When Natural History meets Jewish History

Demystifying Zohar
Diabetes and Stress
Entrepreneurial Potency
TAU Innovators among Global Top 50

Pictured from left, Prof. Beka Solomon of the George S. Wise Faculty of Life Sciences and Prof. Eshel Ben-Jacob and Dr. Itay Baruchi of the Raymond and Beverly Sackler Faculty of Exact Sciences were included among this year’s top technology pioneers by *Scientific American*. See page 21.
Cover Story: This Land Is Your Land

From charting the prehistoric ancestors of the Israelites to predicting earthquakes along the Dead Sea Fault, TAU researchers are providing fresh perspectives on the history of the land of Israel.

Using Knowledge to Change Lives

An outreach program wholly taught by TAU students is the first in Israel to target society’s most distressed groups.

Sleuthing Out the Genealogy of Zohar

Decades of painstaking study by a TAU scholar is resulting in the first authoritative version of the greatest work of Jewish mysticism.

Architecture and Technology of the Future

Philosophy and architecture? This is one of the unusual study combinations that have gained recognition for TAU doctoral students.

sections

innovations

digest

newsmakers

books
As the State of Israel celebrates 60 years, TAU Review reports on some of the pioneering work of TAU scientists researching the land of Israel – the little slip of real estate that links Africa to Asia, that 120 million years ago lay under the sea, that fostered monotheism, and that today still lacks recognized borders.

This land

Land of Israel studies can be summed up in one snappy phrase: Natural history meets Jewish history.

From studying live fallow deer – mentioned in the Book of Deuteronomy, to weighing in on problems of water supply and borders, hundreds of TAU scientists and scholars are contributing to a vast and fascinating body of knowledge that includes zoology, botany, anthropology, archeology, religious studies, geology, geography and Zionist history, among numerous other fields.

“TAU pursues the most diverse and comprehensive research into ancient and contemporary Israel – the land itself – than any other institution in the world,” says Prof. Hagit Messer-Yaron, TAU Vice President for Research and Development.

The following is a sampling of five areas that represent the wide scope of research being pursued at TAU.
is your land

“TAU pursues the most diverse and comprehensive research into ancient and contemporary Israel – the land itself – than any other institution in the world."
The country’s biodiversity bank

Long before biodiversity and ecology were buzz words in a world straining to counteract rapid human development, scholars at TAU and its predecessor institutions were recording Israel’s natural history. Going back seven decades, Prof. Heinrich Mendelssohn – one of the founders of TAU – was obsessed with documenting and preserving the country’s fast-shrinking flora and fauna. “His influence has been incredible,” says Prof. Tamar Dayan, a zoologist at TAU’s George S. Wise Faculty of Life Sciences. “It took a lot of foresight to do something like that in the 1930s.”

The work Mendelssohn initiated then is flourishing today as Israel’s National Collections of Natural History, housed at TAU and directed by Prof. Dayan. This unparalleled scientific resource is made up of millions of specimens of animal and plant life ranging from deep sea Mediterranean fish to marine algae, from early human fossils to invertebrates, and from insects to Red Sea corals. Over 2,500 scientific papers have been based on the collections, which attract an average of 300 researchers from Israel and abroad each year.

In recognition of this unique TAU treasure, the Israel Antiquities Authority transferred its collection of human bones from its Rockefeller Museum headquarters in Jerusalem to TAU’s Sackler Faculty of Medicine. Similarly, Schmidt Girls College in East Jerusalem has given the university on permanent loan its century-old taxidermy collection. Among the stuffed animals is the region’s very last cheetah, as well as the last Arabian Oryx before hunters seeking the long-horned mammal as a trophy drove it into extinction in the eastern Mediterranean. The collection, which was in a state of decay, is being expertly restored at TAU by Igor Gavrilov, one of Israel’s most skilled taxidermists, who learned his craft in the Soviet Union before immigrating from Tajikistan.

The university’s collection of ancient human remains is the largest in Israel and one of the largest in the world, comprising thousands of skeletons dating from prehistoric times. TAU evolutionary anthropologist Israel Hershkovitz, who heads the collection, describes it as “providing hard evidence of human-kind’s biological, medical and cultural development in the land of Israel.” Prof. Hershkovitz, who holds the Tassia and Dr. Joseph Meychan Chair in the History and Philosophy of Medicine, is now searching for early modern humans in the Carmel region in a project that was initiated by the Dan David Foundation.

Alon Barash, a doctoral student in anthropology who helps maintain the collection, notes that graduate students come from all over the world to study it. “The university allows them to work with the original artifacts, which is unusual,” he says.

Among the rarest objects is a skeleton in which the ulna bone has been sawed off; in the 8th century BCE,
Assyrian troops hacked off the hands of killed enemy soldiers and shipped them back to their Tigris-Euphrates homeland as testimony of their victory over the Kingdom of Israel. Other treasures include the earliest cases of successful neurosurgery, known as trephination; the largest collection of hunter-gatherer specimens in the world; and examples of biblical diseases such as leprosy.

**Where Neanderthal meets Homo sapiens**

TAU paleontologist and anthropologist Yoel Rak’s area of specialization covers the period 100,000 to 40,000 BCE. Rak has explored the Kabara Cave on Mount Carmel – the southernmost point where Neanderthal bones have been discovered, and sites in a cave near Safed where he found the skeleton of a Neanderthal baby in 1993.

The land of Israel was the southernmost locale to which Neanderthals retreated as Ice Age glaciers covered Europe, says Rak, who is incumbent of the Igor Orenstein Chair at TAU. At roughly the same time, *Homo sapiens* was emerging from Africa, and TAU owns the oldest skull of modern man outside of that continent, found in a cave near Nazareth.

“Not saying they were playing cards together, but Neanderthals and early Homo sapiens lived in the same caves – at different times.” Their flint tools, he notes, are nearly identical. “It’s not inconceivable that the two groups saw each other occasionally, especially in this region.”

Rak’s current research passion is the Neanderthal mandible. Widening his mouth to illustrate the point, he says the huge gap in the Neanderthal mouth was considerably bigger than that of modern man. He is using reverse engineering to deconstruct the way the surviving jaw bone fragments worked.

“We’re trying to figure out the functional significance of the very peculiar jaw of the Neanderthal.”

Prof. Dayan is optimistic that the National Collections of Natural History will soon be housed properly in a new building to be constructed on the TAU campus that will enable their safe preservation and planned growth, promote scientific research, and allow the public to share these treasures. Major funding for the project has already been raised from Michael Steinhardt, the former Chairman of TAU’s Board of Governors, and a private foundation.

“Once a building is in place, TAU will serve as Israel’s largest center for biodiversity and conservation research and education, integrating activities at our laboratories, I. Meier Segals Garden for Zoological Research and Botanic Gardens,” Prof. Dayan says.

**Predicting the “Big One”**

31 BCE; 363, 749 and 1033 CE are the dates of major earthquakes that occurred in the land of Israel in recorded history. “Roughly we’re talking about an interval of every 400 years,” says TAU geologist Dr. Shmuel Marco of the Raymond and Beverly Sackler Faculty of Exact Sciences.

The next big one is overdue, he says, citing seismographic patterns in the Dead Sea region recorded in historical documents.

The Dead Sea fault runs along a 1,000 kilometer-long fracture in the Earth’s crust, which includes the Gulf of Elat, the Arava and the Jordan, Kinneret and Hula valleys. The fault generates frequent earthquakes, explains Marco. “If the Earth continues to behave the way it has, the simplest answer to the question, ‘Where will there be an earthquake?’ is where they have occurred in the past. This comes as no surprise to geologists. The only surprise is when.”

Recently a series of mild earthquakes shook Israel averaging 4.1 on the Richter scale. While these seismic
events helped release the tremendous pent-up pressure of two of the Earth’s plates grinding against each other as they drift in opposite directions, the underlying danger of a major earthquake remains, warns Marco.

“When it strikes – and it will – a quake could cause vast damage throughout the region including in cities like Amman, Ramallah, Bethlehem and Jerusalem,” he predicts.

According to fellow TAU seismologist Dr. Hillel Wust-Bloch, entire cities situated on the Dead Sea fault that were built cheaply in the 1940s and 1950s are “vulnerable.” These include Eilat, Beit Shean, Tiberias and Kiryat Shmona.

Better Dead than Red

Like Marco and Wust-Bloch, TAU’s Prof. Zvi Ben Avraham has an abiding fascination for the Dead Sea region – the lowest point on the face of the planet at 420 meters below sea level.

That interest led Ben Avraham, of the Raymond and Beverly Sackler Faculty of Exact Sciences, to bring a mini-submarine in 1999 to explore depths of 200 meters underwater.

The submersible boat’s color? Yellow of course.

