

# Translating Solids

The Holographic Image  
February 28 – March 16, 2005



Rebecca Deem, Larry Lieberman, R. Scott Lloyd, Sam Moree, Ikuo Nakamura, Ana Maria Nicholson,  
Jason Sapan & Fred Unterseher  
Deborah Chalfant, Harris Kagan & Jim Kendrick

Curated by Harris Kagan & Prudence Y. Gill

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February 28 – March 16, 2005



The Ohio State University  
Hopkins Hall Gallery + Corridor  
128 N. Oval Mall  
Columbus, Ohio  
Gallery Hours: 9 am - 5 pm MWF  
9 am - 7 pm T+Th

[http://www.physics.ohio-state.edu/~kagan/holo\\_show05](http://www.physics.ohio-state.edu/~kagan/holo_show05)

Sponsored by OSU Department of Art, Department of Physics, the College of the Arts, the College of Mathematical and Physical Sciences, the College of Arts and Sciences, and the Hopkins Hall Gallery + Corridor. Lectures co-sponsored by the Wexner Center for the Arts.

# Translating Solids

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## Exhibition

This exhibition consists of works by artist holographers, faculty and students who participated in the Ohio State University Holography Program.

## Events

- |            |         |  |
|------------|---------|--|
| Mon Feb 28 | 4:00 pm | Guest Lecturer: Don Ihde<br><i>Seeing the Unseen, Hearing the Unhearable:<br/>New Technologies for the Senses</i><br>Wexner Film/Video Theatre |
|            | 5:00 pm | Opening Reception: Hopkins Hall Gallery  |
| Mon Mar 7  | 4:00 pm | Guest Lecturer: Larry Lieberman<br><i>Exploring Light and Space with Holography</i><br>Wexner Film/Video Theatre                               |

## **Introduction**

Holography – its name derived from Greek, meaning ‘whole picture’ – is a modern technique that allows the ‘recording’ and ‘playback’ of three-dimensional images. Unlike photography, which uses ordinary light to record or store three-dimensional information as two-dimensional images, holography uses the light of lasers in a highly controlled setting to store the information from three-dimensional objects within a two-dimensional plane. No cameras or lenses are involved in the process. As such, the holographic image is a direct reconstruction, within the film itself, of the light wave patterns that were present at the original scene. Because of the containment of wave information a hologram can be cut into pieces and a view of the whole image will still be visible in each part.

Holographic techniques make it possible to accurately display three-dimensional light imagery with the same perspective, parallax, form, and content as the original scene, including the recording and recreating of events in the fourth-dimension, time. These qualities place holography as an important medium in science and in art. Scientists use holographic techniques to perform stress and failure analysis, non-destructive testing, and encryption. Designers invent commercial applications with rainbow colored diffraction films and imagery of unbelievable realism. Artists are drawn by this vibrant light-based medium to create compelling and meaningful pieces. As a result, a network of journals, exhibition spaces, collectors, advocates, seminars and courses at universities and institutes has evolved along with the medium.

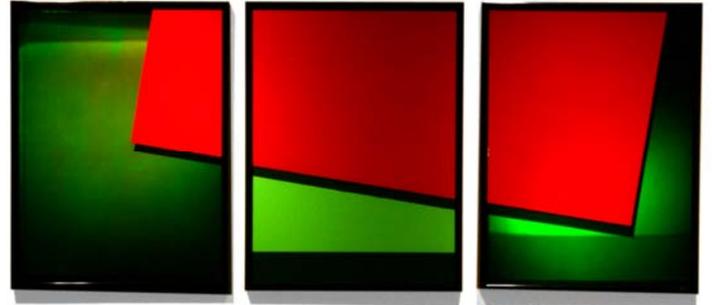
The study of holography at The Ohio State University was started, in the 1970's, by Stuart Collins in the Department of Electrical Engineering. Beginning in 1985, it was taught by Harris Kagan in the Department of Physics. In 1987, as a means of fostering interdisciplinary ideas between art and science, Susan Dallas-Swann, Department of Art, and Harris Kagan initiated a collaborative effort in teaching holography. Holography is now a required course for Art and Technology majors in the Department of Art, and it is available as a cross-listed honors course in Art and in Physics as well as being available university-wide to interested students.

## **The Exhibition**

In this exhibition, a diversity of holographic works were chosen in an attempt to increase our visual and cultural literacy of the medium. The artists communicate through unique vocabularies developed by the exploration of their ideas in three or four dimensions.

