



האקדמיה הלאומית הישראלית למדעים
المجمع الوطني الإسرائيلي للعلوم والآداب
THE ISRAEL ACADEMY OF SCIENCES AND HUMANITIES



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Driving Israel's Scientific Excellence

The Israel Academy of Sciences and Humanities is tasked with promoting Israel's scientific excellence; advising the government on scientific matters of national interest; maintaining active contact with the scientific and scholarly community in Israel; cultivating, advancing and maintaining relationships with the international scientific community; and publishing scholarly research of lasting merit.

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בירושלים



A Note from the President



The Israel Academy of Sciences and Humanities, the foremost representative of Israel's scientific community, enthusiastically promotes the country's scientific and scholarly research. Since its establishment six decades ago, the Academy has vigorously fostered and devotedly nurtured Israeli academic excellence, advised the government on matters related to science and technology, strengthened international scientific ties, and presented Israeli research accomplishments to wider domestic and global audiences.

Over the past year, the global pandemic has exposed many challenges, to our health, and our social and economic wellbeing. It has demonstrated to the entire world the importance of scientific research and the significance of international scientific cooperation.

The Academy continues to be an active partner for binational scientific workshops, with venues alternating between Israel and the partner country, generally on an annual basis.



Such meetings are the central feature of agreements signed with Germany, the USA, China, France, the UK, India, and Italy. Agreements with over 30 additional academies entail support for various scientific activities.

In 2019, the Academy signed a historic Agreement for Scientific Cooperation with the U.S. National Academy of Sciences (NAS) in the presence of the president of the State of Israel, Reuven (Ruvy) Rivlin, and Dr. Marcia McNutt, president of the NAS. In 2020, the Academy renewed its Agreement for Scientific Cooperation with the British Royal Society during a visit by then RS President Prof. Sir Venki Ramakrishnan, which supports joint activity for another five years.

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The Academy's investment in young researchers was further expanded in 2018 with the launch of a Postdoctoral Fellowship program bringing excellent researchers from around the world to join Israel's research laboratories, and the establishment of the Blavatnik Awards for Young Scientists in Israel in 2017. In 2020, the Academy established an Emergency Fund for outstanding Israeli Post-Doctoral fellows whose fellowships abroad were affected by the COVID-19 crisis.

An emphasis is being laid on the Academy's mission to cultivate Israel's scientific research, improve its standing in the international community, foster scholarly research in the humanities, expand the role of women in science, promote young scholars, and open the Academy's activities to the public at large.

In response to the global pandemic, the Academy established an advisory committee to advise on Israel Academy activities relating to COVID-19. Within its mandate, two committees were established to deal with key long-term issues at the national level. One is examining the role of the academic system in supporting decision-making bodies in Israel, and their expression in



times of national crisis; the other is examining the balancing of rights and needs in times of national crisis. In addition, Academy members have joined a number of international working groups and advisory committees on COVID-19 related issues, and the Israel Young Academy worked tirelessly to bring the plight of young researchers to decision makers.

The global health crisis has served as a sobering reminder of the critical importance of international scientific cooperation, and shown us that the relationships we cultivate between our institutions, and the personal connections we build alongside them, are crucial to advancing science and scholarship and leading the way to a more optimistic future.

Nili Cohen
Prof. Nili Cohen



Presidents of The Israel Academy of Sciences and Humanities

(1) Prof. Martin Buber 1960-1962 (2) Prof. Aharon Katzir 1962-1968 (3) Prof. Gershom Scholem 1968-1974
(4) Prof. Aryeh Dvoretzky 1974-1980 (5) Prof. Ephraim Urbach 1980-1986 (6) Prof. Joshua Jortner 1986-1995
(7) Prof. Jacob Ziv 1995-2004 (8) Prof. Menahem Yaari 2004-2010 (9) Prof. Ruth Arnon 2010-2015
(10) Prof. Nili Cohen 2015-



The Israel Academy of Sciences and Humanities

The Founding of the Academy

In 1954, six years after the founding of the State of Israel, then Minister of Education, Prof. Ben-Zion Dinur and a committee of prominent scientists called for the establishment of two independent national academies to serve as national foci for Israeli scholars in the natural sciences and the humanities.

In November 1957, Prime Minister David Ben-Gurion endorsed the creation of a single, combined national academy. Following extensive preparations, Prof. Martin Buber proclaimed the establishment of The Israel Academy of Sciences and Humanities on December 27, 1959. The Academy was chartered by law in 1961, and Prof. Buber went on to serve as the Academy's first president.

In 2010, the law was amended to reflect the expanding role of the Academy in advising the government on activities relating to research and scientific planning of national significance. It now mandates that the Academy submit to the government of Israel a triennial review of the state of Israeli science and its standing in comparison to other countries.



Academy Council

The Academy is comprised of a Sciences Division and a Humanities Division sharing equal responsibility in conducting the Academy's affairs. It is administered by a Council consisting of the Academy's president, the vice president, the immediate past president, the chairpersons of the Sciences and Humanities Divisions, and the executive director.

The Academy's president is appointed by the President of the State of Israel, upon the recommendation of the Academy. The governing regulations of the Academy are self-determined, in consultation with the Ministry of Science and Technology.

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Prof. Nili Cohen

President

Prof. Ruth Arnon

Outgoing President

Prof. Sergiu Hart

Chairperson, Humanities Division

Prof. David

Harel

Vice President

Prof. Yadin Dudai

Chairperson, Sciences
Division

Ms. Galia Finzi

Executive Director



Academy Council

(1) Prof. Nili Cohen (2) Prof. David Harel (3) Prof. Ruth Arnon (4) Prof. Yadin Dudai (5) Prof. Sergiu Hart (6) Ms. Galia Finzi



Goals of the Academy

The goals of the Israel Academy of Sciences and Humanities are:

- 1. To enlist as its members distinguished scholars and scientists resident in Israel**
- 2. To advise the government on activities relating to research and scientific planning of national significance**
- 3. To cultivate and promote scholarly and scientific endeavor**
- 4. To maintain contact with parallel bodies abroad**
- 5. To ensure the representation of Israeli scholarship and science at international institutions and conferences**
- 6. To publish writings calculated to promote scholarship and science**
- 7. To engage in any other activity that serves the aforesaid objectives**



Electing Distinguished Scholars and Scientists to the Academy

The Academy is composed of a Sciences Division and a Humanities Division, currently comprising approximately 135 of Israel's most distinguished scientists and scholars. Each Division is restricted to 40 members, but members over 75 years of age, while remaining full members in every way, are not counted in this number.

Each year, the Academy elects up to five eminent Israeli scholars and scientists as new members in each Division. Candidates for membership are proposed on the basis of written recommendations by at least three members of the particular Division. A secret ballot is held in each Division to nominate the candidates who will be submitted to the Academy's General Assembly for election.

Academy members include Nobel laureates, Turing Award winners, Japan Prize winners, a Fields Medalist, and many recipients of other prestigious international awards, such as the Wolf Prize, the Abel Prize, the Holberg Prize, the BBVA Frontiers of Knowledge Award, and the Presidential Medal of Freedom. Numerous Academy members are laureates of Israel's highest honors, such as the Israel Prize, the EMET Prize for Art, Science and Culture, and the Rothschild Prize. Many Academy members are recipients of honorary degrees from distinguished universities worldwide and are members of prestigious foreign academies of science, humanities, and engineering.

A full list of the members of the Israel Academy appears on the Academy's website (www.academy.ac.il/english).



The following Academy members are recipients of these major awards.

Nobel Prize: [1] Prof. Yisrael Aumann, [2] Prof. Aaron Ciechanover, [3] Prof. Avram Hershko, [4] Prof. Dan Shechtman, [5] Prof. Ada Yonath; **Turing Award:** [6] Prof. Shafrira Goldwasser, [7] the late Prof. Amir Pnueli, [8] Prof. Michael Rabin, [9] Prof. Adi Shamir; **Fields Medal:** [10] Prof. Elon Lindenstrauss; **Holberg Prize:** [11] the late Prof. Shmuel Noah Eisenstadt; **Abel Prize:** [12] Prof. Hillel Fusternberg; **Japan Prize:** [13] the late Prof. Ephraim Katzir [9] Prof. Adi Shamir; **BBVA Frontiers of Knowledge Award:** [6] Prof. Shafrira Goldwasser [9] Prof. Adi Shamir [14] Prof. Jacob Ziv; **IEEE Medal of Honor:** [14] Prof. Jacob Ziv; **Shaw Prize:** [15] Prof. David Kazhdan; **Albert Lasker Basic Medical Research Award:** [2] Prof. Aaron Ciechanover, [3] Prof. Avram Hershko.





Cultivating and Promoting Scholarly and Scientific Endeavors

The Academy is a national leader in defining Israel's scientific needs and in ensuring appropriate national coordination and funding to promote Israeli academic excellence.

In order to advance Israeli science, the Academy's two divisions establish various advisory committees, either as internal initiatives or in response to government requests. These committees review scholarly and scientific topics and propose knowledge-based recommendations about future investment and strategies to address those topics. One of the Academy's major tasks is to advise the government on scientific research and planning of national significance and, in this capacity, to periodically review and evaluate the country's scientific activities.

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Perhaps the most important contribution of the Academy, impacting the very foundations of basic scientific research in Israel, was the 1986 report, *Scientific Research Activity in Israel*, that catalyzed the establishment of the Israel Science Foundation.

A significant activity of the Academy is to issue science policy reports and initiate the assessment of scientific research. Other activities include distributing awards to outstanding scholars and arranging intellectual exchange activities. A detailed account of each division's activities is presented in the following sections.

The Academy's president serves *ex officio* as chairperson of the Board of the Israel Science Foundation, Israel's preeminent source of competitive grants for basic research, and as chairperson of the Advisory Board of the National Library of Israel.

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The Sciences Division

The Academy's Sciences Division comprises approximately 70 members, leading researchers in biology, chemistry, computer science, engineering, geology, life sciences, mathematics, medicine, and physics. The Division, headed by Prof. Yadin Dudai, promotes basic research on various topics at the national level by establishing advisory committees of experts in particular fields (e.g., bioethics, flora and fauna, high energy physics, marine sciences, nuclear physics, synchrotron radiation, etc.). Each of these committees assesses Israel's comparative standing in the field under review and recommends what steps, if any, should be taken to further strengthen it.

