

האקדמיה הלאומית הישראלית למדעים
THE ISRAEL ACADEMY OF SCIENCES AND HUMANITIES



ADAMS

כנס אדאמס לשנת 2013
האקדמיה הלאומית הישראלית למדעים

ADAMS CONFERENCE FOR 2013
The Israel Academy of Sciences and Humanities

ינואר 2013 January



ADAMS
מלגות אדאמס Fellowships

כנס אדאמס

יום שני, ג' בשבט, תשע"ג

מושב בוקר

כיבוד קל	9:30-9:50
פרופ' רות ארנון , נשיאת האקדמיה דברי פתיחה	9:50-10:00
פרופ' איתמר וילנר , חבר אקדמיה, יו"ר ועדת מלגות אדאמס - הקדמה	10:00-10:15
פרופ' עידן שגב , פרופסור לניורולוגיה חישובית באוניברסיטה העברית ירושלים, על "פרויקט המוח האנושי"	10:15-11:00
שאלות ותשובות	11:00-11:15
פרופ' אשר קוריאט , חבר אקדמיה, פרופסור לפסיכולוגיה, אוניברסיטת חיפה, על "איך אנחנו יודעים שאנחנו יודעים?"	11:15-12:00
שאלות ותשובות	12:00-12:15
ארוחת צהריים	12:15-13:15

מושב אחה"צ

פרופ' צבי בן-אברהם , חבר אקדמיה, פרופסור לגיאופיזיקה, אוניברסיטאות תל-אביב וחיפה, על "שבר ים המלח: אתר ייחודי בעולם"	13:15-14:00
שאלות ותשובות	14:00-14:15
עודד ברגר-טל , מלגאי אדאמס, על "התמודדות עם סביבה לא מוכרת: היחס בין רכישה וניצול של ידע"	14:15-14:45
שאלות ותשובות	14:45-15:00

ADAMS CONFERENCE

Monday, January 14, 2013

Morning Session

Refreshments in Lobby	
Prof. Ruth Arnon , President of the Academy – Opening Remarks	9:50-10:00
Prof. Itamar Willner , Academy Member, Chair of the Adams Committee – Introduction	10:00-10:15
Prof. Idan Segev , Professor of Computational Neuroscience at the Hebrew University, on "The Human Brain Project"	10:15-11:00
Questions and Answers	11:00-11:15
Prof. Asher Koriat , Academy Member, Professor of Psychology at the University of Haifa, on "How We Know That We Know?"	11:15-12:00
Questions and Answers	12:00-12:15
Lunch	12:15-13:15

Afternoon Session

Prof. Zvi Ben-Avraham , Academy Member, Professor of Geophysics, Tel- Aviv and Haifa Universities on "The Dead Sea Fault : a Unique Global Site"	13:15-14:00
Questions and Answers	14:00-14:15
Oded Berger-Tal , Adams Fellow, on "Confronting Novel Environments: The Trade-off Between Exploration and Exploitation"	14:15-14:45
Questions and Answers	14:45-15:00

Greetings from

Professor Itamar Willner
Academy Member, Chair of the
Steering and Selection Committee



As Chairman of the Academic Committee of the Adams Fellowship Program I am pleased to welcome you. The existence of Israel rests on three sturdy inter-linked legs. One is the security leg, the second, the social leg of equal opportunities and the third leg is the education. Israel is poor in natural resources but a very rich country with highly motivated blessed brains. Without skilled scientists and engineers, no Iron Dome or anti-rocket Chetz systems could have been developed, and without an impressive education program, the integration of new immigrants and cultures into the Israeli society would be impossible.

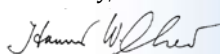
Although Israel is a small country, with a few academic institutions, it plays a central role at the highest international level, and Israel is valued for its achievements at the edge of modern science. This is reflected by the pioneering and creative research conducted in Israel in biology, chemistry, physics, mathematics, computer science, medicine and engineering. No other country in the world has accomplished comparable achievements per capita. The secret for this success is the young generation of wonderful, highly talented and motivated students. A fraction of these blessed students are sitting in this room, and together with your other gifted colleagues, you provide the intellectual foundations for excellent research. You represent the future generation of leading Israeli scientists.