## Rebecca Deem

Title: *Double Take*  
Date: 2002  
Size: Three 11.5 x 15 inch panels  
Edition: Unique  
Type: White light reflection hologram  
Description: Two reflection holograms with glass, hand made paper and optical filters



Title: *Pandora's Box*  
Date: 1998  
Size: 15 x 11.5 inches  
Edition: Unique  
Type: White light reflection hologram  
Description: Image plane reflection hologram with handmade flattened black box

“Pandora’s Box” depicts a female figure balanced between a confined and an open area. Pandora, as the first woman in the Greek culture, is sometimes compared to Eve in Hebrew myth. Originally Pandora was a title of the goddess Rhea.

*Illustrious Rhea ... Mother of Gods and Men, who from Gaia (Earth) and spacious Ouranos (Heaven) derives her glorious birth.*

—Orphic

Hymn 14 to Rhea

Pandora, meaning all gifts

Pandora's box still, and always, holds hope.



My current works combine cut film and glass plate holograms with manufactured and hand made paper, optical filters, and laser printed, engraved and cut elements. They deal with “implied movement and dimension” and, in some cases, movement due to the close proximity of certain contrasting colors and what has come to be termed vibrating optical patterns. The very nature of the medium of holography offers a wealth of opportunity to explore along the lines of human perception, particularly as relates to color, dimension and pattern. The hologram is based on an interference pattern. Ever increasing recognition is paid to the part that colors and patterns play, not only with our emotions, but also in the very ways in which “visual” information or “coded light” is processed by the human organism. “Seeing” as a learned experience leads us to explore the way we perceive our experiences – real, imagined or manipulated – and in turn brings us to greater awareness of how we create our world.



*“You only see what you are taught to see.” (Mihaly Csikszentmihalyi)*

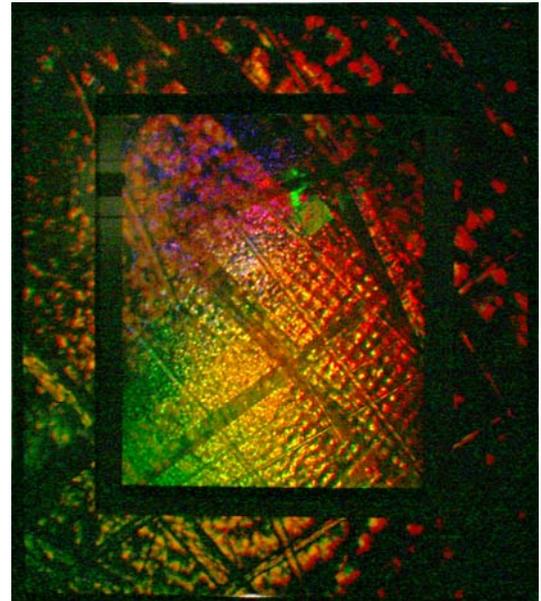
*“Art is not just about beauty, taste or fashion. It’s most rewarding when it simply and elegantly allows the mind the experience of self transformation.”*

## **Biography**

Rebecca Deem has worked with holography as an art medium since she completed training at the New York School of Holography in the mid 70’s. She is regarded as one of the initial artists to combine reflection holograms with mixed media to form free standing art works. She was among the first artists to receive an award funded by the National Endowment for the Arts as an Artist-In-Residence at the Museum of Holography, NYC. Deem lectures periodically on Art and Holography and has exhibited her work internationally in England, Australia, France, Germany and throughout the US and Canada. In the 1980s she joined forces with artist/holographer Fred Unterseher and worked with him to develop a pulsed laser system and Artist-In-Residence Program in Germany. After their return to the US, they participated as team members to record the first Presidential Pulse Laser Portrait of then ex-president Ronald Reagan, now in the Smithsonian Portrait Collection. Deem co-founded Zone Holografix Studios with Unterseher in 1995, an art studio and teaching facility. She received the Shearwater Foundation Award for her distinguished career and creative achievements in art holography. Currently she teaches, writes and serves as a guest editor and editorial board member to print and on-line publications dealing with holography.

