Opening of the Art Spaces

Simons Center for Geometry and Physics

How “thinks” works

- An exhibition which explores the human thought process in relationship to mathematics, perception, philosophy, language, and nature. The works include sculpture, prints, performances and media works from both established and emerging artists.

- The exhibition is open between November 29th 2011 and March 1st 2012 at the Gallery and the open spaces on the ground floor, lobby level and terrace of the Simons Center for Geometry and Physics.

- Curated by Nina Douglas, PhD, Director of the Art and Science Program at the Simons Center for Geometry and Physics, Stony Brook University.

Program

- 5:30 arrival

- 5:45 welcome from John Morgan, SCGP director
- 6:00 Visual Illusions, lecture by Al Seckel
- 6:30 Computer music presentation organized by Dan Weymouth
- 7:45 viewing of the gallery; cocktails; performance art by Steve Marsh and Josh Perry

Al Seckel

The Nature of Belief: An Interactive Journey Through Your Mind's Eye

Come see, experience, and take delight in some of the world's most powerful visual illusions. The illusions presented in this talk will not just be confined to the visual senses, but there will be auditory ones too, including cross-modal examples of sound influencing what you see, and what you see influencing what you hear.

Illusions are a wonderful window into perception, as they can reveal the hidden rules of the human perceptual system in a way that normal perceptual processes do not.

Join us as Al Seckel takes us on an interactive and transformative journey through our inner minds. Many of the dynamic illusions presented in this lecture are not available anywhere else, including his many books, and cover many different aspects of perception, and will offer new and transformative insights into how we build up belief systems, which have far reaching implications for all aspects of social policy, education, and inner personal relationships.

Al Seckel is internationally recognized as one the world's leading authority on visual and other types of sensory illusions. He has authored over 15 books on the subject (several best-sellers, two have won national book awards). He has lectured extensively throughout the world, at many of the world's most prestigious universities including, Harvard, MIT, Caltech, Cornell University, University of Oxford, University ofCambridge, UCLA, UCSD, Berkeley, University of Rome, University of Utrecht, University of Lund, Singularity University, etc., as well as at many prestigious conferences and venues, including the World Economic Forum, Davos, TED (spoke three times), IdeaCity, Nokia's Ideas Camp, Monoco Media Forum, Kinnernet, etc.

Seckel is now completing a massive interactive applet on illusions for various mobile platforms.

Masters of DECEPTION

Escher, Dalí & the Artists of Illusion

Al Seckel Foreword by **Douglas R. Hofstadter**, author of *Gödel, Escher, Bach*

Dan Weymouth

Events for Simons Center Opening, September 29, 2011

#1) Auditorium Program: Musical Program with Commentary [approx. 45 min]

Dr. Weymouth will introduce each piece, and talk briefly about the musical ideas and the technology used to enliven them.

Three ElectroAcoustic Micro-Minatures (Dr. Daniel Weymouth)
electronic sound

> Three very short works that explore some of the aspects of audio technology: the internal life of sounds revealed by close micing in *A Breath for Rob*, what happens when digitial editing goes a bit too far in *No Rest*, and some very precise use of FFT filtering in *having to do with motion*.

Kinetic Petals (Timothy Vallier)
dancer, Kinect game controller, and electronics
Dancer: Mallory Vallier

> The appearance of the Kinect has created an explosion of artistic works using motion and gesture capture. This piece uses software modified in MAX/MSP to create a virtual instrument that the dancer plays. The interface and screen data is projected, adding an additional visual layer to the piece.

Until Paper Becomes Fur (Dr. Margaret Schedel)
electric cello, sensor bow, and electronics

> A work exploring a multitude of silences. Using Rebecca Fiebrink's machine learning software Wekinator, the computer is able to recognize and respond to bow articulations, shaping the piece in real-time in response to the performer's gestures, before, after and during the sound.

Improvisation for Teacups and Light (Levy Lorenzo)
teacups, light, light sensors, and electronics
Teacups and Light, Levy Lorenzo

> Teacups and Light is an instrument built by percussionist/instrument designer Lorenzo. In this tender and humorous improvisation, light and sensors run software programming done via MAX/MSP, using a Make Controller microcontroller hardware interface.

Rare Events (Dr. Daniel Weymouth)
bass clarinet and computer-altered sounds
Bass Clarinet, Lisa Preimesberger

A frenetic conversation between a living musician and an unseen alter ego, which explores the musical application of "rare events." All the sounds are from the bass clarinet, although some have been heavily spindled and mutilated.

Dr, Schedel and Dr. Weymouth are members of the composition faculty in the Department of Music and of cDACT. Mr. Vallier is a PhD student in composition; Mr. Lorenzo and Ms. Preimesberger are DMA candidates in performance.

