INTER SECTIONS

SCIENCE IN CONTEMPORARY ART

WEIZMANN INSTITUTE OF SCIENCE REHOVOT, ISRAEL 21 SEPTEMBER - 7 DECEMBER 2012

THE WEIZMANN INSTITUTE ART & SCIENCE

The Weizmann Institute of Science, initiated in 1934, is one of the world's leading multidisciplinary basic research institutions in the natural and exact sciences. The Institute's five faculties – Mathematics and Computer Science, Physics, Chemistry, Biochemistry and Biology – are home to 2,700 scientists, graduate students, researchers and administrative staff.

Established by the chemist Dr. Chaim Weizmann, the driving force behind its scientific activity and its first President, Weizmann later became the first President of the State of Israel. Weizmann scientists pioneered cancer research and designed and built the first electronic computer in the country – one of the first in the world. They were the first in Israel to establish a nuclear physics department, which led to the construction of a particle accelerator; and the first to create an academically linked office for technology transfer as well as initiate the creation of a science-based industrial park. The Institute also played a pioneering role in the development of brain research, nanotechnology and solar energy research.

Institute scientists' research has led to the development and production of drugs to treat a number of diseases, including cancer. They created new computer languages; the solving of three-dimensional structures of a number of biological molecules – including one that plays a key role in Alzheimer's disease. Their inventions in the field of optics have become the basis of such advanced devices as virtual head displays for pilots and surgeons. A method for separating isotopes developed at the Institute is used around the world.

Additional research led to the development of advanced methods for transplanting embryonic tissue, for finding and identifying genes that are involved in disease, and the development of a nano-biological computer that may one day be able to operate in the body's cells, identifying disease processes and blocking them before they cause damage.

The focus of the Weizmann Institute is on basic research in the natural sciences, but art and aesthetics play a significant role in campus life. The architecture, landscaping and many sculptures dotting the grounds are an integral part of the Institute's unique character. They provide inspiration to scientists who, much like artists, are engaged in probing the nature of reality and shaping new facets of that reality. In this, scientists and artists are partners in the endeavor to better understand the world.

When scientists arrive at a new theory or attain a significant result in the lab, their instinctive response is likely to be: "beautiful!" In science, as in art, that "beautiful" is almost the feeling that everything has "fallen into place". Beauty is a sign of truth, and truth, according to this view, should, above all, be beautiful. It is said that Rene Descartes, the leading thinker of the Enlightenment, once lost the love of a beautiful

woman by saying to her: "no beauty equals that of the truth." Einstein formulated the theory of relativity in an attempt to reconcile two beautiful theories that were not in agreement.

Of course, beauty is not enough, in and of itself, and not all scientific truth has been endowed with loveliness, but there is still something in us that seeks to find beauty in truth, that hopes that a beautiful idea will also be true and that the world we live in operates according to pleasing patterns and plans that we can make sense of using our ideas of structure and aesthetics.

The desire to see patterns and structures is common to science and art. Pythagoras, for instance, discovered that musical harmony could be described using simple mathematics. He showed that the length of the strings needed to produce harmonious chords could be calculated with simple fractions. We experience symmetrical shapes as beautiful; this phenomenon seems to be tied to the symmetry of the human body. Symmetry, indeed, may well be a basic, underlying principle of the physical universe, and physicists look to it to unify all the other basic theories. Such a unified theory would explain everything from the shape of the universe to the behavior of the smallest particles known – electrons and quarks – as well as the phenomena we encounter every day in the world we know. This all-inclusive theory of symmetry may never be completely proven, but it continues to engage the imaginations and research efforts of numerous physicists around the globe.

Like science, much of today's art begins with a concept – an internal seed that sprouts first in the mind. To grow into a full-fledged idea, that seed must undergo a process of refining, selection and testing. Practitioners in both fields value precision and consistency, and, from this standpoint, we can see that not only are both worlds closer than they first appear, there is significant overlap between them.

At the Weizmann Institute of Science, a world leader in scientific research, art is understood to be a complimentary activity – one that enables scientists and artists alike to view the world from a greater height, to gain perspectives that are more critical and exacting. The synergy between the two worlds can spur both scientists and artists on to higher achievement in their respective quests to better understand the world and our place in it.

Yivsam Azgad

Institute Spokesman Head, Publications & Media Relations Department Weizmann Institute of Science

The **BI ARTS** programme congratulates the participating artists in the "INTERSECTIONS" exhibition and is proud to support artistic connections between Israel and the UK



BI ARTS is a partnership between the British Council, the Israeli Ministry of Foreign Affairs and the Israeli Ministry Culture and Sport.

INTRODUCTION

Interdisciplinary research and collaborations in the field of art and science embrace the potential to explore diverse approaches to understanding the nature of the world we live in and the development of ways to communicate this. In this exhibition we can view the work of a number of artists, who make artworks that explore, question or touch upon different aspects of art-science relationships and processes.

Developing discourse and research that engages at the interface between disciplines provides fertile ground for creative enquiry and experimentation. A collaborative process between scientists and artists engenders a mutual respect for different approaches to discovery and invention and a preparedness to question convention.