Today, Ben Avraham directs TAU’s multidisciplinary Minerva Dead Sea Research Center and holds the Mikhail Moshe Nebenzahl and Dr. Amalia Grossberg Chair in Geodynamics. He collaborates at the center with fellow experts from

SECRETS OF TEKHELET

Henk Mienis, an advisor to the mollusk collection within TAU’s Department of Zoology, has a colorful story – but it’s all in hues of royal purple and blue. Mienis is an expert on tekhelet – the little understood dye referred to 48 times in the Bible that colored the tassels of the ritual prayer shawl. According to the Talmud, tekhelet is a specific azure dye produced from a sea creature known as a chilazon. Rabbinic sages ruled that other blue dyes were unacceptable. But as the Jews emigrated from the land of Israel in late antiquity, the source of the precious dye was lost. Since then, Jews have worn plain white prayer shawls with uncolored tassels.

Over the past 120 years several theories were presented for reviving the biblical process of dyeing the tassels, among them one proposed by Israel’s first chief rabbi, Isaac Herzog, father of Israel’s sixth President Chaim Herzog. He believed that the violet pelagic snail, Janthina janthina, was the source of the ritual tekhelet.

These theories have now been rejected and instead the banded rock-snail Hexaplex trunculus has been identified as the source of the biblical dye. A species found on the rocky coast of the Mediterranean, the snail secretes a fluid from its hypobranchial gland that was used by the Phoenicians to produce royal blue or Tyrian purple. Today this dye is deemed acceptable by various religious groups for producing ritual prayer shawls with biblical blue tassels.

When it strikes – and it will – a quake could cause vast damage throughout the region.
Jordan’s National Research Authority in Amman, universities in Jordan, and Palestinian professors from Al-Najah University in Nablus and Al-Quds University in East Jerusalem. Together they examine the area’s climate change, geological structure, tectonic evolution and seismic history.

Ben Avraham is a consultant to the World Bank’s current feasibility study on building the Red-Dead Canal. The 200 kilometer-long conduit would pump sea water from Aqaba up to the Arava Valley where it would undergo desalination before turning the turbines of a hydro-electric dam. Water would cascade into the depleted Dead Sea, where it would slowly raise the water level. A fresh water reservoir would also allow for major irrigation projects, and contribute to solving the growing drinking water crisis in Jordan and Israel.

Ben-Avraham has reservations about the project: “We have to give deep thought to whether a canal is the solution. Should an earthquake occur, it would rupture the canal’s pipes and contaminate important aquifers,” he warns. Instead he favors restoring the equilibrium of fresh water flowing south from the Jordan and Yarmuk rivers – which offsets the evaporation of the Dead Sea during the torrid summers. Without that flow, the Dead Sea level is currently dropping a meter annually.

What if that flow is not restored? The Dead Sea will never entirely dry up, he responds. While the southern section is already an artificial lake held behind earth dams, the northern half will continue to subside a further 100 meters. At that point, which he predicts will arrive in approximately two centuries, the even denser saturated water will achieve a new equilibrium between winter rain runoff and evaporation.

**Ramat Rachel revisited**

Most Israelis are familiar with the capital – the decorative top of a 2,700 year-old column – that is pictured on the country’s five shekel coin and that was unearthed in Ramat Rachel, just south of Jerusalem, by Prof. Yohanan Aharoni, the founder of the archeology institute at TAU.

That imposing capital, like Ramat Rachel itself, is an anomaly in the archeology of Judah at the end of the Iron Age. This was the time of the Judean kings Hezekiah, Menasseh and Josiah, says Dr. Oded Lipschits, a TAU archeologist at the Entin Faculty of Humanities, who heads the excavations at Ramat Rachel. But while only one capital has been discovered in Jerusalem, 12 have been found at Ramat Rachel. Furthermore, the site stands out for its magnificent window balustrades, huge palace and gardens, pools and tunnels. Another unusual feature is an inner casemate wall surrounded by an outer solid wall which is unlike remains at similar sites from that period.

Piecing together the unusual archeological finds and architectural grandeur with the historical writings, Lipschits has deduced that Ramat Rachel was an Assyrian, and later also Persian government center, a colonial headquarters from which the empires ruled Judah as a vassal province.

**Foreign rule**

Another indication of the non-Judean usage of the site can be found in the soil samples found across it; Terra Rosa soil brought up from the valleys covered the hilltop site to a depth of 50 centimeters. Lipschits explains that just as the Assyrian, Babylonian and Persian rulers favored royal gardens with exotic trees imported from across the empire, so too they had a taste for lush gardens with waterfalls. “The hypothesis is that Ramat Rachel was an administrative center
Coexistence:

Yifat Thareani-Sussely, a PhD candidate at the Sonia and Marco Nadler Institute of Archeology, is pictured with a female figurine found at the 8th-7th century BCE Judean site of Tel ‘Aroer in the Negev desert. The site was a center of commerce and administration along the trade route that stretched from south Arabia through Edom, the Arava, Beersheba valley, the western Negev, and onto the coast. The largest source of Edomite pottery in the land of Israel, the site shows how the Judean rulers enabled other ethnic groups to coexist peacefully in a Judaic caravan town, says Thareani-Sussely, whose doctoral dissertation on the subject is supervised by Professors Israel Finkelstein and Nadav Na’aman.

With the advent of Zionism in the 19th and 20th centuries, the Jewish settlers were better able than the tradition-bound Arabs to harness technology.

for foreign rulers, far from the cultic center of the First Temple,” explains Lipschits. This would explain why the Maccabees destroyed the site as a hated symbol of foreign occupation.

As well as publishing the finds of Aharoni’s earlier excavations, Lipschits is now completing a book on a second corpus of stamp impressions from the Persian period. These include hundreds of stamped handles that bear the name of the province “Yehud” from the time of Ezra and Nehemiah – the first time Jews from Babylon returned to their homeland, as well as the names and titles of the governors at the time of Persian rule, indicating that Nehemiah was not the only Judean governor in the land.

Lipschits has been excavating at Ramat Rahel every summer since 2004 in conjunction with the University of Heidelberg, Germany, joined by numerous volunteers from Israel and throughout the world.

Everything has a boundary

The history and geography of the land of Israel are inextricably bound, says Prof. Gideon Biger of the Department of Geography and Human Environment, Entin Faculty of Humanities. With the advent of Zionism in the 19th and 20th centuries, the Jewish settlers were better able than the tradition-bound Arabs to harness technology and “change the landscape to suit a modern people.” The Arabs sold them low-lying swamps and sandy soils because they did not know what to do with them, while the Jews, with their heavy machinery, could cultivate them, he explains.

This settlement pattern dictated by technology changed in the 1930s when political and security issues became paramount, he continues. For example, Kibbutz Hanita was founded in 1938 for no economic reason but rather to annex the Western Galilee area to the future Jewish state.

Biger, one of the world’s leading experts on the boundaries of Israel, is quick to point out that the State of Israel is not synonymous with the biblical entity known in Hebrew as Eretz Yisrael, and in English as the “Land of Israel” with a big “L.” That territory stretched into parts of modern-day Egypt, Jordan, Lebanon and Syria.

When the borders of the modern state are finally drawn as part of an Israeli-Arab peace agreement, Biger, who serves as a consultant to the Israeli government and defense establishment, is likely to play a considerable role.

He was part of the Israeli team which inconclusively negotiated peace
The separation barrier in Jerusalem

Prof. Gideon Biger

with Syria in 1999-2000 under Prime Minister Ehud Barak. To understand those tortured negotiations, one must be familiar with the history of the area’s changing boundaries, he explains. In a nutshell, in the aftermath of World War I, France and Britain arbitrarily drew lines on a map in 1920 to demarcate their respective mandates granted by the League of Nations. Three years later, in 1923, those impractical boundaries were adjusted so that farmers would not be cut off from their fields and the international boundary between British Palestine and French Syria and Lebanon was established. In 1948, Syria invaded the nascent State of Israel and occupied some territory. Those lands became demilitarized in the 1949 armistice agreement and then some of the area was reoccupied by the Syrians until 1967, when Israel seized the Syrian-controlled Golan Heights.

“Israel has never actually defined its border on the Golan Heights,” he says. “Former Prime Minister Yitzhak Rabin said Israel would leave the Golan Heights in exchange for peace, but he never said to where.”

While Biger’s role in past negotiations with Syria has been important, his controversial proposal to swap land lived on by Arab Israelis in exchange for territory in the West Bank and Jerusalem has had a major impact on discourse relating to a final status agreement with the Palestinians. Under his formula, Arab-Israeli cities and villages in areas known as Wadi Ara and the Little Triangle would be traded for settlement blocs gained by Israel in the 1967 Six-Day War.

“If we want Israel to remain a Jewish state, then we can part with all the Arab villages that were attached to Israel after the 1948-1949 War of Independence,” says Biger. “Every state can exchange land. This is what is going to happen. It happened when Jordan and Saudi Arabia exchanged land in 1965 along their mutual boundary.”