Composer/conductor Daniel Allen Weymouth is currently on the Composition faculty at the State University of New York at Stony Brook where he is the Director of Computer Music and Co-Director of the Laboratory for Technology in the Arts. His music is performed widely in the US, Canada and Europe and is recorded by SEAMUS and New World Records. A ten-year stint as an itinerant musician in popular genres may have something to do with his fascination with gadgets, as well as the kinetic and compact nature of much of his music, both acoustic and electronic. Weymouth's work has been described as "power-color" music. As far as "color" goes, he is a confessed lover of sound(s) -- just about any kind of sound. This has led to a fascination with electro-acoustic music, and experience ranging from a summer spent at Stanford's CCRMA (Center for Computer Research in Music and Acoustics) to two years in Paris working at a couple of computer-music facilities, Pierre Boulez's IRCAM and Iannis Xenakis' CEMAMu. The "power" part, along with other aspects -- the music's compact scale, density and pace, although probably not its harmonic language -- most likely come from his ten years spent as an itinerant musician on the road, playing jazz, rock, disco(!), R&B and funk in clubs, concerts and studios. He has composed for a wide variety of ensembles, using both standard and electronic instruments, including "computer-interactive" ones. He is a founding member of NAME (New American Music in Europe) and is frequently an invited composer at the Lüneburg, Germany, Internationalen Studienwoche für zeitgenässische Musik. Commissions have come from the Lüneburg New Music Ensemble, the Ensemble des Deux Mondes, the San Francisco Contemporary Music Players, the Stony Brook Contemporary Chamber Players, the Guild Trio as well as individual performers; grants from Meet the Composer and ASCAP. His compositions have been performed throughout Europe, Canada and the United States and appear on the SEAMUS and New World Record labels as well as MIT Press (as part of a CD-ROM).
Dan continues to be an active conductor. He has led numerous ensembles, including Neue Musik Lüneburg, the San Francisco Contemporary Music Players, the Berkeley Contemporary Chamber Players and Stony Brook's Contemporary Chamber Players.

Margaret Anne Schedel is a composer and cellist specializing in the creation and performance of ferociously interactive media whose works have been performed throughout the United States and abroad. While working towards a DMA in music composition at the University of Cincinnati College Conservatory of Music, her interactive multimedia opera, A King Listens, premiered at the Cincinnati Contemporary Arts Center and was profiled by apple.com. She holds a certificate in Deep Listening with Pauline Oliveros and has studied composition with Mara Helmuth, Cort Lippe and McGregor Boyle. She sits on the boards of 60x60 Dance, the BEAM Foundation, the

Electronic Music Foundation Institute, the International Computer Music Association, and Organised Sound. She contributed a chapter to the Cambridge Companion to Electronic Music, and her article on generative multimedia was recently published in Contemporary Music Review. In the space of two years she edited an issue of the Journal of Visual Culture on Sound Art, and edited an issue of Organised Sound on Visual Music. Her work has been supported by the Presser Foundation, Centro Mexicano para la Música y les Artes Sonoras, and Meet the Composer. In 2009 she won the first Ruth Anderson Prize for her interactive installation Twenty Love Songs and a Song of Despair. Her research focuses on gesture in music, and the sustainability of technology in art. As an Assistant Professor of Music at Stony Brook University, she serves as Co-Director of Computer Music and is a core faculty member of cDACT, the consortium for digital art, culture and technology. In 2010 she co-chaired the International Computer Music Conference, and in 2011 she co-chaired the Electro-Acoustic Music Studies Network Conference.

Steve Marsh Bio and Performance description

Steve Marsh is an actor, dramaturg and teacher. He is a longtime faculty member of SBU's department of Theatre Arts where he serves as Director of Graduate Studies in Dramaturgy and Theatre. He is also an associate in the School of Journalism's Center for Communicating Science (CCS) teaching improvisation to scientists in an innovative program spearheaded by Alan Alda. Steve has taught workshops and presented for the CCS at Brookhaven National Lab, Cold Spring Harbor Labs, the Stony Brook Summer institute, Pop Tech, the National Institute of Health, the World Science Festival, the Council of Graduate Schools in Washington DC and at the Kavli-California Nano Systems Institute at UCLA. He is a founding member of Asylum Theatre Company on Long Island and literary manager for the John Gassner New Play Competition, a national playwriting contest in its ninth year. Steve recently directed Brecht's *Galileo* for the dedication of the Simon's Center for Physics and Geometry, and will act in Ibsen's *Ghosts* in March of 2012. He is producing a new play, *Robeson*, about the famed actor, singer and civil rights activist, Paul Robeson, in May 2012.

