



TEL AVIV UNIVERSITY REVIEW



Releasing
Energy
from
Nature

Combat-Related Trauma

New Solar System

Jewish Humanitarian Aid Conference

STOP PRESS



Gore, Oz and Stoppard among 2008 Dan David Prize Winners

The Dan David Prize, administered by Tel Aviv University, has announced this year's winners: In the Present Time Dimension, for social responsibility with particular emphasis on the environment, the prize goes to former US Vice President Al Gore; in the Past Time Dimension, for creative rendering of the past in literature, theater and film, the prizes go to writer Amoz Oz, playwright Sir Tom Stoppard and filmmaker Atom Egoyan; and in the Future Time Dimension in geosciences, the prizes go to Prof. Geoffrey Eglinton of the UK and Prof. Ellen Mosley-Thompson and Prof. Lonnie G. Thompson of the USA.

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As the new head of TAU's Hillel Center, Ethiopian immigrant Pnina Gaday has a vision: to help more Ethiopian-Israelis gain access to higher education.



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Renewing Our

Unlimited, cheap air conditioning, biofuel **grown in the desert**, electricity created through **photosynthesis** – these are a few of the **unexpected advances** being made by TAU scientists in the field of renewable energy.

The goal: Leapfrogging over current technologies that create more problems than they solve to find truly reliable, long-term solutions.

By Ilana Teitelbaum

The combination of hiking oil prices and fears of global warming has scientists racing to produce a viable alternative to fossil fuels that will be clean, renewable and generated by natural resources. The energy provided by such resources is usually environmentally-safe and the resources themselves are either renewable – such as plant matter for biofuels – or unlimited, such as wind and sunlight.

Unfortunately, the renewable energy-generating technologies that are currently in place are inefficient and costly, and in the case of biofuels, riddled with controversy.

Driven by their passion to resolve this global dilemma, re-

searchers at TAU are making great strides toward developing a variety of new energy technologies that are efficient, affordable and practical. Their goal is nothing less than a technological revolution. The multidisciplinary research is being carried out across the campus as well as under the auspices of TAU's Porter School of Environmental Studies, Israel's leading think tank in environmental research.