**Simulating the separation fence**

Fellow TAU geographer Prof. Juval Portugali is fascinated by maps and the stories they tell. Portugali intimately knows every centimeter of the West Bank separation fence surrounding Jerusalem – even the sections which have yet to be built. Thanks to the border simulation software he and his students have developed, he has virtually visited the entire 125 kilometers of the Jerusalem section of the fence, seeking to resolve potential difficulties in both design and human interaction. That virtual map grew out of his interest in urban planning and virtual geographic environments.

Developed together with students of TAU’s Environmental Simulation Laboratory founded by the Charles H. Revson Foundation, the 3D visual simulation software was commissioned by the Center for Middle East Peace and Economic Cooperation, Washington DC, as a tool for helping decision makers formulate policies regarding Jerusalem.

Such computer cartography may help avoid the pitfalls of previous negotiated borders, such as the 1916 Sykes-Picot Agreement, when two British and French bureaucrats sitting in Paris drew lines dismembering Ottoman Turkey. They made decisions with little regard for private, communal and religious property or local trade routes, setting a course for generations of conflict.

Here, at the nexus of the ancient and the contemporary, the prehistoric and the post-modern, Tel Aviv University researchers are generating scholarship that continues to shape and influence our understanding of Israel’s environment and human culture, and ultimately its future.
Battered women, ex-convicts, teenage delinquents and other groups on the sidelines of society are being given a taste of university life through TAU’s “Access for All” program, which offers them year-long introductory courses in law, medicine, management and psychology. The courses are taught by highly motivated TAU undergraduate students who receive special training and academic credit, but no payment, for their endeavors. Demand to volunteer is high and students – who undergo a strict selection process – are limited to teaching only one year to enable others to do so in subsequent years.

The only program of its kind in Israel, Access for All is the brainchild of Dr. Adi Koll of the Buchmann Faculty of Law, who serves as program director. “The aim of the program is to give a chance to those people who, because of circumstances, were unable to gain an education. I know what it’s like to feel you’re not good enough, and that’s what drives me to help these people develop the
self-confidence to change their life course,” she says.

Access for All is one of a wide range of community building programs operated by the university, and “embodies TAU’s active drive to initiate programs that help society,” says the TAU President, Professor Zvi Galil.

Harnessing student enthusiasm

Each of the 30 students that volunteer each year brings his or her own special perspective to the program, and all leave with an experience that will stay with them forever.

One of these students is Roy Homri, 25, a TAU student of accounting, economics and management, who taught a group of teenagers with criminal records. Despite his rigorous triple-degree curriculum, Roy was only too happy to sign up. “I know it sounds corny, but I joined the program because of Zionism. I will do whatever I can for the State of Israel,” he says. “To be able to do good with my knowledge and give it to those who really appreciate it has only increased my motivation to do more.”

Law and economics student Hila Bitton, 25, taught a group of battered women. “We prepared for about a month before the program began, including a visit to a shelter for abused women. We customized the course to include legal content that would be particularly relevant to these women, specifically family law and their right to take their abusive partners to court,” she says.

Hila felt she had much to offer the program, having been an instructor in the military and a summer camp counselor. She also knew what it meant to overcome adversity; despite losing her mother to cancer when she was just 14, she excelled at school and today achieves outstanding grades at TAU. What she got out of the experience, however, was much more than she could have hoped for, and she is determined to put it to good use in the future: “I know I’ll carry on the spirit of the program by working at a law firm where they do pro bono,” she says.

Partnering with local municipalities

About 300 teenagers and adults take part in Access for All each year. Classes are homogeneous, enabling the student counselors to tailor their course content to the specific group they have been assigned, such as Ethiopian youth or teenage girls in distress. Admittance to the program is through referral by social welfare services personnel and parole officers from the municipalities of Tel Aviv, Holon and Bat Yam, partners of the program.

Each week, participants are bussed to the TAU campus and given a light meal. All are required to take a short computer course and are given the option of being tutored in reading, writing or math. They attend 24 four-hour sessions over the year, and are encouraged to sign up for the other three courses at the end of each year. They leave the program with a certificate that, although not a formal diploma, gives them a sense of accomplishment.

Life-changing impact on attendees

For some alumni, the program has simply provided education; for others, a trigger for making new life choices. One was recently accepted to an accredited course at an Israeli college of higher education, several have continued to high-school equivalency programs and non-academic professional schools, and some have obtained better jobs. In feedback questionnaires, attendees have noted increased self-esteem, enhanced social skills and academic knowledge, and a feeling of being better prepared to integrate into mainstream Israeli society.

Rafi K., 46, an ex-convict and former drug addict, is now in his second year of the program. “Access for All changed my whole life. It reinforced me intellectually and emotionally. I used to harm society; today I am proud to be able to contribute to society instead,” he beams.

The program is supported by TAU’s Sivan Center for Community Initiative, private donors such as Avi Naor, Dov Lautman, Ariel Landau and Ari Steimatsky, and foundations including the Ted Arison Family Foundation and the Jacob Levison Memorial Foundation.

Yael’s Story: “I never dreamed I would even visit a university, let alone study there,” says Yael Kazis, 40. A single mother of three, Yael is now in her third year of the program studying psychology as part of a group of battered women.

“The program gave me the tools and self-esteem to completely turn my life around,” she effuses. Formerly a house cleaner, she is now a manager responsible for 10 employees. She also volunteers as a counselor to battered women, “poor scared women who are in the same position I used to be in.”
Sleuthing Out the Genealogy of Zohar

A TAU scholar is helping unravel the mystery of how the greatest work of Jewish mysticism was written

In today’s world, no Jewish book except for the Bible enjoys more popularity than Zohar (“the Book of Splendor”), which is considered the most important work of mysticism or Kabbalah. Interest in this 24-volume commentary on the Bible – purported to have been written in Aramaic in the 2nd century by the revered Safed rabbi, the Rashbi (Simeon Bar-Yohai) – has spiraled in recent years with the proliferation of populist Kabbalah study centers. Trend-setting Kabbalah aficionados like Madonna have made the study of Zohar “cool.”

“The correct term is Zoharic literature or Zohar – not ‘the Book of Zohar,’” says Dr. Ronit Meroz of TAU’s Department of Jewish Philosophy, Chaim Rosenberg School of Jewish Studies. For Meroz, Zohar has been a lifelong passion, not a fashion. “Zohar not only gives answers to life’s quandaries; it is simply beautiful, poetic and mysterious,” says Meroz, who has devoted over a decade to studying and comparing 650 out of some 1,000 different Zohar manuscripts archived on microfilm in Israel’s National Library.

This mammoth project is being funded by the Israel Science Foundation to settle the question of how Zohar was written and who its authors were, and to enable Meroz to publish an authoritative scientific edition, a world first. “The 16th century copy we have all been reading is a corrupt version, full of mistakes,” says Meroz. “It reflects the understanding and beliefs of the printers at that time who were not historians, but rather saw the work as a means of hastening the coming of the Messiah.”

Meroz and her team will be publishing two volumes: a synoptic, computerized edition aimed mainly at scholars, and an annotated, printed version for the wider public.

New scientific approach

While the 16th century edition was based on only 10 manuscripts, scholars today have access to hundreds, some 500 pages long, some only a page or a few pages long, notes Meroz. “I’m trying to analyze the historical framework, structure and ideas of the work to elucidate what the original writers were trying to transmit,” she says.

Meroz introduced computer-aided research into her methodology. Using a computer program developed by her husband Eylon Meroz, she assigned numeric codes to individual passages in each of 650 Zoharic manuscripts that had already been dated by experts. When Meroz examined the computed data, which mapped the age and contents of each manuscript, she found patterns that had previously escaped scholars. The result, what she describes as a “genealogy of Zohar,” changes some basic assumptions scholars have held for years.

To begin with, Meroz discovered that the first Zohar texts were in Hebrew; not all were written in Aramaic as everyone thought. Moreover, she found that the text was a constantly expanding body of literature – a textual stew of sorts, bubbling for centuries while different scholars added their own ingredients, layer-by-layer, to enhance existing commentary.

Settling authorship

Close comparison of the wording, style and linguistic “signatures of origin” of key passages in the different manuscripts holds clues as to when they were written and by whom. Already
The sacred and the profane
In the Jewish tradition, women are forbidden to study Zohar. The fact that Dr. Meroz is both a woman and secular makes her work suspect for religious people who regard Zohar as a sacred text. Still, Meroz says, her articles are sometimes cited in Zohar discourse within religious circles, but under the name R. Meroz, to conceal her identity as a woman. Occasionally she gets confidential telephone enquiries. “Once, a Haredi (Ultra-Orthodox) emissary arrived at midnight to obtain a copy of my doctoral dissertation on the ARI, a venerated mystic, for a well-known rabbi. Then he got into a waiting taxi and sped away,” she recounts.