It takes time to build relationships of trust and awareness that, while unpredictable, can result in collaborative endeavour leading to new insights and ways of thinking that inform future research and experimentation. For meaningful exchanges to take place scientists and artists need to comprehend one another, and in the process benefit from appraising their research from alternative perspectives.

Exploration and expression by visual means offers one approach to achieve a greater understanding of what we encounter and conceive for both artists and scientists, and encourages a wider audience to engage with the process.

In our endeavours to comprehend we make connections between experiences, render ideas tangible and conceive and test propositions and hypotheses in ways that enable others to broaden their vision and enhance their quality of life. This is a human endeavour that is served well by a creative correspondence between scientists and artists; points of intersection that are celebrated in this exhibition.

Nathan Cohen

Artist and Course Director, MA Art and Science Central Saint Martins, University of the Arts London

CURATOR'S NOTE

My parents introduced me many years ago to the wonderful work the Weizmann Institute does, but as an art historian, I always wondered how I might get more involved with an institution promoting scientific research. The germ of this exhibition came out of a conversation three years ago with Robert Drake, Deputy Chair of the Executive Board of the Weizmann Institute and an avid and enthusiastic art aficionado and collector.

I am humbled by the energetic support of all the wonderful artists and galleries, who have been so generous in lending works for the exhibition. It has been a privilege and an enormous pleasure to work alongside them. We are deeply grateful to our sponsors, BI ARTS (a British Council initiative), Christie's and Coutts, without whose support this exhibition would not have been possible.

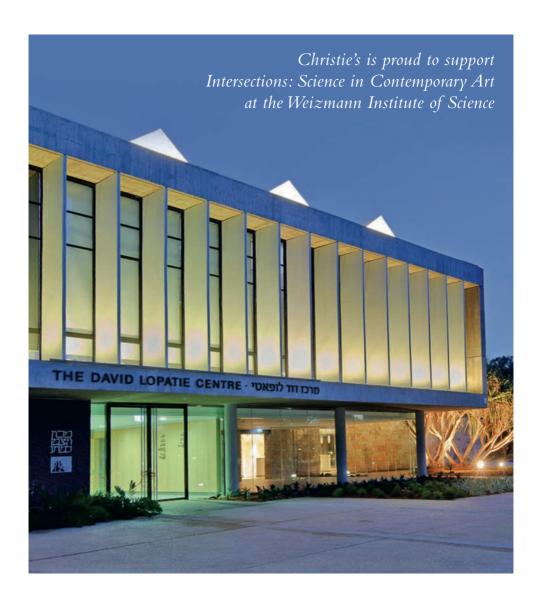
I would like to thank my curatorial assistant Carolyn Drake, for her important organisational input and enthusiasm. I am very grateful to Andrew Lee and Nikki Vermeulen for their professional assistance with the catalogue and the many administrative aspects of the exhibition. I owe particular thanks to Yivsam Azgad, who has moved mountains to co-ordinate the exhibition at Weizmann, especially with all the logistical difficulties of organising the show by phone and email. Other noteworthy efforts have been made by Kelly Avidan and Yael Goren-Wegman in Israel and Sheridan Gould in London. Nathan Cohen provided an important sounding board in the exhibition's formative stages and has been kind enough to introduce the project here.

By visiting this exhibition (and certainly by buying one of these fascinating works), you will have contributed to the groundbreaking research and educational work that are the lifeblood of the Weizmann Institute. The more we can do to draw attention to the extraordinary work being done in this place, the more world-changing the results will be.

I hope that all who visit this exhibition will go home fizzing with ideas and inspiration.

With thanks.

Cathy Wills MA



Intersections: Science in Contemporary Art

Weizmann Institute of Science

CHRISTIE'S

Exhibition

21 September – 7 December 2012

Christie's (Israel) Ltd.

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WE WISH YOU EVERY SUCCESS



ROGER **ACKLING**



"For over forty years my work has been made by focusing sunlight through a hand held lens onto wood. Each black dot is an over-exposed photographic image of the sun. I sit on the ground with the wood on my lap and experience seen and unseen realms.

"How I spend time is crucial. Sunlight falling onto a rotating earth is fundamental in concepts of time. How long it takes is a very wonderful way to perceive starting, engaging and stopping.

"I believe in now and now and now and now."

One At A Time. 6 hrs 14 mins 46 secs

2007

Sunlight on wood, in 10 parts 21.5 x 12.5 x 0.5 cm each

Courtesy of the artist and Annely Juda Fine Art, London

MAYA **ATTOUN**



Perpetuum Mobile 2010 Pencil and oil on paper 250 x 150 cm

Courtesy of the artist and Givon Art Gallery, Tel Aviv "Perpetual Motion describes motion that continues indefinitely without any external source of energy, impossible in practice because of friction. There is a scientific consensus that perpetual motion in an isolated system would violate the first and/or second law of thermodynamics."

EDWARD BURTYNSKY



This photograph was taken in the SOCAR oil fields in Azerbaijan. It forms part of a huge series on the consequences of man's use of oil. Burtynsky transforms this unprepossessing subject matter into skillfully composed photographs of industrial and manmade landscapes.