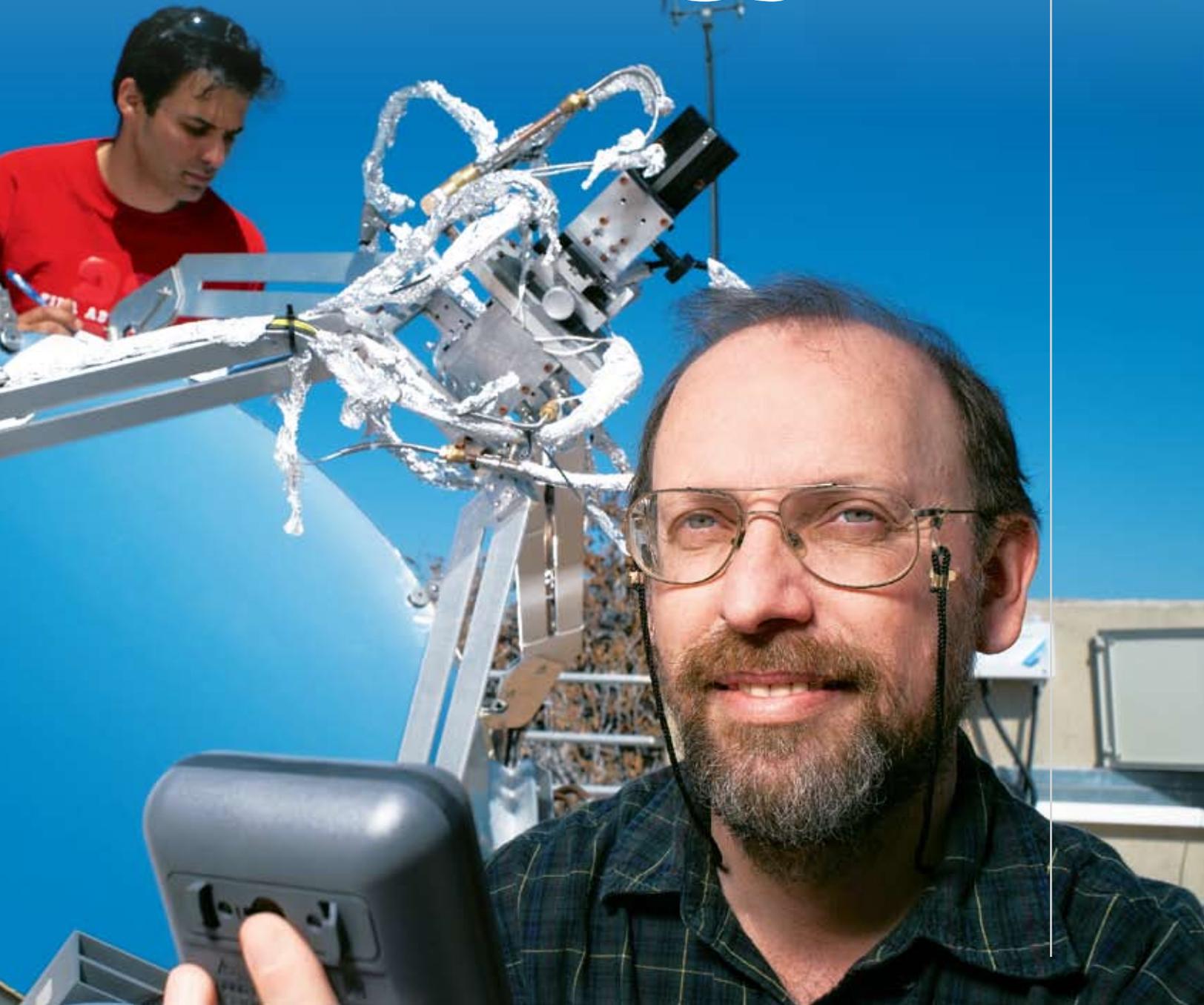
“With some 30 senior faculty members and dozens of doctoral and master's students all working intensively on renewable energy, TAU is already making a global name for itself,” says the TAU President, Professor Zvi Galil.



Prof. Avi Kribus pictured with his solar collector. Its solar radiation intensity is 500 times higher than normal sunlight.



Thinking about Energy





project, which has received funding from the European Union for the next three years. “The EU considers his project a top priority,” says Prof. Yehuda Benayahu, Head of TAU’s Porter School of Environmental Studies.

While solar energy is already used worldwide as a source of electricity, its use is limited for a number of reasons. One is inefficiency: Even the most effective photovoltaic cells (the devices which convert light into energy) are only 15%-30% efficient, with the rest of the solar energy going to waste.

Additionally, these cells are extremely costly to manufacture, since they are made of the same material as computer chips.

An example that demonstrates the current

the tune of \$400 billion. Meanwhile Kribus is working on a device that is small, efficient and cheap.

Kribus is using the principle of concentration to collect sunlight from a large surface area and direct it onto a very small area, where the light is then converted into energy. By using concentration, Kribus explains, the photovoltaic cells can be made in much smaller sizes, thereby significantly reducing the cost of manufacture.

Kribus has also found a way to dramatically increase the efficiency of the solar device. About 70% of solar energy collected usually goes to waste, in the form of heat. Kribus has developed the technology to trap this heat and use it as an additional energy product.

“This lost part of the solar energy that we capture can’t be used as electricity, but it can be used as heat,” explains Kribus. “It can be used for water heating and space heating, and more interestingly we can use this heat as a form of energy for air condi-



Dr. Hadas Mamane is searching for new, environmentally friendly technologies to treat and disinfect water

New under the Sun

Imagine if air conditioning came without the hefty price tag of electric bills – if it was, in fact, freely available on a wide scale. Now imagine that unlimited air conditioning produced by non-polluting and affordable technology is a reality that is just around the corner. Prof. Avi Kribus, a mechanical engineer at TAU’s Fleischman Faculty of Engineering, has created a solar energy device that can power air conditioning and heating while producing electricity at the same time. Israel is a world leader in solar technology, having invented solar-powered water heaters, and Kribus’s research signifies a new milestone on that historic path.

