Plenary Speakers:

Alexander Zamyatin, Chile and Russia – The Scientific Aspects of Art

Universidad Técnica Federico Santa Maria 
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A.N. Bach Institute of Biochemistry Russian Academy of Sciences 33 Leninsky prosp. Moscow 119071, RUSSIA

Date of Birth: October 23, 1940
Place of Birth: Leningrad (Saint-Petersburg), RUSSIA (USSR)

From 1993 lieder scientist, scientist general, and the head of the Computer Biochemistry Group of A.N.Bach Institute of Biochemistry, Russian Academy of Sciences, Moscow, RUSSIA.

He is a member of the Scientific Council on assignment of scientific ranks Ph.D and Doctors of sciences.

Have more than 200 scientific publications in different Russian and International Journals and more than 30 popular scientific and historical publications.

Field of interest:
Protein thermodynamics, endogenous oligopeptides (neuropeptides, hormones, toxins, antimicrobial), structure-function relationship, ligand-receptor interaction, biosensors, computer biochemistry and biophysics, biological data bases, drug design, science history, music.

Alec Groysman, Israel - Art, Science and Technology: Interaction between Three Cultures

Dr. Alec Groysman graduated from the Chemical Technological University named after Mendeleyev in Moscow (Faculty of Physical Chemistry).

He received his Ph.D. in physical chemistry and corrosion in 1983 in Moscow.

He has experience in corrosion and protection from corrosion from 1976 to 1990 in the oil refining industry in the former USSR and worked as a deputy director of the Scientific Research Laboratory in Astrahan. Since 1990 he is a head of the materials and corrosion laboratory at the Haifa Oil Refinery in Israel.

He deals with thermodynamics and kinetics of corrosion processes, on-line corrosion monitoring, choice and use of corrosion inhibitors, coating systems, selection of appropriate alloys for corrosive conditions, failure analysis, education in physical chemistry, corrosion of metals, corrosion control and materials science.
He is a lecturer of the courses “Corrosion and Corrosion Control” and “Physical Chemistry” in the College of Engineering ORT Braude (Karmiel) in Israel. He was a lecturer of the courses “Corrosion and Corrosion Control” and “Chemical Resistance of Materials” in the Technion and Bar-Ilan University, Israel.

Dr. Alec Groysman is a Chairman of the Israeli Society of Chemical Engineers and Chemists. He organized a club of engineers, scientists, and students in the Association of Engineers, Architects and Graduates in Technological Sciences in Israel with the aim of uniting three generations of engineers and scientists: young, middle and retired. He is an active member of NACE (National Association of Corrosion Engineers International) since 1992, and the European Federation of Corrosion, organizes conferences, symposia and seminars. He is Past Chairman of the Corrosion Forum NACE Israel (2005 – 2007). Dr. Alec Groysman has given presentations at all International Corrosion Congresses since 1993, European Corrosion Conferences EUROCORR and NACE International Corrosion conferences.

He is an author of the book “Corrosion for Everybody” (Springer, 2010),


His favorite topic is connecting science (physical chemistry and corrosion) with art (especially, music, painting, sculpture, literature, and poetry), philosophy and history.

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Tsion Avital, Israel - Art versus Design: the Confusion between Brain Tools and Hand Tools

Tsion Avital is Professor of cultural philosophy at the Holon Institute of Technology, Faculty of Design in Holon, Israel. He was born (1940) in the walled medieval town of Sefrou in Morocco. The ever-presence of a family lineage that could be traced to the expulsion from Spain gave him a classical sensibility. Upon immigrating to Israel in 1951 he experienced a cultural shock which was resolved years later with the discovery of a structural bridge between Eastern and Western cultures. Mindprints theory or a structural interface between mind and reality also became the key to his reinterpretation of the essence of art and culture. In his youth Avital was interested mainly in painting. However, the total anarchy in this field led him to address a fundamental question: What is Art? In order to attempt to solve this problem he studied philosophy, psychology and history of art at the Hebrew University of Jerusalem, and did the research for his Ph.D. thesis at Toronto University. His writings present some fruits of his broad intellectual voyage, examining interrelations between art and other cultural domains and critically evaluating the status of (visual) nonrepresentational art. Mindprints theory which he has proposed in his first book probably represents ultimate structural organization principles underlying mind, and therefore also art and all cultural domains. In his first book (2003) he applied this theory to the solving of the most crucial problem in art: the demarcation between art and nonart. Avital
has two more books in progress: one deal with the origins of art and culture, and the second with the future of art. He has published chapters in other books and papers in various journals of different domains: science, experimental aesthetics and art history. He participates regularly in international conferences, and he is a member of The International Association of Empirical Aesthetics and The International Society for the Interdisciplinary Study of Symmetry.

His main works:

- Mind and Culture: Hand Tools, Brain Tools, Mind Tools. (Work in progress)

List of publications:  [http://www.hit.ac.il/ac/site.asp?e_name=avital](http://www.hit.ac.il/ac/site.asp?e_name=avital)

Email: tsionavital@bezeqint.net
Session 1

Art, Science, Technology and Society

Menahem Alexenberg, Israel - The Future of Art in a Postdigital Age: From Hellenistic to Hebraic Consciousness

Menahem (Mel) Alexenberg is a biologist turned artist. He is head of the School of the Arts at Emuna College in Jerusalem and formerly professor at Bar Ilan University and Ariel University Center. In the United States, he was art professor at Columbia University, head of the art department at Pratt Institute, and research fellow at MIT Center for Advanced Visual Studies, Massachusetts Institute of Technology. He earned a doctorate at New York University for his research on aesthetic experience in art and science.

As an artist, he creates artworks that explore interrelationships between art, science, technology and Jewish consciousness in a networked world. Millions have seen his blogart, wikiart, multi-media installations, telecommunications art events, environmental sculptures, and exhibitions of paintings and prints that explore digital technologies and biological and cultural systems. Alexenberg’s artworks are in the collections of more than forty museums worldwide.


Dan Shechtman, Israel - The Beauty of Soap Bubbles

Yuli Chakk, Yehuda Stupniker, Israel - Relativity Principle to Means of Measurements in Science and Art
Joseph Salzman, Israel - Beyond Certain Knowledge

Joseph Salzman was born in Buenos Aires, Argentina, in 1945. He received his BSc., MSc., and PhD. in physics from Tel-Aviv University in 1973, 1979, and 1984, respectively. In 1987 he joined the Technion as a Senior Lecturer, in 1993 he became an Associate Professor, and in 2003 a Full Professor in the Department of Electrical Engineering, Technion – The Israel Institute of Technology, in Haifa, Israel. Dr. Salzman is the Head of the Laboratory for Novel Semiconductors for Photonic and Electronic Applications, in which epitaxial growth of thin semiconductor films is being performed by Organometallic Vapor Phase Epitaxy. From 2005 to 2010 he was the Head of the Microelectronics Research Center, and Director of the Zisapel Nanoelectronics Center at the Technion, Dr. Salzman's research interests include: Photonic Devices, Semiconductor Lasers and Light Emitting Diodes, Integrated Optics, Epitaxial Crystal Growth, Electronic devices, Microfabrication and Characterization of semiconductor Devices. In 2005 he started creating sculptures from natural materials. In 2008 he became aware of clay as a sculptural medium. Today he uses a variety of techniques based on iron, wood, ceramics, and plaster.

Katharina Prinzenstein, Austria - Interdisciplinarity in the Eyes of Equal Treatment Ethics

Mixed-media-worker, Sociologist & administrative worker at Technical University of Vienna (Head of the Office of the Equality Treatment Working Group), Energy Trainer in the realm of self-healing techniques, Freelance Researcher and Activist on Gender- & Ecology Mainstreaming,

http://www.unet.univie.ac.at/~a8401943/sustainability/sustainabilities_E.htm

Scientific and Real-Life interests: Interdisciplinary and inter-cultural communication (esp. on the grounds of Science’s Research) and Research on Methods, e.g. on Feminist Social Research

Methods: http://www.unet.univie.ac.at/~a8401943/

Ben Baruch Blich, Israel - Between Displaying and Representing: a Matter of Selection

Ben Baruch Blich, b. New York, USA. (ph.d. thesis: Pictorial representation and its cognitive status), at present a senior lecturer in Bezalel – Academy of Arts and Design, Jerusalem. His interests and publications are in the fields of Visual Culture in the history of Western civilization: visual representation, culture and information, art, photography, media studies, animation, comics, and the cinema. In 1989 a visiting scholar to the Warburg Institute in London University working with Prof. Roger Scruton and Sir E. Gombrich. In 2002 a guest Professor to the Hisk (Hoger Institute voor Schone Kunsten) in Antwerp. His papers were presented in various journals and conferences. Last publications "The body as Mirror", in: Territorial bodies, Waanders Uitgevers, Den Haag, and "Body representation in Photography" in The weight of Photography, Free University in Brussels. At present he writes 3 books on photography: 'Photography in conflict: representing political upheavals'; 'Bodies represented by the Camera'; 'Amateur photographers during World war 2". His book 'Can we learn from pictures' is due to be published this year.