Performance: A monologue from *QED* by Peter Parnell

In this short monologue Nobel Prize winner Richard P. Fyneman talks about nature, art and women, perhaps to keep his mind off the looming disease to which he will eventually succumb; and to find inspiration for a lecture that he needs to write about the "What We Know."

Josh Perry is a percussionist currently based in New York. Josh's main artistic interests lay in contemporary music and performing arts, with a particular emphasis on interdisciplinary mediums. Over the past year he has premiered multiple new works for percussion and mixed ensemble and has been heard at venues including Issue Project Room, Trinity Church, Symphony Space, and Merkin Concert Hall. He has performed at the Bang on a Can Marathon, Make Music New York, and the Festival Internacional de Inverno de Campos do Jordao in Brazil. Josh earned his Bachelors of Music from the University of Massachusetts-Amherst under the instruction of Ayano Kataoka and Thomas Hannum. Currently, Josh is completing his Masters of Music at SUNY Stony Brook where he studies with Eduardo Leandro.

Stuart Saunders Smith's *Songs I-IX* is a solo work for actor-percussionist that explores the flavors of the voice and human emotion while being accompanied by traditional and non-traditional percussion sounds. This multi-media work utilizes theatre and sound to create different aural colors and visual textures for each of the nine songs. The composition explores the unfamiliar aspects of the everyday with nonsensical words, phrases, and peculiar sounds, elegantly using our most basic and familiar tools.

Exhibition

Kiki Smith:

CV- Kiki Smith

About Kiki Smith
Kiki Smith was born in 1954 in Nuremberg, Germany. The daughter of American sculptor Tony Smith, Kiki Smith grew up in New Jersey. As a young girl, one of Smith's first experiences with art was helping her father make cardboard models for his geometric sculptures. This training in formalist systems, combined with her upbringing in the Catholic Church, would later resurface in Smith's evocative sculptures, drawings, and prints. The recurrent subject matter in Smith's work has been the body as a receptacle for knowledge, belief, and storytelling.
In the 1980s, Smith literally turned the figurative tradition in sculpture inside out, creating objects and drawings based on organs, cellular forms, and the human nervous system. This body of work evolved to incorporate animals, domestic objects, and narrative tropes from classical mythology and folk tales. Life, death, and resurrection are thematic signposts in many of Smith's installations and sculptures. In several of her pieces, including "Lying with the Wolf, Wearing the

Skin," and "Rapture," Smith takes as her inspiration the life of St. Genevieve, the patron saint of Paris. Portrayed communing with a wolf, taking shelter with its pelt, and being born from its womb, Smith's character of Genevieve embodies the complex, symbolic relationships between humans and animals. Smith received the Skowhegan Medal for Sculpture in 2000, the Athena Award for Excellence in Printmaking from the Rhode Island School of Design in 2005, the fiftieth Edward MacDowell Medal from the MacDowell Colony in 2009, and has participated in the Whitney Biennial three times in the past decade. In 2005, Smith was elected to the American Academy of Arts and Letters. Smith's work is in numerous prominent museum collections, including the Museum of Modern Art, New York; Walker Art Center, Minneapolis; Whitney Museum of American Art, New York; Solomon R. Guggenheim Museum, New York; the Metropolitan Museum of Art, New York; and the Museum of Contemporary Art, Los Angeles. Smith lives and works in New York City.

Artwork: Black apples; Red apples

Helaman Ferguson

Helaman Ferguson's mathematical sculptures in stone and bronze celebrate ancient and modern mathematics, melding the universal languages of sculpture and mathematics including human anatomy, algorithms, computer graphics, diamond cutting and final form. Helaman Ferguson is both a sculptor whose work is located in institutions and collections worldwide and an internationally known mathematician whose PSLQ algorithm has been listed as one of the top ten in the twentieth century. His current sculpture studio occupies 72,000 cubic feet in Baltimore, Maryland.

Double Torus Stonehenge, 28 Silicon Bronzes(6” x 32” x32”, 1990)Double Torus Stonehenge is a proof of a non-intuitive topology theorem: that two handles on a double torus can be linked or unlinked without tearing or breaking. The proof is accomplished by transitions – one step to the next, around the perimeter of an oak disc. The twenty-eight pieces choreograph a dance in the round, one for each day in the lunar month. The torus links and unlinks with small perturbations through twenty-eight stages as the moon waxes and wanes by small changes over the same period; and just as the waning moon looks different from the waxing, the linking sequence is topologically different from the unlinking sequence read backwards.

Robert Michael Smith

Artist Statement
Art is alchemy. Alchemy is the magic, observation, process and ritual of life.
My sculptures, both virtual and actual, are conversations regarding the archetypal forms that are the basic structures of nature. I build alien abstract worlds that become familiar through frequent immersion. These worlds are constructed to open exploration to the deepest regions of the human psyche for development within the landscape of the imagination.
During the past several years I have worked with Asian artisans to realize in stone, metal, and wood the fantastic forms that I have been developing in Cyberspace since the early 1990s after introduction to the first professional level modeling and animation software application for the PC. This development afforded the quantum aesthetic leap that has impacted my work for the past twenty years by significantly speeding up the dimensional design process while simultaneously allowing me to view evolutionary changes in my forms through time (animation).