A flurry of international interest has been generated by Kribus’s

plight of solar energy technology can be found in a recent issue of *Scientific American*. The cover story advocates a national solar energy plan which would involve building a solar plant on 30,000 square miles of land to

tioning. When you have strong sunlight you also need air conditioning, so it makes sense.”

But heat can’t be transported over large distances, and that leads to the next stage of Kribus’s plan: to devel-

AL GORE TO SPEAK AT TAU RENEWABLE ENERGY CONFERENCE

The former US Vice President and Nobel laureate will be in Israel to accept the 2008 Dan David Prize at TAU

TAU is convening a high-profile international conference on renewable energy – the first in Israel – that will promote the research and implementation of sustainable energy solutions for the benefit of all. Environmental responsibility guru Al Gore will give the opening address. Other speakers include figures representing the scientific, industrial, financial and political aspects of renewable energy. A special session will address Israel’s energy policy and future energy independence. The conference is being sponsored by the Pears Foundation, the Consensus Business Group and Ampal.



“ Developing countries don’t have money – what they have is sunlight.”

op solar collectors in small units that would be attached to the roof or wall of a home or office, replacing or at least complementing massive solar plants.

What to do when there is no sunlight? Kribus’s response is that in that case, consumers can still connect to the local electrical grid. At times when no one is at home, consumers can sell surplus solar electricity to the grid to offset their electricity bills. The heat, on the other hand, can be stored until it is needed for heating or air conditioning purposes.

While Kribus began his own startup company three years ago and has a unit running in his lab, the project is not yet ready to enter the commercial phase.

“From a technological point of view there are no major problems,” says



Kribus. “Now the only question is how to make it as cheaply and efficiently as possible, and how to make it reliable. We want to install these devices and have them work for 20-30 years, which needs very careful engineering.”

Kribus has another project in the works, in collaboration with former Porter Fellow Dr. Hadas Mamane. Using the solar energy technology developed by Kribus, they are developing a method of disinfecting large amounts of water in one go. Such an innovation would have tremendous benefits for developing countries where contaminated water causes disease and where money is scarce. Currently the only similar technology in place, called SODIS (solar water disinfection), can only clean small amounts of water at a time and is consequently inefficient and costly.

The system developed by Kribus and Mamane involves what Mamane calls a “synergy” of thermal heat and ultraviolet rays. “The idea is to find a disinfection system that is cheap and will take advantage of the natural properties of solar heating,” she explains.

She adds, “Developing countries don’t have money – what they have is sunlight.”

Throwing Caution to the Winds

Another bounty of nature is wind, “which is one of the cleanest energies that we can use,” says Prof. Avi Seifert of TAU’s School of Mechanical Engineering, Fleischman Faculty of Engineering.

Wind energy is closely related to solar energy because all winds are generated by solar heating of the atmosphere. Unfortunately, the technology that produces wind energy is currently inefficient, since wind tur-

bines require high wind speeds to operate. This limits the applicability of turbines in general, and also restricts where turbines can be placed.

Seifert and Kribus are working to develop a wind turbine that will turn at lower wind speeds. Seifert explains that the technology developed at the TAU Meadow Aerodynamics Laboratory for more than two decades, called Active Flow Control, “can change the flow near the surface of the turbine blades with a small amount of energy injection in the right place and at the right time with a concomitant increase in the overall performance.” If developed to maximum efficiency, the wind turbines operating with Active Flow Control technology could be placed even in areas where there is little wind, opening thousands of new opportunities for the utilization of wind energy.

In addition to their inefficiency, another problem with current turbines is that they are noisy and often have to be placed far from populated areas. Seifert is collaborating with Prof. Touvia Miloh of the School of Mechanical Engineering, who is also a researcher at IAG Stuttgart University in Germany, to reduce the noise of wind turbines using Active Flow Control. Quieter turbines could be placed in many areas, even residential neighborhoods, without creating a disturbance.

Seifert views wind energy as a virtually untapped resource with vast potential. “If wind turbines would become more efficient, could be placed closer to homes and be smaller and have more flexibility, our capability to harness energy from wind would substantially increase,” he concludes.