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Division activities also include hosting lectures by top-ranking scientists—foremost among them being the prestigious annual Albert Einstein Memorial Lecture—and organizing other scientific conferences and workshops, as determined by the Division.

In June 2018 the Sciences Division marked the 70th anniversary of the State of Israel by hosting a major international conference on "The Grand Challenges in the Chemical Sciences", which included a number of Nobel laureates, and recipients of other prestigious awards.



Initiatives in the Sciences

The Annual Albert Einstein Memorial Lecture

Since 1980, the Israel Academy has presented a prestigious series of annual lectures in memory of Prof. Albert Einstein. The lectures, delivered by eminent scientists and scholars, have spanned a broad spectrum of subjects in physics, chemistry, the life sciences, and mathematics. Among those who have given the lecture in recent years are Prof. Peter Sarnak, Prof. David Reitze and Prof. Chi-Huey Wong.

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From Left: Prof. Itamar Willner, Academy President Prof. Nili Cohen, Prof. Peter Sarnak, Prof. Alexander Lubotsky, Prof. Gil Kalai, Prof. Joseph Bernstein, Prof. Hillel Furstenberg.



European Organization for Nuclear Research (CERN)

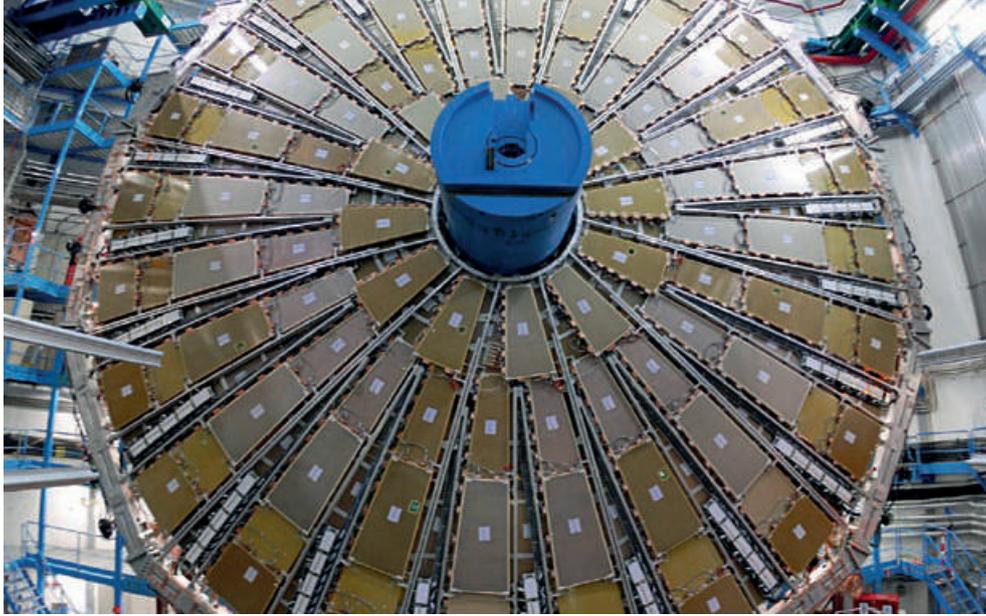
The European Organization for Nuclear Research (CERN), located in Geneva, Switzerland, is the leading particle accelerator worldwide for the study of elementary particles. The Israel Academy's Committee on High Energy Physics played a key role in the process that led to Israel becoming a full member of CERN in 2014.

The Committee, which in the last decade was led by Prof. Eliezer Rabinovici, oversees Israel's scientific ties with CERN. Its mandate is to monitor the research activities in the field of high energies carried out by Israeli researchers at CERN, to link between CERN and the activities carried out at Israeli universities, and to recommend ways to cultivate Israel's scientific connections at the facility. The committee has been led by Prof. Marek Karliner since January 2021.

Prof. Halina Abramowicz of Tel Aviv University, member of the Academy's Committee on High Energy Physics, chairs the CERN European Strategy Group, which is tasked with guiding the direction of the field to the mid-2020s and beyond.



From Left: Prof. Yaffa Zilbershats, head of Israel's Council for Higher Education's planning and budget committee, Academy president Prof. Nili Cohen, and Prof. Dave Charlton, of the international ATLAS Collaboration at CERN in 2017



The muon detector on both endcaps of ATLAS, built in Israel by scientists from the Weizmann Institute, Tel Aviv University and the Technion

Israeli scientists from the Weizmann Institute, Tel Aviv University and the Technion played integral roles in designing, building, operating and upgrading ATLAS, one of the two major detectors at the LHC (Large Hadron Collider) at CERN. Dr. Shikma Bressler of the Weizmann Institute currently leads the group of Israeli scientists.

Israeli scientists also contributed to creating CERN's GRID analysis platform. The Israeli contribution to analysis played a key role in the discovery of the Higgs boson elementary particle in 2012, and is also significant in current searches for other new particles.





From Left: Chair of Israel's National Committee on Synchrotron Radiation Prof. Yuval Golan, Chair of the ESRF Council Prof. Miguel Ángel García Aranda, Prof. Moshe Deutsch, ESRF Director-General Prof. Francesco Sette, and Israel Academy Director Galia Finzi sign the renewal of the arrangement between the Israel Academy and the ESRF (Picture courtesy of ESRF)

European Synchrotron Radiation Facility (ESRF)

Israel joined the European Synchrotron Radiation Facility (ESRF) in Grenoble, France, as an associate member in 1999, and the Academy recently extended its membership for five more years. This important agreement allows Israeli scientists direct access to one of the world's premier synchrotron mega-facilities. Israel is an avid user of the facility, and has representatives on the ESRF Council and its committees. Of note, Academy member Prof. Ada Yonath's Nobel Prize-winning research was performed mostly at the ESRF.

The Israeli National Committee on Synchrotron Radiation, established by the Academy, and headed by Prof. Yuval Golan, works to promote research in this field and serves as the primary provider and distributor of synchrotron radiation information among Israeli scientists. As part of its responsibilities, the committee is a member of the European Synchrotron Users Organization (ESUO).

The committee has organized a number of related events, such as a joint workshop between the Academy and the ESRF in 2018 and a joint workshop with DESY & European XFEL on Cooperation in Photon Science in 2019.

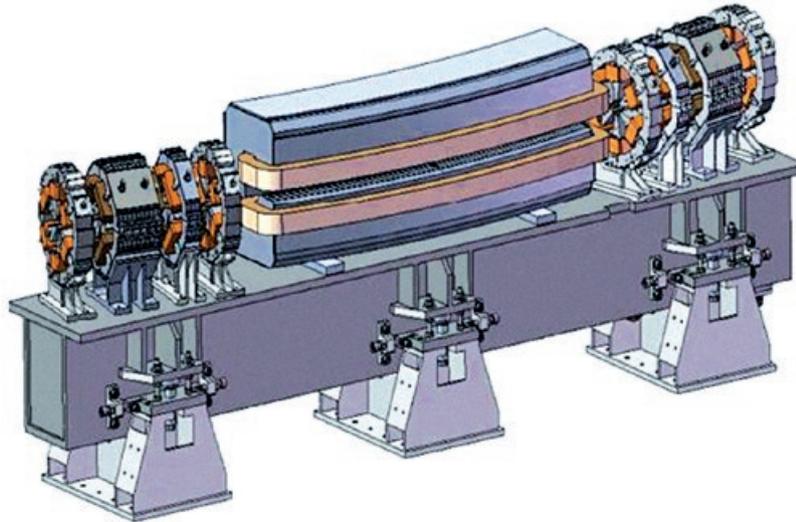
< The ESRF facility in Grenoble, France. Image courtesy of ESRF

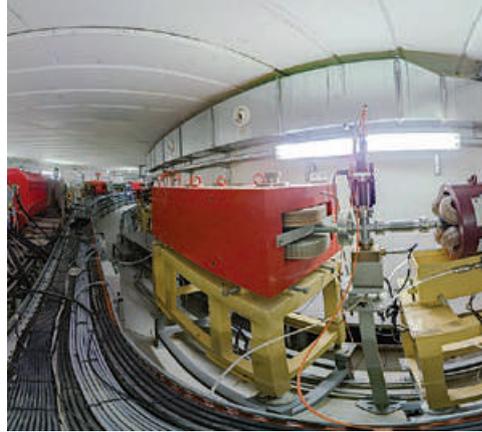


Synchrotron-light for Experimental Science and Applications in the Middle East (SESAME)



SESAME is a synchrotron-based research facility established in Jordan with the participation of countries in the region, including Israel as a founding member, to advance research in this field via regional scientific collaborations. As such, it serves as a potential scientific bridge between Israel and other countries in the region, such as Egypt, Jordan, Palestinian Authority, Turkey, Iran, Pakistan and Cyprus. Research in the facility facilitates regional progress in physics, chemistry, material sciences, biology, engineering, and other scientific fields.





Images courtesy of SESAME (www.sesame.org.jo)

The Israel Academy's National Committee on Synchrotron Radiation has been accompanying the project from the very early stages of its inception.

The construction of SESAME was completed in 2017, and today it is the leading particle accelerator in the Middle East, available for the collaborative projects of researchers from the region. A number of Israeli researchers conduct research and collaborations there at present. In 2020, Prof. Eliezer Rabinovici was elected, for the second time, to serve as Vice President of the SESAME Council.

Natural History Collections

The Academy recognizes the importance of maintaining Israel's unique natural history collections; it promotes the scientific activity that they generate, and encourages national funding of collections of Israeli flora and fauna at Israel's research universities. These collections are concentrated mainly at the Hebrew University of Jerusalem and Tel Aviv University.

An Academy committee, chaired by Academy member Prof. Yossi Loya, with the financial support of Israel Council for Higher Education's Planning and Budgeting Committee (PBC), has contributed greatly to the continued existence, maintenance, and operations of the collections, as well increasing the number of faculty members managing and promoting relevant research.

The committee's efforts supported the establishment of the Steinhardt Museum of Natural History by Tel Aviv University in 2018. The museum, located in Tel Aviv, stores the collections, conducts research, and is open to the public.