Bio
Robert Michael Smith has been an active pioneer of digital sculpture, 3D computer visualization/animation, Web design, virtual sculptures for the Web, as well as a significant art and technology educator as Associate Professor of Art and Technology at New York Institute of Technology Fine Arts Department. Smith is also NYIT Middle East Fine Arts Computer Graphics Coordinator for Global Exchange Programs at Amman, Jordan; Adliya, Bahrain, and Abu Dhabi, United Arab

Emirates. Smith serves as a Board Director for Digital Stone Project and currently President of The Sculptors Guild. During the past two years Smith has also been the Director of Beijing Tomorrow Art Gallery at Beijing, China.

Smith’s art has been exhibited worldwide for over thirty years including the acclaimed Digital Stone Exhibition at Beijing Today Art Museum, Shanghai Duolun Museum of Modern Art, Chongqing Jinse Gallery, and Wenzhou ArtMap Gallery.

Smith's sculpture "Paradise Bird Burlesque" is included in the permanent collection of China National Museum of Fine Art at Beijing. Smith has been a guest lecturer at numerous universities, international conferences, and featured in several international articles and books including “Art of the Digital Age”, published by Thames and Hudson.

"Spinal Cuttle Cutter" 2010, stainless steel, 19" x 36" x 21"
For Sale: $15,000

- **The Houdini Collective** is a group formed by Nina Douglas and Prof. David Westerfeld, Electrical and Computer Engineering, Bipin Birari, a recent Engineering MA graduate, Varun Deshpande, and Parikshit Desai, Masters student in Engineering and Anthony Tricarichi, dual major Physics and Engineering, with the help of the Physics Mechanical shop led by Walter Schmelling

- **"The Magic Boxes"**

- In his Philosophical Investigations, Wittgenstein uses an analogy in an attempt to clarify some of the problems involved in thinking of the mind as something over and above behavior. Imagine, he says, that everyone has a small box in which they keep a beetle. However, no one is allowed to look in anyone else's box, only in their own. Over time, people talk about what is in their boxes and the word "beetle" comes to stand for what is in everyone's box.

- Everybody has his own beetle in his head. And, they are all different. How is it possible that everybody has all the same Platonic solids in his head? Interactive installation of five acrylic boxes containing beetles and Platonic solids, sound installation

Tatjana Bosch, with composer **Wolfgang Schmid-Grandy**

The contradiction between planning and intuition, structure and deconstruction, even and curved surface, accurately applied color and decomposition accounts for the tension and fascination in the works of Tatjana Busch. Repeatedly, she breaks with her originally strictly reduced pictorial language in the course of the creation of her objects. She begins with stern graphic and geometrical shapes like the circle, the rectangle and the triangle. Then she bursts open these forms via alteration of the surface in the third dimension from which arise completely different, manifold shapes for the eye of the spectator, dependent on his perspective in the approach of the respective art work. Busch is represented by Gallery Thomas Jaeckel, New York.

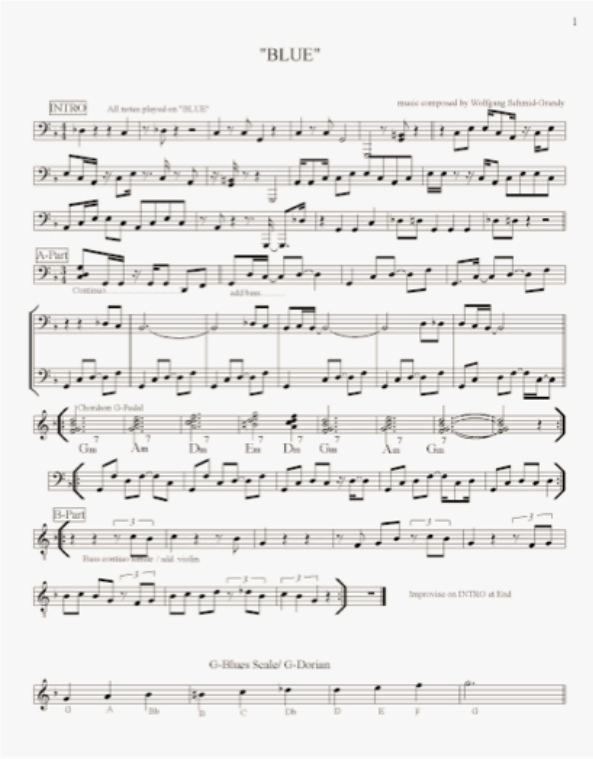
Wolfgang Schmid-Grandy is a bassist, composer, producer. He was honored as artist of the year by the phonoacademy in Germany; Multiple tours, festival appearances, TV shows mark his rich carrier in pop and jazz. He composed and recorded the musical “Manaus”, with Andrea Baker as vocalist. He is distinguished composer, who composed and produced more than 50 CDs/ Lps. He is bassplayer on over 400 Lps/CDs.