Unfortunately, we are witnessing from time to time obstacles to the development of science in Israel, reflected by budget cuts and under-appreciation of the significance of science in the development of the State. The academic community in Israel reveals, however, the strength to overcome these temporary perturbing events.

The Adams Fellowships Program represents a unique effort to encourage the very best young students in their scientific careers. As Chairman of the Committee, I must confess that we face every year the hard job of selecting the best, and I would like to thank the Committee members for their efforts and support. The Adams Fellowships Program aims to provide the financial support to allow students to devote full time to their Ph.D. research. During the years, the Adams Fellowships Program has not only provided the financial backing to the fellows, but has become a scientific and social forum for exchange of ideas and social cooperation. This is reflected by the annual Adams Conference that combines presentation by well-established scientists and Adams fellows, and by an annual field trip of the Adams fellows (this year to the Soreq Nuclear Center and the Historical Ayalon Institute, Rehovot).

I would like to wish all the Adams fellows success in their research, and I do hope that the Adams forum will promote and expand the research in Israel. You, Adams fellows, are the future of science in Israel. Last, but not least, I would like to use this opportunity to thank Batsheva Shor for her dedicated managing of the Adams Fellowships Program. I truly believe that the Adams Fellowships Program has a major impact in advancing science in Israel, and I look forward to the future support of Adams family and the Israel Academy of Sciences.

Sincerely,



Itamar Willner



Prof. Idan Segev

Idan Segev is the David & Inez Myers Professor in Computational Neuroscience and former director of the Interdisciplinary Center for Neural Computation (ICNC) at the Hebrew University of Jerusalem, where he received his B.Sc (1973) in Math and Ph.D (1982) in experimental and theoretical neurobiology.

He initiated the prestigious international EU course in Computational Neuroscience (starting in Crete, Greece then in Trieste Italy and presently in Friburg, Germany). His work is published in the top journals such as Science, Nature, PNAS and he received several awards including "best teacher" in international brain-courses.

His research team utilizes computational and theoretical tools to study how neurons, the elementary microchips of the brain, compute and dynamically adapt to our ever-changing environment. In recent years, his group worked jointly with several experimental groups worldwide in an endeavor to model a whole piece of the mammalian cortex with the ultimate goal to unravel how local fine variations within the cortical network underlie specific behavioral function and may give rise to certain brain diseases or to a healthy and "individual" brains.

Idan Segev takes a keen interest in the connection between art and the brain and recently co-edited an "Artists" book with original etchings by ten top Israeli artists prompted by an encounter with ICNC researchers.



Prof. Asher Koriat

Asher Koriat was born in Meknes, Morocco. He has completed his BA and MA studies at the Hebrew University of Jerusalem in Psychology and Philosophy, and received his Ph.D. from the University of California, Berkeley. He taught at the Hebrew University in Jerusalem, and has been a member of the Department of Psychology at the University of Haifa since 1977. He is married to Dr. Amalia Koriat, a Clinical Psychologist and Psychoanalyst.

Prof. Koriat was among the founders of the Institute of Information Processing and Decision Making (IIPDM, [HYPERLINK "http://iipdm.haifa.ac.il/"](http://iipdm.haifa.ac.il/)<http://iipdm.haifa.ac.il/>), and has been the Head of the Institute since 1993. The Institute operates as a "Research Kibbutz", providing the research infrastructure for 9 senior researchers in all areas of cognitive psychology, as well as a large number of graduate students. All researchers and students are equal members, using all research facilities on a time-sharing, first-comes first-served basis.

