

ADAMS
תלגות אדאמס Fellowships

האקדמיה הלאומית הישראלית למדעים
The Israel Academy of Sciences and Humanities



ADAMS CONFERENCE FOR 2014

כנס אדאמס לשנת 2014

פברואר 2014 February

ADAMS CONFERENCE **כנס אדמאס**

יום ראשון, כ"ג אדר א', תשע"ד

Sunday, February 23, 2014

	Morning Session	מושב בוקר
9:30-10:00	Refreshments in Lobby	כיבוד קל
10:00-10:10	Prof. Ruth Arnon, President of the Academy – Opening Remarks	פרופ' רות ארנון, נשיאת האקדמיה דברי פתיחה
10:10-10:20	Prof. Amiram Grinvald, Academy Member, Chair of the Adams Committee – Introduction	פרופ' עמירם גרינוולד, חבר אקדמיה יו"ר ועדת מלגות אדמאס - הקדמה
10:20-11:05	Prof. Ben-Zion Shilo, Professor of Molecular Genetics, The Weizmann Institute of Science, on "Life's Blueprint: Principles of Embryo Design"	פרופ' בן-ציון שילה, פרופסור לגנטיקה מולקולארית, מכון ויצמן למדע, על "עקרונות קביעת מבנה העובר"
11:05-11:15	Questions and Answers	שאלות ותשובות
11:15-12:00	Prof. Daniel Weihs, Academy Member, Professor of Aerospace Engineering, The Technion, on "Learning from Nature – An Engineer's Perspective"	פרופ' דניאל ויס, חבר אקדמיה פרופסור לאווירונאוטיקה, הטכניון, על "ללמוד מהטבע - ממבטו של מהנדס"
12:00-12:10	Questions and Answers	שאלות ותשובות
12:10-13:30	Lunch	ארוחת צהריים
	Afternoon Session	מושב אחה"צ
13:30-15:00	Poster Competition	תחרות פוסטרים
15:00-15:45	Prof. Ben-Ami Shillony, Academy Member, Professor of Modern History at the Hebrew University of Jerusalem, on "Japanese Aesthetics: Look on the Jar, not in its Contents"	פרופ' בן-עמי שילוני, חבר אקדמיה פרופסור להיסטוריה של העת החדשה, האוניברסיטה העברית בירושלים, על "האסתטיקה היפנית - הסתכל בקנקן ולא במה שיש בו"
15:45-16:00	Questions and Answers	שאלות ותשובות
16:00	Prizes	פרסים



Greetings from

Prof. Amiram Grinvald

Academy Member, Chair
Steering and Selection Committee

I am delighted to extend my warm greetings to all of the Adams fellows. It is well known that the very high level of science in Israel is in the realm of basic research.

The nucleus for this success clearly revolves around the diligent students who make up the front line of these research efforts. Israel is blessed with a wonderful cadre of top-notch, well informed and highly motivated and mature students, who not only provide the intellectual infrastructure for basic research, but also represent future generations of senior scientists. Not surprisingly, Israeli postdoctoral researchers are highly in demand also in the USA and other leading nations excelling in research.

The Adams Fellowship Program aims to strengthen this important research front by encouraging the very best students to go into science, by providing the very best financial backing, allowing these students to devote their full time to research. In addition it is creating a forum for discussing scientific issues and exchanging ideas. For this reason, the Adams Conference represents an important element in this program. This is especially true in today's science arena where multi-disciplinary cooperation is an essential ingredient for advancing research.

I would like to wish all of the participants success in their research and hope that this forum will help in promoting additional collaborations and multidisciplinary research. I would also like to take this opportunity to thank my predecessor, Prof. Itamar Willner, for the excellent work he did in maintaining the highest standards of the Adams Fellowship Program.

I believe that this program will make a major contribution to Israeli science, and I am looking forward to working together with the Adams Family, the Israel Academy of Sciences and the many wonderful students and mentors involved in reaching this goal.

Sincerely,



Amiram Grinvald



Prof. Ben-Zion Shilo

Professor of Molecular Genetics
The Weizmann Institute of Science

Prof. Shilo was born in Jerusalem in 1951. He completed his BSc in Biology and PhD in Genetics at the Hebrew University (1978), and post-doctoral studies at MIT (1981).

Towards the completion of his work in Cambridge, he demonstrated, for the first time, that DNA sequences in the vertebrate genome encoding proto-oncogene proteins are conserved in the genome of the fruit fly (*Drosophila*). He devoted most of his academic career to the utilization of sophisticated genetic techniques to unravel the components and regulation of the signaling pathways he discovered and their role in normal development. The EGF receptor and its signaling cascade represented his primary focus of interest. In recent years he has been collaborating with computational biologists to discover the quantitative basis for the accurate patterning of embryos, and is also studying the role of the actin protein in tissue formation.

At the Weizmann Institute he served as the head of the Department of Molecular Genetics, and Head of the Council of Professors and the Committee for Tenure and Promotion of Professors. As Dean of Biochemistry he facilitated the recruitment of 30 new faculty members in the Life Sciences.

He has been a visiting professor at Yale University and Stanford, and a fellow at the Radcliffe Institute for Advanced Study at Harvard. His research achievements won him prizes, including the Bruno Prize. He is a member of the European Molecular Biology Organization and served on its council. He also serves on the editorial board of journals including *Development*, *The EMBO Journal* and *Molecular Systems Biology*.