Blich is the chief editor of the e-journal 'History and Theory: Protocols', issued by the History and Theory Dept. in Bezalel.
Yoed Tsur, Israel - Common Pitfalls for Science, Art and Society

Yoed Tsur is associate professor at the Chemical Engineering Department at the Technion-IIsrael Institute of Technology. He received his PhD in physics at the Technion in 1998, and was a postdoctoral scholar in PennState University for two years before joining the Technion as a faculty member. He is the head of the Laboratory for Electroceramics and Nanotechnology, and a member of the Grand Technion Energy Program. In addition, he organizes music events and gives many open to the public lectures on music as well as on various scientific issues.

Alev Özkok, Turkey - Digital Learning Environment for Transdisciplinary Studies

Yehuda Stupniker, Yuli Chakk, Israel - Theory of Inventive Problem Solving as a Common Denominator between Science, Technology and Art

Born in 1949, Yehuda Stupniker grew up in Dniepropetrovsk in the Ukraine, then part of the USSR. He obtained there a master’s degree in metallurgy (rolling), and also experience as a mechanical engineer specialising in innovations. In 1974 he started to study TRIZ (a Russian acronym for the Theory of Inventive Problem Solving), a new discipline founded by Genrich S. Altshuller, an outstanding Jewish thinker, writer and engineer. In 1976, following a 250-hour training course, he graduated as a teacher of TRIZ, and then came directly in contact with Altshuller (a contact that continued until the latter’s demise in 1998) who awarded him, as one of his best pupils, a diploma of Master of Triz. In 1990 he left the USSR and returned to his ancestral home, Israel, where he lives with his wife and two children. His interests include, among other things, music and gardening. The main use of TRIZ is for solving problems in inventions and creative activity, in which Yehuda has wide experience both as a teacher and as a consultant. He has published books and numerous articles on TRIZ, participated in international conferences, works actively in educational establishments and with hi-tech companies, and delivers lectures on TRIZ at various institutions. From all this he has acquired a reputation worldwide as a leading specialist in the subject.

E-mail: ystriz @ gmail.com   Site: www.triz-il.org
Alexios A. Petrou, Cyprus - Nietzsche’s Contestation of Science: The Relation between Art and Knowledge

Alexios Petrou holds a doctorate in philosophy from the Aristotelean University of Thessalonica. He is associate professor of education at the University of Nicosia where he teaches philosophy of education, language and culture. He is also teaching at the Open University of Cyprus in the program of Educational Sciences. His research interests are in the areas of philosophy of education, for German philosophy of the 19th century, aesthetics, the philosophy of language as well as neoplatonic philosophy. Among other things, he has translated in Greek and edited three books of the neoplatonic Iamblichus: On the Pythagorean Way of Life (2001), Exhortation to Philosophy (2002) and On the Egyptian Mysteries (2005) –Zitros Edition; and has translated and edited manuscripts in the philosophy of language -a book entitled Ν(ο)εματα και γλωσσικοί κομποί (2007), co-editor with M. Zembylas- Vanias Edition. His most recent book publication is entitled: Nietzsche’s Crossing: Truth, Art and Culture, Zitros Edition. Petrou has also published articles in international and Greek journals and presented papers in international and local conferences.

Vladimir V. Smolyaninov, Russia – The Golden Ratio in Art and Science
Session 2

Scientific and Technological Education through Art

Michel Faucheux, France - Humanities and Engineering Universities

Associate Professor in French and Cultural Studies, INSA (Institut national des sciences appliqués) Lyon, France.

Visiting professor department of Humanities, Technion, Israel Institute of technology, 2007-2008

1998-2001 Former Head of the department of Humanities, Insa Lyon, France

2004-2010 Head and founder of the interdisciplinary research unit STOICA, Insa Lyon, France (UMR EVS 5600)

Ran Peleg, Ayelet Baram-Tsabari, Israel - Drama in the Science Classroom: Theatrical Tools for Teachers

Ran Peleg is a doctoral candidate in the Department of Education in Technology and Science at the Technion. His research focuses on the use of theatrical tools in science education. He is also an actor and producer of plays on science. Ran received his bachelor’s and master’s degrees in chemical engineering from Cambridge University.

Igor Verner, Khayriah Massarwe and Daoud Bshouty, Israel - Using Ornaments for Geometry and Multi-Cultural Education: Development, Implementation and Evaluation

Igor M. Verner is an Associate Professor at the Department of Education in Technology and Science, Technion – Israel Institute of Technology. He received the M.S. degree in Mathematics from the Urals State University, the Ph.D. in computer aided design systems in manufacturing from the Urals State Technical University, and the teaching certificate in technology from the Technion. His research interests include experiential and situated learning, cognitive and affective development, design projects and competitions, educational robotics, mathematics education for engineers and architects, museum and multicultural education. He has published over one hundred peer reviewed papers, guest-edited four special issues of archival journals, and serves on board of the International Journal of Engineering Education. Nexus Journal of Architecture and Mathematics and International Journal of Robotics, Education and Art.
Diana Alderoqui Pinus, Israel - Science is the Story: an Interactive Exhibition at the Bloomfield Science Museum Jerusalem

Diana Alderoqui Pinus has been working in the field of museums for 30 years. Diana got her BA in Education and Art history, and MA in Education from the Hebrew University of Jerusalem, and her PhD on interactive exhibits in science museums from the School of Psychology, Universidad Autonoma of Madrid. Diana worked 9 years in the Israel Museum and joined the Bloomfield Science Museum in 1989. In her capacity of Curator of Visitors she was the educational consultant for many exhibitions, curator of others and is involved in program development and evaluation activities in informal education. She has written several articles on museum education and evaluation and is active in museum educational research in Israel and abroad.

Dafna Efron, Israel - Can Science Make you Cry? Theatre at the Bloomfield Science Museum Jerusalem


www.mada.org.il dafnae@mada.org.il

Eilon Aviram, Israel - Computerized Composition in Music Education

Eilon Aviram is a Teacher in the M.Ed program for Music Educators at Levinsky College in Tel-Aviv. A graduate of the Rimon School of Contemporary Music and Jazz, and holds a Bachelor of Education degree in conducting choirs and M.Ed. in music education from the Levinsky College in Tel-Aviv. Eilon has also taken music classes at the University of South Florida and the Mannes College of Music in New York, and now he is a Ph.D Student in the Hebrew University in Jerusalem.

For years he has been involved with musical instruction at various educational levels from elementary to college, as well as, conducting classes in computerized musical creativity at: Jordan Valley Center for the Gifted, Rabin School in Kfar Tavor, Kaduri School, Afula Conservatory, Ben-Gurion High School in Afula, Megido High School, Harod Valley High School, and Kinneret College.
Roey Tzezana, Israel - Magic, Mentalism and Science
Roey Tzezana is a PhD student in Nano-technology in the Technion, and a research fellow in the Interdisciplinary Center for Technology Analysis and Forecast (ICTAF). He has been the organizer of the FameLab competition for the past three years in the Technion, has scientific columns in Scientific American-Israel, Technion Magazine and Blazer, and is the editor and main writer of the Hebrew blog שלג זורק (Blazing Science) which enjoys over 1,000 views a day. He is a highly wanted lecturer in the area of popular science, and many of his scientific lectures involve audience participation and a sense of wonder both about the future and the present. He often combines in his lectures elements and curious demonstrations of the power of the mind.

Tanya Nekritch, Igor Verner, Israel - Developing Visual Literacy and Creative Work Skills through Exposure to Art and Practice in Geometric Design
Tanya Nekritch is a graduate student at the Department of Education in Technology and Science, Technion - Israel Institute of Technology. She received the M. Arch. degree in Architecture from the Ural State Academy of Architecture and Arts. She is a member of the Russian Designers' Union. Her research focuses on visual literacy, aesthetic perception and art education through applying the geometrical concepts to visual artwork.

Anna-Lena Østern, Alex Strømme, Norway - The Importance of Key Questions in the Storyline Water Project Combining Explorations into Art and Science in a Norwegian Urban Secondary School
Anna-Lena Ostern is professor of arts education and Alex Stromme is professor of biology education at Norwegian University of Technology and Science, Program for Teacher Education. They are exploring the potential of combining art and science in order to qualify the learning experiences of becoming teachers as multilayered and focused. They have 2008-2011 carried out a three year R&D project in secondary school in a Norwegian city. The Scottish storyline method serves as frame for inquiry based exploration of science issues connected to water as threat and hope on local, national and global levels. This cooperation is part of an EU project S-Team with 22 participating universities, one of them Technion.
Session 3

Being an Artist, Being a Scientist, Being Both

Keynote lecture: Dirk Huylebrouck, Belgium - Do Re Math: Mathematics, Music and Visualization: How Music, Modern Technological Features and even Food can Illustrate Mathematics

Dirk Huylebrouck spent nearly eight years in Congo-Zaire (at Universities in Bukavu and Kinshasa), until a diplomatic incident between Belgium and President Mobutu of Congo interrupted his stay in Africa. He went to the University of Aveiro in Portugal and the European Division of Maryland University (in Belgium and Germany), until the majority of his American students went to Iraq. He returned to Africa, to the University of Burundi, but only for three years, until the turbulent times of the genocides (1994) made an end to his contract. Since 1996 he resigned to settle at the Department of Architecture Sint-Lucas Brussels.

