on a work term. While it benefited from the professional input of the office and their consultants, the project would not be what it is without the student's contribution to design, modeling, and rendering. It is a stunning project both in terms of the evocative geometric configuration and in terms of the renderings; both are very appropriate allusions to space travel.

Fabrication

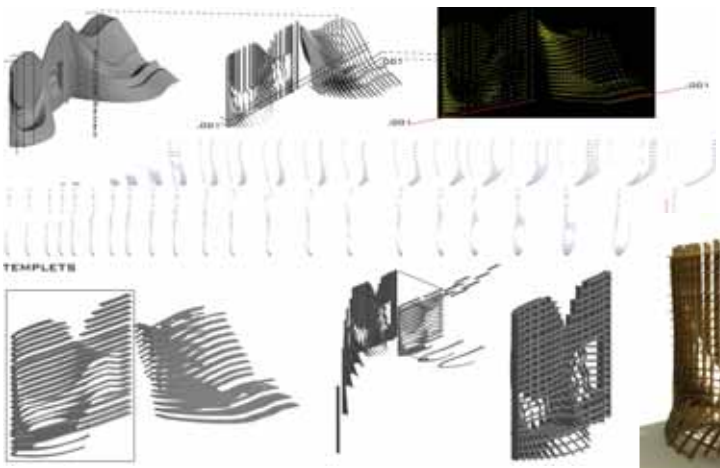
"Modulation+Mutations II"

Arturo Nunez : Fourth year, Architectural Studio
Advisor/Principal Investigator: **Tim B. Castillo**

School of Architecture and Planning
University of New Mexico, Albuquerque, New Mexico

Summary description of project:

The exponential growth of digital information and continual expansion of new technologies has had a profound effect on the manner by which architects create space. Designers are now incorporating new methodologies that borrow from the automotive, aeronautical and cinematic professions. This multi-disciplinary approach is challenging the traditional approach to the practice of architecture. As a result, a new studio environment must be established to enable young designers to engage in these new processes. This studio will aim to explore this continuingly evolving condition where extraction of space is no longer statically derived. It will rather define a more interactive model that is based on social forces defined through contextual specificity.



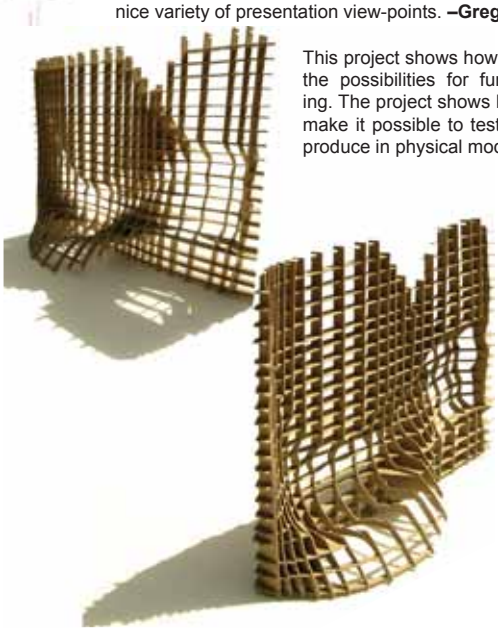
Jury comments:

Fabrication of complexly-curved surfaces into ribbed three-dimensional objects has been an established and well-explored process by now. The project would have been more interesting if it went into a greater detail and field testing. **–Mahesh Senagala**

Enjoyed the use of negative space and structure to evolve this unique and well derived design form. Excellent visualization of concept in a nice variety of presentation view-points. **–Gregory McCambley**

This project shows how little we have exploited the possibilities for furniture and room-making. The project shows how the electronic tools make it possible to test ideas that are hard to produce in physical models. **–John S. Hansen**

The clarity of thought is apparent, both in the use of fabrication techniques and in the development of the design. **–Ruth Gless**



Reasons for the nomination:

This project researched new ergonomic possibilities based on cross-programmed spaces associated with furniture and dwelling. The wall is intended as a living element that engages a multiplicity of programmatic activities. The student's ability to economically create a wall that utilized digital fabrication process allowed for a unique and poetic structure to be realized.

Fabrication

"Duke City Shootout Film Festival Insomnia Space"

Jake Semler, Arturo Nunez, Alberto Rodriquez
: Fourth year, Architectural Studio
Advisor/Principal Investigator: **Tim B. Castillo**

School of Architecture and Planning
University of New Mexico, Albuquerque, New Mexico

Summary description of project:

This spring, the 400-level studio was given the opportunity to design the interior space for the Duke City Shootout International Film Festival. The studio was given a program that would accommodate spaces for digital editing, cyber dwelling, coffee/bar space and exhibit space.