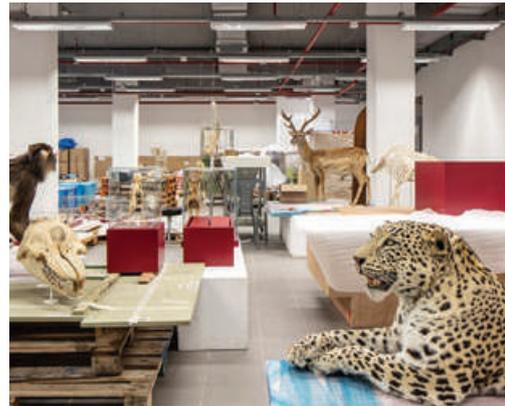


Photo courtesy of the Steinhardt Museum of Natural History



National marine research ship "Bat Galim." Photo: Dr. Gideon Tibur, Head of Geology and Geophysics Department, Israel Oceanographic and Limnological Research (IOLR)

Marine Sciences

At the request of the PBC, the Academy established in 2020 a National Steering Committee in the field of marine sciences, led by Academy member Prof. Zvi Ben-Avraham. The steering committee is charged with examining the field of marine sciences in Israel and mapping its activities, scientific collaborations, the use of national infrastructure, and new and emerging areas within the field. On the basis of these findings, the committee will construct a national strategic plan for the future development of marine sciences in Israel.

Bioethics

The Bioethics Advisory Committee is charged with reporting to and advising the Israel Academy on bioethics activity in Israel and worldwide, and with disseminating information on bioethical issues to the general public as well as collaborating with foreign academies on workshops and conferences on the subject.

In 2019, the committee, headed by Dr. Otniel Dror, organized a multi-disciplinary conference entitled: "Rewriting the Book of Life: Ethical, Social and Regulatory Dimensions of Gene Editing." The committee also established a bioethics forum focusing on the interface of science, technology and bioethics in collaboration with the Van Leer Institute.

Cryogenic Electron Microscopy (Cryo-EM)

In May 2020, the Academy decided to form a committee to examine the need to establish a national center in Israel for Cryogenic Electron Microscopy (Cryo-EM) at extremely low temperatures. The establishment of such a center in Israel would allow scientists to use state of the art technologies and advanced research methods.

The report of the committee has been approved by the Academy Council and is working to implement its recommendations. The committee is headed by Academy member Prof. Ada Yonath.



Young Scholars Forum

In recent years the Sciences Division has established a Young Scholars Forum. The Forum brings together a group of outstanding young researchers from different academic institutions in Israel to focus on a chosen field of natural sciences. The Forum meets several times a year to hold scientific discussions on issues at the forefront scientific research in the chosen field.

The first cohort, led by Academy member Prof. Howard Cedar, focused on "Epigenetic Heredity," and the second cohort, led by Academy member Prof. Joseph Kost, on Biotechnology in Israel. Prof. Kost and the Young Scholars Forum submitted a report to the Academy, with recommendations to establish national centers of excellence in technology in Israel. In 2019, Academy member Prof. Adi Stern led a symposium on the subject of "Quantum Connections," which featured excellent young scholars among its speakers.



Participants in the 2019 Kavli program in Jerusalem

Kavli Frontiers of Science Program

The special collaboration between The Israel Academy and the U.S. National Academy of Sciences (NAS) is reflected in Israel's participation in the biennial Kavli Frontiers of Science Program, an NAS initiative that Israel joined in 2013. It includes interdisciplinary conferences in the natural sciences, attended by 80 outstanding young scientists from both countries. The symposia alternate between Israel and the U.S.; the fourth and most recent Kavli meeting took place in September 2019 in Jerusalem. Due to the interdisciplinary nature of these conferences, participants gain exposure to topics that are new to them, and opportunities for unique collaboration arise. The Israel Academy has added a competitive travel-fellowship program to enable Kavli alumni from both sides to meet and launch joint initiatives to foster long-term scientific collaboration between young scientists from Israel and the U.S.





The Humanities Division

The Humanities Division, headed by Prof. Sergiu Hart, comprises approximately 65 members, among the best Israeli researchers in a wide range of fields in the humanities and social sciences.

The Division's activities include supporting research projects; organizing seminars, lectures and international scholarly symposia; and examining a range of issues relating to the humanities and social sciences in Israel. The Division also promotes various activities initiated by Academy members, organizes programs for scholars in the early stages of their academic careers, and arranges events for the public, such as the annual Martin Buber Memorial Lecture.

In 2016, the Academy initiated an annual multi-disciplinary conference, open to the public, to mark International Darwin Day. At the annual celebration in 2019, Academy member Prof. Yoel Rak presented an exhibition documenting the evolution of humankind, entitled: "The Fossil Trail: Evidence for Human Evolution," which included items from his private collection.



Initiatives in the Humanities

The Annual Martin Buber Memorial Lecture

In 2009, the Humanities Division established a series of annual distinguished lectures named after the Academy's first president, Prof. Martin Buber. In keeping with Buber's wide-ranging interests, lectures in the series are intended to appeal to a broad audience of scholars. The Buber Memorial Lecture is a central feature of the Division's annual program. Among those who have given the lecture in previous years are Prof. Sir Partha Dasgupta, Prof. Guido Calabresi, Prof. Lorraine Daston, and Prof. Jürgen Habermas.



Prof. Sir Partha Dasgupta gives the Buber Memorial Lecture in 2019



The Academy supports several projects in the humanities judged to be of broad scope and national importance.

The Onomasticon of Iudaea, Palaestina, and Arabia in the Greek and Latin Sources

The project, founded in the 1960s, consolidates all the passages in Greek and Latin sources that mention geographic and ethnic names in the land of Israel (Palestine) and its immediate vicinity, from the 5th century BCE until the late 8th century.

The excerpts collected in the Onomasticon are drawn from over 1,300 texts, including major compositions, correspondence, sermons, administrative and ecclesiastical lists, inscriptions, and coins, and include sources in Near Eastern languages, which were translated from the Greek and have not survived in the original language.

The project was headed for many years by the late Academy member Prof. Yoram Tsafrir.

Volume II was published in 2017, and Volume III is to be published in the near future by Dr. Leah Di Segni.



A fragment of Hayom Te'amtzaynu ("Strengthen us today"), a well-known piyut recited on the High Holidays, from the Additional Series in the Taylor-Schechter Collection at Cambridge University (T-S AS 116.256). All of the volumes of piyutim in this collection have been catalogued in recent years, and their contents have been entered into the database of the Geniza Research Project for Hebrew Poetry. Reproduced by kind permission of the Syndics of Cambridge University Library.

The Ezra Fleischer Geniza Research Institute for Hebrew Poetry

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This Academy-sponsored project was established in 1967 to decipher, identify, and catalogue fragments of liturgical poems (piyutim) preserved in the Cairo Geniza. The project is named for the late Prof. Ezra Fleischer, who initiated and directed it for over four decades. It is directed at present by Prof. Shulamit Elizur.

The project's database, launched in 2013, now contains more than 90,000 titles of piyutim from the Geniza and the opening words of more than 70,000 piyutim that exist in print.

The work has yielded significant scholarly benefits, expanding the known oeuvre of a number of famous poets. Fragments of poetry and piyutim have been published in various books and academic journals.

The material in the database provides a constant stream of data for researchers of Hebrew poetry and liturgy in Israel and around the world. In collaboration with the National Library, the database will now be made available and accessible to researchers and the general public.



Monumenta Germaniae Historica (MGH)



In 2001, the Israel Academy and Monumenta Germaniae Historica (MGH), the leading European institute for publishing critical editions of medieval texts, established a collaboration aimed at publishing a series of Hebrew texts composed in medieval Germany. This innovative project is the first instance of Hebrew texts being included in a collection that presents sources pertaining to the history of a European country, and was published in a number of volumes.

The third volume, published in 2019, is a critical edition of Takkanot Shum – the decrees issued by the rabbinical leaders of the Rhineland cities of Speyer, Worms and Mainz in the late twelfth and early thirteenth centuries – prepared by Dr. Rainer Josef Barzen of the University of Münster. Additional volumes are in preparation and will be published in the next few years.



Committee for Examining the State of Holocaust Research and Teaching in Universities in Israel

In recent years, the Academy established a committee to examine and map the state of Holocaust Studies in research universities and colleges in Israel. The committee, led by Academy member Prof. Israel Bartal, published a report in 2020 with conclusions and recommendations for action. The committee found that academia in Israel has engaged extensively in the study and teaching of the Holocaust in recent years but expressed concern regarding the continued existence of a vibrant academic community of high international standing. It called for efforts to dedicate resources nationally and internationally, and to foster high-level scholarly research, along with in-depth academic teaching in the field. Specific recommended activities include strengthening infrastructure, and establishing an inter-university program or national forum, and an advisory system for research students.



Members of the Young Scholars Forum with Academy member Prof. Yoel Rak (far right)

Young Scholars Forum

Since 2004, the Humanities Division has convened an annual Young Scholars Forum with the aim of bringing together outstanding young scholars in the humanities and social sciences to promote collaborative intellectual and research activity among researchers from different institutions. Each forum is headed by an Academy member.

In 2019 the Young Scholars' Forum convened for its sixteenth cycle, headed by Academy member Prof. Yoel Rak. The selected topic was "The Nature of Proof in the Humanities."

In 2020, the Forum is exploring the topic, "Racism, Antisemitism, Genocide: The Holocaust in Its Historical, Ideological and Cultural Context", led by Academy member Prof. Israel Bartal.





Participants in the 11th GISFOH conference held in Jerusalem in 2019

German-Israeli Frontiers of the Humanities (GISFOH) Symposia

The German-Israeli Frontiers of the Humanities (GISFOH) Symposia is a series of interdisciplinary binational conferences established in 2009 and co-organized by the Israel Academy and the Alexander von Humboldt Foundation. Each conference brings together around 50 outstanding young scholars from a wide range of humanistic disciplines, challenges them to venture beyond their disciplinary boundaries, and provides them with opportunities for scientific networking and intellectual exchange toward possible future binational collaborations. The location of the GISFOH Symposia alternates each year between Israel and Germany. The 11th conference, held in 2019 at the Academy, was on the topic of "Positioning Self and Society."