## Larry Lieberman

Title: *The Gateway*  
Date: 2005  
Size: 22 x 20 inches  
Edition: Unique  
Type: White light reflection hologram  
Description: White light reflection hologram  
& photograph



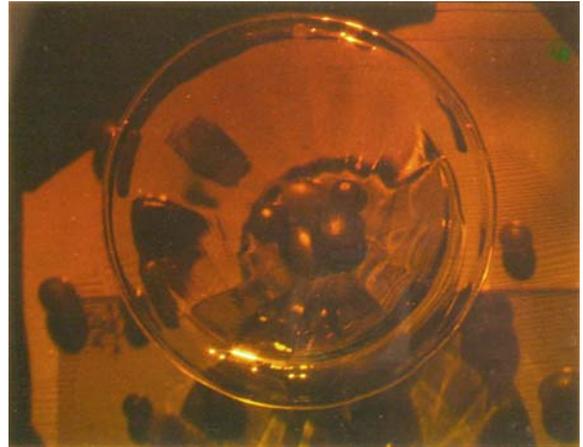
In my art, I try to explore Light and Space using paint and holograms to create dimension and infinite space.

### Biography

Larry Lieberman has been a working artist since 1977. After graduation from Ohio State University with a BFA in Painting, Graphics and Photography, Larry set up an independent study program with the Departments of Art, Electrical Engineering and Physics at OSU to further study art and holography. Larry later attended The San Francisco School of Holography and attended and lectured at workshops on Holography and Phonics in Lake Forest College in Chicago. Larry Lieberman has been producing and helping other artists produce holographic art for 30 years. His award winning work has been shown in galleries around the world, including The Sterling Gallery, The Atmospheres Gallery, and The Chad Elliot Gallery.

## R. Scott Lloyd

Title: *HeNe Fruit*  
Date: 1985  
Size: 9 x 7 inches,  
Edition: Unique  
Type: White light reflection hologram



The art in holography, for me, has to be about using the medium in ways that tell us something that we never would have known without using the medium in this way. This hologram was my first serious foray into holography as an art form. Originally, it was to be placed as the top of a glass cube with the cube's height being the same as the height of the vase upon which the plate actually rested during the exposure. The glass cube – with the hologram as the top – would then have been placed on a waist-high column.

As it is presented here, framed, I ended up enjoying the way that it looks as if it should not hang on a wall. The grapes magically defy gravity while the vase clings to the blue disk on the surface of the glass plate. Perfect reality makes no sense here – kind of like a metaphor for life.

### Biography

Scott Lloyd received an Ed.D. in Arts Education with an emphasis on holography in post secondary Education, and an MFA in Painting from Pratt Institute, NY. From 1983 – 1988 he was Director of Educational Services, Museum of Holography, NY. Scott Lloyd teaches Printmaking and Foundations at California University of Pennsylvania. He has had several one-person exhibitions of his holograms.

## Sam Moree

Title: *DNA Sculptor 5/7*  
Date: 1995  
Size: 8 x 10 inches  
Edition: 7  
Type: White light transmission hologram



My approach in holography stems from my interests in painting, sculpture, photography, film, video, and theater. My works often integrate sculptural components into their final compositions. The sculpture works as a focal point to balance the complex details of the hologram.

I look at holography as a dance of balance – a Rosetta Stone – between Art and Science. The Primitive and the Sophisticated. The Past and the Future. A Balancing beam of Light and Dark. Working with diverse material – metal, stone, neon, plastic, paint and glass, the sculpture echoes in a holographic window. With my work I use stark, almost symbolic sculpture as a diving board to tumble into a holographic graffiti landscape.

### Biography

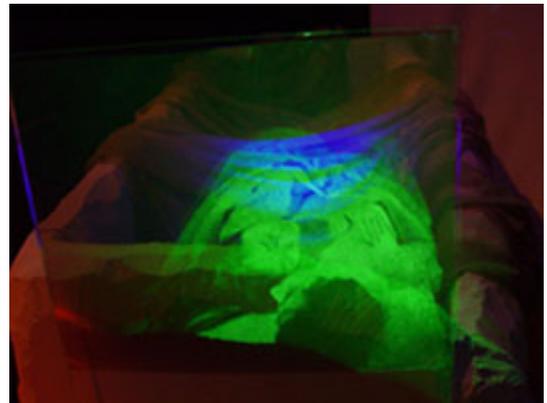
Sam Moree has received three Shearwater Awards for his work in holography. In 1996 he received a German National Fellowship for Media Arts in video/holography in Cologne. He taught Visual Arts at the NY School of Holography from 1990 to 1995. His work is in numerous public and private collections.