Seifert and Miloh are collaborating with Prof. Thorsten Lutz from the Aerodynamics Institute at Stuttgart University.

Storing the Sun and Wind

Another researcher making great strides in the field of clean, renewable energy is Prof. Emanuel Peled of the Raymond and Beverly Sackler School of Chemistry. Peled is developing fuel cells that could potentially store large amounts of wind and solar energy and divert it to the national electricity grid. This energy storage system is based on a low-cost, high-performance technology that he and his group have developed and patented.

A fuel cell is a device similar to a battery but with one crucial difference: its chemicals are stored outside, and not inside, the device. Prof. Peled's system takes wind or solar-generated electric energy and converts it into chemical energy. The resulting chemicals are stored in appropriate

containers or tanks outside the fuel cell. When the need arises, the fuel cell transfers the chemical energy back into electric energy and sends it to the grid or to the customer.

The TAU system incorporates low-cost materials and boasts a high energy conversion efficiency rate of 75%,

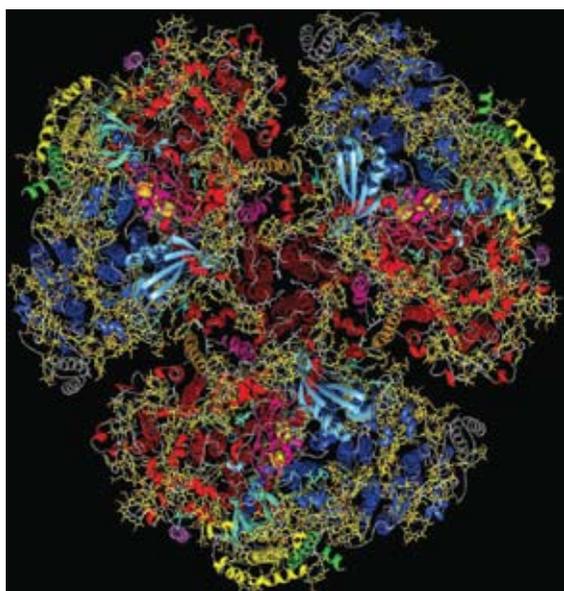
The fuel cell Peled has developed could also overcome a major disadvantage of wind power, which blows strong at night when the demand for electric energy is low. Wind energy could be trapped during the night and supplied during the day when demand is high.



We might reach the point where wind and solar farms could supply 50% or more of the country's total electricity.

making it attractive for cases in which very large amounts of electric energy need to be stored. In the future, Peled believes, it could be scaled up to multi-megawatt systems that could stabilize and store the excess energy generated by solar and wind farms.

“By dealing with the intermittent nature of solar and wind power, stabilizing it and storing it, we might reach the point where wind and solar farms could supply 50% or more of the country's total electricity. In practice we would use many hundreds of



 A protein chlorophyll complex that converts light into electricity

POWER PLANTS

Photosynthesis, the process by which plants convert sunlight into food and oxygen, represents some of the most advanced technology engineered by Mother Nature. Now TAU researcher Prof. Chanoch Carmeli of the Wise Faculty of Life Sciences has found a way to harness the process of photosynthesis to create electricity.

Carmeli explains that since plants are the earliest source of energy on the planet, they have had the most time to develop a perfect process of energy production. “In the course of hundreds of millions of years, the process of photosynthesis was fine-tuned to become extremely efficient,” says Carmeli.

As technology becomes more advanced, the electronic devices we use, such as computers and cell phones, become smaller and smaller. The same holds true with photosynthesis: the process takes place in a tiny nano-sized protein acting as a photocell – something that converts light into electricity – within plant cells. Plant molecules act as “wires” that channel the energy between photocells.

Carmeli's idea was to isolate the plant protein where sunlight is converted into electricity, fabricate layers of dry proteins, and place them between two electrodes. These electrodes are transparent so that sunlight can pass through them and into the protein, galvanizing the process of photosynthesis. The result is a renewable, pollution-free method of producing energy. This device is also potentially cheaper to manufacture than conventional solar cells, which are made of expensive materials.