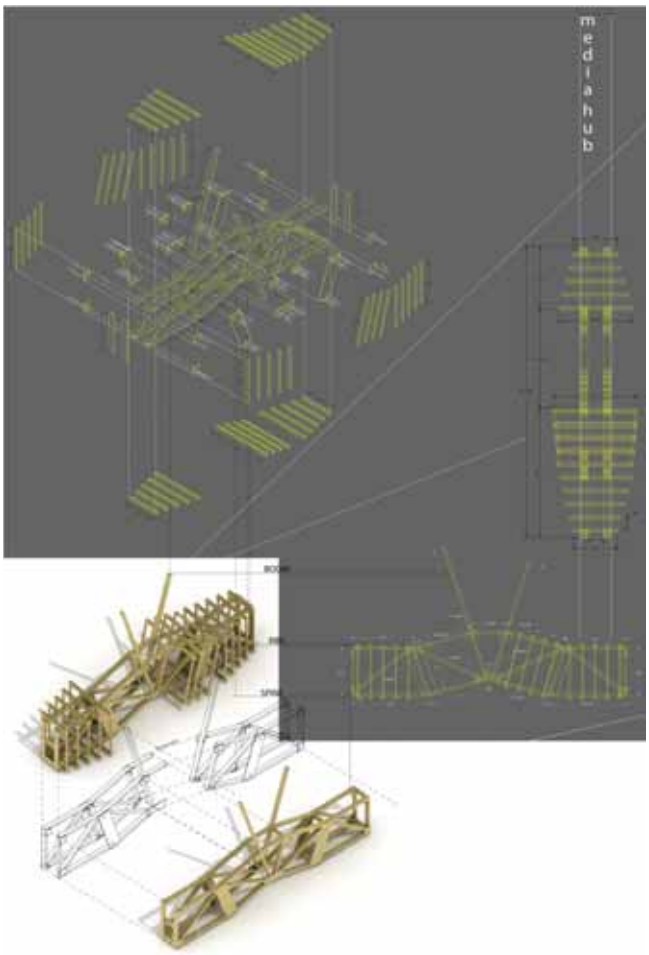
The challenge of this project was to keep it within a very slim budget. Innovative uses of space and the use of inexpensive materials were the primary goals of the studio. The studio format was a competition and the winners fabricated the installation this July.

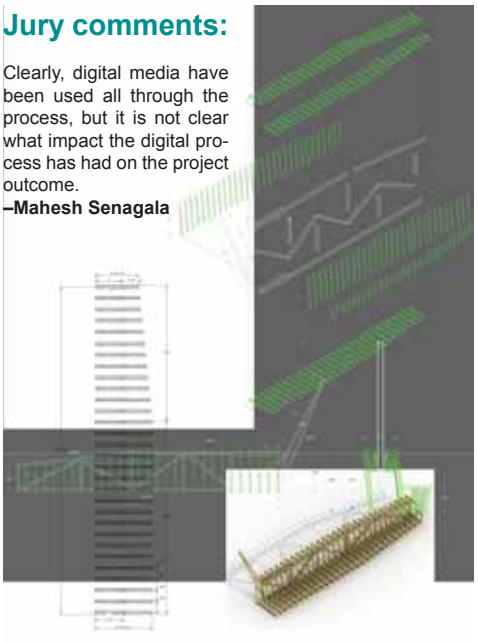
Reasons for the nomination:

This project deserves recognition in that it utilized digital fabrication processes to develop an innovative formal and structural language. This project deviates from recent surface/pattern driven methodologies and focused on structural innovation as the basis for its aesthetic. The creative use of material and economy of form provided a compelling spatial environment at full-scale.

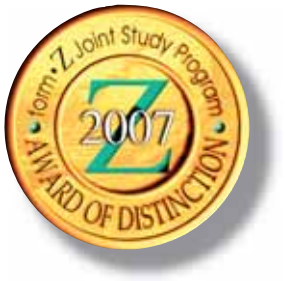
Jury comments:

Clearly, digital media have been used all through the process, but it is not clear what impact the digital process has had on the project outcome.
–Mahesh Senagala





Animation



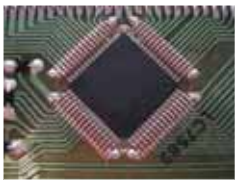
"Creating by Destructing"

Natalie Dibenedetto : Second year, Environmental Design

Advisor/Principal Investigator: **David Matthews**

Department of Interior Architecture
Ohio University, Athens, Ohio






Jury comments:

Not only communicating the ideas of the creator, but inspiring and educating the viewer in a total audio-visual performance! Great! **–John S. Hansen**

Animation

"The Spaces within"

Bridget Hyde : Second year, Environmental Design

Advisor/Principal Investigator: **David Matthews**

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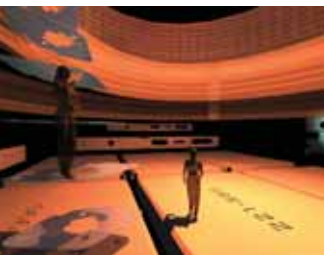



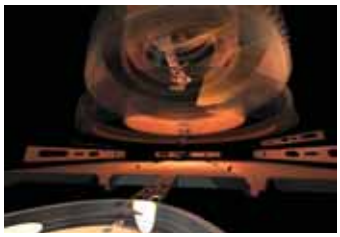

Jury comments:

Liked the transitions from sketch to **form•Z** animation, allowing the viewer to see the concept in its raw forms to rendered design. The music hit the right tone (not overwhelming the visual) and the visuals were well timed to the music and evolution of the concept. **–Gregory McCambley**