## **Ikuo Nakamura**

Title: *Memory II*  
Date: 1998  
Size: 9 x 7 inches  
Edition: Unique  
Type: White light transmission hologram



Title: *Fossils*  
Date: 1999  
Size: 20 x 24 inches  
Edition: Unique  
Type: Laser viewable transmission hologram



*One night, I had a strange dream, where I was standing and watching myself sleeping with Kayo. Then I suddenly realized that I was inside of King's Chamber, The Great Pyramid of Khufu. I was aware that I was in a dream. Our time has been frozen and seems like it lasts forever.*

Working on *Fossils* is a realization process of my personal dream. It is a disappointment not being able to remember my sensations of dreams. The sensations of seeing a hologram are close to those of feeling a dream or déjà-vu. With the completion of *Fossils*, my dream may exist in déjà-vu.

## **Biography**

Ikuo Nakamura is a media artist/holographer. He learned the medium of holography in the early 1980's at the New York Holographic Laboratory. His experimental multi-media installations, such as *Rainbow Dance*, a holographic pattern animation series; *Neuro Hologram*, a brain wave interactive hologram; and *The Mirror*, an interactive space projected video image synthesizer with sonic installation, were well received as holo-hybrid art in Europe. His scientific and artistic training in Japan lead him to create these unique concepts and original works. He was awarded an Artist-in-Residence at the Museum of Holography, the Shearwater Foundation Award, Japan's Suzuki Masane Prize, Fellowship at the Academy of Media Art, Cologne, Germany and an Artist-in-Residence at The Center for Holographic Art. He is presently the Director of Technical Creativity at The Center for the Holographic Arts.

## Ana Maria Nicholson

Title: *Flame*  
Date: 1999  
Size: 19 x 23 inches  
Edition: Unique  
Type: White light reflection hologram

The central theme of my work as an artist has always been the human figure: its beauty, its complexity and its ability to express in gesture and movement the hidden realities that lie at the core of the human spirit and heart. When carefully observed the body is but a thin shield, a permeable membrane that can obscure but not obliterate the psychological and spiritual dimensions of each person.



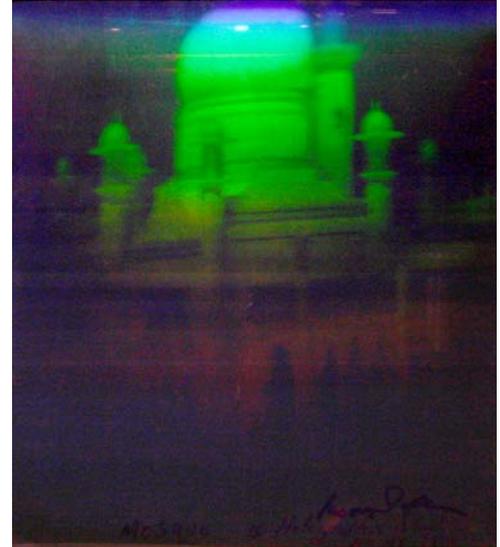
In my portraits I strive to portray what the sitter is behind the facade of personality. In a holographic portrait the artist and the sitter are, for brief moments, surrounded by laser light, a light never seen on our planet before 1960. This special event often allows for an opening into a person's deep being, recorded for 20 nanoseconds on the holographic plate. William James wrote: *All around us lie infinite worlds, separated only by the thinnest veils.* In my new series I combine different exposures of the figure to explore the human longing for integration in the psychic and spiritual realms that release us into a state unlimited by boundaries.

### Biography

Ana Maria Nicholson, Ph.D. is an artist/holographer who has been involved in the medium since 1975. She was assistant director of the Center for Experimental Holography at the University of Hawaii from 1976 to 1980. In New York, she was director of the Portrait Studio at the New York Museum of Holography, where she executed portraits of numerous well known figures such as Walter Cronkite, David Byrne, Gloria Steinem, Philip Johnson and Arnold Schwarzenegger. Ana Maria has had numerous exhibitions worldwide. Currently she is the director of the Center for the Holographic Arts, an institution devoted to the promotion and dissemination of the art of holography.

## Jason Sapan

Title: *Mosque*  
Date: 1989  
Size: 9.75 x 11.25 inches  
Type: White light transmission hologram



I first worked in holography during a summer internship in 1968. By 1975, I had decided to become a professional holographer, and have been so ever since. In 1979 I opened my current gallery, The Holographic Studios in New York City, which over time has become the world's oldest gallery of holography. Located in a former blacksmith's forge there are times as I watch the red glow of a laser that I can't help thinking that once upon a time a different artisan watched the red glow of hot iron as he shaped his work.