He won the Lester Ford Award 2002 of the American Mathematical Association for his contribution in number theory. He made numerous interventions about mathematics in the Belgian media, some of which enjoyed international attention (CNN, BBC, RAI, Le Monde). He is the author of the books “Africa + Mathematics (2005, VubPress; 2008, French translation) and “The Codes of da Vinci, Bach, pi and Co” (2009, Academia Press). Since 1997 he edits the section “The Mathematical Tourist” in “The Mathematical Intelligencer”, in which sites of interest to professional mathematicians are discussed. Huylebrouck also regularly writes for the popular science magazine EOS, a Dutch equivalent of “Scientific American”. One of his most noticed contributions were “The Skew Sphere of the Atomium”, which was even mentioned by stand-up comedians, and “An Error by Leonardo da Vinci”, which reached a worldwide attention.

Dirk Huylebrouck holds a PhD in mathematics (linear algebra), and teaches at the Department for Architecture Sint-Lucas Brussels, Belgium; Huylebrouck@gmail.com; site: http://etopia.sintlucas.be/3.14/

Vered Aviv, Israel – What does the Brain Tells us About Abstract Art?

Noah Shamir, Israel – About Aesthetics in Natural Sciences

Noah Shamir born in Germany, 1947. In Israel since 1949
Lived and was educated in Jerusalem, 1949-1970 – preliminary, high school and university.
Education:
B.Sc. in Physics and Mathematics- Hebrew University, Jerusalem 1968
M. Sc. in Physics – Hebrew University, Jerusalem 1970
Ph.D. in Physics – Weizmann Inst. of Science, Rehovot 1977
Employment:
Senior Scientist at the Physics dept., Nuclear Research Centre-Negev
Partner in research laboratories and students supervision towards higher degrees, Ben-Gurion University.
Art:
Participated in many group paintings and photography exhibitions throughout Israel.
Igor Grabec, A. Borštnik Bračič, E. Govekar, J. Gradišek, P. Mužič, E. Susič, F. Švegl, Slovenia – Characterization and Modeling of Patterns by an Intelligent System

Igor Grabec is Professor Emeritus of the University of Ljubljana, Slovenia with experience on statistical modeling of chaotic phenomena by learning systems and their application in various fields such as industrial manufacturing, economy, medicine and art. From his profession technical physics he published ~450 articles, 17 patents and four books. In addition to this, he is active in sculpturing, painting and writing. On this field he often exhibited his works and recently published a book *Sculptures and Verses*. In relation to this hobby he is also interested in joining science and art by doing research on application of intelligent systems to characterization of artistic patterns. He is a member of “International Academy for Production Engineering – CIRP” as well as “Academy of Sciences and Arts” and “Engineering Academy” of Slovenia.

Eugene A. Katz, Israel - Bridges between Mathematics, Natural Sciences, Architecture and Art: The Case of Fullerenes

Eugene A. Katz received his Ph. D. in physics in 1990 from the Moscow Institute of Steel and Alloys. In 1995, as a visiting scientist at the Israel National Solar Energy Center of the Ben-Gurion University, he started to investigate the growth, structure and photoelectrical properties of fullerene thin films. In 1997, he joined the Ben-Gurion University’s Institute for Desert Research and has been working in the Department for Solar Energy and Environmental Physics ever since. In 2006 he became a member of the Ilse-Katz Institute for Nanoscale Science and Technology at the Ben-Gurion University. His research interests include areas of applied solar energy, photovoltaics based on non-traditional semiconductors (fullerenes, carbon nanotubes, conjugated polymers, etc), photovoltaic characterization of AlIIIBV concentrator solar cells at ultra-high concentration of natural sunlight (1,000 suns and more), and synthesis of carbon and inorganic fullerenes and nanotubes by concentrated sunlight. He has published more than 120 scientific papers and book chapters on the above-mentioned topics, and a number of popular articles on fullerene-like structures in carbon nanomaterials, living organisms and architecture.

Eliezer Rapoport, Israel – To See the Voices

Barak Tal, Israel – Music Score Reading and its Relation to Solving a Mathematical Problem

"Artistically and pedagogically exceptionally gifted master of the baton... his aesthetic hand movements evoke tenderly the singing and sounding of his orchestra, achieving finest harmony"

Jungfrau Zeitung, Switzerland
"An excellent, knowledgeable and inspired conductor"

Klaus Mertens, baritone singer

Founder and Music Director of the Tel-Aviv Soloists Ensemble (“by far Israel’s finest chamber orchestra” The Jerusalem Post, Israel; “An impressive group of young professionals with a lot of enthusiasm and idealism, together with the highest level of individual playing” Tabea Zimmermann, violinist) since 2001.

Barak Tal has conducted orchestras in the world’s major concert halls, such as Carnegie Hall, New York, Konzerthaus, Vienna, and Tel-Aviv’s Mann Auditorium. As Music Director of The Tel-Aviv Soloists Ensemble he has collaborated with many international soloists, such as violinists Maxim Vengerov, Ida Haendel, Patricia Kopatchinskaja and Ilya Gringolts, violist Tabea Zimmermann, countertenor Andreas Scholl, baritone singer Klaus Mertens, cellists Sol Gabetta, Alexander Huelshoff and Amit Peled, pianists Itamar Golan, Ian Fountain, Boris Berman and Alexander Gavrylyuk, clarinetists Giora Feidman and Chen Halevi, and bassoon player Sergio Azzolini.

As guest conductor, Mr. Tal has performed with the Israel Philharmonic Orchestra, Moscow Symphony Orchestra (Russia), Wroclaw Philharmonic Orchestra (Poland), Vaasa City Orchestra (Finland), Sinfonietta Cracovia (Poland), Neue Philharmonie Westfalen (Germany), and others.

Mr. Tal has served as Principal Guest Conductor of the Israel Young Philharmonic Orchestra, Music Director of the Haifa Youth Symphony Orchestra, Music Director of Matan Symphony Orchestra, and Assistant Conductor of the Israel Northern Symphony, Haifa.

He is the recipient of major Israeli awards, such as the 2006 Oedoen Partos Award for outstanding performance of an Israeli composition, granted by the Israeli Ministry of Culture, and of The 2007 Rosenblum Award for outstanding artist, granted by the Tel-Aviv Municipality. He is also a recipient of scholarships and grants by the America-Israel Cultural Foundation.

Mr. Tal has studied in mastercourses in Europe with conductors Kurt Mazur, Neeme Jarvi, Jorma Panula, Vladimir Ponkin and Zsolt Nagy. He graduated from The Jerusalem Music Academy and The Buchman-Mehta School of Music, Tel-Aviv University, where he studied conducting with Prof. Mendi Rodan and Evgeny Zirlin.

"Barak Tal has a uniquely impressive style, avoiding simple time-beating in order to focus instead on gestural emphasis and pulse, eliciting the finest nuances of texture, dovetailing and dynamics from the players. His freedom and structural control infused the opening work, Britten’s charming Simple Symphony, with poise and wit."

Malcom Miller, Music and Vision, on the concert at Carnegie Hall 9.11.2003

“His sense of rhythm and fluidity of phrases, his feeling for melody and his stylistic intelligence make him an extraordinary musician. He conducts the orchestra in a very natural way and gives the impression that everything is completely trouble-free... he is able to accompany a soloist and to form an orchestral work with the same intensity”

Sergio Azzolini, bassoon player

Blog (in Hebrew)

Mozart Divertimento k.251
Haydn Symphony No.74
Einat Leader, Miri Weiss Cohen, Israel - An Intelligent Learning Design Support System for Jewelry Features

Oved Kedem, Israel - Science of Music and Music of Science

Symposium: Aesthetics in Industry

Talia Goldberg Gertman, Israel – Artistic Painting for Industry

Niva Yehiav, Israel – Trend Watching & Color Forecasting Through the World of Paint and Fuax Finishes
Session 4

Art and Design in Industry

Symposium "Generative Art as Science of Poetics"

Keynote lecture: Celestino Soddu, Italy - Immanent Codes of Cities Identity

Celestino Soddu, Master Degree at Università di Roma “La Sapienza” in 1970, Registered Architect since 1970. He has taught Architectural Representation, Composition and Technology in Italian universities since 1971. He is now professor of Architectural Generative Design at the Politecnico di Milano in the Faculty of Engineering-Architecture. Precursor of generative approach, in 1987 he designed Argenia, the first generative software for architecture and industrial design presenting it in the book “Citta' Aleatorie” (aleatory cities), 1989. In 1997 he founded and is presently director of the Generative Design Lab at the Department of Architecture and Planning of the Politecnico di Milano University. In 2001, at the Industrial Center of Hong Kong Polytechnic University practically experimented Argenia in the generative intelligent industrial productions of unique objects. Beginning in 1998 he has organized and directed the annual International Generative Art Conference, www.generativeart.com. He has presented his generative projects and artworks in many personal exhibitions, including exhibits at the Hong Kong Museum, Visual Art Centre, MF Gallery in Los Angeles, IDB Cultural Center in Washington DC, the Pacific Design Center, Los Angeles, the Italian Embassy in Beijing, the International Finance Center of Hong Kong and the Commerce Chamber in Milan. He is the author of numerous books in Italian and English. Video interviews and programs for international televisions were created about his architectural research activity in Italy, China, US and Spain. More information can be found in his website www.celestinosoddu.com