The Alexander von Humboldt Foundation established the "CONNECT" follow-up program, which enables GISFOH participants to apply for support of collaborations with colleagues they met through the GISFOH Symposia. So far, this program has supported more than 50 German-Israeli collaborations. Academy member Prof. Margalit Finkelberg coordinated the project on behalf of the Academy until 2020 and is succeeded by Prof. Bilha Melman.



International Relations

A major role of the Academy is to foster ties with the world's scientific research community.

The Academy has agreements with over forty international institutions (most of them national academies of science), providing the basis for bi-national and multinational science workshops, exchange of international scholars, sponsoring prestigious postdoctoral scholarships, and participating in regional scientific activities.

In 2019, a historic agreement was signed with the US National Academy of Sciences (NAS), including a program of binational scientific conferences alternating between the two countries and short visits by senior researchers. In recent years, the Israel Academy has renewed agreements with the Royal Society and with the national academies of South Korea, Romania, and The Czech Republic.

From Left: President of the Israel Academy Prof. Nili Cohen, the President of the State of Israel Mr. Reuven ("Ruvy") Rivlin, and President of the National Academy of Sciences Dr. Marcia McNutt at the signing of the Scientific Agreement of Cooperation between the academies.





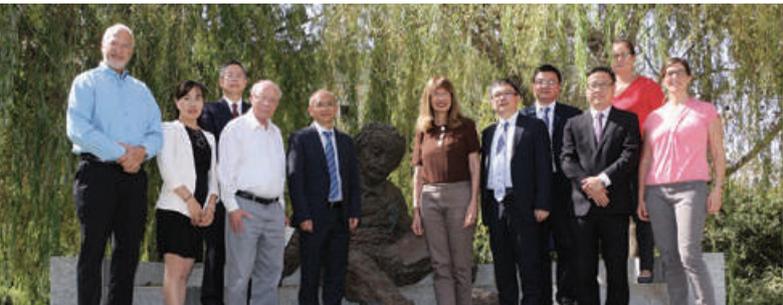
There are a number of ongoing programs, symposia series, and bilateral scientific meetings, which alternate between the Israel Academy and foreign academies, such as the French Académie des Sciences, the Italian Accademia dei Lincei, the Berlin-Brandenburg Academy of Sciences and Humanities, The Chinese Academy of Sciences, the German National Academy of Sciences Leopoldina, the Royal Society, the Czech Academy of Sciences, the Azerbaijan National Academy of Sciences, and the Indian National Science Academy.

Under these agreements, hundreds of foreign researchers and scholars have paid scientific visits to Israel, and Israeli scientists have travelled abroad to participate in a variety of binational workshops, conferences, and research visits convened under the joint auspices of the Israel Academy and foreign academies.

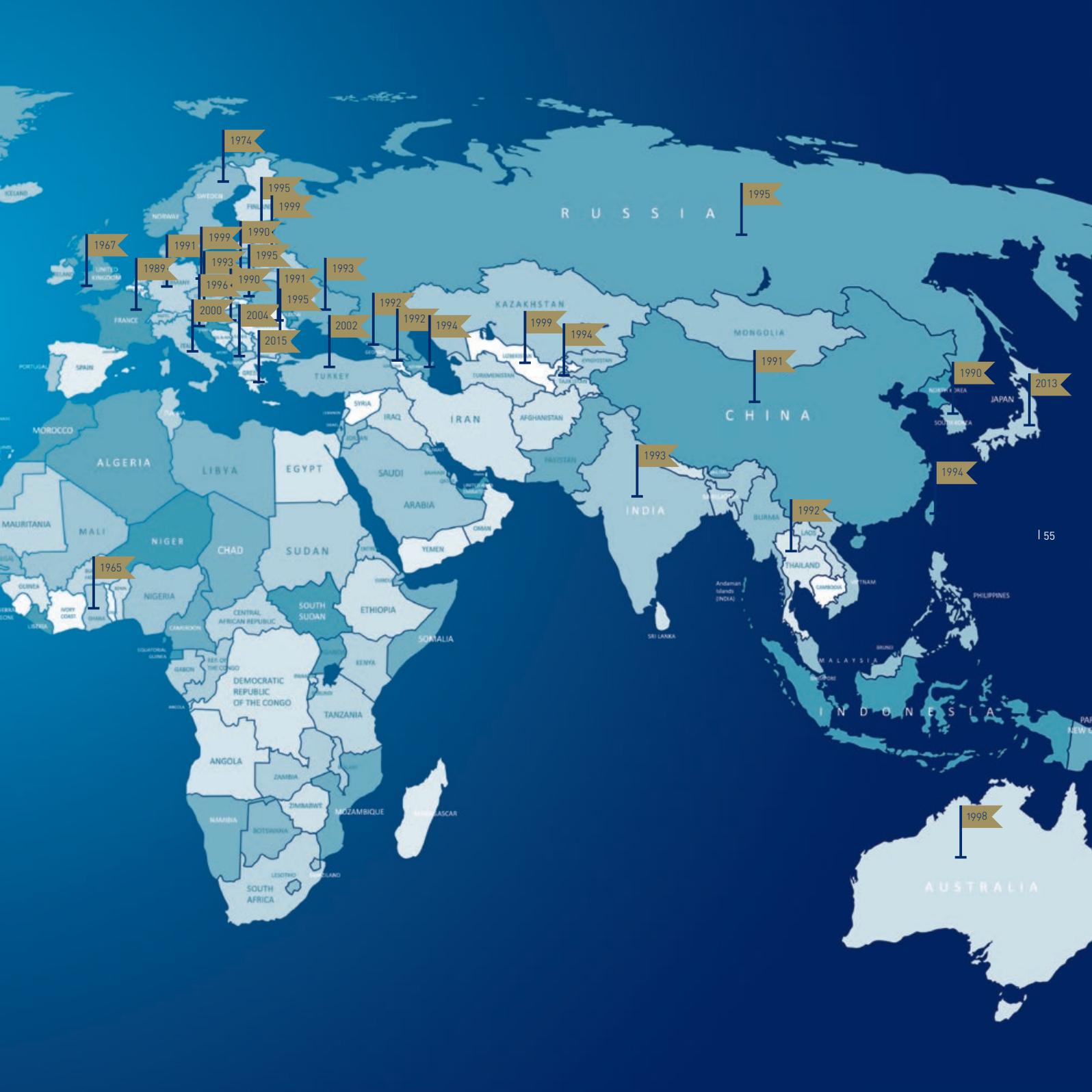
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Highlights of the last few years include joint conferences in Paris and Jerusalem of the French Académie des Sciences and the Israel Academy, marking the 70th anniversary of the State of Israel, and attended by the President of Israel, Reuven (Rubi) Rivlin; the first bilateral conference with the US National Academy of Sciences in 2019 on "Computer Science and Its Impact on our Future;" and a bilateral conference with The Royal Society in Jerusalem in 2020, on "Structural Biology: The Molecular Fabric of Life."

The Academy has also held bilateral workshops with the Indian National Science Academy on Astrophysics and Planetary Sciences, and with the German National Academy of Sciences Leopoldina, on Computational Archeology, and on Neurosciences.









Agreements for Scientific Cooperation

(by country and year of signing, presented graphically on pages 54-55)

Albania	2004
Armenia	1992
Australia	1998
Austria	1993
Azerbaijan	1994 (renewed in 2015)
Bulgaria	1995
Canada	2012
China	1991
Czech Republic	1991
Estonia	1995
France	1989
Georgia	1992 (renewed in 2014)
Germany	2013, Leopoldina, the German National Academy of Sciences
	2009, the Alexander von Humboldt Foundation
	2003, the German Science Foundation (DFG)
	2000, the Berlin-Brandenburg Academy of Science (BBAW)
Ghana	1965



Greece	2015
Hungary	1990
India	1993
Italy	2000
Japan	2013
Latvia	1999
Lithuania	2016
Netherlands	1990
Poland	1990 (renewed in 2009)
Romania	1991 (renewed in 2019)
Russia	1995
Singapore	2016
Slovakia	1995
Slovenia	1996
South Korea	1990 (renewed in 2019)
Sweden	1974
Taiwan	1994
Tajikistan	1994
Thailand	1992
Turkey	2002
Ukraine	1993
United Kingdom	1967, The Royal Society (revised 2015, renewed 2020)
	1972, the British Academy
United States	2019, The National Academy of Sciences
	2017, The New York Academy of Sciences
Uzbekistan	1999 (renewed 2021)



International Scientific Organizations

The Academy represents the Israeli scientific community in many international scientific organizations. It is the national participating body in the International Science Council (ISC) – the preeminent scientific "umbrella" organization, incorporating 40 international scientific unions and associations and over 140 national and regional scientific organizations, including academies and research councils. In recent years, Israelis scientists have attained international leadership positions in a number of scientific unions and academy networks, including the International Union of Pure and Applied Chemistry (IUPAC), the Committee on Data (CODATA), the International Union of Theoretical and Applied Mechanics (IUTAM), the International Union of Microbiological Societies (IUMS), the International Astronomical Union (IAU), and the International Union of Pharmacology (IUPhar).

The Academy also appoints Israel's representatives to the InterAcademy Partnership (IAP), the Union Académique Internationale (UAI), and to regional networks of academies, like All European Academies (ALLEA), Association of Academies and Scholarly Societies in Asia (AASSA), and the European-Mediterranean Academies Network (EMAN). Israel Academy members have served as president and vice president of the UAI, of EMAN, and president of the AASSA.

The Israeli Academic Center in Cairo



In 1982, the Academy established the Israeli Academic Center in Cairo following the Israel-Egypt peace treaty, in a bid to advance binational cultural and academic ties.

Historically, the Center's primary missions are to strengthen connections between universities and scholars in Egypt and Israel, help scholars from each country access sources in the other, and foster joint research. It operates a digital and physical library that serves Egyptian scholars and students, mainly in the fields of Hebrew language, literature and Judaic studies, and is a point of contact for Israeli researchers of Arab and Egyptian history and culture.