Although I make most types of holograms, I am arguably best known for my work as an integral portrait holographer. There is something about capturing a living person in a dimensional medium that includes the vibrancy of motion that has always appealed to me. Among the more notable personalities who have sat for me are Andy Warhol, Pierre Cardin, Isaac Asimov, Phil Donahue, Sally Jessy Raphael, Oksana Baiul, Ed Koch, Billy Idol, John Kenneth Galbraith, Prime Minister Edward Heath of the UK, and President Bill Clinton.

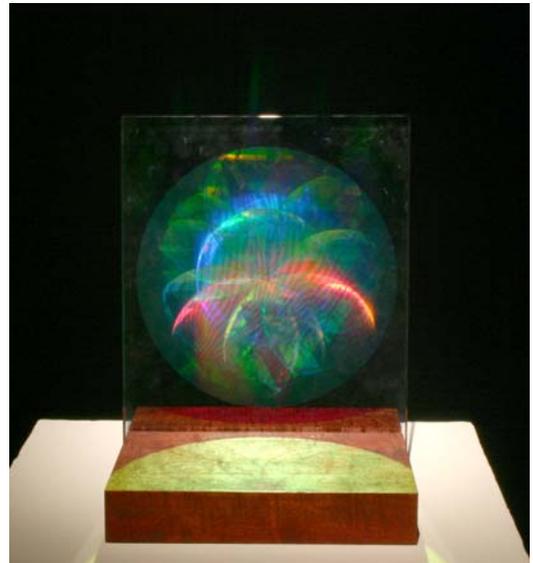
For about thirty years I have taught classes in holography and worked with interns.

## Fred Unterseher

Title: *Sri Yantra Inspired, 1 A*  
Date: 1999  
Size: 11.75 x 12 x 0.75 inches  
Edition: Unique  
Type: Off axis Fourier transform lens matrix holographic optical element  
Material: Dichromate gelatin hologram optically cemented between glass  
Description: Hologram on purple heart wood base



Title: *Sri Yantra Inspired, 2*  
Date: 1999  
Size: 10.5 x 12 x 0.75 inches  
Edition: Unique  
Type: Off axis Fourier transform lens matrix holographic optical element  
Material: Dichromate gelatin hologram optically cemented between glass  
Description: Hologram on purple heart wood base



The works presented here are part of the Sri Yantra series of kinetic *yantras*. They involve an exploration of light and spatial relationships in kinetic form, which combines technical media with ancient sacred geometry. These particular works have been highly influenced by the Sri Yantra, a diagram of the continuous process of creative generation. Technically the holograms can best be described as off axis Fourier transform lens matrix, holographic optical elements (H.O.E.s). This technique produces white light viewable holograms of pure dimensional light. Although shapes and forms are created they are not reproductions of reflected light from an object. This echoes the form of the ancient *yantras* which are intended to evoke a pure state of consciousness, an experience of wholeness, leading the viewer to explore and investigate the impermanence and ever changing nature of light and life. Ritual practices transform the mind, the actual *yantra*, with lines, shapes, and colors, transforms the mind of the viewer. The observer becomes one with the *yantra*.

My artwork explores the nature of light and its relationship to the ways we experience the world. In these works I have configured contemporary optics and techniques to speak to the focus of space/time. The configuration can be seen to present almost infinite aspects, apart from a transformational experience of seeing and the natural beauty of light alone.

## **Biography**

Fred Unterseher is a graduate of the San Francisco Art Institute. While in the Bay area, he participated in the formation of cooperative artists projects including Project Artaud and The Emeryville Artists Coop. He was a member of ANT FARM an art/media collective famous for Cadillac Ranch and Media Burn. Unterseher was a pioneering member of the San Francisco School of Holography with Lloyd Cross and Gerry Pethick. He formed Holografix, an art studio and teaching facility, where he conceived and co-authored the HOLOGRAPHY HANDBOOK, which has sold over 60,000 copies and received a Kodak Award. In New York City, he was Director of Education at the Museum of Holography. He spent four years in Europe based in Hamburg, showing his work in England, France, Italy and Denmark. He was a team member for the first holographic portrait of USA president, Ronald Reagan, now in the Smithsonian Portrait Collection. He taught in the graduate program at Brooks Institute of Photography and Holography at Pasadena City College. He is a recipient of the Shearwater Foundation Holography Award. He consulted on SBIR projects involving 3-D imaging systems (holographic/autostereo-graphic screens) for NASA and JPL. His work has been shown in museums, institutions and galleries worldwide. His interests are in art, science/technology, visual perception, light, kinetics, consciousness and community, which he expresses by mixing holography with other media. He views art as a condition that enhances and expands the experience of self-transformation. He currently teaches at the Columbia Area Career Center, Columbia, Missouri.