Prof. Daniel Weihs

Academy Member, Professor
of Aerospace Engineering,
The Technion

Prof. Daniel Weihs (PhD Technion, 1971) is Head of the Technion's Autonomous Systems Program, including all aspects of advanced robotics. He is one of less than 10 Distinguished Professors at Technion. He was Provost (1998-2000), Dean of Aerospace Engineering (1987-1989), Dean of the Graduate School (1996-1998) and Director of the Neaman Advanced Research Institute (1990-1995). He is Chairman of the Israel National Committee for Space Research since 2005 and has been a member of the Steering Committee of the Israel Space Agency 1987-2007. Most recently he has been Chief Scientist of the Israel Ministry of Science & Technology.

Prof. Weihs is a Member of the Israel Academy of Sciences and Humanities, Foreign Member of the US National Academy of Engineering, Fellow of the American Physical Society and received an Honorary Doctorate from Ben-Gurion University in Beersheva, Israel.

Prof. Weihs is on the Board of an Israeli Venture Capital Fund (TEUZA) and has been on the boards of companies such as Israel Aircraft Industries, Beit Shemesh Engines, Israel Limnological and Oceanographic Research Co. and others. He is Chairman of the Interuniversity Marine Institute in Eilat, is a Member of the National Committee for Research & Development (MOLMOP) and has been on the Board of Governors of Ben Gurion University since 1988.

He has published more than 160 scientific papers and presented over 120 talks, at international conferences. His education has been in Aeronautical Engineering (B.Sc, 1964, M.Sc 1968, PhD, 1971), all degrees received at the Technion, Israel Institute of Technology.

He has been active in the area of aerodynamics for over 40 years. His work on Space Research, includes study of sloshing in satellites and trajectories. He worked in jet engine design and wind tunnel design and testing, including development of intakes for two indigenous fighter aircraft, and has been active in unmanned aircraft development since 1974.

In another area, Prof. Weihs worked on spraying techniques for painting and combustion, including contributing to the development of "Reactive Armor" against shaped charge penetration. He has been active in the field of bioinspired engineering and the biomimetics of bird insect, fish and marine mammal locomotion for over 35 years and published over 80 papers both on the theoretical and experimental aspects of biomimetic research, including design of floating nano-UAVs based on Dandelion seeds.



Prof. Ben-Ami Shillony

Academy Member, Professor of Modern History,
The Hebrew University of Jerusalem

Ben-Ami Shillony is Professor Emeritus of
Japanese History and Culture at the Hebrew

University of Jerusalem, member of The Israel Academy of Sciences and Humanities, and honorary president of the Israeli Association of Japanese Studies. He was born in Poland in 1937 and immigrated to Israel in 1948. He studied history at the the Hebrew University of Jerusalem, where he wrote his Master thesis on the dropping of the atomic bombs on Hiroshima and Nagasaki. This made him interested in Japan. In 1965 he went to Japan on a scholarship from the Japanese Ministry of Education and studied for two years Japanese language and history at the International Christian University in Tokyo. In 1967 he went to Princeton University in the United States, where he studied Japanese and East Asian history under Professor Marius B. Jansen. He wrote his doctoral dissertation on the February 1936 military revolt in Japan. After receiving his Ph.D. degree from Princeton in 1971, he returned to Israel and taught Japanese history and culture at the Hebrew University of Jerusalem for 35 years until his retirement in 2006. He also taught, lectured and did research at the universities of Harvard, Oxford, Cambridge, Berkeley, Tokyo, Colorado, and Haifa.

At the Hebrew University, Shillony served as chairman of the Department of East Asian Studies (1979-1984, 1996-2000), as chairman of the Harry S. Truman Research Institute for the Advancement of Peace (1987-1990), as member of the Standing Committee of the Senate (2001-2005), as director of the Joseph Saltiel Center for Pre-academic Studies (1977-1979), and as chairman of the academic committee of the Harry S. Truman Research Institute for the Advancement of Peace (1999-2003). His class "Introduction to Japanese History and Culture" was the largest class at the Hebrew University (once numbering 680 registered students). In 2000 he was appointed Louis Frieberg Professor in East Asian studies. In 2007 an international conference on Japan was held in his honor at the Hebrew University of Jerusalem. He continues to be a commentator on Japan and Korea in the Israeli mass media.

Shillony was twice awarded the Michael Milken Prize for Excellence in Teaching (1996, 2005). In November 2000, the Japanese emperor awarded him the Order of the Sacred Treasure, Gold and Silver Star (Kun-nitō Zuihōshō). In October 2010 he received the Japan Foundation Award for that year and was granted an audience with the emperor and empress. In 2012 he was elected member of The Israel Academy of Sciences and Humanities. In 2013 his book *The Secret of Japan's Strength* (the Japanese version of his Hebrew book *Japan as I See It* with additional articles) was awarded the prize of the best book published that year in Japan promoting international understanding.

Shillony's research includes twentieth-century Japan, the Jews and the Japanese, and the institution of the Japanese emperor. He has written many books and articles on these and other subjects in English, Hebrew and Japanese. His books in Hebrew have become the standard textbooks on Japanese history and culture in Israel.



Pictures of Adams Seminar, July 2013



Design: Studio Schneider | Photographer: Michal Fattal

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