Sleuthing Out the Genealogy of Zohar
in the 14th and 15th centuries, several Jewish scholars disputed a 2nd century basis for Zohar, claiming that the language indicated it was the work of a 13th century Jew in Christian Spain, Rabbi Moshe de Leon. Later scholars agreed but disagreed whether there had been one author or a chavura (a study group) of scholars together with de Leon. Meroz’s work found clear evidence that there were many competing study groups over the centuries.

One of the most telling signs of a host of chavurot resides in an uncomplimentary passage Meroz discovered mocking the Rashbi himself – a normally highly venerated figure. The passage was censored out of the regular edition of Zohar known today, but will appear in Meroz’s scientific edition.

Other scholars before Meroz had noticed textual differences that made it clear this was no 2nd century composition – such as the paraphrasing of later Medieval writings; mention of later historic events such as the 7th century Muslim Conquest; and linguistic clues such as the use of the Greek concept of infinity or ein sof, which only entered Jewish philosophy in the late Middle Ages.

Zoharic flowchart
Meroz’s ten years of comparing documents revealed an undisputable pattern: Zoharic literature went through three phases of development. The first manuscripts – the root of Zohar – were written in the 11th century in the Middle East, and in Hebrew. Early 11th century texts, Meroz discovered, focused mainly on the “world of angels” while later texts focus on the “nature of the Divinity.” The majority of the text was added in Aramaic – the second stage – during a 60 year period of intense intellectual creativity in Spain toward the end of the 13th century and beginning of the 14th century. “The hidden roots of the Zoharic tree,” states Meroz, “were planted in the Muslim East, while its top spread out in Christian Spain.” In the third stage, Zohar was finalized in a number of print editions in Italy in Aramaic in the 16th century.

In essence, the research has generated a flowchart of Zohar’s creation. “Meroz’s attempt at scientific analysis of such a large and complex body of work is an example of how TAU is contributing to modernizing Jewish studies and making them relevant to our times,” says Dean of Humanities, Prof. Shlomo Biderman, himself an expert in comparative philosophy and religion.
Edna Langenthal has worked for years as an architect, is married to an architect and teaches architecture. A few years ago, she decided to turn inward and explore architecture in a manner unique to her field: through the prism of philosophy. In a move that is almost unprecedented, Langenthal is continuing her architectural studies at TAU’s School of Philosophy as a doctoral student, blending two seemingly unrelated areas in a manner that she hopes will revolutionize the way architects approach their field.

Langenthal is one of two TAU doctoral students who have been selected for Azrieli Fellowships, awarded for the first time this year to Israeli students pursuing advanced degrees in science, education, architecture and urban planning and who demonstrate outstanding academic achievement and personal merit. The fellowships are supported by the Azrieli Foundation, a Canadian philanthropic organization established in 1989 by Canadian real-estate developer David Azrieli, a 1996 TAU honorary doctor and founder of TAU’s Azrieli School of Architecture.

Both Azrieli Fellows at TAU are engaged in unique combinations of interdisciplinary studies: while Langenthal pursues philosophy and architecture, Jonathan Berant combines linguistics and computer science. Berant, 28, is on a direct track from his BSc degree to his PhD, after serving as an intelligence officer in the Israeli army for five years. Berant seeks to resolve a hot debate in the academic community: whether language acquisition in children is based on innate knowledge of language, or is a cognitive mechanism like all others.

Where does computer science come into it? “We try to teach computers language without prior knowledge of grammatical rules,” explains Berant. He adds that if the computer can be taught language, this would challenge the idea that language acquisition skills are inborn.

The algorithms Berant has developed enable the computer to learn language by analyzing its structure and patterns, such as the recurrence of specific word combinations, without having had input of grammatical rules and meanings. This research has implications for technology such as voice recognition programs and search engines.

In combining architecture and philosophy, Langenthal wants to get in touch with the existential and ethical aspects of architecture—how it relates to daily life.

Most architecture today, Langenthal points out, is orientated toward creating a beautiful space that is self-contained, rather than toward creating a building that is organically suited to its surroundings and people. “Everyone has a Guggenheim today,” says Langenthal, referring to the landmark museum in Manhattan. Such landmarks, she opines, “are all alike, and don’t connect with the place.”

Dr. Hagi Kenaan, Langenthal’s supervisor in the School of Philosophy, comments on Langenthal’s studies: “Edna is considering how buildings are tied to the question of what it means to live, to dwell. To dwell implies on the one hand being an individual, while on the other hand being a member of the community.”
A sixth-century mosaic floor depicting an amphora, fruit trees and fruit baskets was recently uncovered by TAU archaeologists at the Yavneh Yam archaeological site near the present town of Yavne. The floor belonged to a Byzantine estate believed to have once been the home of a charismatic Georgian monk known as Bishop Peter the Iberian.

Prof. Moshe Fischer and Itamar Taxel of TAU’s Sonia and Marco Nadler Institute for Archaeology and Jacob M. Alkow Department of Archaeology and Ancient Near Eastern Cultures have been conducting intensive archaeological work at the Yavneh Yam site since 1992. According to Prof. Fischer, Yavne Yam, a seaport from the Bronze Age to the early Islamic Period, served as a fascinating meeting point between diverse cultures of the East and the Mediterranean, in particular Egyptian and Greek.

The excavation, in its seventh year, was intended, among other things, to examine the settlement pattern and life in the community as depicted in a biography of the monk written by one of his disciples. “The work provides intriguing glimpses into the ethnic and religious nature of the community,” says Fischer.

TAU researchers have become the first in the world to store information in a lab-grown neural network for an extended period. The discovery marks an early but crucial step toward the invention of a computer chip with the capability to create and store information like humans do.

“This is the first time that multiple rudimentary memories have been imprinted in neural networks cultured outside the brain,” says Prof. Eshel Ben-Jacob of the Sackler School of Physics, who developed the technology along with Dr. Itay Baruchi. Ben-Jacob notes that his team’s discovery could set the stage for inventions such as a hybrid tissue combining brain cells and silicon chips to treat neurological disorders like epilepsy, Alzheimer’s and Parkinson’s, or help paralytics regain muscle control. His research is partially supported by the Lazlo N. Tauber MD Charitable Fund, USA.

In the future Ben-Jacob, together with co-investigator Dr. Yael Hanein of the School of Electrical Engineering, plans to extend the research toward the imprinting of memories and development of neurosensors using the neurochip they developed.

TAU Takes First Steps in Creating Live Memory Chips

Spectacular Mosaic Floor Uncovered

A discovery that could potentially help people with brain disorders or paralysis was cited as one of 2007’s top innovations by Scientific American (see story p. 21).
Feeding Industry Needs

TAU’s technology transfer arm Ramot has recently completed five new technology transfer agreements with some of the world’s leading companies.

Johnson & Johnson hones in on applied research
An applied research fund has been jointly established by TAU’s Colton Family Next Generation Technologies Institute and the Johnson & Johnson Corporate Office of Science & Technology. The Colton Institute promotes the development of high-tech and biomedical technologies that are still in the lab stage but that hold great commercial potential. The new fund will be dedicated to research projects in the life sciences that address industry-specific needs in the fields of therapeutics, diagnostic agents, medical technologies and novel medical materials and devices. The fund continues a long and successful history of collaboration between TAU and the global pharmaceutical giant.

Cinnamon: The key to fighting viruses?
Ever since encountering a biblical passage seven years ago, Prof. Michael Ovadia of TAU’s Department of Zoology has been studying the use of cinnamon to combat viruses. “A section in the Bible explains how the high priests would prepare a holy oil they used on their bodies before making a ritual animal sacrifice,” recalls Ovadia. “I had a hunch that this oil, which was prepared with cinnamon and other spices, played a role in preventing the spread of infectious agents to people.” His hunch proved to be accurate and, in July 2007, a research and licensing agreement on his patent-pending cinnamon extract was signed between Ramot and Frutarom, a multinational nutraceutical company based in Israel. The new extract could be used to neutralize or immunize against viruses such as human flu, avian flu, herpes, Newcastle Virus disease and HIV, among others. But don’t try this at home, kids. Household cinnamon in large amounts does not have this preventative effect in large amounts and could even be harmful, Ovadia warns.

New Alzheimer’s breakthrough
Research conducted by Prof. Ehud Gazit of the Department of Molecular Microbiology and Biotechnology has led to the licensing of a novel drug technology to treat Alzheimer’s to the German company Merz Pharmaceuticals. The worldwide exclusive licensing deal includes an upfront fee and milestone payments, as well as royalties on future sales. TAU President Zvi Galil said of the agreement, “we believe that our cooperation with Merz will lead to the development of long sought-after treatment for one of the most devastating illnesses known to date.”