## Art created at The Ohio State University Holography Laboratory

### Susan Dallas-Swann & Harris Kagan

Title: *El Diablo*  
Date: 2005  
Size: 8 x 10 inches  
Type: White light transmission hologram  
Description: Aluminum and glass

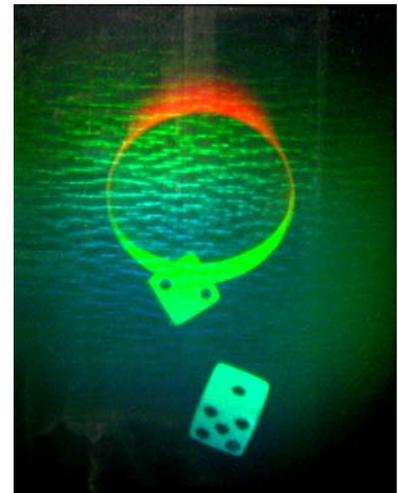
Susan Dallas-Swann exhibits computer controlled light sculptures in interactive installations. Her exhibitions include Hudson Opera House, NY; Art Resources Transfer, NY; The Ann Arbor Hands-On Museum, Michigan; Fundacio Pilar i Joan Miro a Mallorca, Spain; Tracor School of Art, Madrid, Spain; SPACES Gallery, Cleveland Ohio. Grants include New Forms Regional Grant, New York Council for the Arts; Artist's Space Exhibition Grant; National Endowment for the Arts Individual Fellowship Grant. Her work is in the International Museum of Electrography Collection, University of Spain and Fundacio Pilar i Joan Miro a Mallorca Spain.



### Harris Kagan

Title: *Survival of the Fittest*  
Date: 2005  
Size: 8 x 10 inches  
Type: White light transmission hologram  
Description: Aluminum and glass

Harris Kagan is a Professor in the Physics Department and an Adjunct Professor in the Department of Art at Ohio State University. He received, with Susan Dallas-Swann, three Interdisciplinary Research Seminar Grants and a Battelle Endowment Technology and Human Affairs Grant for their work in Holography. Professor Kagan developed holography as a course at OSU in 1985. He teaches holography in both the Art and Physics Departments.



## Deborah Parker Chalfant

Title: *Wood Nymph*  
Date: 2003  
Size: 25 x 24 inches  
Edition: Unique  
Type: White light reflection hologram  
Description: Wood sculpture with embedded hologram



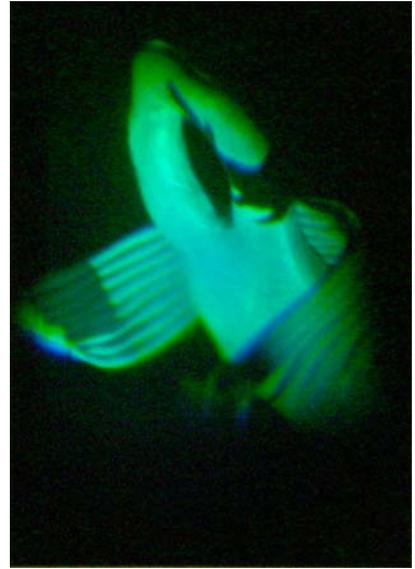
Title: *Wood Nymph II*  
Date: 2005  
Size: 22 x 19 inches  
Edition: Unique  
Type: White light reflection hologram  
Description: Wood sculpture with embedded hologram



Holography, just like photography, will become less marginalized as people see and understand the possibilities of the multiple applications for education and art that are inherent in holography. The mindset or preconceived idea that science and technology are hard to understand and not enjoyable can be changed through education, exposure, and accessibility. Through education and exhibiting holography as art, I seek to demystify the process of holography and promote the voice I have found as an artist and educator using technology.