"In 1997 I had what I refer to as my oil epiphany. It occurred to me that the vast, human-altered landscapes that I pursued and photographed for over twenty years were only made possible by the discovery of oil and the mechanical advantage of the internal combustion engine...These images can be seen as notations by one artist contemplating the world as it is made possible through this vital energy resource and the cumulative effects of industrial evolution."

SOCAR Oil Fields #3 Baku, Azerbaijan

2006 Chromogenic colour print 99 x 124 cm Edition 6 of 9

Courtesy of the artist and Flowers Gallery, London

DANIEL CANOGAR



Blood Streams III (detail) 2004 Kodak Endura mounted on wood structure 160 x 80 cm Edition 1 of 3

Courtesy of the artist

"Though often images produced by science are factual, many artistic decisions are made when rendering images taken with an electron microscope. Choices in composition, as well as the use of dyes and coloring techniques to highlight certain aspects of the photographed specimen, are imbued with aesthetic qualities. With this series, I was interested in taking this further and using EM photography for purely artistic purposes. The resulting compositions - created mostly with images of blood cells, virus and bacteria – became abstractions of the human circulatory system. 'Blood Streams' taught me that both art and science are technologically assisted forms of human inquiry that allow us to imagine what remains hidden."

SUSAN COLLINS



This photograph combines digital technology with the classical traditions of English landscape painting. Using imagery captured in real time by a webcam located in Folkestone looking out to sea, the seascape was constructed a pixel at a time, from top to bottom and left to right, in horizontal bands continuously over a six and a half hour period. Approximately the same amount of time it takes for the south coast sea tide to come in or out, the picture gradually unfolds from night time at the top of the image through dawn and then day.

Collins is a pioneering video and new media artist, and since 1995 she has been Director of Electronic Media, Slade School of Art, University College London.

Seascape, Folkestone, 25th October 2008 at 11:41 am 2009 Archival digital inkjet print on 203.2x152.4cm Somerset photorag paper 182.88 x 137.16 cm

Courtesy of the artist

Edition 1 of 3

MAT COLLISHAW



Sordid Earth Panel

Polyester resin and fibreglass, painted in acrylic, steel, LCD screen, media player 61 x 51 x 16.5 cm Edition 3 of 3 + 2 artist's proofs

Courtesy of the artist and Blain Southern

This video work references Collishaw's highly acclaimed "Sordid Earth," a 2011 installation at the Roundhouse, London. Drawing on an earlier series of "Infectious Flowers," inspiration comes from the strange and apocalyptic landscapes of John Martin and Martin Johnson Heade.

Collishaw has said the work "intends to exploit our neurotic appetite for the depiction of a catastropheravaged Earth." It features many of the defining themes of Collishaw's work: the debasement of beauty, the glorification of violence, and our own innate responses to such stimuli.

Ron Arad's "Curtain Call" project, of which "Sordid Earth" formed a part, was installed in the garden of the Israel Museum in Jerusalem through summer 2012.

Born in Nottingham; lives and works in London. www.matcollishaw.com

SUSAN **DERGES**



This unique print was constructed in such a way that the viewer would feel a sense of looking through water, up at a low harvest moon through the Hogweed. Each element relates to the other in terms of place, the season, and quality of light. This cusp between summer and autumn, life and dying away, is both melancholy and hopeful: the ingredients of renewal are already in place in water, seed, and light.

The print was made in a tank of water using a composite method of slide projection and photogram onto Ilfochrome colour positive paper.

Derges was included (along with Garry Fabian Miller) in "Shadow Catchers," a major 2011 survey of camera-less photography at the Victoria & Albert Museum. London.

Low Moon Hogweed (detail) 2002

Unique ilfo chrome print 170 x 60 cm

Courtesy of the artist and Purdy Hicks Gallery, London

JACQUELINE **DONACHIE**



Weight II
2012
Pencil on paper, in two parts
45 x 62 cm each

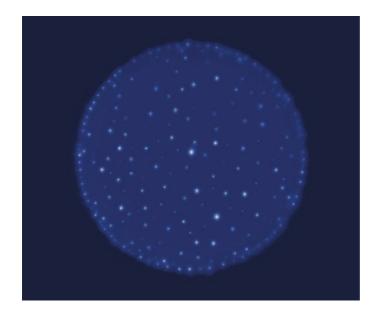
Courtesy of the artist

"These drawings come from a wider series of works that look at my own physical strength in relation to the increasing weakness of my father and siblings, all of whom suffer from Myotonic Dystrophy, an inherited genetic condition that causes progressive muscle wasting. Many of the objects are illustrated from their daily life; some used now, some on hand for the future."

Modern molecular biology, with the discovery of genes and DNA as the mechanism by which we receive and pass on our physiological make-up, has enabled us to examine the logistics of inheritance. Donachie's research into her family's affliction introduced her to a world of specialists and geneticists, including Darren G. Monckton, Professor of Human Genetics at the University of Glasgow, who became a valuable collaborator on this ongoing project.