Novel acne treatment
A pioneering treatment for adolescent acne has been developed by Professors Naftali Savion and Sarah Brenner of TAU’s Sackler Faculty of Medicine. The treatment works by applying statins – materials that are known to inhibit the production of cholesterol in the body – to facial skin. The technology is being licensed by Ramot to Israeli startup Lovaderm, which is developing the treatment in collaboration with a leading US company.

A quieter drill
Ramot has signed an exclusive licensing agreement with Sciense Microwave Ltd. for the development of innovative microwave drilling technology pioneered by Prof. Eli Jerby of the Fleischman Faculty of Engineering. The drill uses microwave radiation to bore into solids such as concrete, ceramic materials, silicon and glass and suffers from none of the problems that plague regular mechanical drills. It promises clean, silent drilling at a fraction of the cost of lasers.
DIMES, a TAU-led project headed by Prof. Yuval Shavitt of the Department of Electrical Engineering–Systems, is the largest of its kind in the world for measuring the Internet and could improve interactive media.

The Internet can be seen as an enormous circle made up of layer upon layer of networks, where the “core” networks are located in the center and the smaller ones on the periphery. When private users hook up to the Internet, their connection is often channeled via the core networks, regardless of the location of their own Internet service provider. This round-about method can make the Internet connection slower than connecting to peripheral networks located in or closer to their own “layer.”

Initiated by Shavitt, the DIMES project aims to redress this problem and make the Internet more efficient. Findings could lead to more advanced applications that require a fast Internet connection, in areas such as online gaming and video streaming.

DIMES relies on the participation of thousands of volunteers worldwide who download a small program to their home computers that periodically sends information on how they are connected to the Internet back to the TAU team. Shavitt’s group has developed a new method for measuring the Internet and generated previously-unknown information about the Internet’s topological structure. “We want to be the major source of Internet mapping and to share our knowledge with the world,” says Shavitt. DIMES findings are already being used by leading researchers in the field in the US and Europe.

Diabetes and Stress

People who suffer from stress in the workplace may be more likely to develop Type 2 diabetes, says TAU’s Prof. Samuel Melamed of the Sackler Faculty of Medicine. Type 2 typically occurs after the age of 40 and involves excessively high sugar levels in the body due to inadequate supplies of insulin and to insulin resistance in the cells.

Melamed’s research suggests that stressful work conditions could boost the risk of illness by a “magnitude similar to other risk factors, such as high body mass index, smoking and lack of physical exercise,” he says. His team analyzed the experiences of 677 Israeli workers from 1998 through 2003. Seventeen of the subjects developed Type 2 diabetes during the study period, but the team found that those who experienced job burnout were nearly twice as likely to develop the disease, regardless of factors such as age, sex and weight. In a separate analysis designed to check for the possible effect of blood pressure levels among subjects, the stressed-out employees turned out to be four and a half times more likely to become Type 2 diabetics.

Nonetheless, Melamed notes that job stress may not be the only factor involved, and that other life stresses could also contribute to the development of diabetes. The research was published in the journal Psychosomatic Medicine.
Entreprenurial Potency

In our era of fast technological growth, it isn’t surprising to find that one start-up begets another. But when researching the evolution of the Israeli high-tech sector, Prof. Shmuel Ellis of TAU’s Faculty of Management—Recanati Graduate School of Business Administration, together with colleagues, discovered that they could identify which company had a better chance of spawning new firms based on the entrepreneurial characteristics of the founding fathers.

This process, which the researchers call “genealogical entrepreneurship,” could be used to forecast directions of future industry growth.

Ellis and his co-investigators, Prof. Israel Drori of the Colman College of Business Administration, Israel, and Prof. Zur Shapira of the Stern School of Management, New York University, examined Israel’s successful telecommunications sector, a total of about 1,200 companies, and the genealogies of six companies: Tadiran, Telrad, Rad Data Communications, ECI Telecom, Fibronics and Converse.

The research team identified two main factors that differentiated one genealogy from another: the entrepreneurial tendencies of the founding fathers, and their “imprinting potential” or ability to transmit their firms’ skills, practices and knowledge onto new ventures. The researchers discovered that, just as genes are passed on from parents to children and grand-

Children born in July and August are 25 percent more likely to develop moderate to severe myopia (nearsightedness) than those born in December and January, finds a joint study of TAU’s Goldschleger Eye Research Institute and the Israel Defense Forces (IDF). Results of the study into environmental and genetic factors that cause myopia were recently published in the journal Ophthalmology.

Data collected by Dr. Yossi Mandel of the IDF on birth dates and vision problems of more than 250,000 IDF soldiers indicated a clear correlation between summertime birth and nearsightedness. Prof. Michael Belkin, Director of the Ophthalmic Technologies Laboratory at TAU’s Goldschleger Institute, explains that greater exposure to light at the time of birth affects the size and shape of the eyeball, causing it to elongate. “When the eye is too long,” says Belkin, “nearby objects are seen clearly, but distant objects appear blurred.”

A laboratory analysis of myopia in young chickens that was part of the study suggested that the body has a mechanism that causes the eyeball to lengthen when it is exposed to prolonged illumination. This mechanism is associated with melatonin, a compound secreted by the pineal gland in the brain when it is dark to control the day/night cycle of the body, although the scientists are not exactly sure how it operates in regulating eye length. “We know that sunlight affects the pineal gland and we have indications that melatonin, through other intermediate compounds, is involved in regulating the diameter of the eye in infancy,” says Belkin. “More sun equals less melatonin, equals a longer eye which is short sighted.”

Belkin warns that while eyeglasses can correct shortsightedness, severe cases of myopia can result in retinal detachment requiring surgery, or even loss of vision.

The study was conducted in cooperation with the Hebrew University of Jerusalem and the Technion-Israel Institute of Technology.
Lucy Is Demoted

TAU anthropologist Prof. Yoel Rak has debunked a decades-long held belief: that Lucy, the world-famous 3.2 million year-old skeleton of a small woman found in Ethiopia, was the prehistoric mother of the human race.

The remains of Lucy, otherwise known as *Australopithecus afarensis*, were discovered in 1974 in the Afar region of Ethiopia and she and her species have been considered the ancient forebears of modern humans ever since.

Now, however, examination of a new more complete skull of the same species that Rak found at the site where Lucy was discovered threatens to turn this theory on its head.

Rak, one of the world’s leading researchers in human evolution and a member of TAU’s Sackler Faculty of Medicine, found that the new skull’s lower jaw was not that of a human, but was actually more similar to the jaw of *Robust australopithecines*, a different branch of the human evolutionary tree that became extinct millions of years ago.

“It is now known that evolutionary biological development does not take place as a continuous chain of events, but is more like a tree with different branches,” says Rak. Scientists previously placed Lucy’s species at a node between the human branch of development and that of *Robust australopithecines*; however, the new evidence proves that Lucy and her kind are not situated at a node, but rather at the beginning of a different branch leading to *Robust australopithecines*.

“Given the anatomy *Australopithecus afarensis* shares with that species, Lucy cannot be our ‘mother,’ but is rather our ‘cousin,’” says Rak.

The research means a return to the drawing board for anthropologists seeking to complete the family tree of *Homo sapiens*. They must now contend with an evolutionary gap of one million years for which no fossils of human ancestors have been found.

The research was carried out together with Dr. Eli Geffen and Avishag Ginzburg of TAU.
How Do You Say “E=MC²” in Yiddish?

Yiddish brings to mind nostalgia and sentimentality rather than science and scholarship. Yet, Yiddish, TAU researchers revealed recently, was also used in a surprisingly cerebral way by 20th century academics working in various disciplines in Europe, the USA and Argentina.

A new collection of essays on this topic and translations of long-forgotten texts were presented at a symposium, “Science and Scholarship in Yiddish,” organized by TAU’s Cohn Institute for the History and Philosophy of Science and Ideas and the Goldreich Family Institute for Yiddish Language, Literature and Culture.

The event celebrated the publication of these texts in a special issue of Science in Context, a journal edited by the Cohn Institute and published by Cambridge University Press. Among the texts presented were Jewish mathematician and physicist Tuvia Shalit’s 1927 book on the theory of relativity, for which Einstein enthusiastically wrote a short introduction.

Prof. Leo Corry, head of the Cohn Institute, says: “The combination of these two worlds of science and Yiddish is typically received with skepticism. But the idea behind the journal is that science, while embodying universal values and truths, is always produced in locally, historically and culturally defined contexts. The Yiddish culture offers a context for science that has never been properly investigated.”

Scientists and scholars working in Yiddish emerged for only a brief period, beginning in the late 19th century and ending at the start of World War II. The movement was supported by university departments and flourished following the Russian Revolution, especially in countries such as the Ukraine and Belarus. Some scholars imagined that Yiddish would one day become the official language used by Jewish scientists.