Prof. Koriat has won the Israel Prize in Psychology (2002) and the Rothschild Prize in the Social Sciences (2005), and was elected to the Israel National Academy of Sciences and Humanities (2002). He has also received the Humboldt Research Award from Max-Planck, Germany, and the Oswald-Külpe Award for the Experimental Study of Higher Mental Processes, University of Würzburg.

Prof. Koriat's research has covered a wide range of topics in cognitive psychology, including memory processes and organization, metacognitive monitoring and control processes, reading and text-processing, and mental representations and their transformations. Some of his recent work on metacognition has touched upon such topics as subjective experience and consciousness, intuition, and the interaction between conscious and unconscious processes in human thought processes and behavior. Prof. Koriat has published in the major scientific outlets in Psychology, and has served on the Board of most leading journals in his field.



Prof. Zvi Ben-Avraham

Professor Zvi Ben-Avraham is the head of the Minerva Dead Sea Research Center in Tel-Aviv University. He is also the founding director of the Charney School of Marine Sciences at University of Haifa and the head of the newly created Israel Center for Mediterranean Sea Research. In addition, he holds the Max Sonnenberg Professor of Marine Geosciences in the University of Cape Town.

Ben-Avraham received his Ph.D. in Massachusetts Institute of Technology and Woods Hole Oceanographic Institution (Marine Geophysics) in 1973. Since then he gained extensive academic experience at various universities in the U.S. and Europe. He conducted scientific studies in the Atlantic, Pacific and Indian Oceans, the Mediterranean, the Red Sea, the Gulf of Elat, the Dead Sea and the Sea of Galilee.

A partial list of Ben-Avraham's Honors and Awards include Fellow of the Geological Society of America and the American Geophysical Union, Member of the Israel Academy of Sciences and Humanities, Academia Europaea, Heidelberg Academy of Sciences and the Netherlands Academy of Arts and Sciences, recipient of the Israel Prize and of the L.Meitner-A.v. Humboldt Research Award. Professor Ben-Avraham had published over 230 publications in scientific journals and ten books and special issues as author and editor.



Oded Berger-Tal

Oded is a PhD student at the Mitrani Department of Desert Ecology, Ben-Gurion University of the Negev, under the supervision of Prof. David Saltz.

Being a passionate admirer of science as well as of nature conservation, Oded was dismayed to discover that in many cases, there is still a large gap between scientific research and conservation practice. With this in mind Oded devoted his B.Sc. at the Hebrew University and his M.Sc. at Ben-Gurion University to acquire a strong theoretical ecology background. He also obtained extensive experience in applying this theoretical knowledge in the field, working as a research assistant on a variety of taxa, in Australia, Africa and Israel.

Oded's PhD research has a strong theoretical and mathematical foundation, and at the same time its goals are applied. By studying the effects of learning and exploration on the behavior of reintroduced large mammals in Israel, he aims to improve the management and reintroduction "tool-box" for endangered species both in Israel and globally.

Oded has devoted much of his academic career to studying behavioral processes that influence conservation outcomes and is one of the leading figures of the emerging discipline of conservation behavior, a field that aims to apply behavioral ecology knowledge in conservation and management. He has published a unifying theoretical framework for conservation behavior in the journal "Behavioral Ecology", organized a symposium in the International Congress for Conservation Biology, and is currently editing a framework-based conservation behavior volume for Cambridge University Press. He also started cooperating with the IUCN (International Union for the Conservation of Nature), the world's oldest and largest global environmental network, to make crucial behavioral knowledge easily available for conservation practitioners via the IUCN red list of threatened species, a project that could have tremendous impact on the conservation of species world-wide.

Oded has already published 13 papers, and has served as an editor (along with Avi Braun, a fellow Adams fellow) to a special issue of the Israel Journal of Ecology and Evolution, dedicated in full to 'the makings of good science'.

Oded plans to continue his work on integrating science (behavioral ecology in particular) and nature conservation, in order to contribute to conserving Israel's declining fauna and flora and protect its magnificent diversity of ecosystems, working with, and not against the interests of us human beings.

December 2012 Field Trip to Rehovot