In the past, a number of scholars and students from Israel and Egypt received scholarships for visits to the other country, in order to advance their research. Until January 2011, the Center held hosted prominent personalities from Israel's academic and cultural world, who gave lectures in their fields of expertise.

Since 2006, the Director of the Center is Prof. Gabriel M. Rosenbaum, a specialist on the language, literature, and culture of modern Egypt.



Advising the Government on Science Policy

The Academy advises the government on a wide range of subjects and activities.

Triennial Report on the State of Israeli Science and Scholarship

In 2010, the advisory responsibilities of the Academy were expanded to include the submission to the Government of Israel of a triennial review of the state of Israeli science and its standing in comparison with other countries. In recent years the report was prepared by a committee headed by Academy member Prof. Reshef Tenne. It is submitted by the Academy president to Israel's minister of Science and Technology and to the Knesset's (Israeli Parliament) Science Committee.

The third report issued in 2019 provided a comprehensive overview of the state of Israeli science. It assessed Israel's scientific accomplishments to date, pointed out potential threats to its higher education system, and outlined the steps required to ensure Israel's continued prominent and influential standing in the academic world. A follow-up committee is charged with reviewing the implementation of the report's recommendations.



The Academy's Review Committees

The Academy establishes ad hoc committees to review and assess various fields of research in Israel. The findings are released in reports prepared by the committees and approved by the Academy Council. Among the topics in review or recently reviewed are:

- Examining the state of Holocaust research and teaching in universities in Israel
- Israel Academy activities related to the COVID-19 pandemic
- Balancing needs and values in times of national crisis
- The relationship between Israel's decision-makers and the academic system
- Sustainable well-being in Israel
- The state of religious studies at research universities in Israel
- The state of Israel's marine sciences
- Examining the integration of data science in all university disciplines
- Examining the establishment of a national center for Cryo-EM.

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In response to the COVID-19 Pandemic



In response to the global pandemic, the Academy established an expert committee led by the Chair of the Sciences Division, Prof. Yadin Dudai, to advise on Israel Academy activities related to COVID-19. The committee established two advisory committees to deal with key long-term issues at the national level.



The Relationship Between Israel's Decision-Makers and the Academic System

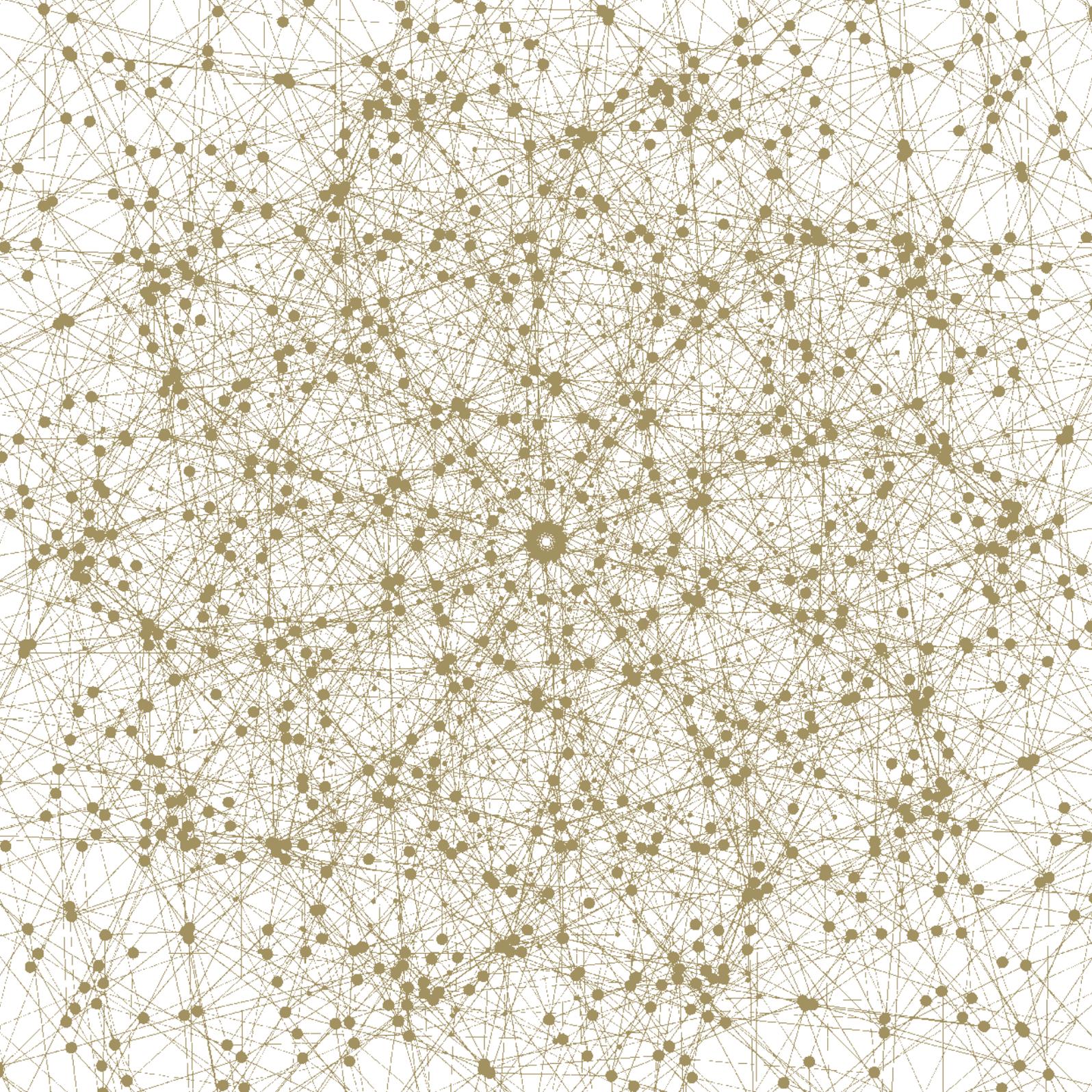
The committee examines the relationship between the academic system and decision-makers in Israel, with the aim of clarifying the existing and desired ways in which decision-makers consult with and utilize the Academy and the academic community as a resource, when making national decisions, both during times of routine and during national crises.

The committee is undertaking interviews and working on an action plan, based on the broad academic community, so that it can provide high-quality expertise in various fields for the benefit of decision-makers, government ministries and the public service. It is led by Prof. Daniel Zajfman, former President of the Weizmann Institute and chair of the Academic Board of the Israel Science Foundation.

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Balancing Needs and Values in Times of National Crisis

The committee is charged with examining the balancing of needs and values in times of national crisis. It has identified four key issues, and plans to publish an opinion paper outlining how they are affected in times of emergency, and the alternatives for addressing these issues. Namely, the relationship between economy and life; the constitutional aspects of restriction of individual liberties versus protection of privacy; trust, the importance of building public trust, and how to prevent its breakdown; and economic disparities and cultural differences. The committee is led by Academy member Prof. Moshe Halbertal.



Empowering Young Scientists

The Academy places great importance on establishing connections with Israel's excelling young researchers and research students – its future scientists and scholars – which it fosters through several frameworks, including the following:



Adams Fellowship recipients tour Old Acre (Akko)



The Israel Young Academy

In 2012, the Israel Academy established the Israel Young Academy (IYA), comprising at any given time around 30 of the country's leading young scholars (up to age 45) in all the academic fields. IYA members, elected for four-year terms, are researchers whose pursuit of scientific and scholarly excellence has merited exceptional recognition, and who are committed to social and community involvement, and strengthening Israeli academia.

The IYA operates independently, with the Israel Academy's backing and support, and strives in its composition to reflect a balanced representation of the various disciplines and of Israel's society and academic community.

In 2020, members of the IYA met with President Reuven (Ruvi) Rivlin. Discussions focused on the IYA's main strategic goals: enhancing the connection between scholars and policy-makers and between academia and society, advancing the status of young scholars in Israel, enhancing research capabilities, and addressing topics of national and international concern. The IYA has a number of representatives in the Global Young Academy and maintains ties with other young academies around the world, working to establish and sustain meaningful collaborations.





Representatives of the Israel Young Academy visit the President of Israel Reuven (Ruviv) Rivlin at the Presidential Residence in Jerusalem. Photo Credit: Naveh Ben Shmuel

IYA activities in recent years include conducting surveys of early career faculty in Israeli research universities, in order to help map the challenges and opportunities facing them; a series of workshops to introduce early career researchers to various aspects of academic life and improve science communications skills; a forum and conferences to promote the Digital Humanities; and, in 2020, a number of initiatives to advance the accessibility of Higher Education to Arab Society.

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The IYA also works to make science more accessible to the public, collaborating with major media outlet Ynet to provide a popular weekly column. During the global pandemic, IYA members instigated an online public lecture series on various COVID-19 -related research topics, which was broadcast every evening to thousands of viewers. They also were active in bringing the concerns of Israeli post-doctoral students to the attention of decision-makers.



The Contact Center for Israeli Researchers



A large percentage of Israel's most promising young academics reside abroad at any given time, to pursue graduate and postdoctoral research, and an increasing number do not return to Israel. Many of them would return if appropriate career tracks and positions could be assured.

To address this concern, more than a decade ago, the Israel Academy founded the Contact Center for Israeli Researchers, to help promising researchers embark on careers in Israeli academia. Since its establishment, the Center has aided the return of approximately 1,000 Israeli researchers to Israel's universities and helped many more to find positions in academic colleges and research centers. The Contact Center's registry currently includes about 4000 Israeli researchers.

The Contact Center also brings Israeli researchers living abroad to large international conferences, giving them the opportunity to present their science and connect with search committees of Israel's universities, successfully assisting their return.

Every year, the Contact Center arranges a conference and Career Fair for Israeli postdoctoral fellows and returning academics. It is attended by representatives from Israeli universities and colleges and officials from government agencies, who interview them personally and set their return process in motion.







Awards and Grants

Realizing the importance of promoting excellence in academia, the Israel Academy awards a variety of prestigious prizes, including awards for early-career researchers. Awards are administered by prestigious jury committees, led by Academy members.