Tragically, the growth of the language (spoken by about 11 million Jews) along with its scholarship was brutally cut short by the Holocaust.

The Chinese government has established a Confucius Institute at TAU, the first in Israel and one of 150 at leading universities around the world. The institute, which is offering courses in Chinese language and culture to university students and the wider public, is part of China’s efforts to promote its language and culture overseas.

Director of the institute Prof. Meir Shahar said, “China is the fastest growing economy in the world today. Many Israelis are interested in learning the language, history and culture of the newest global superpower.”

He added that TAU was the natural choice in Israel for a Confucius Institute because of the high number of students already enrolled in Chinese studies at the university’s Department of East Asian Studies.

The institute will operate within the framework of TAU’s S. Daniel Abraham Center for International Cooperation and Regional Studies and will hold conferences, award student scholarships and promote bilateral ties between China and Israel in a variety of fields.

Cancer Research Crosses Borders

Starving prostate cancer cells to death by cutting off the blood supply to secondary growths was just one of the research directions presented by TAU scientists in Vienna, Austria. A delegation of some 15 researchers from the life sciences and medicine, led by Prof. Isaac Witz of the George. S. Wise Faculty of Life Sciences, attended the third joint meeting on cancer research together with their counterparts from the Medical University of Vienna.

The conference was dedicated to translational research that has a real chance of reaching clinical trials in the future. Other TAU presentations at the event covered topics such as targeted drug carriers for cancer therapy; molecular imaging in breast cancer; slowing the pace of tumor metastasis using chemokine proteins; and the genetics of prostate cancer.
Greening Israel’s Chemical Industry

Producing plastic from corn, neutralizing biological weapons and removing hazardous waste deposited by munitions factories were just some of the technological breakthroughs showcased at a conference held by TAU’s Porter School of Environmental Studies. “Green Chemistry – Applications, Research and Trends” was the first conference of its kind in Israel to raise awareness of the links between green chemistry, industrial development and public health and the environment.

The two-day conference covered sessions on the commercial applications of green chemistry; raw materials recycling; toxicity reduction; renewable fuels; environmental and health aspects of home and commercial use of chemicals; and global and national policy on chemical use.

Keynote speakers were Dr. David Henton of the NatureWorks LLC Company and Prof. Terry Collins of Carnegie-Mellon University, both from the United States.
One of the worst catastrophes of the 21st century, ethnic strife in Darfur, Sudan, has resulted in up to 400,000 people killed, a further 2 million displaced from their homes and over 200,000 living in refugee camps in Chad. Some 500 of these refugees have made their way to Israel, which is still ambivalent about how to deal with them. However, say participants in a conference on Darfur held by TAU’s Hartog School of Government and Policy, Israel and the Jewish people have a special role to play in garnering support for the victims.

The conference aimed to raise awareness of the Darfur crisis among Israelis and encourage a united Jewish response on the part of Israeli government officials, non-profit organizations and Jewish aid organizations in the United States.

The conference was part of the Hartog’s School Tikkun Olam project to research Israel’s international aid policy and strengthen Israeli and Jewish involvement in weaker parts of the world, noted Prof. Yossi Shain, then Head of the Hartog School. “Although the State of Israel faces considerable challenges of its own, it is established enough to play a meaningful role in resolving world conflicts, especially in places where massive rights abuses and even genocide are being perpetrated,” said Shain.

Guest speakers included Ruth Messinger, President of the American Jewish World Service, an organization that provides support to grassroots social change projects throughout the world; Rabbi Israel Meir Lau, Chief Rabbi of Tel Aviv-Jaffa and former Ashkenazi Chief Rabbi of Israel; and Jacqueline Murekatete, a Rwandan genocide survivor and human rights advocate now residing in the United States. Murekatete’s visit to TAU was initiated and sponsored by Stanley Bergman, Chair of the Advisory Board of the Hartog School.

Attorney Anat Ben-Dor, Head of the Refugee Rights Clinic of the Cegla Legal Education Program at TAU’s Buchmann Faculty of Law, pointed out that Israel was a signatory to the Fourth Geneva Convention and was therefore obliged to extend protection and offer asylum to refugees. Ben-Dor and a team of about 20 students in the clinic provide free legal aid to Sudanese asylum seekers and refugees, assisting clients with a range of issues relating to forced migration, asylum applications, detention, social and economic rights, and family reunification.

The conference was sponsored by the Pears Foundation of the United Kingdom.

TAU Hosts Friendship Games

Young Israelis recently faced a group of Palestinian opponents on the TAU campus, but of a different kind than usual. The encounter took place as part of a basketball tournament aimed at promoting peace.

The second annual Friendship Games, a week-long basketball tournament held at TAU, attracted 25 college teams from the Palestinian Authority and 14 countries that included Jordan, Italy, Serbia and China. Over 300 players took part in the tournament – about three times the amount of the previous year, demonstrating the growing interest in the games among young people worldwide. The event was conceived by NBA Atlanta Hawks co-owner Ed Peskowitz in 2006 after meeting with the director of TAU’s Elite Sports Center, Arie Rosenzweig.

“The aim of the tournament is to get together through sport to demonstrate coexistence,” says Rosenzweig. In fact, the week proved to be much more than just a sporting event as the young athletes lived, ate and traveled together throughout Israel.

What the Israeli-Palestinian game lacked in quality, says Rosenzweig, it made up with determination and heart. It ended with a win for the Israeli team, 43 to 39, but the real winners were the students who managed to connect with each other through the universal language of basketball.

The eventual tournament victors were the Canadian men’s team and the Polish women’s team, who were presented with their trophies at the closing ceremony by Israeli President Shimon Peres.
Chagall Lithographs Showcased

NEW TEACHING PROGRAMS

Beckett and the Jews

The inauguration of the Annual Samuel Beckett Lecture Series at TAU’s Department of Theater Studies was marked with the attendance of Irish Ambassador to Israel Michael Forbes. The series kicked off with a lecture on “Samuel Beckett and the Holocaust” given by Jackie Blackman of Trinity College, Dublin. It was based on Blackman’s research on Beckett’s close contact with Jews in Ireland, Germany and France before and after World War II, and the impact of these experiences on his post-war writings.

Sponsors of the event were the Embassy of Ireland in Israel; the Cultural Division, Irish Department of Foreign Affairs; and the Samuel Beckett Society of Israel. The event was organized by Prof. Linda Ben-Zvi of TAU’s Department of Theater Studies.

The Katz Faculty of Arts has recently published a translation into Hebrew of the collected dramatic works of Beckett, prepared by Prof. Shimon Levy of the Department of Theater Studies.

Humanities and arts join forces

A joint degree in cultural studies for outstanding students is being offered by the Entin Faculty of Humanities and the Katz Faculty of Arts. The program includes courses from the multidisciplinary curricula of both faculties, as well as enrichment courses in creative writing and debating, among others. Dean of Humanities Shlomo Biderman and Dean of Arts Hana Naveh said the program’s purpose was “to promote a more culturally enlightened society.”

Focus on ancient material culture

A new multidisciplinary course in technology and material culture is enabling students of archeology and engineering to investigate the first complex technologies developed by humankind. The course, which is headed by Prof. Yuval Goren of TAU’s Sonia and Marco Adler Institute of Archeology, focuses on the study of cultural artifacts from the 8th to 4th centuries BCE including ceramics, plaster objects and the first use of metals.

Strengthening civil society

A master’s degree program for training activists for social change organizations is being offered by the Department of Sociology and Anthropology at the Gordon Faculty of Social Sciences. The first of its kind in Israel, the program is run with the assistance of Shatil, the New Israel Fund’s training center for non-profits in Israel. The program provides theoretical and methodological knowledge on social issues, as well as courses on relevant subjects such as gender, social and ethnic inequality, the labor market, immigration, environmental protection, welfare policy, and more. Entrance criteria for students include proven social involvement.
TAU Olympic Fencing Hopeful Foils Competition

TAU fencing champion Noam Mills (pictured) was recognized by TAU President Zvi Galil for her achievement in winning the silver medal in fencing at the “Universiade” – World University Games in Bangkok, Thailand. Noam, a student in accounting and economics, beat seven competitors for the title, including two former world champions. Placed top in the world youth rankings, Noam hopes to represent Israel at the 2008 Olympic Games in Beijing.

Chinese Teacher Makes TAU’s Top Twenty

The creative pedagogical style of Chinese teacher Dr. Zhang Ping won him a place in the TAU Rector’s list of the 20 best teachers for 2007. Zhang originally came to Israel from Beijing in 1994 for a year-long student exchange program in Jerusalem, but then decided to remain in the country. Today, having completed his combined PhD in Chinese philosophy and Jewish studies at TAU, he is a tenured lecturer at TAU’s Department of East Asian Studies, Entin Faculty of Humanities. He is fluent in Hebrew and has translated sacred and philosophical texts into Chinese.