Born in Glasgow, where she lives and works. www.jacquelinedonachie.co.uk

GARRY FABIAN MILLER



Garry Fabian Miller is an important practitioner of camera-less photography, the interaction of light and light-sensitive paper. His work makes reference to pioneering photographic experiments from the 1830s and 1840s by artists including Anna Atkins and William Henry Fox Talbot.

These unique prints condense light and colour into spectacular images. The delicate balance between art and science in these methods has come into clear focus recently as the raw material on which it depends – light-sensitive Cibachrome paper – is fast disappearing. Artists have had to stockpile materials and rethink their practice as the manufacturers of their precious paper close down.

Fabian Miller was included (along with Susan Derges) in "Shadow Catchers," a major 2011 survey of cameraless photography at the Victoria & Albert Museum, I ondon

The Night Cell

Winter 2009-2010 Water, light, lightjet, C-print from dye destruction print 189.3 x 219 cm Edition 3 of 3

Courtesy of the artist and Ingleby Gallery, Edinburgh

SPENCER FINCH



Studio window (INFRARED, JANUARY, 25 2012, MORNING EFFECT)

2012
Oil and pastel on paper, in four parts
119.1 x 82.8 cm framed

Courtesy of the artist and Lisson Gallery

"I attached 68 thermometers to the studio window and kept track of the changes to the temperature of the window as the sun moved across it during the day. Because the window is south facing, the east side (left) is in shadow in the morning and hence cooler and by the end of the day the right side is cooler. I then diagrammed out the temperature and created a false color system to show what is happening in the clear glass at wavelengths beyond our visual spectrum."

Born in New Haven, Connecticut; lives and works in New York. www.spencerfinch.com

JEM **FINER**



Conceived as both sculptural work and working observatory, "Spiegelei Junior" reflects and magically inverts the silent world using the simple technology of mirror and lens. Within, the camera obscura and cyclorama are an immersive, 360-degree panoramic projection space, illuminating the spherical interior with an upturned living image of the surroundings.

"Spiegelei Junior" continues Finer's engagement with landscape, time, space and the cosmos, which includes "Longplayer," a thousand-year-long musical composition; sculptural radio observatories built in Oxford and Northern Ireland; and "Everywhere All The Time," a drawing machine animated by signals from the hiss and static of the early universe.

A larger "Spiegelei" work was commissioned for the 2010 Tatton Park Biennial and is currently on display at Yorkshire Sculpture Park.

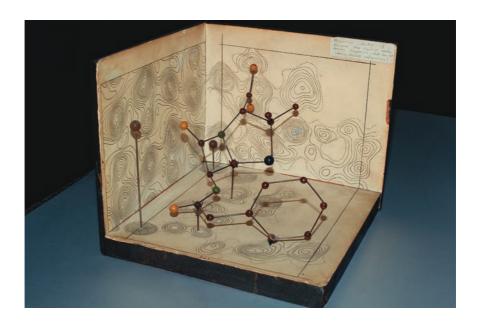
Spiegelei Junior

2012 Stainless steel sphere and legs, lenses

 $75\ \mathrm{cm}$ diameter, $225\ \mathrm{cm}$ high Edition 1 of 10

Courtesy of the artist

PETER FRASER



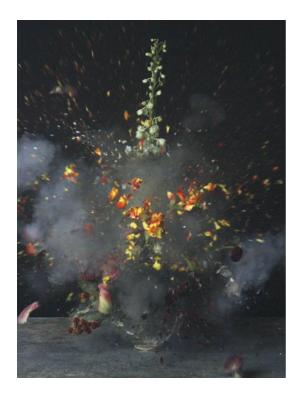
Untitled, "A City in the Mind" 2008-2011

Aluminium mounted pigment print in a handmade American Walnut frame 89.5 x 65.5 cm Edition 1 of 6

Courtesy of the artist and Brancolini Grimaldi The series "A City in the Mind" takes its inspiration from Italo Calvino's novel "Invisible Cities," in which the explorer Marco Polo tells the Emperor Kublai Khan of the many fantastical cities he has visited on his travels. Fraser's eye is drawn to objects and interiors that would not fascinate most as they do him. Taken together, the untitled photographs comprise a mysterious and allusive portrait of a city.

Here, an old model of the structure of penicillin seems curiously outdated in its handmade aspect. Its fantastical geometry, blown up from a scale invisible to the unaided human eye, calls to mind the architecture of Buckminster Fuller and a nostalgic pre-digital vision of the future.

ORI **GERSHT**



Ori Gersht's work explores optical perception, time, and the supposedly objective nature of the photographic image. "Time after Time 23" depicts an elaborate floral arrangement, based upon a still-life painting by Henri Fantin-Latour, captured in the moment of exploding. Gersht's photographs, which allude to the traditional vanitas function of still-life paintings, derive from video works tracking these explosions at a speed of 1/6000 of a second. They make visible a moment otherwise imperceptible to the human eye.