“After we develop this device, it will come out cost-effective and possibly even cheaper than the electricity we get today,” says Carmeli.

A salt cedar tree
experimental plot
at Kibbutz Yotvata 

50 kilowatt regenerative fuel cells in our renewable energy storage system,” Peled says.

Peled’s project is being commercialized through TAU’s technology transfer company, Ramot. A start-up company was recently established aiming to complete the technology’s development and bring it to the market.

Seeds of Change

Energy from biomass – renewable organic material such as crops – has become popular in the United States in recent years. This has led to a dramatic increase in the use of liquid transportation biofuels such as ethanol and biodiesel, which are derived primarily from agricultural crops.

Biofuels, however, are plagued with controversy: crops such as corn, wheat, and soybeans, which were once only used for food, are now being used for fuel as well, and the result is that the price of these crops has risen tremendously. Since crops are used as animal fodder in the meat industry, prices for meat are skyrocketing. An additional problem is that crops such as corn are only 15% efficient as a source of biofuel, which means that massive amounts of corn must be used.

TAU’s Manna Center for Plant Biosciences is committed to expanding the world’s horizons on how biofuel can become an efficient and cheap source of energy.

“TAU is developing plants that will be cost-effective, together with the technology to convert them into biofuel,” says Prof. Bernard Epel, Head of the Manna Center at TAU’s Wise Faculty of Life Sciences. The future, says Epel, lies in using plants that are high in cellulose for biofuel, since such plants are inedible and would therefore not compete with agricultural crops. But cellulose, which is usually the stems and tougher parts



MAKING THE DESERT BLOOM FOR BIOFUELS

A few times a month, Professors Amram Eshel and Yoav Waisel of TAU’s George S. Wise Faculty of Life Sciences get up at 5 in the morning to cultivate plants in the extreme heat of the Yotvata Desert, 220 miles south of TAU. They have shlepped there for the past three years because their project may solve one of the toughest ethical issues in the production of biofuels today: the imperative to grow biomass for fuel without usurping arable land and fresh water needed for food production.

Eshel explains that while some crops developed for biofuel are inedible, such as switchgrass and *Jatropha*, they are grown on land that could be used for growing agricultural crops. These biofuel crops are also diverting water that could be used for other purposes, say the researchers.

The team’s great discovery is that trees in the salt cedar group – a local species that is extremely hardy – can be nurtured in the unrelenting heat and inhospitable soil of the desert. Perhaps most notable of all is that the trees are nourished with saline and sewage water, which would be useless anywhere else. “Our idea was to divert from agricultural production, make use of unexploited desert areas, and cultivate plants that have potential to produce materials for fuel substitutes,” says Eshel.

The trees the researchers have grown on an experimental plot in the desert live on the saline and sewage water that is discarded by desalination plants. According to Eshel, the disposal of saline water has been “an unsolved problem in all inland desalination plants. We have shown that we can use it to make our trees grow very well. It’s the first time someone has found a way to use this water,” he says.

While Israel is too small to be a significant source of biomass for fuel, Eshel and Wiesel are aiming to apply their technology to larger areas of desert, such as in Africa. Now the only obstacle is that the technology for converting tree biomass into fuel is still in development. “We’re thinking long-term,” says Eshel. “We’ll be ready with the raw material once the technology is ready for converting wood into fuel.”

The project is being carried out within the framework of a partnership between the Porter School of Environmental Studies and Italy’s Ministry of the Environment, Land and Sea.

The same team is now examining the utilization of a latex-producing desert shrub from East African deserts named *Euphorbia tirucalii* as a potential source for biodiesel production. The idea was broached some 20 years ago, but was uneconomical at a time when the price of a barrel of oil was only \$20. The current economic situation has changed the picture completely and the researchers are now investigating the productivity of this plant under Israeli desert conditions.



The latex-producing shrub, *Euphorbia tirucalii*

of the plant, is difficult to break down in an energy-efficient manner.

One possible solution to this problem is to put to work a fungus that produces and secretes cellulose-degrading enzymes. Applied to solid plant material, the fungi can convert cellulose into glucose, which can then be processed into biofuel.