„I enjoy my hands, my eyes, my skin, my body, my senses,
they all know about the fascinating rules of geometry.
I do not.“ Tatjana Busch

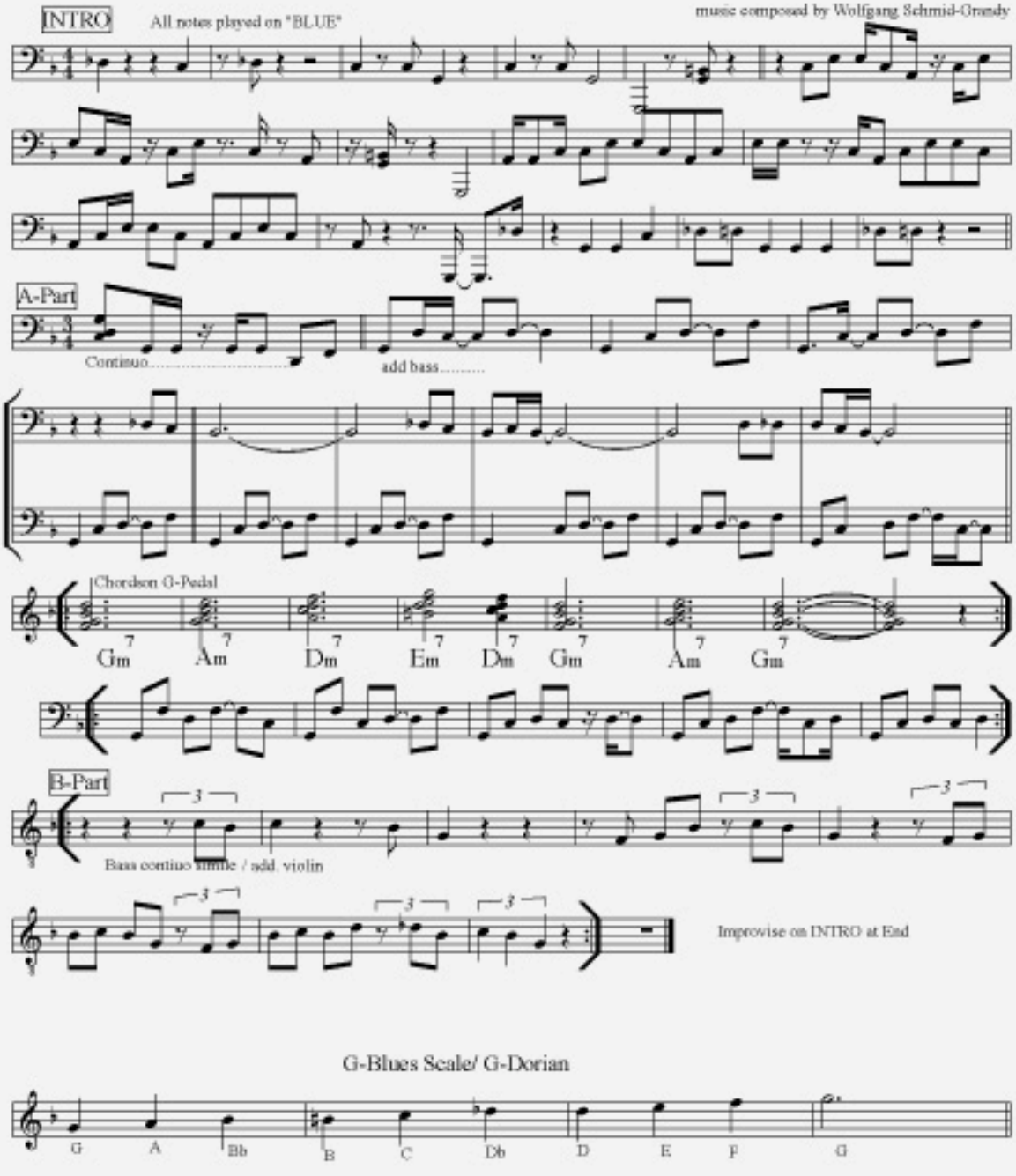
The BLUE G-Blues Scale/ G-Dorian

Form - Sound - Form - Sound
A synthesis of intuitive forms and sounds.
Hearing forms, seeing sounds.
Frontiers dissolve.
Sounds and forms remain as an aspect of the whole.