Time after Time 23 2006 C-type print 40 x 30 cm Edition 6 of 6

Courtesy of the artist and Noga Gallery, Tel Aviv

SCARLETT HOOFT GRAAFLAND



"Using a combination of straight photographic practice, performance and sculpture, I refer to a profound cultural discourse of my surroundings which allude to my anthropological interests and environmental concerns.

"This work was made in the Uyuni salt desert of Bolivia, the world's largest. You can find a pattern of delicate salt crests. It is a fragile mineral web of irregular polygons, each one different. I wanted to emphasise the beauty of these natural patterns and fill them with the vibrant colors of the 'Ajis', the local spices; creating a powder carpet in the middle of the desert until the wind took it away."

Carpet
2010
C-Print
120 x 150 cm
Artist's proof

Courtesy of the artist

Born in Maam, Netherlands; lives and works in Amsterdam and New York. www.scarletthooftgraafland.nl

BARNABY HOSKING



"This work is inspired by the contemplation of dualities, which often manifests as a dialogue between different elements of certain practices. I am contemplating how the mind, represented by the bird, can give rise to duality, in a similar way that the mind can divide art and science.

"I have always been drawn to exploring the gap between art and science. Often a moment of insight can come to a scientist through a very creative and sometimes poetic way of looking at the world, a way that is more commonly associated with artists." Breaking Free from Duality (detail) 2012

Mixed media sculpture 245 x 100 x 57 cm

Courtesy of the artist and Max Wigram Gallery, London

Born in Norfolk; lives and works in London. www.maxwigram.com

WALTER **HUGO**



Developing Shadows 5
2011
Plaster board and silver nitrate emulsion
48 x 60.5 cm
Unique

Courtesy of the artist and Shizaru Gallery, London Hugo uses a unique technique of photographic fresco, developed on scraps of the walls of his own studio. Hugo's subjects are individuals who previously occupied these studios, their nakedness representing the exposure often felt when an outsider views these immensely personal spaces.

The brush strokes are from Hugo's application of photographic chemicals to create the frescos, and different colorations of the works are from chemical reactions to the walls and substances that may have previously been on it. Each is totally individual to the place it was created.

LUKE **JERRAM**



These solar-powered kinetic chandeliers consist of dozens of glass radiometers, which shimmer and flicker as they turn in the sunlight. Altering their speed with the subtle changes in lighting conditions, the vanes of each radiometer speed up and slow down throughout the day. Observed from a distance, the sculpture is a delicate, kinetic glass. During the evening, the chandelier is activated by electric light. A five-meter chandelier consisting of 700 radiometers has just been made for the Bristol and Bath Science Park.

Solar Powered Kinetic Chandelier 2012

Glass chandelier 150 x 40 cm

Courtesy of the artist

EDUARDO **KAC**



Free Alba!

2011 Colour photograph mounted on aluminum with Plexiglass 91.5 x 118 cm Edition 2 of 5

Courtesy of the artist

Internationally recognised for his interactive net installations and his bio-art, Eduardo Kac was the first artist to truly work with molecular biology.

In 2000 he created his seminal work "GFP Bunny," a green fluorescent rabbit ("Alba"), the public dialogue generated by the project, and the social integration of the rabbit. The bunny truly glows under a blue light due to the harmless incorporation of jellyfish DNA. For the first time in history, an artist had created a new mammal.

"GFP Bunny" became a global media star after a front-page article appeared in the Boston Globe and elsewhere, with wire services further spreading the news worldwide. The photographs in this series dramatise the fact that the reception of "GFP Bunny" was complex, taking place across cultures and in diverse locations

Born in Rio de Janeiro; lives and works in Chicago. www.ekac.org

LILIANE **Lijn**



"'Acid Lava Koan' is about relating the parts to the whole, a continuing theme of my work. 'Koan' is a Japanese word for a paradoxical riddle given to young Buddhist monks as aids for meditation and a pun on cone. The cone spins at a constant speed so that the viewer's eye focuses on the lines, which, in turn, appear to dissolve the volume of the sculpture. It is as if the lines move through the volume, whereas, in fact, the volume is spinning as a whole. Each line describes the form of the cone at the precise points at which it dissects it. Since the cone turns and the viewer remains static, the viewer is given this information in a continuous flow, unlike an object around which the viewer would have to walk, and where the viewer's perceptions are discontinuous."

Acid Lava Koan

2008

Glass fibre, polyester resin, perspex, motorized turntable, fluorescent light 70 x 44 cm base diameter

Courtesy of the artist and Riflemaker, London

ALASTAIR **MACKIE**



Metamorphoses

2009
Taxidermy bell jar, glass, mirror, wood
176 x 43 x 43 cm
Unique artist's proof

Courtesy of the artist and All Visual Arts, London

A 1930's taxidermy display bell jar has been transformed into a mirroring structure using a traditional technique of mixing silver nitrate and copper sulphate. The title refers to the profound change in form from one stage to the next in the life history of an organism, and is also the title of Ovid's series of mythological tales, which describe the creation and history of the world, and includes the story of Narcissus, the boy who fell in love with his own reflection.