A major obstacle, though, is the sensitivity of fungi. Explains Prof. Amir Sharon of the Manna Center: "When you apply the fungus to the plant material, degradation releases toxic material, which usually ends up killing it."

In response, Prof. Sharon has developed a genetically-modified fungus that is resilient to stresses and has improved growth and survival capabilities. Modified with an anti-death gene to prolong life, the fungus could be used under exceptionally harsh conditions, including the extreme environment that develops during the conversion of plant cellulose into

bioethanol. "This transgenic fungus is more tolerant so it can withstand heat and toxins, making the plant degradation process more efficient," Sharon says.

is an effective cellulose degrader. This strain of bacteria, called *Clostridium thermocellum*, contains a complex of many proteins which attacks the cellulose and breaks it down. Lamed and his colleague Prof. Edward Bayer of the Weizmann Institute of Science coined the term "cellulosome" for the complex. According to Lamed, using cellulosomes to degrade cellulose is up to 20 times more effective than using fungi for the same purpose.

Now, Lamed and his team are researching whether the bacterial strategy has a potential for the bio-conversion process. "An important topic of current debate is whether cellulosome systems display greater ability to break down complex biomass material, such as plant cells and plant walls," says Lamed. The method he and his colleagues are using is the creation of "designer cellulosomes" by putting together different components from various types of bacteria.

"An artificial cellulosome has a defined structure so I can control what is what," explains Lamed. "We hope to create a 'super-degrading' hybrid of different bacteria."



Prof. Hagit Messer-Yaron, TAU Vice President for Research and Development, sums up: "TAU's comprehensive strength, with nine faculties covering all academic disciplines on one campus, encourages the type of multidisciplinary approach needed to develop renewable energies correctly. This includes expertise in economics, business, law and social sciences, as well as the hard sciences. TAU is the right place to lead renewable energy R&D in Israel."



ENERGY: CREATE IT AND SAVE IT

Reducing dependence on fossil fuels is an imperative, says Prof. Yehuda Kahane (pictured), Head of TAU's Alfred Akirov—ALROV Institute for Business and the Environment at the Faculty of Management. Kahane stresses that while we make the costly and time-consuming effort to develop alternative energies, we should seek an immediate interim solution for the reduction of oil consumption. This could easily be done if each individual and business were to trim their energy use by reducing mileage, switching off unneeded lighting, restricting air-conditioning, lowering the temperature of washing machines, and saving water. "These steps, which involve little effort, will lead to an immediate cut in global oil consumption and enhance quality of life," says Kahane.

"We should carefully select the right technologies for renewable energy, since not all renewable energy solutions are 100% 'green,'" cautions Kahane. "Some can have harmful effects such as using up land and water resources, affecting food production and prices, and harming wildlife and nature. We must adopt a more consistent, accurate and transparent pricing mechanism to evaluate such projects," he says.

Yet another reason for reducing oil consumption is that high oil prices enrich oil-producing countries that support terrorism, notes Kahane. "A \$70 increase in the price of a barrel of oil means a daily gain of about \$7 billion or \$2.5 trillion a year to these non-democratic regimes," he points out. "Some of this money finances terrorism, and some is used to gain substantial holdings in the world's financial institutions, which increases global instability."

The longevity protein (stained green) within mitochondria (stained red) of the transgenic fungus



The Devil Wears Designer Cellulosomes

Another solution may come from the research of Prof. Raphael Lamed of the Department of Molecular Microbiology and Biotechnology, Wise Faculty of Life Sciences, who has discovered a strain of bacteria that

Perhaps even without being aware of it, Pnina Falego-Gaday is following in her mother's footsteps, unafraid to meet challenges. In 1984 Gaday's mother set out alone with her and her younger sister on the difficult journey from Ethiopia to Israel via Sudan. Gaday doesn't recall the hardships of the journey but she does remember how hard it was to be among the first Ethiopians in Israel. Often,

sion and am capable of accomplishing things."