The Blue is played as an instrument by Wolfgang Schmid Grandy
The object plays the following notes:
G, A, Bb,B, C, Db, D, E, F, G (G-Blues Scale/ G-Dorian)



"BLUE"



G-Blues Scale/ G-Dorian

Aluminum abstract sculpture by **Tatjana Bosch,** with music, written and performed on the piece by composer **Wolfgang Schmid-Grandy**; The piece is about synergy of the mind-body experience

Lydia Nestor is born in Moscow, Soviet Union. She finished Leningrad
School of Fine Art
and MA in Fine Arts at Rutgers University, US.
Lydia Nestor is working primarily as a portrait painter and her works
are owned by numerous private sponsors over the world. She had shows in
Eastern Europe, Germany, France, Switzerland, Spain, Italy, Argentina,
Brazil, and the US.
Now, Lydia Nestor is experimenting in sculpture and installation art.
She is very interested in the symbolic meaning of letters and signs, in
connections to myths and legends from all cultural traditions. Lydia
lives and works in the US and Germany.

/no picture of the work/

Her work "Spider in Aleph 0" refers to the mythological image of the
spider as a primeval ruler of the world, and connects that image with the
mathematical symbol of Aleph 0, which refers to the basic infinity, in
comparison with the other infinities, like Aleph 1, Aleph 2, Aleph 3...

The work was created the help and creative support of Ars Cora Collective, and the Art and Science Program at the Simons Center for
Geometry and Physics. It was produced by Canal Street Studios.

Ji Choi

Ji Choi is a Korean artist who travels a lot between Seul and Europe, and the US. She spends a fair amount of time near Carrara, Italy, working on stone, and works with famous traditional foundries all over the world to master her bronzes. Ji Choi has a sense for the mythological dimension of our everyday life and tries to constantly build parallel Universes out of these two worlds.

/no picture/

The spider is a mighty representation of power and submersion to the forces of the nature.

"Spider Ruler of the Universe" is a sheer force of the mother instinct, crunched up in that little corner of the Universe, which is given to us, humans, to prove our existence.

The work was created with the help of Ars Cora.

Peter Nicks

Peter Nicks is a philosopher who has active interest in experimental film and video making, and, when he is not jogging with his dog in the parks of Potsdam, spends his spare time watching all experimental performances in Berlin and London. He grew up in a family of lovers of the minimalist art, the German expressionism and the Russian experimentalism of the 20ties and the 30ties. His sculptures are more to be thought as stage props, although he takes the effort to have them produced in more durable classic materials, like bronze, for example, like the sculpture

/no picture/
"One Idea coming up".
Peter Nicks created this sculpture within the collaboration Ars Cora

Ars Cora:

The visitors of this exhibition will notice that several works here were created with the help of Ars Cora. Ars Cora is an artist collective, which is built upon artists willing to join their great artistic skills and modest financial power to help produce each other's works of art.
"Cora" comes from Greek and means the pupil of the eye, and is another name for Persephone. Ars Cora refers to the arts of the pupil of the eye: as artists, we are meant to represent things not by their appearances, but the way they really are for the very pupil of the eye. Art looking for the truth and escaping the allure of the semblances experiences itself as a science, and Science, trying to dissect the various appearances of reality to reach for the hidden core vision, is art. Therefore, Ars Cora dedicates itself to the joyful union of art and science, but that does not mean trying to play in both playgrounds at the same time, but trying to achieve a perception which unites the two human experiences of the world: the artistic and the scientific, as they join in the united vision of Ars Cora. Ars Cora invites artists through private invitations and open calls.

Andrew Logan

He decided as a child growing up in the Australian bush that one day he would travel the globe.
In doing so he found that he was a sculptor. 15 years later, since all roads lead there, he ended up in New York City.
his sculpture revolves (elliptically) around his "poetic" understanding of time and space, intuition and reason, life and death.

- The Big X, work by ``Pi'' (Andrew Logan)

- X, is used for independent variable or unknown value in mathematics, comes from the Arabic word šay' شيء = “thing,” used in Arabic algebra texts such as the Al-Jabr. It came into Old Spanish with the pronunciation /ʃei/, which was written xei and soon habitually abbreviated to x. (The Spanish pronunciation of ‹x› is not the same now.)

- X signifies the multiplication operation. An “italic x” is often used to avoid potential confusion with the multiplication symbol.