These include:

- The Excellence Fellowship Program for International Postdoctoral Researchers
- The Blavatnik Awards for Young Scientists
- The Adams Fellowship Program for Doctoral Students of the Sciences
- The Ruth Arnon Postdoctoral Fellowship for Adams Alumnae
- The Foulkes Foundation Awards
- The Batsheva de Rothschild Foundation programs
- The Gershom Scholem Award for Kabbala Research
- The Fund for the Advancement of the Humanities and Social Sciences in Israel
- The Postdoctoral Fellowships in Nuclear Physics



The Excellence Fellowship Program for International Postdoctoral Researchers

The Excellence Fellowship program aims to attract young, top-of-the-line researchers from around the world to join Israel's research laboratories. Their participation is expected to leverage international collaboration, strengthen Israel's leading laboratories, further their own professional and personal ties with excellent researchers at the outset of their careers, and create fruitful collaboration for future research.



From Right: Prof. Itamar Wilner and Prof. Moti Segev, with fellows at the launch event of the fellowship program in 2018.

Since 2018, The Academy has awarded a number of two-year postdoctoral fellowships of US\$45,000 per fellowship per year to foreign researchers in the natural sciences, the exact sciences, medicine, the life sciences and engineering, on the basis of scientific excellence.

In 2020, the program was expanded due to a new partnership with the Council for Higher Education (CHE), and it currently offers up to twenty fellowships a year in all fields of knowledge, including the humanities and social sciences.



From Left: Mr. Avi Fischer, Dr. Marcia McNutt, President of the US National Academy of Sciences, Mr. Len Blavatnik, Prof. Nili Cohen, President of the Israel Academy of Sciences and Humanities, Mr. Ken Fulton, Director General of the US National Academy of Sciences, 2019. Photo: Eran Barry

The Blavatnik Awards for Young Scientists

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The Blavatnik Awards for Young Scientists in Israel honor exceptional young scientists in three disciplines – Life Sciences, Physical Sciences & Engineering, and Chemistry – by highlighting their extraordinary achievements, recognizing exceptional promise for future discoveries, and accelerating innovation. The prizes are awarded annually to three outstanding scientists aged 42 years or younger, each of whom receives US\$100,000.

The Blavatnik Awards were established globally in 2007 by the Blavatnik Family Foundation to honor exceptional young scientists (faculty and post-doctoral) in the United States. In March 2017, the awards were launched in Israel, as part of a cooperation agreement between the New York Academy of Sciences and the Israel Academy. Since then, three Blavatnik Awards have been awarded in Israel each year.

From Left: Blavatnik Awards for Young Scientists 2019 Laureates Prof Moran Bercovici, Dr. Michal Rivlin and Prof. Erez Berg.
Photo: Eran Barry >



BLAVATNIK AWARDS FOR YOUNG SCIENTISTS ISRAEL







The Adams Fellowship Program for Doctoral Students of the Sciences

ADAMS
מלגות אדמס
Fellowships

In 2005, recognizing the pivotal significance of world-class science for Israel's growth, the late Mr. Marcel Adams of Canada established the Adams Fellows Program for nurturing the highest echelon of young scientific researchers in Israel at the Ph.D. studies level.

Administered by the Academy, the program awards eight prestigious Adams Fellowships a year. Fellows receive approximately US\$30,000 per year in direct support and are eligible for additional funds (up to US\$3,000 per year) to support their participation in international conferences and workshops, scientific collaboration, and preparation for postdoctoral training abroad. They are also assisted in forming their own community through annual seminars, conferences, science communication workshops, and other activities.

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The Ruth Arnon Postdoctoral Fellowship for Adams Alumnae

Thanks to a generous donation by former Academy President Prof. Ruth Arnon, a fellowship program was established in 2016, dedicated to promoting women in science. The fund encourages excellent female graduates of the Adams Fellowship Program to travel abroad for postdoctoral training. The recipient receives US\$20,000 for this purpose.



The Foulkes Foundation Awards

The Foulkes Foundation Awards, established in 1975, promote the study of medicine by students of the life sciences and vice versa, thereby encouraging the completion of MD/PhD programs. Applicants, receive up to £2,000 per year for 1–3 years.

The selection committee is appointed by the Academy President, but awards are subject to the approval of the Trustees of the Foulkes Foundation in London. The committee is led by Academy member Prof. Moshe Oren.

Every three years, the Foulkes Foundation presents a special "Senta Foulkes" award, in the sum of £2,500, to a former fellowship recipient who has combined the clinical practice of medicine with continuing exemplary medical research.

The Batsheva de Rothschild Fund

The Batsheva de Rothschild Fund supports basic research in Israel since 1993, through scientific seminars, workshops, and fellowships involving leading experts from Israel and abroad, on the basis of scientific excellence.

The Batsheva Seminars have anticipated future trends, and have had a marked impact on the development of new fields of basic science in Israel.

In 2011, the Fund launched the Aharon and Ephraim Katzir fellowship program to assist young scientists in the first decade after completing their Ph.D. or MD to travel abroad for a research enrichment program of few months. The selection committee is led by Academy member Prof. Yossi Loya.

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Participants in the Batsheva Seminar 2020: Molecules and, Atoms, Photons Using Simulations at Kibbutz Ein Gedi. Photo: Mor Rozes



עון העירייה -
בקריות מבני 11

הארץ



The Fund for the Advancement of the Humanities and Social Sciences in Israel

Founded in 2016, the Fund aims to further the humanities and the social sciences in areas of importance to the State of Israel by expanding knowledge in cutting-edge fields and facilitating the exchange of information and ideas.

Funding is granted on the basis of scientific excellence to support conferences and seminars led by eminent scholars from Israel and abroad; and invite leading international scholars to visit Israel in order to meet with Israeli academics and students and exchange knowledge, views and ideas in their disciplines. In addition, the fund offers grants to outstanding young Israeli scholars for short-term advanced training in research methods, and in libraries, archives, laboratories and other suitable frameworks abroad.

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Gershom Scholem Prize for Kabbalah Research

The Israel Academy awards the Gershom Scholem Prize for Kabbalah Research every four years to an outstanding scholar of Kabbalah, in any of its periods and streams. The prize, first awarded in 1991, perpetuates the memory of Gershom Scholem, the Academy's third president and a towering scholar of Kabbalah and mysticism. In 2018, the prize was awarded to Prof. Haviva Pedaya of Ben-Gurion University of the Negev.



Opening the Gates of the Academy

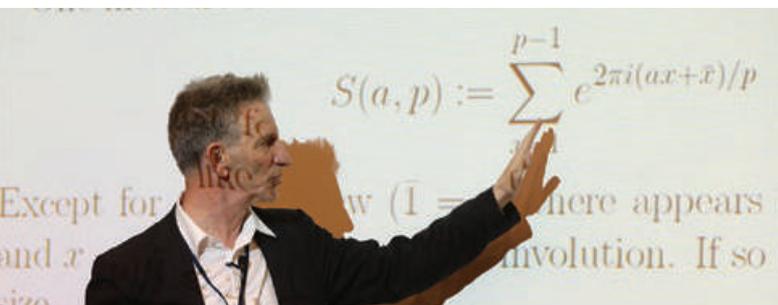
Public Lectures and Events

The Academy hosts more than 30 public lectures and events every year as part of its mandate to promote science awareness and make science more accessible to the general public.

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Prof. Arie Vardi at the Annual Multidisciplinary Science and Humanities Conference on Beauty







From Left: The architect Daniel Libeskind at the conference on Beauty; The Royal Museum in Ontario, Canada. The expansion of the museum was designed by architect Daniel Libeskind. Photo: Alex Fradkin

The Annual Multidisciplinary Science and Humanities Lecture Series and Conferences

In 2015, the Israel Academy initiated an annual series of lectures designed for the general public, devoted to multidisciplinary topics at the interface of the life sciences, the social sciences, and the humanities. Entitled "Gates to the Academy," previous series have focused on "Boundaries," "Science and State," "Revolutions," and "Discoveries."

In addition, the Academy established in 2016 an annual multidisciplinary science and humanities conference, with each gathering exploring a particular subject from various disciplinary angles and through varied lenses. The fifth annual conference in 2020 examined the subject of "Beauty," from diverse perspectives. Each conference hosts a distinguished guest lecture; past lectures have been given by the architect Daniel Libeskind, Prof. Mario Livio, Prof. Joel E. Cohen, Prof. Antonio Damasio, and Prof. Pierre Nora. Conferences have explored the themes of "Memory," "Voyages," "Time," and "Languages."