Born in Cornwall, where he lives and works. www.alastairmackie.com

EDGAR **MARTINS**



"The Time Machine: An Incomplete and Semi-Objective Survey of Hydropower Stations," a body of previously unseen works, was shot between 2010 and 2011 in Martins' native Portugal. These stations were built between the 1950s and 1970s, a time of hopeful prospects of rapid economic growth and social change.

They were conceived at a time when man and machine envisaged a shared future, today, they allude to the paradox of this impossibility, and reveal the broken promises of this unrealized prospect of modernity. Empty of human presence, the non-operational machines in their rooms place us in genuine science-fiction settings and in an unavoidable field of nostalgia.

Lindoso power station: control room

From the series
"The Time Machine"

2011

Framed digital c-type print mounted on aluminium 120 x 150 cm Edition 1 of 4 + 1 artist's proof in 120 x 150 cm; Edition of 2 + 1 artist's proof in 180 x 225 cm

Courtesy of the artist, The Wapping Project Bankside & Fundação EDP

ANNE-MIE **MELIS**



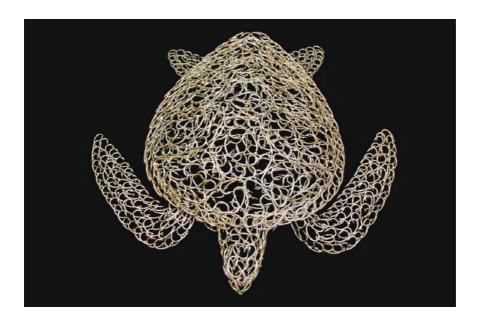
Double Mutant A
2007
Pencil, colored pencil,
pastel and correction fluid,
tape on paper
63 x 88 cm

Courtesy of the artist

Anne-Mie Melis' drawings result from her ongoing scientific research into plant development and plant growth mechanisms. Working closely with a biologist, Melis makes technical drawings in the lab of engineered plants.

Melis takes us on a journey in which a new landscape is proposed. Scale is ambiguous and we are never sure if the images are magnified, cellular and regenerating, or perhaps a batch of new crops ready to burst their over-ripe seeds.

VINCENT **MOCK**



Vincent Mock, an autodidact, took up art full-time after working as a conservationist in Africa. His work frequently concerns endangered marine animals. Mock explores the relationship between our identity as a human species and our place on this planet. Our oceans, as the last vastly unexplored and unregulated wilderness, demand to be preserved if we are to survive ourselves.

"Our consumption corresponds directly to the increasing number of endangered species, which suggests that we have become disconnected from nature and misguided about our responsibilities towards our natural environment."

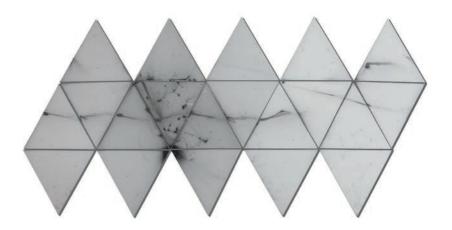
The sculptures from the "Hooked on Life" series are made out of hundreds of real longline fish hooks used in the destructive commercial fishing industry today.

Green Turtle

2012 Stainless steel longline fish hooks 110 x 108 x 24 cm Edition 3 of 7

Courtesy of the artist

DAVID **RICKARD**



Star Gazer

2012 Exploded sky gazer, skyrocket on painted board 280 x 130 cm

Courtesy of the artist and Sumarria Lunn, London "Star Gazer" is formed by a chance event within an ideal form; namely a "Star Gazer" rocket ricocheting off the faceted interior of an icosahedron. The work refers to Johannes Kepler, a 17th-century mathematician and astronomer who believed he had discovered God's geometrical plan for the universe ("Mysterium Cosmographicum") by determining that the five platonic solids nested inside of each other relate proportionally to the orbits of the five known planets. By unfolding the icosahedron, after detonation of the rocket inside, a triangulated star map emerges of an explosive event within the boundaries of an ideal system.

MICHAL ROVNER

Michal Rovner's work deals with time and the human condition, raising questions about culture, science, and politics. Rovner's video "Most," with its chromosomelike figures, recalls Wislawa Szymborska's poem "Microcosmos," which evokes the fascination of peering through a microscope.

While the work does not actually present images viewed through a microscope – the figures in Michal's work are dimensionless and have undefined form – the figures create patterns and display characters as they pair, split and shift, much like the "small-scale creatures" in Szymborska's poem.

Rovner's work across media has been exhibited worldwide in over fifty solo exhibitions, including "Histoires" (2011), a three-part exhibition at the Musée du Louvre, Paris. Rovner's permanent twelve-meterhigh video wall "Living Landscape" (2005) is installed at Yad Vashem, Jerusalem.

Text adapted with assistance from Prof. Benny Geiger at the Weizmann Institute.

Most

2012

Framed plasma screen and video 91.44 x 152.40 cm

Courtesy of the artist and

The Pace Gallery

Edition 3 of 3

KAREN RUSSO



Yesterday's Paradox Today's Reality / Untitled 2009

Video (9 min); Ink on paper 101 x 140 cm + monitor Edition of 3 + 1 artist's proof (video); drawing unique

Courtesy of the artist and Dvir Gallery, Tel Aviv This video explores the application of Remote Viewing – the psychic ability to see and describe remote geographical locations, or 'targets' – developed by the CIA during the Cold War for intelligence-gathering purposes.