**Jim Kendrick**

Title: *Song*  
Date: 1999  
Size: 5 x 7 inches  
Type: Reflection Transfer



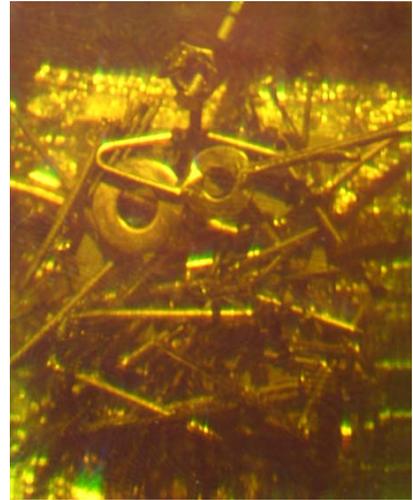
**Carl Bailey, Undergraduate Student**

Title: *No. 48*  
Date: 2005  
Size: 4 x 5 inches  
Type: White light reflection hologram



**Michael Ealy**, Undergraduate Student

Title: *Through the Passion, Through the Pain*  
Date: 2005  
Size: 4 x 5 inches  
Type: White light reflection hologram



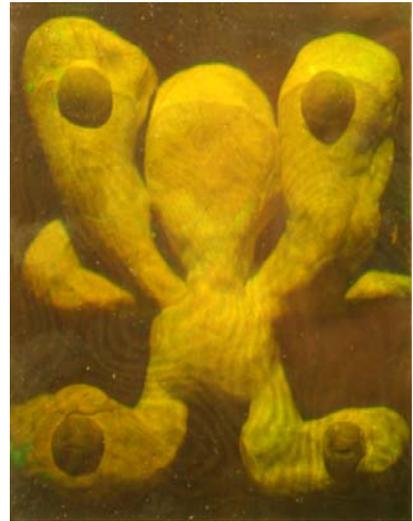
**Melissa Fontanini**, Undergraduate Student

Title: *Sunrise*  
Date: 2004  
Size: 5.5 x 7.5 inches  
Type: White light reflection hologram



**Ryan Hale**, Undergraduate Student

Title: *Fleuric Element*  
Date: 2005  
Size: 4 x 5 inches  
Type: White light reflection hologram



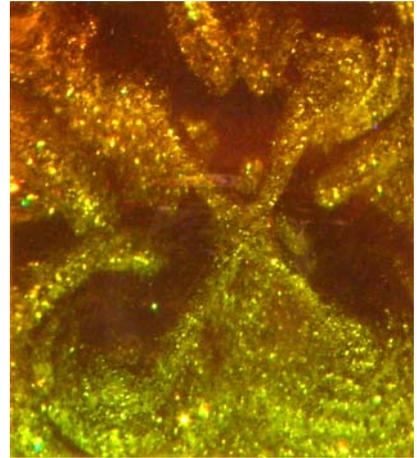
**John Hampton III**, Undergraduate Student

Title: *Winter Scene, Yellow*  
Date: 2005  
Size: 3.25 x 7 inches  
Type: White light reflection hologram



**Christopher Howard**, Undergraduate Student

Title: *Four Days Until Tomorrow*  
Date: 2005  
Size: 4 x 5 inches  
Type: White light reflection hologram



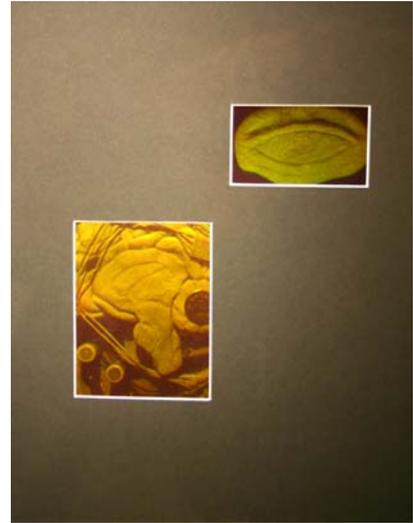
**Brian Huneke**, Undergraduate Student

Title: *Reiterative Viewports*  
Date: 2005  
Size: 6 x 7.5 inches  
Type: White light reflection hologram



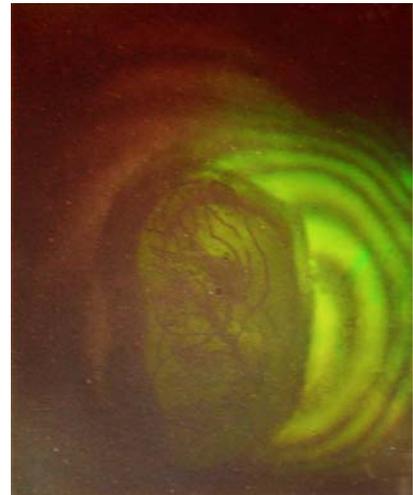
**Joel Kidd, Undergraduate Student**

Title: *Evolution*  
Date: 2005  
Size: 11 x 14 inches  
Type: White light reflection hologram