- X in mathematics also represents the cross product.
- X-rays are so called because their discoverer did not know what they were.
- Who knows what the Generation X is, commonly abbreviated to Gen X.
- It is commonly used in correspondence along with the letter O to indicate affection (as in "XOXO" - the Xs representing kisses and the Os hugs).
- X is also used for referring to 'the end of conversation'.
- X is used by the illiterate in lieu of a signature and indicates a signature line on forms.
- In cartoons, Xs are drawn instead of eyes to indicate the death of a character.
- X is commonly used as a generic mark (selecting an item on a form, indicating a location on a map, etc.).

- X (ex) is your lover, husband or wife, after you separate from them.

- In Ancient Greek, ‹Χ› and ‹Ψ› were among several variants of the same letter, used originally for /k^h/ and later, in western areas such as Arcadia, as a simplification of the digraph ‹ΧΣ› for /ks/. In the end, more conservative eastern forms became the standard of Classical Greek, and thus ‹Χ› (Chi) stands for /k^h/ (later /x/). However, the Etruscans had taken over ‹Χ› from western Greek, and it therefore stands for /ks/ in Etruscan and Latin.

- The letter ‹Χ› ~ ‹Ψ› for /k^h/ was a Greek addition to the alphabet, placed after the Semitic letters along with phi ‹Φ› for /p^h/. (The variant ‹Ψ› later replaced the digraph ‹ΦΣ› for /ps/; omega was a later addition.) There has been much mostly fruitless debate about the origins of these added letters.

Daniel Weymouth is Professor of Music at Stony Brook. He earned his PhD in music composition
from the UNIVERSITY OF CALIFORNIA, BERKELEY.
\need more\

Installation for Reception: "Say What?" [to run continuously]

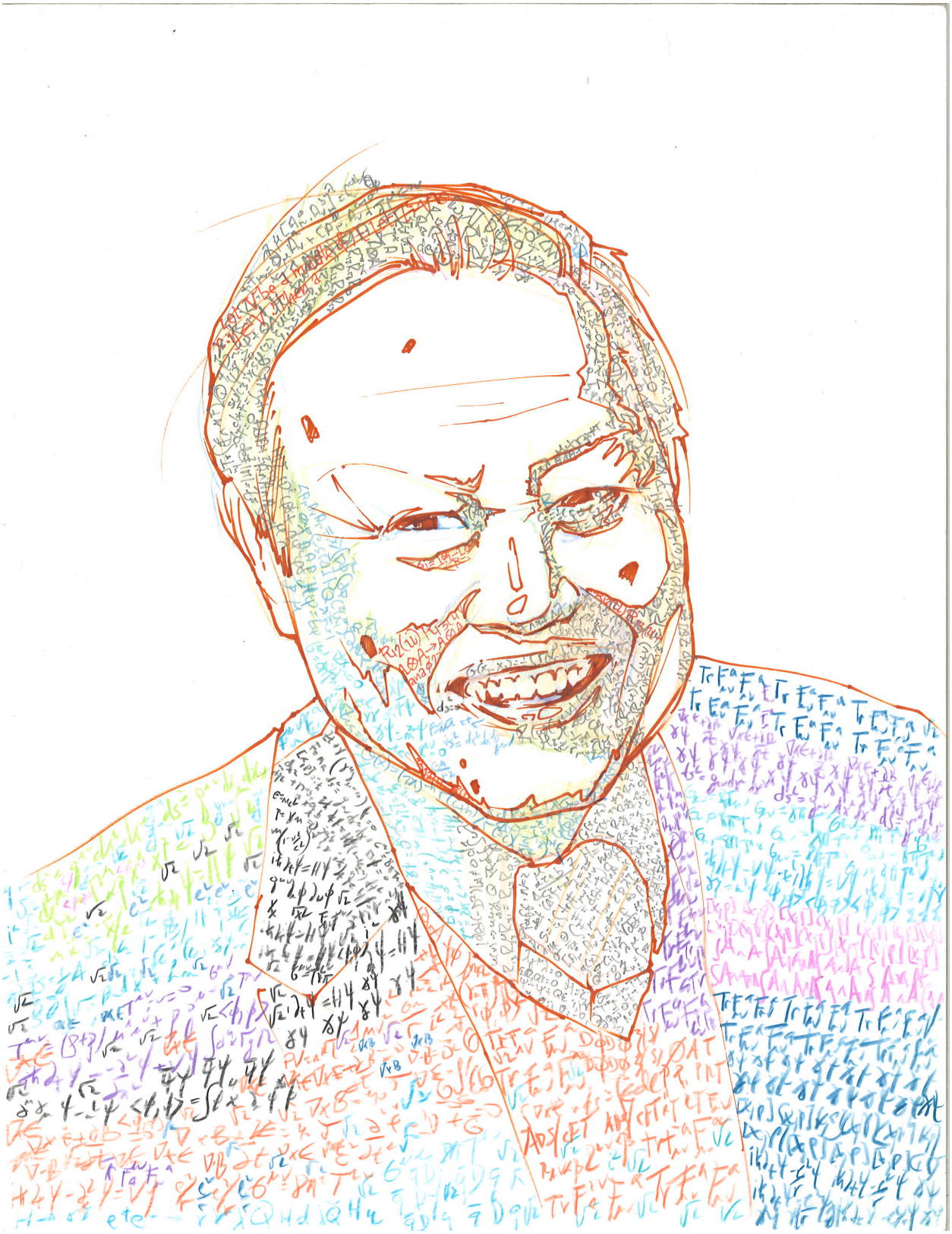
We have all had the experience of catching a snippet of conversation at a party, and wondering about the context. Or perhaps we turn our head, and catch a glimpse of someone as they walk away. In this installation (computer screens and small speakers), very short snippets of audio, separated by long silences, "pop up" – start, and then stop before we are really sure what we heard. The screens also illuminate, identifying the source of the sound, but only for a fleeting moment. For the Simons Center, two or three monitor/speaker combinations will be used, placed as though guests at the reception: mostly silent, but occasionally murmuring the *oddest* things. Programmed in MAX/MSP, the audio will respond to ambient room noise, and be more apt to occur when the sound of the gathering gets louder.