David Avnir, Israel and Dirk Huylebrouck, Belgium – Chirality in Architecture

David Avnir is a Chemistry Professor (holding the Benjamin H. Birstein Chair in Chemistry) at the Institute of Chemistry, The Hebrew University of Jerusalem, where he received all his academic education. His current scientific activities include theoretical and experimental aspects of chirality, theoretical studies in symmetry, organically doped metals, and sol-gel organic hybrid materials and biomaterials. Earlier major interests included fractal theory in chemistry and physics, and far-from-equilibrium phenomena such as chemically driven hydrodynamic instabilities. He has co-authored more than 325 papers, and holds several key-patents in the sol-gel area. His publications have more than 13,000 citations, with an h citation index of 57. Co-founder of Sol-Gel Technologies, Inc. Recipient of the 2011 Israel Chemical Society Prize.
Enrica Colabella, Italy - The Equality Ambiguity

Enrica Colabella, Master Degree in Architecture at Rome University “La Sapienza”. Registered Architect; professor of Generative Design, co-founder of Generative Design Lab and of Generative Art International Conference at Politecnico di Milano University. She worked in connections between different disciplinary sectors, especially between poetry and mathematics by using digital tools in generative processes for gaining complexity. Salsomaggiore Int. Festival prize for her video art “La casa del sogno”. In her Computer graphics course on “I luoghi di Leopardi”, in 1994, she defined attribution as a math model for generating 3D Architecture models in students' design works. She presented her experimental works in many conferences at Boulder; HK; Tel Aviv; Delft; Montreal, Oxford, Singapore, Wien, Beijing, Shanghai, Porto, New Delhi, Nagoya, Eindhoven; etc.

Michael Burt, Israel – Towards a Theory of Space Networks and Space Subdivision

Graduated at the Technion (B.Arch. – 1963; D.Sc. – 1967).

Iohanna Pani, Israel - Objectology

Gàbor Renner, Hungary - Fast Computation of Highlight Lines on Surfaces

Janusz Rębielak, Poland - Graphical Symbols of Three Cultures in Concept Design of Bezalel Academy of Arts

Janusz Rębielak, born 10 October 1955, in Poland., received his architectural degree from the Wroclaw University of Technology, Poland. Chairman of the Commission of Architecture and Town Planning of Wroclaw Branch of Polish Academy of Sciences, at present professor in Faculty of Architecture at the Cracow University of Technology, his main area of research is related to shaping of various types of spatial structural systems and application of numerical models in design processes of them.

Other information available on website: http://rebielak.neostrada.pl
Lila Chitayat, Varda Gur, Maya Halevi, Israel - MIC My Ideal City- A Virtual Ideal Jerusalem

Lila Chitayat, is an architect, artist and an experimental practitioner of design through computational processes. In 2002 Lila founded LinC studio, a trans-disciplinary design environment utilizing computational patterns to produce a wide range of projects and scales, from space design, experience design and industrial design, full scale installations and architecture. Lila graduated from Columbia University and holds a Master in Advanced Architectural Design, a B.Arch from Pratt Institute, NY. and a B.Sc from Holon Inst. of Tech.

Winner of ARS Electronica PRIX 2010 Honorable mention for Interactive art with her project TaXiLink (www.taxilinkproject.com) with Alon Chitayat and In-charge of the design and construction of MIC-My Ideal City, a ‘Virtual Utopian Jerusalem’ commissioned by Blumfield Science Museum and the EU.

Lila is a full faculty member at the HIT institute of technology teaching in academic Institutes in Israel, examining Ideas of movement, gestures and temporal motion as inscribers of urban space.

Michael Schorr, Israel, Benjamin Valdez and Jessica Sevilla, Mexico – Art, Science and Technology in Calatrava’s Bridges

MICHAEL SCHORR is a professor and Dr. Honoris Causa at the Institute of Engineering, Universidad Autonoma de Baja California, Mexico. He started his professional career as a school teacher with a diploma from Seminar Hakibutzim, Oranim, Tel Aviv. He has a B.Sc. in chemistry and a M.Sc. in Materials, Science and Engineering from the Technion- Israel Institute of Technology, Haifa , with 40 years of experience in industrial corrosion control. He taught the subject of materials and corrosion in several Spanish Universities, including the University of Valencia, Calatrava’s alma mater and the site of his City of Arts and Science Museum. M. Schorr has published 233 scientific and technical articles in peer-reviewed journals in Hebrew, Spanish and English, and 300 articles in Hebrew in popular technology magazines. From 1986 to 2004 he was the editor of the international journal Corrosion Reviews . He has worked as a corrosion consultant and professor in Israel, U.S.A., Europe, Venezuela, Argentina, Brazil, Spain, Japan, and South Africa. mschorr2000@yahoo.com

BENJAMIN VALDEZ is the director of the Institute of Engineering, Universidad Autonoma de Baja California, Blvd. Benito Juárez y calle de la Normal s/n, Colonia Insurgentes Este, cp. 21280 Mexicali, Baja California, México. He has a Bs. in chemical engineering, a M.Sc. and a Ph.D. in chemistry, and is a member of the Mexican Academy of Science and the National System of Researchers in Mexico. He was the guest editor of Corrosion Reviews, in which he produced two special issues on corrosion control in geothermal plants and the electronics industry. During an encounter at the University of Valencia, Calatrava’s alma mater, to establish an academic cooperation he visited his City of Arts and Science Museum. He is a full professor at the Universidad Autonoma de Baja California. His activities include corrosion research, consultancy, and control in industrial plants and environments. benval@uabc.edu.mx
JESSICA SEVILLA is a student at the School of Architecture and Design of the Universidad Autonoma de Baja California, currently coursing her last year. She also engages in the field of art, having presented her artwork in several collective art exhibitions, and a solo show of her paintings in 2009. She has been part of student committees dedicated to the organization of conferences and cultural events, as well as participated in international architectural competitions. In 2008 as a part of a special class, she presented a study in situ of the design and structure of Calatrava’s Milwaukee Art Museum in the state of Wisconsin, USA. In 2010 she studied in the Escuela Tecnica Superior de Arquitectura, in the Universidad de Sevilla, Spain, home of the Alamillo Bridge, thanks to an international mobility program. jsevilla@live.com
Session 5

Technology – the Third Culture?

Keynote lecture: Denes Nagy, Hungary and Australia - One, Two, Three or Four Cultures: A Second Look

Dénès Nagy (b. 1951) is a Hungarian-Australian mathematician, professor, Dr. h.c. His research fields include discrete geometry, mathematical crystallography, history of science and technology. He also has a special interest in art-science relationships. He held professorships not only in his native Hungary, but also at Arizona State University, Tempe, Arizona, USA (1986-88), University of the South Pacific, serving the island countries between Hawaii and Australia (1989-1992), University of Tsukuba, Tsukuba Science City, Japan (1993-2000). In 2001 he was appointed as Honorary Research Professor at the Institute for the Advancement of Research, ACU, Melbourne, Australia. Since that time he spends longer periods in both Budapest and Melbourne. He is also the Founding President of ISIS (International Society for the Interdisciplinary Study of Symmetry), an international scholarly organization where artists and scientists work together. ISIS organizes triennial congresses (Budapest, 1989; Hiroshima, 1992; Washington D.C., 1995; Haifa, 1998; Sydney, 2001; Tihany at lake Balaton, 2004; Buenos Aires, 2007; Gmünd near Salzburg, 2010; planned in Crete, 2013). He is also the co-editor of the journal Symmetry: Art and Science, which attracted many leading artists and scholars, from Yuval Ne’eman (discoverer of quarks) to Leo Esaki (Nobel-prize in physics). He gave invited lectures in more than 20 countries in six languages and has close to 200 publications in English, Hungarian, Japanese, German, Russian, French, Chinese, and Ukrainian, including a joint paper with the legendary Nobel-prize winner Eugene P. Wigner (Princeton) and Edward Teller (Berkeley / Stanford).

Email: denes.nagy@acu.edu.au

Iris Aravot, Israel - Where does the Form Come From?

Iris Aravot, B. Arch., M.Sc., Ph.D., Technion, I.I.T., Israel.

Associate Professor in Urban Design and Urban Design Theory at the Faculty of Architecture and Town Planning.

Philosophy studies at Haifa University. Postdoctoral studies at the A.A. Graduate School, London.

Research interest:

Urban design theories
New-towns in Israel and elsewhere
Phenomenology as theory of Architecture and Urbanism;
Phenomenological research of architectural phenomena
Architectural education
Head of Graduate Studies in Architecture and Urbanism, Former head of The Research Centre for Architectural R&D and Vice Dean for Research and Graduate Studies.
Published numerous articles in Hebrew and English. Visiting scholar in European and North American schools of architecture.