Conferences

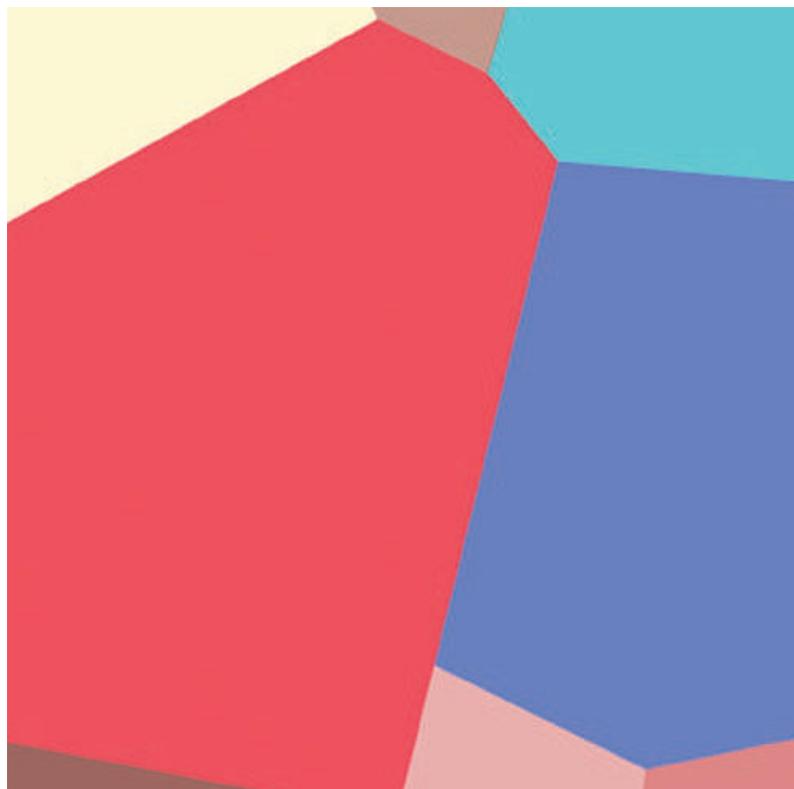
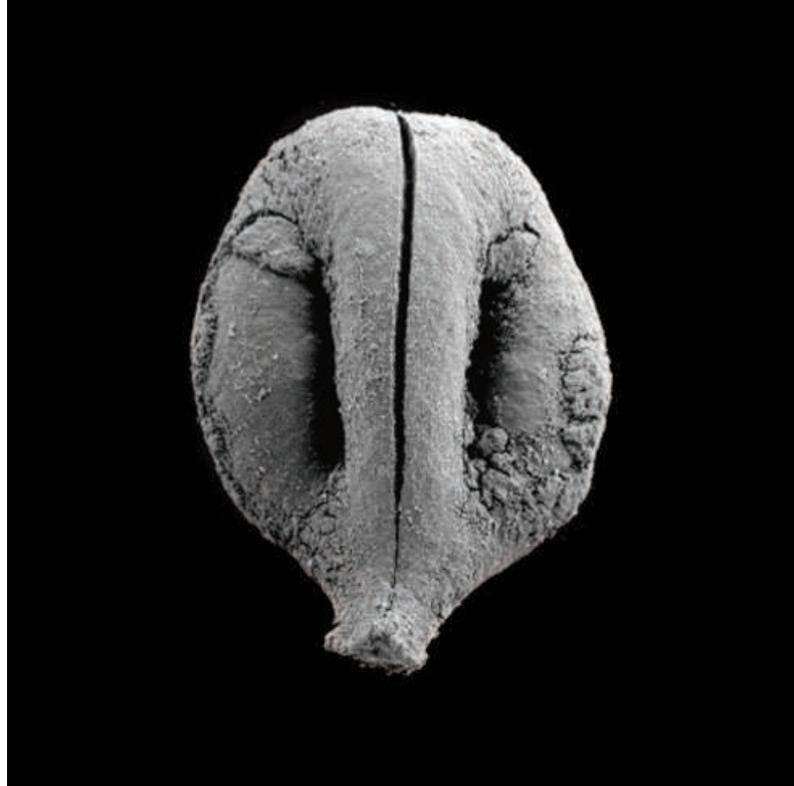
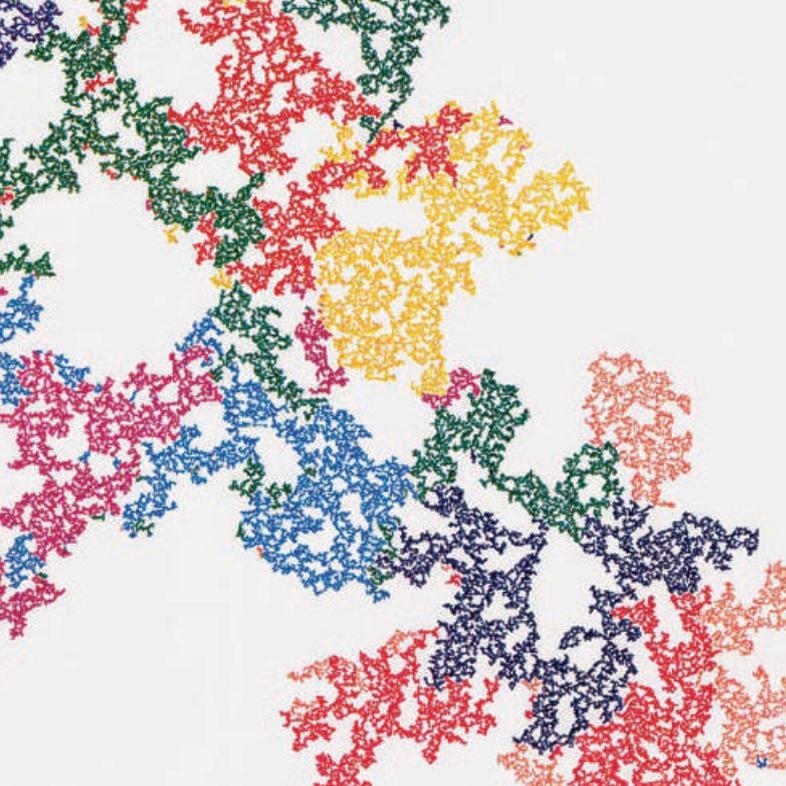
Commemorating historic and scientific events by convening conferences is an additional approach to heightening scientific awareness. Recent conferences at the Academy have commemorated the 100th anniversary of the Balfour Declaration, the 150th anniversary of the opening of the Suez Canal, and seventy years since the establishment of the State of Israel.

The 2019 International Darwin Day, the third annual event since its initiation by Academy members Prof. Yoel Rak and Prof. Yossi Shiloh, featured a conference at the Academy on the subject of "Homo Sapiens and their Strange Relatives—the Neanderthals" and the opening of an exhibition entitled "The Fossil Trail: Evidence for Human Evolution", which included items from Prof. Rak's private collection. The exhibition was visited by thousands of people.

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Images from the exhibition, "The Fossil Trail: Evidence for Human Evolution" (2019)







Images from the exhibition, "The Beauty of Science" (2020). Curator: Yivsam Azgad.



Exhibitions

Recent years have seen the Academy building's expansive central hallway, with its adjoining alcoves, as the venue for professionally curated exhibitions, which have buttressed the Academy's scientific conferences and enhanced the commemoration of important events. These have included: The 100th anniversary of the Balfour Declaration (2017), "The Fossil Trail: Evidence for Human Evolution" (2019), and "The Beauty of Science" (2020), which examines the connection between beauty and science as expressed in images from studies published by members of the Academy and the Young Academy.

שינוי ושונות בלשון
בעריכת רות ברמן

יהושע בלאו
עיונים בתרגום רב סעדיה גאון לתורה
כרך א: בראשית

CHAIM WEIZMANN
SCIENTIST, STATESMAN, AND ARCHITECT OF SCIENCE POLICY
Edited by Benjamin Z. Kedar

חיים וייצמן - המדען, המדינאי ומדינאי-המדע
בעריכת ב"ז קדר

BENJAMIN RICHLER | GUIDE TO HEBREW MANUSCRIPT COLLECTIONS

דוד בן-גוריון והתפתחות המדע בישראל
Alberl Einstein Memorial Lectures
Mechoulam Bekenstein
Editors

Distribution Atlas of Plants in the *Flora Palaestina* Area

HEBREW ILLUMINATED MANUSCRIPTS IN THE BRITISH ISLES
SPANISH and PORTUGUESE MANUSCRIPTS

HEBREW ILLUMINATED MANUSCRIPTS IN THE BRITISH ISLES
SPANISH and PORTUGUESE MANUSCRIPTS

אסופות כתבים עבריים מימי-הביניים
Specimens of Mediaeval Hebrew Scripts
כרך III

Publishing Works to Promote Scholarship and Science

The mandate of the Israel Academy includes the publication of writings intended to promote scholarship and science. Titles are selected on the basis of academic merit by an interdisciplinary Publications Committee composed of Academy members. Some of the lectures delivered at events held by the Academy are published in the Proceedings of The Israel Academy of Sciences and Humanities or in dedicated collective volumes.

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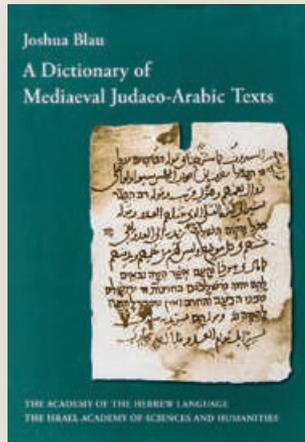
In the humanities, the Academy publishes monographs, collective volumes and lectures of lasting worth in history, religion, philosophy, literature, linguistics, art and other areas. Many publications are critical editions of manuscripts and other basic source texts in Judaica and related fields.

In the natural sciences, the Academy publishes authoritative compilations on the fauna, flora, and geology of the region and environmental surveys. For example, Flora Palaestina and Fauna Palaestina, two renowned series that describe and illustrate the flora and fauna of the region.

The sampling described in the following pages attests to the diversity of the Academy's publications.



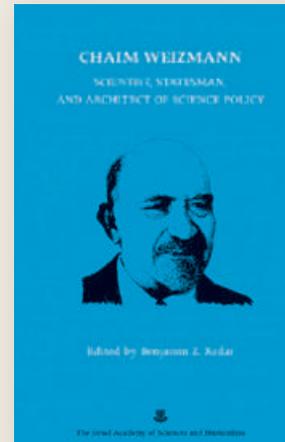
A Dictionary of Mediaeval Judaeo-Arabic Texts



Published jointly with The Academy of the Hebrew Language, and compiled by the late Prof. Joshua Blau, this first comprehensive Dictionary of Mediaeval Judaeo-Arabic contains about 9,000 entries. The Dictionary is based largely on the works of the leading Jewish scholars of the Middle Ages, including Saadia Gaon, Judah Halevi, and Maimonides, but it also refers to the Responsa literature, legal documents, and personal and commercial letters.

Chaim Weizmann – Scientist, Statesman, and Architect of Science Policy

Edited by Academy member Prof. Benjamin Z. Kedar, this collection of essays is based on the lectures delivered at a conference held on January 8, 2013, commemorating the 60th anniversary of the death of Dr. Chaim Weizmann, first President of Israel, a scientist, and a statesman. The lectures address his influence on Israeli industry and politics, his emphasis on scientific excellence, his role in founding Israel's academic institutions, and his major scientific contributions.





Greek and Latin Authors on Jews and Judaism



A comprehensive body of texts compiled by Prof. Menahem Stern, relating to Jews and Judaism by the Greek and Latin authors of Antiquity. The collection of three volumes furnishes valuable source material on the place of Jews and Judaism in the Mediterranean world during the rise and spread of Hellenism.