Excerpts will be selected at random from the following works:

1) *for leaving.* (Dr. Daniel Weymouth: fixed audio)
2) *The Beautiful Don't Lack the Wound* (Dr. Margaret Schedel: Taragato and Interactive Electronics)
3) *Nothing To Say* (Levy Lorenzo: FM Koala Trio)

Miriam Woodwell Carothers was educated at the Pratt Institute, at Columbia University and at the Art Students League. She has worked as an Illustrator and Textile Designer, as a Seventh and Eighth Grade Teacher (Color Theory), as a Courtroom Illustrator , and as an entomologist.

Her exhibitions and projects include poster design and art direction for the Simons Center workshops *Low Dimensional Gauge Theories and Integrability* and *Higher Spin Theories and Holography*; poster design for the group show *Fair Folks and a Goat Gallery*; and the installation project *Mad Arts*, at the Giacobetti Paul gallery.



Portraits of String Theorists

The “Portraits of Physicists” series captures an era in Theoretical Physics through the faces of the protagonists. Some of them are the Pioneers, who laid down the ground for string theory by uncovering the mathematics that describes the world. Then comes the New Generation, who after the Second Superstring Revolution reinvented the theory. And finally the Post Docs and Graduate Students, who will take up the challenge of the future of Physics.

For the Scientists, by the Scientists. The making of “Portraits of String Theorists” project is a collective effort to glorify this moment in scientific history. It grew out of a Simons Summer Workshop poster. I understood that the main thing to do was to pay attention to the people describing their vision; don’t make it about the Math, but make it about them. My first portrait in the series was of C. N. Yang. Even though Yang is not a String Theorist, his work is the very foundation of modern Theoretical Physics.

This project was carried during several weeks of meetings in New York City and Stony Brook, where String Theorists gathered to fill the portraits of their colleagues, each with their own equations. Each protagonist's face is a tribute to her/his own work and to String Theory, forged by the very pen of peers, the only ones who could read those same equations. By looking close you will recognize worldsheet actions, equations of motion, partition functions, flatness equations, higher genera Riemann surfaces, geometric transitions, scattering amplitudes, superspace constraints, integrable hierarchies, topological vertices, superconformal indices, black hole entropy formulas, holographic dictionaries... The whole zoo of Maths that constitutes String Theory.

“Portraits of String Theorists” is a celebration of the very people who every day push the edge of knowledge. This is a story narrated by them, in their own secret language.

How “Thinks” Works

An exploration of the human thought process, as it relates to mathematics, perception, philosophy, language, and nature. Works include sculpture, installations, prints, and media works, by Miriam Carothers, Ji Choi, Peter Nicks, Robert Michael Smith, Andrew Logan, Kiki Smith, Victoria Vesna, Lydia Nestor, Helaman Ferguson, Tatjana Busch and composer Walter Schmid-Gready, The Houdini Collective, and the Ars Cora Collective.

The exhibition opens on November 29th, 2011 at 5:30 p.m. with a reception open to the public. Special events that evening include a lecture on visual illusions by the author Al Seckel, and performances, directed by Steve Marsh and set to computer music by Daniel Weymouth. It will close on March 1st, 2012.

The exhibition is curated by Nina Douglas, Director of the Arts Program at the Simons Center for Geometry and Physics. The title alludes to the common phrase “How Things Work,” and suggests the treatment of the thinking process as an universal mechanism.

The exhibition will take place in the Simons Center Gallery, in the public spaces on the parking and plaza levels, and on the terrace above the auditorium. It will be open for visitors between 10 a.m. and 5 p.m on working days.