Daphne Haim-Langford, Israel - Biomimicry: a Bridge Between Science and Technology

Abraham Tamir, Israel - Interactions between Art and Science

Abraham Tamir is a full professor in Chemical Engineering at Ben-Gurion University of the Negev, Beer-Sheva, Israel. In the course of his administrative career he has been also Rector of the University (1986-1990), the highest academic position. Abraham Tamir is the author of 165 scientific articles and 10 books. He developed an efficient gas burner, which may save about 25% of the gas consumption when applied to domestic gas stoves and outdoor cookers. In 1990, the largest manufacturer of camping equipment in Israel, launched the market with a new product, the Rotoflame Camping Cooker, which applied successfully the new burner. In 1984 he was awarded The Michael Landau Research Prize for "Development of a New Gas-Saving Burner for Domestic Stoves" and in 1991 The Bergman Prize for contribution in the development of the subject "Combustion Processes in Swirling Flows" Abraham Tamir is considered as world expert on “Impinging-Stream Reactors”, a method for intensifying technological processes. A reviewer described him once as the father of impinging streams. His achievements are summarized in his book "Impinging-Stream Reactors", published by Elsevier in 1994, which was translated also to Chinese. In 1998 he founded the Museum on Art and Science in his University, the first of its kind in the world.

http://www.bgu.ac.il/museum/
http://www.bgu.ac.il/museum/tmoaas

He also established about 40 exhibitions on Art&Science in Israel and abroad. During 2000-2005 he acted the Associate Editor on Art & Science in the Canadian Journal of Chemical Engineering. From 2003 he is editing a column on Art&Science in the Scientific American published in Israel and from 2007 in the journal QUIMICA e INDUSTRIA published in Spain. In recent years he has been teaching a new course, entitled, The Interaction Between Art and Science.
Michael Bar-On, Israel - Photography from the Ancient Greeks to the Digital Bayer Process

Michael Bar-On made aliyah in July 1967 and worked in the field of construction until 1991. After taking an early retirement, he researched the subject of civil engineering in the Biblical era and gave a lecture on this to the British Tunnelling Society in June 1993. He expanded his interest in photography and was awarded a Licenciateship of the Royal Photographic Society in 1998. He obtained a B.A. in Jewish History in 2006 from London University and has published an article on the History of Photography in the Holy Land. He has participated in several joint photographic exhibitions in the Jerusalem area and is currently teaching basic photography on a voluntary basis in a school in Jerusalem.

Julia Belopukhova, Sergey Belopukhov, Nikolay Korsun, Arcady Fokin, Elena Kalabashkina, Russia - Flax and Linen Products in the History, Art, Science and Technologies of Nations of the World

Peter Soreanu, Israel - Clusters in Data Mining and Communications: An Aesthetic Perspective

Etan Fisher, Israel - Demonstrating the Pure-Data Real-Time Audio Control Environment

Etan Fisher was born in Scotland and grew up in Beer-Sheva, Israel. Etan recently completed his Ph.D. studies at the department of Electrical and Computer Engineering Department, Ben-Gurion University of the Negev. He currently teaches at the department of mechanical engineering at the Shamoon College of Engineering. Etan is also currently involved in several multi-disciplinary studies involving engineering and music.
Eden Orion, Israel – Astrophotography: Art or Science

Live in Qoranit, in the Galilee, Israel, married, father to 2.
Works at the University of Haifa, in the center of computing and information systems units establishing university Web sites, support Macintosh users in special multimedia needs.

* B.Sc. From the Technion (Israel Institute of Technology) - Department of Education in Technology and Science - 1990
* B.F.A Graduate of the University of Haifa - Department of Art Creation - 2004

Do astronomy for about 15 years, though interest began in childhood.
Build telescopes, organize public observations combine the knowledge lectures in astronomy additional occupation in art.

Some interesting projects in Astronomy:

* Renovation of Albert Einstein's telescope
* Building an accurate replica of Galileo's historical telescope
* Garden Telescope design - garden at the Weizmann Institute of Science
* Curates the Astronomy and Art Exhibition at the Braude College

David Gordon, Israel – Hands free - Controlling an Audio-Visual Performance Through Body Movements in Space

David Gordon Born in 1977, lives in Tel Aviv. A musician and a performing artist.
He has an MA in music from Bar Ilan University where he majored in composition and musical technologies. His recent work present interactive pieces that incorporate sound, visuals and movement.
Session 6
Symposium on Arts and the Brain

Cochavit Elefant, Lotan Meir, Israel - The Importance of Music in the Lives of Individuals with Rett Syndrome

Meir Lotan, BPT, MScPT, PhD is a physiotherapist working as a senior lecturer at the School of Health Sciences, Department of Physical Therapy, Ariel University Center of Samaria, Ariel. He is affiliated with the Israeli National Rett Syndrome evaluation team and the Therapeutic Department, Zvi Quittman Residential Center, Millie Shime Campus, Elwyn, Jerusalem. He has a special interest in physiotherapy and persons with intellectual disability, Snoezelen and physical activity for children and adults with intellectual disability with an emphasis on individuals with Rett syndrome. Awarded in 2000 by the IRSA (Int Rett Syndr Assoc) for his service to individuals with Rett syndrome. Numerous publications in international peer-reviewed journals in his areas of interest.

Vladimir Gontar, Israel - Brain Creativity, Mathematical Imaging and Special Visual Stimuli for Neurofeedback Systems

Department of Industrial Engineering and Management, Ben-Gurion University of the Negev, P.O.Box 653, Beer-Sheva 84105, Israel

Education:
B.Sc./ M.Sc. – 1971 – Moscow Physical Engineering Institute, Moscow
Ph.D. – 1977 – Moscow State University, Moscow

Employment:
Scientific Director of the International Group for Chaos Studies at Ben-Gurion University of the Negev, Beer-Sheva (1991- at present)

Main scientific interests:
Complexity and discrete chaotic dynamics, mathematical modeling of living and thinking systems, neuronal networks, artificial brain systems, softcomputing methods, mathematical imaging, brain computer interfaces and neurofeedback

Publications:
170 scientific publications including books, papers and patents.
Gerry Leisman, Israel - Auditory, Visual and Spatial Aesthetic and Artistic Training Facilitates Brain Plasticity: The Arts as a Vehicle for Rehabilitation

Gerry Leisman is an Israeli-British Neuro- and Rehabilitation Scientist educated in Europe at Manchester University and in the United States at the City University of New York. He received a PhD in Neuroscience and Biomedical Engineering from Union University, in 1979. He currently is the Scientific Director of the F. R. Carrick Institute for Clinical Ergonomics, Rehabilitation, and Applied Neuroscience (C.E.R.A.N.) responsible for it global scientific operations in New York, Havana Cuba, and at Herzog Hospital in Jerusalem.

His scientific career has largely involved two broad areas of endeavour. Firstly, he has been active since the early 1970s in the promotion of consciousness as a scientifically tractable problem, and has been particularly influential in arguing that a fundamental understanding of consciousness can be approached using the modern tools of neurobiology and understood by mechanisms of theoretical physics, having developed the biomedical applications of continuum theory. He has also been influential in examining mechanisms of self-organizing systems in the brain and nervous system for cognitive function exemplified by his work in memory, kinesiology, optimization, consciousness, death, and autism. He was elected a Fellow of the Association for Psychological Science in 1990 and Senior Member of the Engineering in Medicine and Biology Society of the IEEE in 1986.

Secondly, in his long work in Rehabilitation Sciences, he has been able to apply the tools of Industrial Engineering to applications of optimization in human rehabilitation and in patent development for those having sustained traumatic brain injury and developmental disabilities. His chief collaborators in this endeavour have been Moshe Kaspi of Ben-Gurion University and Arthur Ezra, formerly of the National Science Foundation. His first degree is in music and has attempted to integrate the physics of music and the neurosciences.

Robert Melillo, USA - Hemispheric Specific Music as a Potential Treatment Modality for Functional Disconnection in Neurobehavioral Disorders

Dr Robert Melillo, the creator of the Brain Balance program TM, is an internationally recognized author, professor researcher with an expertise in neurology, rehabilitation, neuropsychology, neuroscience and childhood developmental disorders. Since 1994 his program has helped thousands of children and families. He is a clinician with 25 years of experience. He lives in Rockville Centre, New York with his wife and three children.

He holds a Masters in Neuroscience, Masters in Clinical Rehabilitation Neuropsychology, PhD candidate, Doctorate in Chiropractic, Diplomate in Neurology, Fellowship American College of Functional Neurology, Fellowship American Board Childhood Developmental Disabilities, former Associate Professor Functional Neuroanatomy Touro College, Professor Clinical Neurology and Childhood Developmental Disorders, Executive Director FR Carrick Research Institute and Children’s Autism Hope Project, President International Association Of Functional Neurology and Rehabilitation, Co-Editor Of Journal Functional Neurology, Rehabilitation And Ergonomics, Author “Disconnected Kids”, as well as several texts and over a dozen peer reviewed scientific papers. He is the Co-Founder Brain Balance Achievement Centers. His latest book Reconnected Kids will be released by Penguin Publishers in April 2011.
Jean-Paul Courchia, Guigui Sarah, Benjamin Courchia, Maud Righini, Gabriel Cwilich, France - Cezanne and the Mount Sainte-Victoire: A Neuroaesthetic Approach

Jean-Paul Courchia is a medical doctor of endocrinology and metabolic diseases. He is working actually with the department of ophthalmology in Saint Joseph’s hospital in Marseille. He works on the interaction between a work of art and visitors and particularly on the visual strategy of visitors in front of paintings.