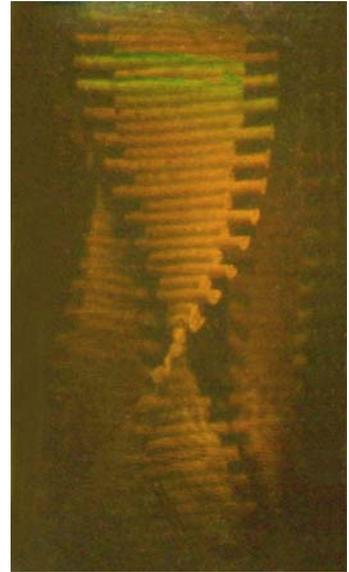
**Andrew Kime, Undergraduate Student**

Title: *Holographic Acupuncture*  
Date: 2005  
Size: 7.25 x 9 inches  
Type: White light reflection hologram



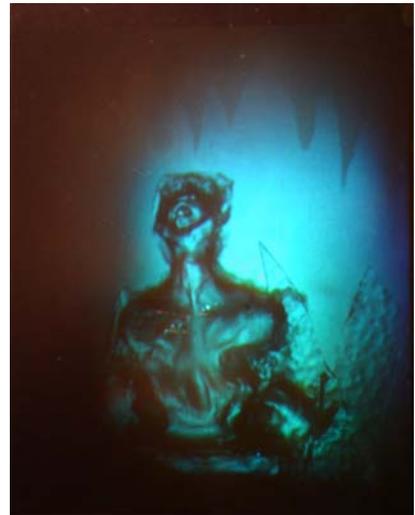
**David Mihal**, Undergraduate Student

Title: *Orbis*  
Date: 2001  
Size: 2.5 x 5 inches  
Type: White light reflection hologram



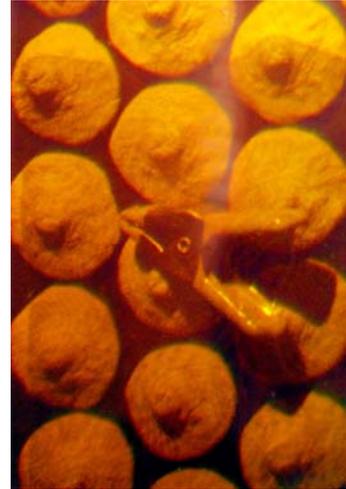
**Kat O'Keeffe**, Undergraduate Student

Title: *Satan Trapped In His Prison Of Ice*  
Date: 2005  
Size: 7.5 x 9.5 inches  
Type: White light reflection hologram



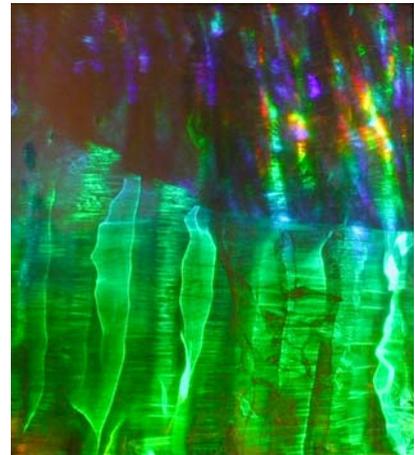
**Evan Oliver**, Undergraduate Student

Title: *A Clamp in the Nipple Field*  
Date: 2004  
Size: 4 x 5 inches  
Type: White light reflection hologram



**Tom Varik**, Undergraduate Student

Title: *Emination V*  
Date: 2005  
Size: 3.75 x 4.25 inches  
Type: Diffraction grating hologram



**Jonathan Welch**, Undergraduate Student

Title: *Ghost in the Machine*  
Date: 2004  
Size: 7 x 8.5 inches  
Type: White light reflection hologram



Title: *Autumn*  
Date: 2005  
Size: 6 x 8.5 inches  
Type: White light reflection hologram



Special thanks for assistance to Victoria Ellwood, Tom Kelch, Melissa Weber, John Whitcomb, and the Hopkins Hall Gallery and Staff including Berry van Boekel, Won Joe, Chad Kessler, Patrick Weber and Anja Brüggemann.