French Academy Honors TAU Professor

TAU history professor and former Israeli Ambassador to France, Elie Barnavi, has been awarded the Grand Prix de la francophonie de l’Académie française (Grand Francophone Prize of the French Academy). The prestigious prize is awarded annually to an individual who contributes significantly to the development of the French language throughout the world.

Barnavi currently serves as a member of the Scientific Committee of the Museum of Europe in Brussels. His recent book on radical religions, Les Religions Meurtrières, garnered considerable media coverage in France.

TAU Math Student Wins SIAM Prize

TAU doctoral student in mathematics Nir Gavish (pictured) won the 2007 student paper competition of the Society for Industrial and Applied Mathematics (SIAM) for research that could have implications for the use of lasers in atmospheric sensing and military applications. The paper, which was coauthored with TAU and Chinese colleagues, was published in the journal Physica D: Nonlinear Phenomena.

New Science Star Born

TAU master’s graduate in molecular genetics Michal Dekel (pictured) is winner of the British Council’s 2007 FameLab in Israel – a competition to identify new faces in science. Michal, whose master’s research focused on detecting genomic alterations affecting fertility among males with chromosomal defects, was selected from among nine finalists for her presentation on single sex reproduction. As the winner, she participated in the 2007 Cheltenham Science Festival in Britain.

The FameLab competition is run along the lines of popular TV reality shows in which participants give short presentations on their work to a panel of judges and a live audience. The purpose of the competition is to encourage young scientists to inspire and excite public imagination with a vision of science in the 21st century.
TAU's Financial Education Program, sponsored by Citi Foundation (formerly Citigroup) and now going into its second year of operation, sends TAU students of economics, management and public policy to teach disadvantaged adults how to manage their personal finances, plan their spending and deal with social service agencies.

Dean of Students Prof. Yoav Ariel notes, “Our students will be taking leadership positions in Israel’s public and private sectors in the future, and this program provides them with practical experience in dealing with real-life social issues and deepens their sense of responsibility.”

A community participant from last year, “Baruch,” said that “thanks to the TAU student who helped me, I have taken care of my debts and received assistance from a lawyer. Without the student’s help, I wouldn’t even have bothered trying to do such things.”

The program is directed by the TAU Unit for Social Involvement at the Ruth and Allen Ziegler Student Services Division, in cooperation with the social services departments of the Tel Aviv-Jaffa Municipality and the ORT Singalovsky College in Tel Aviv. The association of Israeli Friends of TAU initiated the program and provides it with regular assistance.

TAU STUDENTS GET CREATIVE IN THE COMMUNITY

Teddy Bear Hospital allays children’s fear of doctors

A one-day workshop aimed at reducing children’s anxiety when visiting physicians was held on the TAU campus. Children (accompanied by their parents) were encouraged to bring in their “injured or ill” toys for a check-up at the “Teddy Bear Hospital.” TAU medical students acted as “doctors” who examined an assortment of dolls and bears. Each child was asked to describe the bear’s problem and medical history, as well as to rank the severity of its pain and its phobia of doctors. According to the “diagnosis,” the bears were referred to a specialist, sent for X-rays or sent to the pharmacy.

The event was initiated by five students from the Sackler Faculty of Medicine, and supported by the Preschool Department at the Tel Aviv-Jaffa Municipality. An ambulance was parked outside to allow curious children to climb in, examine oxygen masks, stretchers and compresses, and ask questions.

Music makes for happier patients

TAU students have been giving the classical treatment to patients at the TAU-affiliated Tel Aviv-Sourasky Medical Center – but this time they are not medical students. Rather, they are from the Buchmann-Mehta School of Music and have been performing classical and jazz works at the hospital three afternoons a week, together with 6th-12th grade pupils of the Tel Aviv Music Conservatory.

The first initiative of its kind in Israel, the voluntary venture is turning hospital waiting rooms into concert halls and putting patients and visitors at ease. It was launched through the support and endeavors of Prof. Tomer Lev, Head of the Buchmann-Mehta School; Amit Golan, Director of the Tel Aviv Music Conservatory; Klei Zemer, who provided all the instruments; and Bank Hapoalim.
Security Perspectives

Prime Minister Ehud Olmert (pictured left); Deputy Prime Minister and Defense Minister Ehud Barak (below left); and IDF Chief of Staff, Lt. Gen. Gabi Ashkenazi, were among the guest speakers at a conference on “Security Challenges of the 21st Century” held by the Institute for National Security Studies (INSS) at Tel Aviv University. This year’s conference focused on the nature of future wars and intelligence challenges.

Viatcheslav Moshe Kantor, a well-known Jewish Russian leader and philanthropist, was elected President of the European Jewish Congress (EJC), which promotes the interests of 40 Jewish communities throughout Europe. Mr. Kantor established the Kantor Research Center for the History, Culture and Life of Eurasian Jews at TAU, is a member of the TAU international Board of Governors, and is a TAU honorary doctor. He also serves as Chairman of the European Jewish Fund, President of the Russian Jewish Congress and Chairman of the EJC Board of Governors.

“European Jews are strong enough to tackle the many challenges they face and have a bright future in Europe, despite rising anti-Semitism, assimilation and sharp criticism of Israel in the region,” Kantor said.

US UNIVERSITY PRESIDENTS VISIT TAU

In the wake of UK-based efforts to impose an academic boycott on Israeli universities, TAU’s President Zvi Galil hosted 11 American university presidents and chancellors. The visit, aimed at strengthening research ties and student exchange activities between Israeli and American universities, was part of an eight-day seminar organized by the American Jewish Committee’s Project Interchange.

Prof. Galil told the visitors, “Tel Aviv University has many centers of excellence, and we know you are looking for collaboration.” In particular, he noted TAU programs in Middle Eastern studies, nanotechnology, neuroscience, computer science and archeology. He also announced new exchange programs with Brown University and the University of Toronto, emphasizing that TAU offers several programs taught exclusively in English.

Kasa’s Dream

Dan David Youth Competition Winner Meets Martin Luther King III

The winner of the 2007 Dan David Foundation’s “Name Your Hero” Youth Competition, Kasa Getoo, met with Dr. Martin Luther King Jr.’s son, Martin Luther King III, who visited Israel. Kasa won the competition for her piece on “I have a Dream/Martin Luther King,” in which she tells of the hardships and prejudice she faces as an Ethiopian immigrant in Israel and of how she was inspired by King’s teachings to speak out against racism. Kasa, 19, is a graduate of TAU’s Youth University, a program run by the Unit for Science Oriented Youth that offers high school pupils university courses while still at school.

“I have a dream that Ethiopian children will feel part of this country [Israel], that they will not flee from it, since they do not have any other,” wrote Kasa in her prize-winning essay.

On a recent visit to London, Kasa spoke to Jewish high school pupils on her personal story and met with members of the London Jewish community and the TAU British Trust.

Renowned Playwright Gives Carmel Lecture

Martin Sherman, the guest speaker at the 2007 Sheila and Yossi Carmel Lecture, is a Jewish American playwright most well-known for his controversial play Bent, which was nominated for Best Play of the Year by Broadway’s Tony Award in 1980. He has also penned other award-winning plays, including an adaptation of Pirandello’s Absolutely, and Rosa performed by the Royal National Theatre, both of which were nominated for a Laurence Olivier Theatre Award. During the lecture, performers from the Israeli Cameri Theater presented excerpts from his works.

TAU Honorary Doctor Presiding over European Jewish Community

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“European Jews are strong enough to tackle the many challenges they face and have a bright future in Europe, despite rising anti-Semitism, assimilation and sharp criticism of Israel in the region,” Kantor said.
Yehiel Ben-Zvi will be named Vice President by special appointment. This follows 35 years of outstanding service to the university, 27 of them as Vice President for Development and Public Affairs.

Mr. Mordechai Cohen has been appointed Director-General of Tel Aviv University. He has held several positions at the university, including Deputy Director-General of the Engineering and Maintenance Division. Cohen also served as Director-General of the Academic College of Tel Aviv-Jaffa.

Dr. Gary Sussman has been appointed Vice President for Development and Public Affairs at Tel Aviv University. From 2004 to 2007 Dr. Sussman was the Director of Research and Development at TAU’s Harold Hartog School of Government and Policy, and he also helped revitalize the TAU Trust in Great Britain. Before making aliyah in 1992, he served as Head of the Habonim Dror Youth Movement in South Africa.

Prof. Eliora Ron, Department of Molecular Microbiology and Biotechnology, Wise Faculty of Life Sciences; Prof. Vitali Milman, Raymond and Beverly Sackler School of Mathematical Sciences, and Prof. Micha Sharir, School of Computer Science, both of the Raymond and Beverly Sackler Faculty of Exact Sciences; and Prof. Shlomo Giora Shoham, Buchmann Faculty of Law, were awarded the EMET Prize given annually by the Israeli Prime Minister’s office for excellence in academic and professional achievements.