Successful painter, both in Europe and in the United States, his oils on canvas are displayed in Marseille, Monaco, Rotterdam, New York and Westport.

Starting out from a preliminary study into the behavior of museum visitors, and in particular the average time spent in front of a picture (about 12 seconds), his research is intended to highlight the information picked up by viewer exploring various paintings. In a work presented at the French Society of Ophthalmology in Paris in May 2007, he realizes the exploration of the last painting of Van Gogh, and shows how the artistic information conducts the eye of the spectator. Thru this painting we discover the artist’s brain in his last moments. In a recent work, he explores the relationship between the painting of Cezanne in his obsessive work on the Mount Sainte Victoire, and the brain cells that are sensitive to the orientation of the lines. Thus, through the simplification of his work, the artist starts a conversation with the visitor's brain.

Courchia J.P. (September 2004) - "What do we see? A study on the variability of the visual strategy over time to explore a work of art". - European Forum "Regards et Vision". Lille 08-11 September 2004 France - Workshop 1: Construction of visual perception.


Lionel Wolber, Israel - Scale Meters and Attention: Comprehending Phenomena Spanning Multiple Orders of Magnitude

Lionel is a scholar, engineer, and musician who has published on digital security, computer-based visualizations, and the role of music and intonation in rational discourse. Lionel works at NDS Technologies, Jerusalem for 15 years as a Program Engineer. He graduated Bronx High School of Science and holds degrees in Physics and Music (BA, Cornell University) and musicology (PhD, Wesleyan University). Lionel is a significant contributor to a number of web-based communities including http://dmass.net and http://tensegritywiki.com. His composition "Drawing A Map" is sold by the Smithsonian Institute, USA. He lives in Jerusalem with his wife and three children.

Eyal Fried, UK - Acclairs Art Valuation Service: A Critical Exploration of Neuro-metric Technologies and the Human Experience

Vanessa Ben Shabetai, Laliv Cohen Israeli, Israel - A Journey Through the Depth of Leonardo da Vinci's Soul

Laliv Cohen Israeli is married, mother of two and resides in Lehavim, Israel. Ms. Cohen Israeli is a PhD. candidate at the Ben Gurion University, The department of Sociology. Her research is focused on Work – Family Integration among divorce men. Her professional interests are Family, Labor market and Social Psychology.

She is a lecturer at Ben Gurion University, Sapir Academic College and Achva Academic Campus.

Vanessa Ben-Shabetai is an Art History and Design History lecturer and teacher, working with underprivileged teenagers, preparing them for the SAT tests. She is a lecturer at the teacher's continuing education program, Be'er - Sheva and at Amal High School and College, Petah-Tikva. Additionally she is engaged as a linguistic consultant and editor of English-Hebrew documents.

Natalia Vikina, Russia - Rational Muses: New Approach to Science and Art
Ohad Ben Shimon, Israel – Artistic Writing on Science Subjects

Ohad Ben Shimon is an inter-disciplinary artist living and working in The Hague, The Netherlands and Tel Aviv, Israel. He is a graduate of both a scientific education program (B.A Cognitive Science at The Hebrew University in Jerusalem) and an artistic education program (B.A Photography at The Royal Academy of Art In The Hague, The Netherlands). His work explores the intersection between photography, writing and performance as well as the convergence of Art, Science & Technology. Recent exhibitions and projects include Best of Graduates at Ronmandos gallery, Amsterdam, Sugary Photographs Photo festival at Fotomuseum Antwerp, Belgium, Next One Photo festival, Essen, Germany (European Cultural Capitol of 2010), The Struggles of a Super-Hero, Introvert and Rising Star performance festival at Filmhuis Den Haag, Ruhr Expedition pilot project in The Ruhrgebiet, Germany (guest of BKVB), IMAGinE 2010 Conference on Art & Technology at Tiltan college of design, Haifa, and a solo presentation at Gadamer Truth & Method Philosophy Conference at Leiden University, The Netherlands. Alongside these exhibitions and projects he contributes regularly to various on-line and printed publications such as Circa Contemporary Art Magazine, PhotoQ (leading Dutch photography website), Rong-Wrong (European Literary Magazine) and Mifgash (Israeli Literary Magazine) and took part in Unfixed – Photography & Post Colonial perspectives in contemporary Art workshop at CBK Dordrecht, The Netherlands.

www.ohadbenshimon.com
**Exhibition:** (will be open for two days of conference and after it)

**Eden Orion, Israel – “Light Years within Touching Distance” – (photographs, drawings and telescopes)**


Live in Qoranit, in the Galilee, Israel, married, father to 2.

Works at the University of Haifa, in the center of computing and information systems units establishing university Web sites, support Macintosh users in special multimedia needs.

* B.Sc. From the Technion (Israel Institute of Technology) - Department of Education in Technology and Science - 1990

* B.F.A Graduate of the University of Haifa - Department of Art Creation - 2004

Do astronomy for about 15 years, though interest began in childhood.

Build telescopes, organize public observations combine the knowledge lectures in astronomy additional occupation in art.

Some interesting projects in Astronomy:

* Renovation of Albert Einstein's telescope

* Building an accurate replica of Galileo's historical telescope

* Garden Telescope design - garden at the Weizmann Institute of Science

* Curates the Astronomy and Art Exhibition at the Braude College

**Madatech – The Israel National Museum of Science – (interactive)**

**Gazit Ahud, Israel - “Motion” Video and Installations of Physics Objects with Music**

First and second degree in physics from the Technion. Specialized in Optics and Electro-optics. Studding in USC (University of Southern California).

Working in at "RAFAEL".

Working in at "OPTOMIC".

Coming back to the Technion to Electrical Engineer faculty as a laboratory engineer.

Moved to the Pre-Academic Studying Center: Physics laboratory manager.
Noah Shamir, Israel – “Aesthetics in the Natural Sciences” (photography)

Noah Shamir born in Germany, 1947. In Israel since 1949
Lived and was educated in Jerusalem, 1949-1970 – preliminary, high school and university.

Education:
B.Sc. in Physics and Mathematics - Hebrew University, Jerusalem 1968
M. Sc. in Physics – Hebrew University, Jerusalem 1970
Ph.D. in Physics – Weizmann Inst. of Science, Rehovot 1977

Employment:
Senior Scientist at the Physics dept., Nuclear Research Centre-Negev
Partner in research laboratories and students supervision towards higher degrees, Ben-Gurion University.

Art:
Participated in many group paintings and photography exhibitions throughout Israel.

Joseph Salzman, Israel – “Science and Technology” (sculptures)

Joseph Salzman was born in Buenos Aires, Argentina, in 1945. He received his BSc., MSc., and PhD. in physics from Tel-Aviv University in 1973, 1979, and 1984, respectively.
In 1987 he joined the Technion as a Senior Lecturer, in 1993 he became an Associate Professor, and in 2003 a Full Professor in the Department of Electrical Engineering, Technion – The Israel Institute of Technology, in Haifa, Israel. Dr. Salzman is the Head of the Laboratory for Novel Semiconductors for Photonic and Electronic Applications, in which epitaxial growth of thin semiconductor films is being performed by Organometallic Vapor Phase Epitaxy.
From 2005 to 2010 he was the Head of the Microelectronics Research Center, and Director of the Zisapel Nanoelectronics Center at the Technion. Dr. Salzman's research interests include: Photonic Devices, Semiconductor Lasers and Light Emitting Diodes, Integrated Optics, Epitaxial Crystal Growth, Electronic devices, Microfabrication and Characterization of semiconductor Devices.
In 2005 he started creating sculptures from natural materials. In 2008 he became aware of clay as a sculptural medium. Today he uses a variety of techniques based on iron, wood, ceramics, and plaster.

Mehrdad Garousi, Iran - Quest (Animation); Particulate Colosseum and Mayan Architecture (Two digital print artworks)

Mehrdad Garousi as a freelance artist and researcher has worked in painting, photography and graphics for years. Having experimented with other media he chose mathematical and generative arts including fractal art and topological sculpting as one of the newest and most wonderful common areas between mathematics and art.