The work shows an attempt to Remote View the next two-dimensional artwork Russo would produce. Both participants presented Russo with a sealed envelope containing the results of their sessions that was to be opened only after the completion of her next work.

Modern physics indicates that we live in a spider web of space and time, in which both future and past are tugging on the present. Russo's experiment examines these temporal and spatial crossroads, and raises a number of questions about the nature of perception, precognition, and the ontological identity of the artwork.

TOMER SAPIR



Sapir's ongoing project alludes to the embalming of animals that are not part of the official zoological index. His cataloguing undermines familiar systems of classification and distorts coherency and differentiated meaning. The objects are mutations suspended between the organic and the artificial, the seductive and the threatening.

The project started in the exhibition "Shelf Life" in the Haifa Museum of Art. Sapir carefully arranged the objects in a system of vitrines composed of shelves, drawers and cabinets. That display was reminiscent of natural history, pre-history or archaeology museum displays, yet without any coherent classificatory principle.

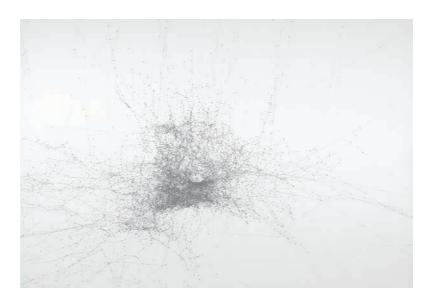
The two-dimensional images function as a means of documentation, but also create a distance and intensify the illusion of a didactic work based on research and knowledge.

Untitled

(detail from Research for the Full Crypto-Taxidermical Index) 2012 43.5 x 52.5 cm Digital print Edition 1 of 5 + 1 artist's proof

Courtesy of the artist and Chelouche Gallery, Tel Aviv

TOMÁS **SARACENO**



Study for 14 Billions

2010
Framed c-print of
computer-rendered 3D drawing
mounted on dibond
167 x 233.7 cm
Edition 1 of 3 + 1 artist's proof

Courtesy of the artist and Tanya Bonakdar Gallery, New York Saraceno has established a practice of constructing habitable networks based upon complex geometries and merging art, architecture, and science. His ongoing "Cloud City" project springs from an interest in expanding the ways in which we inhabit and experience our environment, and is currently installed (until November 2012) atop the Metropolitan Museum of Art, New York

In "Study for 14 Billions," Saraceno scanned a black widow's spider web in order to reconstruct it at Bonniers Konsthall, Stockholm. These large prints represent the 3D scan of the web, with each transitional point marked in code for a future reconstruction. It was created as part of a collaboration between Saraceno and scientists at the Technische Universität Darmstadt

CONRAD SHAWCROSS



"Time Rule" is part of a unique series of works produced from the installation "Chord" (2009), a large-scale work that wove a thick hawser from 324 spools of string as they moved apart along the Kingsway Tram Subway in London. Exploring the perception of time both as linear and cyclical, each point on the rope can be traced to a moment in time. Each work comprises a length of time (rope), ranging from 20 to 220 minutes, presented in a wooden instrument case.

Imbued with an appearance of scientific rationality, Shawcross's sculptures explore subjects that lie on the borders of geometry and philosophy, physics and metaphysics.

Shawcross is currently Artist in Residence at the Science Museum. London.

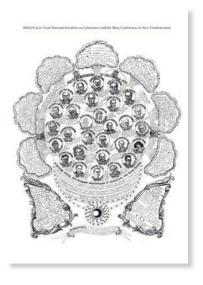
Time Rule 89 Minutes

2009 Wool, wood 91.5 x 7.5 x 10 cm

Courtesy of the artist and Victoria Miro Gallery, London

Born in London, where he lives and works. conradshawcross.com

SUZANNE TREISTER



HEXEN 2.0/Historical
Diagrams/From National
Socialism via Cybernetics
and the Macy Conferences to
Neo-Totalitarianism
2009-2011
Archival giclee prints with
watercolour on Hahnemuhle
bamboo paper, in 5 parts
42 x 29.7 cm each
Edition 1 of 6

Courtesy of the artist and Annely Juda Fine Art, London "'HEXEN 2.0' looks into histories of scientific research behind government programmes of mass control, investigating parallel histories of countercultural and grass roots movements. It charts the coming together of scientific and social sciences through the development of cybernetics, the history of the internet, increased intelligence gathering, and implications for the future of new systems of societal manipulation.

"'HEXEN 2.0' investigates the Macy Conferences (1946-1953), which aimed to set the foundations for a general science of the workings of the human mind. The project looks at diverse philosophical, literary and political responses to advances in technology, and traces precursory ideas in relation to visions of utopic and dystopic futures from science-fiction literature and film

"'HEXEN 2.0' offers a space where one may use the works as a tool to envision possible alternative futures."