Prof. Asher Tishler has been appointed Dean of TAU’s Faculty of Management—Leon Recanati Graduate School of Business Administration. Prof. Tishler also heads TAU’s BRM Institute of Technology and Society and Eli Hurvitz Institute for Strategic Management.

Roni Krinsky has been named President of the American Friends of Tel Aviv University (AFTAU). Ms. Krinsky is an experienced development executive recognized for her innovative methods of donor engagement. She holds two degrees from Tel Aviv University and served as the Vice President of the Northeast Region of AFTAU for two years.
Appointments: • Head of the Max and Betty Kranzberg Research Institute for Signal Processing – Prof. Ady Arie, Engineering • Head of the Ela Kodesz Institute for Cardiac Physical Sciences and Engineering – Prof. Ofer Barnea, Engineering • Head of the Harold Hartog School of Government and Policy – Prof. Neil Gandel • Head of the Andrea and Charles Bronfman Institute for Media of the Jewish People – Prof. Yosef Gorny, Humanities • Head of the Alfred Akirov-Alrov Institute for Business and Environment – Prof. Yehuda Kahane, Management • Head of the Claire and Amedee Institute for the Study of Blindness and Visual Disorders – Prof. Efrat Kessler, Medicine • Head of the newly-established Prais-Drimmer Institute for Development of Anti-Degenerative Drugs – Prof. Yoel Kloog, incumbent of the Jack H. Skirball Chair in Applied Neurobiology, Life Sciences • Head of the Institute for Latin American History and Culture – Dr. Gerardo Leibner, Humanities • Head of the Sackler Institute of Astronomy – Prof. Elia Leibwitz, Exact Sciences • Head of the Djerassi-Elías Institute of Oncology – Prof. Dov Lichtenberg, incumbent of the Lady Davis Chair of Biochemistry, Medicine • Head of the Institute for International Scientific Exchanges in Medical Sciences – Prof. Joseph Moiseev, Medicine • Director of the Batya and Isachar Fischer Center for Corporate Governance and Capital – Prof. Omri Yadlin, Law • Director of the Moshe Dayan Center for Middle Eastern and African Studies – Prof. Eyal Zisser, Humanities • Incumbent of the Helen and Yehiel Leiber Chair for Cancer Research – Prof. Nadir Arber, Medicine • Incumbent of the Sydney A. Fox Chair in Ophthalmology – Prof. Michael Belkin, Medicine • Incumbent of the Chair for the Micromechanics of Composite Material – Prof. Yakov Benveniste, Engineering • Incumbent of the Tarnesby-Tarnowski Chair for Family Planning and Fertility Regulation – Prof. Jehoshua Dor, Medicine • Incumbent of the newly-established Chair of Computational Mathematics – Prof. Nira Dyn, Exact Sciences • Incumbent of the Kalman Lubowsky Chair of Legal Theory and Applied Ethics – Prof. Chaim Gans, Law • Incumbent of the Emma Neiman Chair for Childbirth Research – Prof. Marek Glezerman, Medicine • Incumbent of the Edouard and Francoise Jaupart Chair of Theoretical Physics of Particles and Fields – Prof. Marek Karliner, Exact Sciences • Incumbent of the Zucker Sussman Chair in Glaucoma Research – Prof. Shlomo Melamed, Medicine • Incumbent of the Dr. Miriam and Sheldon G. Adelson Chair in the Biology of Addictive Diseases – Prof. Moshe Rehavi, Medicine • Incumbent of the Chair in Ottoman Studies – Prof. Ehud Toledano, Humanities

Honors: 2007 Young Investigator Award of NARSAD: the Mental Health Research Association, Dr. Yuval Bloch, Medicine • President of the European Federation of Research in Rehabilitation, Prof. Haim Ring, Medicine • Corresponding Fellow of the British Academy – the National Academy for the Humanities and the Social Sciences, Prof. Ariel Rubinstein, Social Sciences • George Freeley Prize, Prof. Linda Ben-Zvi, Arts

Generals in the Cabinet Room: How the Military Shapes Israeli Policy

This work traces civil-military relations in Israel since the 1990s. The author argues that while once Israel’s military was the servant of its civilian political leadership, today it is the Israeli generals who lead in foreign and defense policymaking. Prof. Yoram Peri is Head of the Caesarea de Rothschild School of Communication and Director of the Chaim Herzog Institute for Media, Politics and Society, Gordon Faculty of Social Sciences.

Saudi Arabia and Ethiopia: Islam, Christianity and Politics Entwined

This work surveys modern relations between Saudi Arabia in Ethiopia, beginning in the 1930s and culminating in today’s radicalization of Islam in the region and Ethiopia’s transformation from a “Christian island” into a multicultural state. The conceptual dilemmas of Ethiopia’s Christian establishments, of its Muslim communities and of the Saudis are analyzed. Haggai Erlich is professor emeritus of the School of History, Entin Faculty of Humanities.

Plenty of Room for Biology at the Bottom: An Introduction to Nanotechnology

This book attempts to unravel the mysteries of nanobiology from its fundamentals to the most advanced applications in the field. It is an important reference for those interested in the application aspects of the field. Prof. Gazit is a member of the Department of Molecular Microbiology and Biotechnology, Wise Faculty of Life Sciences.
ARGENTINA
Asociación de Amigos de la Universidad de Tel Aviv en Argentina (AUTA)
Paraguay 4010 p.1A
1425 Buenos Aires
Argentina
Tel. +54 11 4833 7090
E-mail: auota@fibertel.com.ar

AUSTRALIA
Australian Friends of Tel Aviv University – New South Wales
Landerer & Co.
Level 31
133 Castlereagh Street
Sydney
NSW 2000
Tel. +61 2 9261 4242
E-mail: landerer@ozemail.com.au

AUSTRIA
Gesellschaft der Freunde der Universität Tel Aviv in Österreich
Institute for Experimental Physics
University of Vienna
Boltzmanngasse 5
A-1090 Vienna
Austria
Tel.: +43 1 4277 51107/8
E-mail: chris.l.langstadlinger@exp.univie.ac.at

BRAZIL
Sociedade de Amigos da Universidade de Tel Aviv em Brazil
Av. Atlântica 2856/801
Rio de Janeiro RJ 22070-000
Tel. +55 21 2549 9236
E-mail: luizchor@uol.com.br

BRAZIL
Sociedade de Amigos da Universidade de Tel Aviv em Uruguay
Avda.Washington 69978
Tel Aviv
Tel. +972 3 640 8055/6401
E-mail: yedidim@post.tau.ac.il

MEXICO
Asociacion Mexicana de Amigos de la Universidad de Tel Aviv
Seneca 307 Polanco 11560
Mexico DF
Tel. +52 55 5280 5030
E-mail: taunex@mx.inter.net

MEXICO
Norwegian Friends of Tel Aviv University
Bogstadvieien 8
Oslo 3
Tel. +47 22 603190

ISRAEL
Israeli Friends of Tel Aviv University
Tel Aviv University
Guttmann Administration Building – Room 002
Ramat Aviv 69978
Tel Aviv
Tel. +972 3 640 8055/6401
E-mail: yedidim@post.tau.ac.il

ISRAEL
Swedish Friends of Tel Aviv University
POB 7847
S10394 Stockholm
Tel. +46 8 997195
E-mail: david.feder@swipnet.se

SWITZERLAND
Swiss Friends of Tel Aviv University
Bahnhofstr. 14
POB 2315
8001 Zurich
Tel. +41 1 211 60 92
E-mail: Viviane@bollaginfo.com

UK
Tel Aviv University Trust in Great Britain
1 Bentinck Street
London W1U 2EB
Tel. +44 207487 5280
E-mail: tautlondon@aol.com

URUGUAY
Asociación de Amigos de la Universidad de Tel Aviv en Uruguay
Antonio Costa 3565
Montevideo 11300
Tel. +598 2 6284300
E-mail: spillercar@yahoo.es

USA
American Friends of Tel Aviv University – National
39 Broadway – Suite 1510
New York
NY 10006
Tel. +1 212 742 9070
E-mail: info@taau.org

USA
American Friends of Tel Aviv University – Bay Area
PMB 155
484 Lake Park Avenue
Oakland CA 94610
Tel. +510 444 6000
E-mail: infowest@taau.org

SWEDEN
Swedish Friends of Tel Aviv University
POB 7847
S10394 Stockholm
Tel. +46 8 997195
E-mail: david.feder@swipnet.se

VENEZUELA
Asociacion de Amigos de la Universidad de Tel Aviv en Venezuela
Edificio Bet Am
Avda.Washington
San Bernardino
1010 Caracas
Tel. +58 212 550 2234
E-mail: avauta@cantv.net