In addition to continual participating in several art exhibitions of different events including Bridges, Joint Mathematics Meetings, ISAMA, Computational Aesthetics, Generative Art, he has published some papers in this regard in recent years. His works can be found at http://mehrdadart.deviantart.com/.
**Katharina Prinzenstein, Austria – “Water boat … 2/3 H₂O” (model boat)**

Mixed-media-worker, Sociologist & administrative worker at Technical University of Vienna (Head of the Office of the Equality Treatment Working Group), Energy Trainer in the realm of self-healing techniques, Freelance Researcher and Activist on Gender- & Ecology Mainstreaming,

http://www.unet.univie.ac.at/~a8401943/sustainability/sustainabilities_E.htm

Scientific and Real-Life interests: Interdisciplinary and inter-cultural communication (esp. on the grounds of Science’s Research) and Research on Methods, e.g. on Feminist Social Research

Methods: [http://www.unet.univie.ac.at/~a8401943/](http://www.unet.univie.ac.at/~a8401943/)

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**Alon Chitayat and Lila Chitayat, Israel – “TaxiLink - Catch a Ride to the Other Side” (interactive installation which enables users to experience an authentic taxi ride in Jerusalem from abroad presented in film)**

Mr. Elad D. Mentovich

School of Chemistry, Faculty of Exact Sciences, Tel Aviv University, Tel Aviv 69978, Israel

Tel.: 03-640-5705, Fax: 03-640-5612, Mobile: 050-716-2243, mentovich@gmail.com

Education

2000-2005
B.A., Cum Laude in Physics and B.Sc., Cum Laude in Material Engineering, Technion, Haifa.

2005-2007
M.Sc. Cum Laude in Physical Chemistry, School of Chemistry and Research Institute for NanoScience and NanoTechnology, Tel Aviv University, Tel Aviv;


2008-
PhD candidate in Physical Chemistry, School of Chemistry and Research Institute for NanoScience and NanoTechnology, Tel Aviv University, Tel Aviv;

Thesis adviser: Dr. Shachar Richter. PhD Title: “Realization of the Molecular transistors Roadmap.”

Employment

2002-2005
Research Assistant, Department of Materials, Electronic Systems Division, RAFAEL, Haifa


Awards

2002  Dean Award
2003  Dean Award
2004  Dean Award
2005  Dean Award
2005  Shenkar Faculty Award for Outstanding Project
2007  Israel Materials Conference Award for the best poster presentation
2008  The Nanocenter Excellence Scholarship Award for PhD students
2008  The Evergreen Fellowship
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<tr>
<th>Year</th>
<th>Scholarship/Award</th>
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<tbody>
<tr>
<td>2009</td>
<td>Northwestern-Tel Aviv Universities exchange students scholarship</td>
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<td>2009</td>
<td>Converging Technologies National Scholarship.</td>
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<td>2010</td>
<td>The Don and Sara Marejn Scholarship Fund.</td>
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<td>2011</td>
<td>ICS (Israel Chemical Society) award- Jortner Prize.</td>
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<td>2011</td>
<td>Alix De Rothschild award</td>
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<td>2011</td>
<td>The Nanocenter award for best poster in the annual meeting.</td>
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**Alexandra Sirota-Madi, Ina Brainis, Eshel Ben-Jacob, Israel – Poster - Shaped to Survive: Pattern Formed by Paenibacillus Vortex Social Bacterium**

Alexandra Sirota-Madi is a Ph. D. student in the field of Bioinformatics at the Tel-Aviv University, Israel. Alexandra received her master in Genetics from The Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University of Jerusalem, Rehovot in 2006 and bachelor in Computer Science from the College of Management, Academic Studies, Rishon Le-Zion in 2003.

In her research, Alexandra focuses on genome sequencing, comparative genomics and understanding the social behavior of bacterial colonies.

**Igor Grabec, Slovenia – “Application of Intelligent Systems for Modeling of Natural and Artistic Patterns” (sculptures)**

Igor Grabec is Professor Emeritus of the University of Ljubljana, Slovenia with experience on statistical modeling of chaotic phenomena by learning systems and their application in various fields such as industrial manufacturing, economy, medicine and art. From his profession technical physics he published ~450 articles, 17 patents and four books. In addition to this, he is active in sculpturing, painting and writing. On this field he often exhibited his works and recently published a book *Sculptures and Verses*. In relation to this hobby he is also interested in joining science and art by doing research on application of intelligent systems to characterization of artistic patterns. He is a member of “International Academy for Production Engineering – CIRP” as well as “Academy of Sciences and Arts” and “Engineering Academy” of Slovenia.
David Gordon, Israel – “Hands Free” (music & video user interfaces)

David Gordon Born in 1977, lives in Tel Aviv. A musician and a performing artist. He has an MA in music from Bar Ilan University where he majored in composition and musical technologies. His recent work present interactive pieces that incorporate sound, visuals and movement.

Ran Peleg, Ruti Tamir, Israel – “Atom Surprise” (video)

Ran Peleg is a doctoral candidate in the Department of Education in Technology and Science at the Technion. His research focuses on the use of theatrical tools in science education. He is also an actor and producer of plays on science. Ran received his bachelor’s and master’s degrees in chemical engineering from Cambridge University.

Vladimir Loifer, Israel – “Art healing” (digital pictures)

I’m the doctor and the artist. And, as has always been an artist to heal. Naturally, I in my work use the relatively recent advances in science and technology. It is on one side. On the other hand, I’m an artist and use science and technology to create my work in computer graphics or digital art. And the third part, I use my paintings as a medicine. And the most interesting thing is that absolutely no side effects! In this exhibition of my artworks reflect my perception of the universe, man sences and nature. Exhibition of my artworks can be seen always at:

Studies

Geneviève Anhoury is a French director who studied fine arts and photography in London (St Martin’s School of Art and Design) and cinema (Conservatoire Libre du Cinéma Français) in Paris.

For 8 months, over 2001 and 2002, she has been a fellowship holder of the Nipkow Programm, a grant from the European Media Programme for developing film projects in Berlin.

Current project

She is currently developing a series of short documentaries produced by Paris-based production company Le Miroir and co-produced by the CNRS (the National Center for Scientific Research) and Universcience. The series is a scientific take on the positive impact of rot which will air on the web TV universcience.tv during the summer 2011. It is part of the International Year of Chemistry.

Other infos about my work :

She is also the writer/producer/director of a 35mm short film Les Couleurs du Corps (Colours of Bodies), colour, 4mn. Colours of Bodies has won two prizes: the Vision award (Avignon/New York), the Goldmedaille (Cine Art Hamburg) and has been to over 25 other festivals world wide, including: Sydney, Cork, Rotterdam, Tampere (Finland), Molodist (Kiev), Dakino (Rumania), BBC British Short, New York Women, Bradford, Turkey, Foyle, Sitges, Leeds, NY French Shorts, Merano, Premier court Pontault Combault, Milan Creativo, Rencontres Paris/Berlin, Les Armateurs Paris/ Mexico, Bougival...

She has co-wrote and acted in a Finnish comical drama-documentary Haapoja Pariisissa , for the Finnish channel Klo.

She is the winner of Best Film Edited in Camera at the Galloway Video Challenge 2000 (Scotland) with her film, Archie and the Witch.

Her photographic work, exhibited several times in Paris since 1994, includes colour macro-photography of decomposing fruits (exhibitions recommended in the French newspaper Libération and photos published in Nova Magazine).

She is the co-author with Bernard Boubat of the monography of the photographer Édouard Boubat, published in 2004 by La Martinière in France, Abrams in the US, Thames and Hudson in England, Knesebeck in Germany and Contrasto in Italy.

The book won three prestigious prices :

Prix Nadar 2004 (2nd price after L’Afrique à Poings Nus by Philippe Bordas).

Prix Bernier 2004 (best book on art) from the Académie des Beaux Arts.

Price for the Best photo book of 2004, in Germany.
Chezi Poznanski, Israel – “Stories about the Nation and the State of Israel in View of Currency, Coins, Stamps and Songs” (objects exhibition)

• Since 1998 - Lecturer in a unique and funny way, about Israel and Israelis.

• Chairman of the travels commission in IAI within National Workers Organization. This framework included: planning and execution of tours and excursions following by history, heritage tours, sites and landscapes in Israel.

• former chairman and member of the Israel Geographic section in IAI - tracks and challenge.

• responsible for integrating the “Institute of Absalom” in IAI (300 students in 2010).

• member of the board of the “Institute of Absalom” the first Institute of Israel Studies.

• Graduated course of Ministry of Tourism for marketing and management of tourism in Israel.

Svetlana Belinsky, Israel - "Man" (paintings)

I am an artist Svetlana Belinsky. I would like to tell you my story, and why I decided to participate in this Conference.

Nowadays this kind of sentence wouldn't surprise anybody: “I'll take my cell phone to take pictures”. To you, scientists, my astonishment with a cell phone might seem a little naive, but to me as a typical user, in this small device a whole epoch with all scientific achievements is concentrated. Dozens of functions are built into this small device: telephone, calendar, alarm-clock, notebook, photo and video cameras, microphone, radio, Internet, etc. You can reach any person in the whole world and get any information you need!

When my mother was a young girl, she read by candlelight, I remember primus, kerogas, kerosene; a time when nobody had a TV set at home. Today science and technologies reached astounding achievements. Nobody would be surprised by rockets and sputniks in Cosmos or by super-telescopes studying galaxies. MAN will soon land on Mars! The medicine and microbiology achievements are extraordinary: the cardiac and other organs transplantation, a human genome is pervasively transcribed. Isn’t all of this a miracle?

But a MAN was the one who has noticed, has studied, has opened, has deciphered, has described, has invented, and has introduced all these miracles.

How did all this originate? Where is the source of all sciences, art, and culture? All this began with a primitive drawing in a cave, a ritual dance of a hunter, from the elementary arithmetic. A drawing resulted in anatomy, medicine, perspective, geometry; a dance caused music, theater; 1+1+1 resulted in mathematics.