Born in London, where she lives and works. www.suzannetreister.net

TROIKA



Over a century after Sir Isaac Newton analysed the rainbow, John Keats claimed science had robbed nature of its spectacle by reducing its notion to prismatic colours. "Falling Light" explores the preternatural experience crystal prisms can create.

The metal armatures rise in syncopation by rotating cam before gravity pulls them earthward, activating the LED in each device to move closer to the crystal lens. The lens acts as a prism, diffracting the white light into a rainbow.

The shower of light and the humming sound of the mechanism meld into a single multisensory experience, enforcing Troika's agenda that science does not destroy, but rather discovers poetry in the patterns of nature.

"Falling Light" has been exhibited at the Israel Museum, Jerusalem, and the Victoria & Albert Museum, London.

Troika is a collective formed by Eva Rucki (born Germany),
Conny Freyer (born Germany), and Sebastien Noel (born France);
they live and work in London.
troika.uk.com

Falling Light

2010

Brass, aluminium and stainless steel, Swarovski crystal lens, LED, custom build electronic control, 10 minute animation cycle 1.62 x 1.0 x 0.5 m Each mechanism: 11.8 x 50 x 69 cm

Courtesy of the artists; produced for Swarovski Crystal Palace

ALISON TURNBULL



Sea the Stars 2009 Oil and acrylic on canvas 150 x 230 cm

Courtesy of the artist and Matt's Gallery, London "Sea the Stars" was the first of a group of paintings that take the ways in which we observe and map the night sky as a starting point. It involved the painstaking transcription of a page from Antonín Bečvář's 1951 star atlas onto the prepared canvas surface. Celestial bodies are emboldened in oil paint, lines of right ascension and declination become delicate graphite traces, and the Milky Way is built up by tiny, repetitive brush marks. This is a painting after an astronomical map; its constellations are painted objects, all clearly differentiated, like units of language.

Born in Bogotá; lives and works in London. www.mattsgallery.org

CLARA **URSITTI**



Two identical bottles on a shelf contain the scents of skin: one contains the Serge Lutens fragrance "Jeux de Peau" ("Skin Games"); the other, the scent of an actual skin analysis.

Clara Ursitti has been working with fragrance since the early 1990s, creating pungent installations that touch on the social and psychological aspects of smell.

Jeux de Peau (Sketch no. 1) 2012 Hand blown and etched glass bottles, fragrances, Perspex shelf

Courtesy of the artist

JORINDE **VOIGT**



Words and Views I-II, Fragmente einer Sprache der Liebe/Fragments of a Language of Love

2012
Coloured vellum & ingres
paper, pencil, ink on
watercolour paper, in two parts
288.5 x 151.5 cm each

Courtesy of the artist and Lisson Gallery

Jorinde Voigt investigates processes of imagination, perception, and communication. Here, she collages terms from Roland Barthes' "Fragments d'un discours amoureux" (1977), which triggered images in her mind. These imagined objects and situations appear as a sequence of "Views."

Curving arrows and elements of musical notation provide spatial and temporal data, locating these abstract shapes within the present time (and space) of our imagination. Originally a photographer, Voigt grew frustrated by photography's claim to objectivity. Her work is non-static: objects are multidimensional, set in motion, and arranged quasi-scientifically.

In her work, Voigt considers how ideas are shaped by collective memories and experiences. While Barthes' essay searches for a means of describing the indescribable, Voigt's idiosyncratic collages evoke the tensions between individual and collective language, and strive towards a new kind of objectivity.

Born in Frankfurt; lives and works in Berlin. www.jorindevoigt.com

DOUGLAS WHITE



In his "Dark Moon" series, White sets an ethereal tone, illuminating circles of wax in framed light boxes. Working in a strangely alchemical method of pouring pigmented wax onto boiling water, the unique result is the moon as a space of reverie and contemplation. White's "Dark Moon" series present a unique physical presence and hint at an odd aesthetic quality, but never reveal strong narrative meanings. They are like talismans left by a now distant forgotten culture, which still retain a suggestion, or even a threat, of power and purpose.

Dark Moon IV 2011 Lightbox 120 x 120 cm

Courtesy of the artist and Paradise Row, London

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ACKNOWLEDGEMENTS

The Weizmann Institute of Science and all their staff

for coordinating and hosting the exhibition

British Israeli Arts Training Scheme (BI ARTS), a British Council initiative in partnership with the Ministry of Foreign Affairs and the Ministry of Culture and Sport in Israel

for making the exhibition possible from its earliest stages, and for supporting the artists' programme

Coutts

for their tremendous financial support for the exhibition

Christie's

for their sponsorship of the catalogue, especially **Jody Wilkie** in New York and **Roni Gilat-Baharaff** in Tel Aviv

Sommer Gallery

for assistance in Israel

Williams and Hill

art shipping in Europe and the USA

Globus

art shipping in Israel

Tucan

exhibition installation

Eila Eitan

press

Dan Biddulph

catalogue design

Capucine Coninx

for her administrative assistance

and last but not least...

Andrew Lee and Nikki Vermeulen

for their exceptional organisational efforts