Specimens of Mediaeval Hebrew Scripts, Volumes I–III



This series, compiled by Academy member Prof. Malachi Beit-Arié, Dr. Edna Engel, and Dr. Ada Yardeni, documents, describes and classifies types of Hebrew scripts on the basis of thousands of date-bearing Hebrew manuscripts kept in some 200 libraries around the world. A product of the Israel Academy's Hebrew Palaeography Project, it serves as a comparative tool for identifying the types of scripts used in undated manuscripts and estimating their time and provenance. The third volume (2017), devoted to the Ashkenazic script, is dual-language in English and Hebrew.



Related Activities

The Israel Science Foundation (ISF)



הקרן הלאומית למדע
المؤسسة الإسرائيلية للعلوم
Israel Science Foundation

Established in 1972 under the auspices of the Israel Academy, with a modest seed allocation of US\$200,000, the Israel Science Foundation (ISF) is now Israel's preeminent source of competitive grants for basic research, with an annual budget of around US\$200 million.

Since 1995, the ISF has functioned as an independent nonprofit organization, with the Israel Academy's administrative support in its early years. Approximately 98% of its current budget comes from the Planning and Budgeting Committee (PBC) of Israel's Council for Higher Education (CHE), with the remainder consisting of direct donations, prizes, designated funds, and various funds managed by the Academy. Prof. Daniel Zajfman, former President of the Weizmann Institute of Science, is Chair of the ISF.

The ISF evaluates and selects research proposals from the exact sciences and technology, life sciences and medicine, humanities and social sciences. The dual competitive selection process is based on scientific excellence and merit and comprises both professional review committees and peer-review assessment.



The ISF has increased Israel's participation in international programs, for example, via a joint program with the National Natural Science Foundation of China and other similar programs with India, Canada, Japan and the BROAD Institute.

The ISF is a member of the Global Research Council and is active in its European regional leadership alongside Science Europe.

In the 2020-21 academic year, the ISF funded

- Approximately 2,100 personal research grants provided to scientists in academia and other research institutions;
- 17 Focal Initiatives in Research in Science and Technology (FIRST) programs. The F.I.R.S.T (Bikura) program is designed to promote groundbreaking research that is fundamentally different from existing preconceptions.
- Nine research centers;
- The purchase of advanced research equipment;
- Publications in the humanities;
- International research seminars;
- Programs designed to advance specific research topics, such as biomedical research on juvenile (Type I) diabetes, clinical studies in hospitals, alternative energy sources for transportation vehicles, quantum technologies and science and precision medicine.

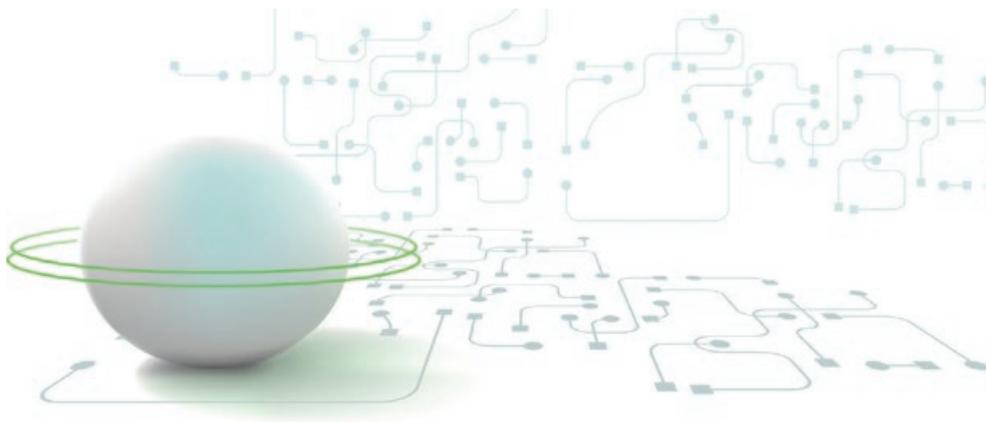


TELEM Forum

The Forum for National Research and Development Infrastructure (known by its Hebrew acronym TELEM) was established by the Academy in 1997 with the goal of pooling various governmental budgetary resources—and catalyzing the participation of others—to undertake major joint science and technology initiatives of national interest.

TELEM's members are the heads of Israel's major national research-funding organizations: a representative of the Israel Academy (who serves as TELEM's Chair), the chairperson of the Planning and Budgeting Committee of Israel's Council for Higher Education, the chief scientist of the Ministry of Economy and Industry, the director-general of the Ministry of Science & Technology, head of the R&D Division of the Ministry of Defense, and a senior representative of the Ministry of Finance. Academy member Prof. Shimon Ullman currently serves as Chairman of the Forum.

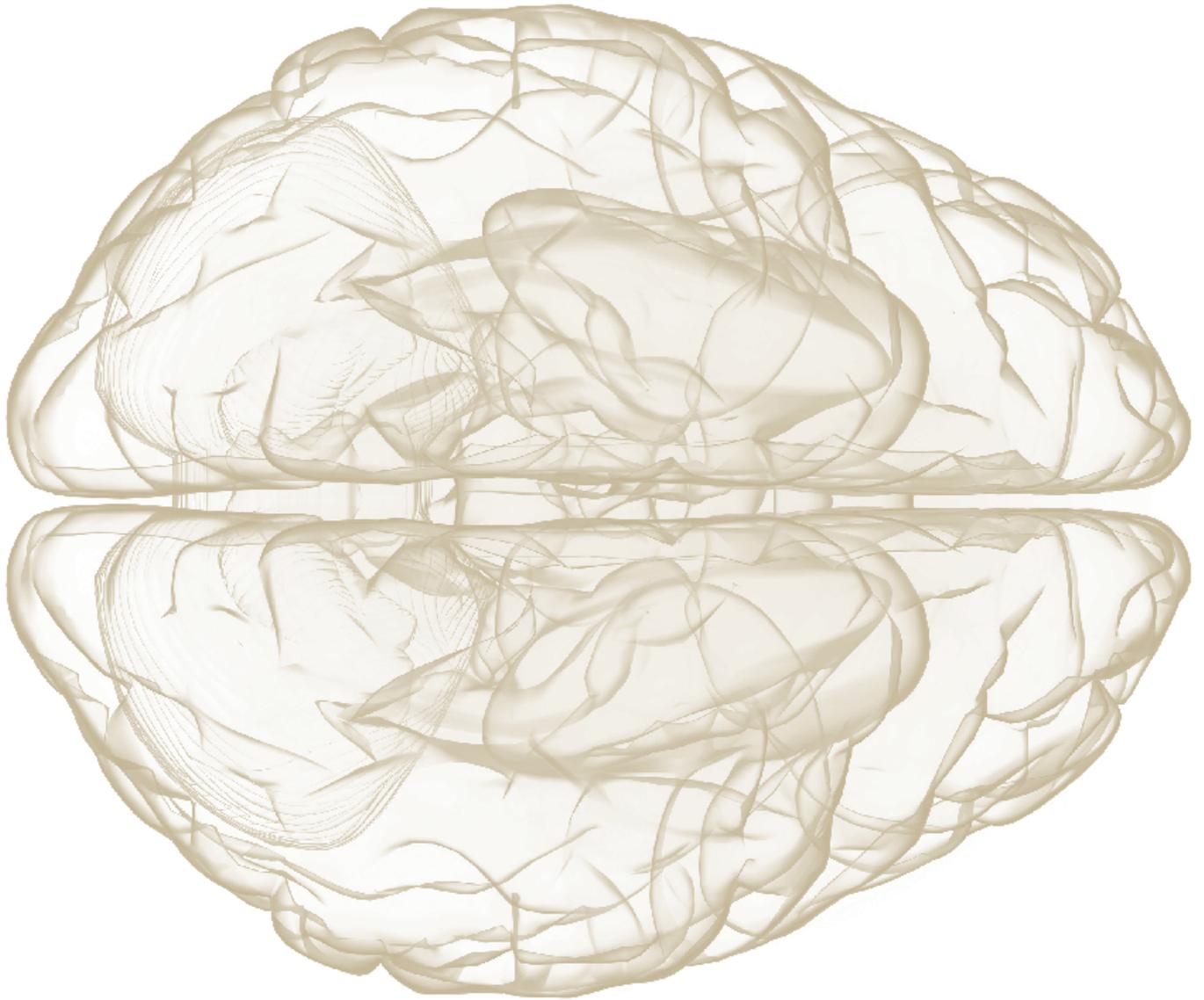
A Telem-appointed committee recently examined the need to establish an infrastructure for artificial intelligence and data science. It presented a program of action which the TELEM forum has approved.





Over the years, TELEM has pooled resources to initiate a string of national scientific and technological ventures, representing a total investment of hundreds of millions of U.S. dollars, including the following:

- Participation in the European Synchrotron Radiation Facility (ESRF) – US\$10 million
- Nanotechnology research and infrastructure – US\$231.5 million
- Second-generation broadband Internet communication initiative – US\$38 million
- Particle accelerator for the Nahal Soreq SARAF nuclear research center – US\$25 million
- Establishing equipment centers for biotechnology R&D – US\$10 million
- Quantum sciences – US\$370 million
- Advanced photonics – US\$56 million
- Brain research – US\$25 million
- Stem cell R&D equipment – US\$10 million
- Founding a national tissue bank – US\$8.9 million
- Creating the basis for a national grid for shared computer resources – US\$2.6 million



Center for Knowledge and Research in Education

Yozma - Center for Knowledge and Research in Education (known in Hebrew as Ha'Yozma) provides Israeli decision-makers in the field of education with up-to-date, research-based, critically appraised knowledge to serve as a basis for formulating policy and designing interventions to improve Israeli education. It is responsible for consultation services on education-related issues provided by the Academy to the Israeli government and the relevant national authorities.

Ha'Yozma utilizes three different modalities in carrying out its mandate: consensus expert committees that tackle complex challenges—fundamental issues of ongoing concern to the education system; working groups established for the purpose of developing a specific product required for setting policy or implementing it; and research to support policy-planning, designed to provide research-based answers to specific questions on topical issues.

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From top to bottom: Meeting of working group, the Annual Conference of the Center for Knowledge and Research in Education at the Van Leer Institute, January 2019



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Jerusalem, April 2021

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האקדמיה הלאומית הישראלית למדעים
المجمع الوطني الإسرائيلي للعلوم والآداب
THE ISRAEL ACADEMY OF SCIENCES AND HUMANITIES



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