Only MAN with his brain, curiosity, and hard work has come through centuries from these primitive drawings to today's knowledge and super technologies. Times and environment have changed, the countries and civilizations disappear. Only a MAN remains a MAN.
But who will tell about a MAN, his unique inner world, feelings, emotions, and hopes? All these topics are the aim of literature, music, and fine arts.

I am a modest representative of one of the types of arts, and I am trying to tell you, how I understand the world of a MAN and a WOMAN...

Leeya Engel, Israel – "Chemical Cuisine: Looking at a lab through the eyes of a kitchen" (microscope images)

While crafting with fimo, Leeya became enamored with the world of polymers and decided to enter the field of materials science and engineering. Today she is a full time research student in Tel Aviv University’s Materials and Nanotechnology Program under advisors Prof. Yosi Shacham-Diamand and Prof. Slava Krylov. She is currently working on creating an integrated, multi-polymer, micron-scale device. Leeya moved to Israel from New York in 2004 and completed her undergraduate degree in Physics at The Hebrew University of Jerusalem in 2008. She enjoys photography both inside and outside of the lab.

Lionel Wolberger, Israel – “Scalometer (The Hunt)” (graphics)

Lionel is a scholar, engineer, and musician who has published on digital security, computer-based visualizations, and the role of music and intonation in rational discourse. Lionel works at NDS Technologies, Jerusalem for 15 years as a Program Engineer. He graduated Bronx High School of Science and holds degrees in Physics and Music (BA, Cornell University) and musicology (PhD, Wesleyan University). Lionel is a significant contributor to a number of web-based communities including http://dmass.net and http://tensegritywiki.com. His composition "Drawing A Map" is sold by the Smithsonian Institute, USA. He lives in Jerusalem with his wife and three children.
Stephen G. Lipson, Israel – “Topology and Map-coloring in Wood” (sculpture)

I am emeritus Professor of Physics at Technion, where I specialized in cryogenics and optics and taught for 42 years. I joined the faculty of Ort Braude College last year where I teach in the new Optical Engineering discipline.

“Posterauma”

Neri Bloomfield Academy of Design and Education (WIZO), Israel

Graphic design students at the Neri Bloomfield School of Design and Education in Haifa studied various aspects of environmental and sustainability issues affecting our society today. The students familiarized themselves with the public and scientific debates concerned with these issues.

Creating a poignant graphic statement and effecting changes in consciousness and thought patterns cannot exist without intellectual rigor and investigation. The design process becomes a journey of intellectual discovery when the object of study by students is beyond the discipline of design per se.

Visual communication is a vehicle for expressing ideas. By exposing students to the current discussion around environmental conservation, sustainability, scientific issues, unwanted phenomena and processes taking place due to the human impact on the environment we create identification with the subject matter and thus a more committed and responsible message by any given student.

The purpose of this type of exercise is to expose students to written and documentary materials, increase their awareness and enable identification with a topic in question. The second goal is to enhance their ability to communicate via verbal and visual means.

The purpose of these posters is not ornamental and we hope that due to their visual and verbal power they will constitute a fertile ground for discussion, awareness and action.

More info on the project at: www.posterauma.org
mail: info@posterauma.org
Scientific Performance:

Madatech – the Israel national museum of science - Discover the science behind magical phenomena! Nature's elements meet in an extraordinary scientific presentation, demonstrating light, fire, sound, water and color effects.

Musical Performance:

Trio "Atar" (Ofer Shelley – Piano, Tanya Beltser – Violin, Marina Kats - Cello) :
Baroque, Jazz and Blues

THE ATAR TRIO was established in Jerusalem in 1996 by the pianist Ofer Shelley after he finished his studies at the Rubin Academy in Jerusalem.

It is currently one of the busiest chamber ensembles in Israel giving many concerts, participating in series of chamber music, various productions and special musical projects. The ensemble was guided by first rank musicians such as Prof. Binyamin Oren, Prof. David Chen and Prof. Jerome Lowenthal. It has also worked with the Altenberg Trio in Vienna, Austria.

The Atar Trio, working on a permanent basis, strives to reach a multi-cultural audience by giving concerts and developing different programs through private concerts, concerts geared to children and students.

We give over 100 concerts a year in Israel and abroad and our repertoire is broad and many-faceted.

We have performed among other venues at the Israel Museum in , Beit Gavriel, at the Wix Hall in Rechovot, at the Enav C, the music centre at Mishkenot Sha'ananim, the Wise Auditorium . We also participated in series at Ein Hashofet; Kibbutz Ma'abarot etc.

The ensemble is regularly invited to participate in official ceremonies at Yad Vashem, the Hebrew University and the Ministry for Foreign Affairs.

Music Education - The trio is regularly performing for groups from abroad hosted by the Hebrew university and the Jewish Agency with a view to present the achievements of Israeli creativity and culture.

Aside from its central repertoire the ATAR TRIO performs different compositions with additional musicians and important Israeli composers such as Michael Wolpe, Daniel Shalit, Yehzkel Braun, Eran El-Bar and others.

Special Projects:

Among our main projects over the years we would like to emphasize "Eretz- Israel Chamber Music – inspired by Shostakovitch", which came to be in collaboration with the composers Michael Wolpe and Eran El-Bar. This project was subsidized by the ministry for science culture and sports and focused on the performance of Israeli music side by side with the classical works of Shostakovitch. It was presented at the enav Centre in Tel-Aviv and Jerusalem in 2003.

"A light in your window" is performed with the participation of the soprano Yeela Avital and deals with original arrangements for songs which are considered to be Israeli classics and songs especially commissioned. It has been running for two years with great success in all parts of the country and some of them were transmitted through the radio and have been recorded for a disc.

The project "Love and Hate" with the participation of soprano Valeria Ventura is dedicated to Spanish music. It contains original arrangements for songs by De Flla, Granados and others.

In 2001 the Atar Trio has recorded a disc with works by Haydn and Shostakovitch at the Targ Centre in Jerusalem.

"Jewish cabaret" an ensemble of piano, violin and soprano singer
The concert is a gateway to a journey to Jewish music of the early twentieth century in Europe. Jewish folklore as is reflected in the works of the composers of the time—Jews and non-Jews alike—in a period of cultural growth between the two world wars.

Varied music which draws inspiration from synagogue melodies as well as the local cultural environment.

The program includes art and folk songs, chamber music produced during the period and light music from the Yiddish theater and the cabaret.

Works by Yoseph Achron, Kurt Weill, Shostakovich, Schonberg, Bloch and others.

**Performances Abroad:**

In the summer of 2004 the members of the Atar Trio participated in an international festival of chamber music held in Hatberg, Austria where they performed and studied with the Altenberg Trio of Vienna. In the summer of 2006 they played at another festival in the north of Italy.

In the spring of 2005 we toured northern Italy, delegated by the music school "Magnificat".

In the winter of 2007 we shall tour Hungary with "When there is light in your window" and Italy with "Love and Hate".

Visit our website for more information and dates of concerts: [www.atartrio.com](http://www.atartrio.com).
Irena Friedland-piano, Avshalom Sarid-viola, Ilan Shull-clarinet
Seeing Music and Hearing Color "Marc Chagall in Sounds in Colors"

Miss Friedland went on to pursue an active performing career both as soloist and chamber musician and has participated in numerous festivals, chamber concerts and solo recitals in, among others, Israel, France, Germany, Russia, Norway, Belgium, Italy, Holland, Finland, Sweden and the United States.

Ms.Friedland has appeared in Israel with some of the leading orchestras and have released three CD’s for Romeo Records (USA) which were warmly received and critically acclaimed.

Since 2000 Irena Friedland has been intensively involved in developing her new career as a lecturer, concentrating on exploring the various interactions between audio and visual arts, the relationships between sound and color, and between musical compositions and various paintings and sculptures. In the series, called "Seeing Music and Hearing Colors", the projections of paintings and sculptures are accompanied by her own piano playing.
She is lecturing and teaching academic courses regularly, with emphasis on this topic in Israel and abroad.
Ms.Friedland is currently on the teaching faculty at Haifa University (in Music and Multi-Disciplinary Studies departments) and at Tel Aviv University (the Buchmann-Mehta School of Music)
"The Karmiel Orchestra"
Artistic director and conductor - Vladimir Shtukmeyster.

"The Karmiel Orchestra" was founded in 1991 in Karmiel, Israel. The orchestra includes 10-15 musicians, with huge concert experience, and 2 soloists: Julia Suits (soprano) and Iana Katsyf. They perform popular composition in Italian, Russian, English, French, Yiddish and other languages. The orchestra is taking an active part in various festivals and concerts in Israel and abroad.

Public applauded to Karmiel Orchestra in the best halls of Europe: (Belgium, Holland, France, Spain, Germany, Greece, and Belarus), and in U.S.

In 1994 Orchestra won second place in the International Festival-Contest in Dijon, France. In 2000 it took first place in Israel orchestra contest. The orchestra's repertoire is diverse. It includes light classical music, jazz, klezmer (Jewish folk) music, as well as music written by modern composers.