Gaday held both volunteer and professional positions in Hillel at the Hebrew University of Jerusalem prior to joining Hillel in Tel Aviv. Of her first encounter with the organization, she says: "I came to Hillel with mixed feelings, but I quickly realized that my background is only one of many in the social fabric of Israel, every

Gaday has introduced a pilot program on campus for Ethiopian students, the *Guzo* (Amharic for "journey") Empowerment Project for Ethiopian Students, run jointly with the Ruth and Allen Ziegler Student Services Division.

Through *Guzo*, some 20 Ethiopian students meet once every three weeks to hear a lecture given by a member of the Ethiopian community about their

TAU Hillel Breaks the Mold

Pnina Gaday, the first Ethiopian Jew to direct a Hillel Center worldwide, is an inspirational role model for Ethiopian-Israelis



up until the second wave of Ethiopian immigration in 1991, she was the only Ethiopian in her school.

Last year Gaday, now 26, was appointed Head of Hillel at Tel Aviv University. She is the first Ethiopian to serve as a center director for Hillel, the largest Jewish campus organization in the world. In addition to bringing students closer to their Jewish heritage, Gaday hopes to encourage Ethiopian-Israeli students to continue with their higher education and be proud of their roots as well.

Gaday's position as Hillel director defies people's preconceptions about her on three different levels, says Gaday: she is young, female, and Ethiopian. "Sometimes people are shocked when they first meet me," says Gaday, who with her nose ring and stylish clothing could easily be mistaken for a student at the university. "But then they see I have a vi-

part of which is unique and vital to the whole."

Last year Gaday, who is active in the Ethiopian-Israeli community, was invited to attend the annual United Jewish Communities General Assembly meeting in Nashville, Tennessee, where she shared the podium with US Secretary of State Condoleezza Rice.

Journey to higher education

Only about 3,000 Ethiopian young people study in institutions of higher education in Israel, says Gaday, out of a total of some 200,000. Many Ethiopian students who begin studies end up dropping out and returning to the workforce to help support their families. "We have to change their attitude," says Gaday. "We have to push them to contemplate their responsibilities as Ethiopians who have reached this level of academic education."

heritage and traditions. The intimate size of the group allows the students to connect with each other, notes Gabay.

Personal journey

Two years ago Gaday felt the need to return to her birthplace, and undertook her own *guzo* into her roots. "I was curious about my mother's experiences. What made her decide to leave everything she knew to fulfill a 2,000-year-old dream?

"My return to Ethiopia two years ago closed the circle of aliyah for me. The trip was all about getting to know who I am, where I came from and, most of all, where I want to go. Today, I am more confident in myself and trying to use my new position as Hillel director to educate people about the potential we all have to influence the Jewish people and the world around us."



Pnina Gaday

Soothing the Trauma

After seven wars and endless terror, what is the state of mental health in Israel today? A look at TAU's pioneering research on post-traumatic stress disorder.

By Gil Zohar

American soldiers serving today in Iraq and Afghanistan may never have heard of Tel Aviv University, but the G.I. Joes there owe a major debt of gratitude to Prof. Zahava Solomon of TAU's Bob Shapell School of Social Work and her colleagues. The Israeli researchers – world experts in combat stress reaction (CSR) and its related pathology, post-traumatic stress disorder (PTSD) – have made a significant contribution to the understanding and treatment of combat trauma in many Western countries, and have made TAU a world center for the study of the issue.

Whereas in World War I “shell-shocked” Allied and German soldiers were sometimes executed at dawn for cowardice, today the US and other armies have copied the Israel Defense Forces (IDF) in offering more effective and humane front-line psychological first aid. Military mental health officers now recognize that CSR is a normal reaction to an abnormal situation. They treat affected soldiers with food, liquid refreshment and sleep. Dressed in clean uniforms, CSR victims are kept busy, and their ties with their unit are maintained. After 48 hours of such treatment, most soldiers are able to process their immediate trauma, and are re-attached to their original unit with no long-term impairment.

Prof. Solomon, a former adviser to numerous armies, has been researching CSR and PTSD for a quarter of a century. The subjects of her stud-

ies have included IDF veterans and former prisoners of war, Israeli and Palestinian youth, and Holocaust survivors. She has served as an adviser to the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*, the “bible” of mental health professionals published by the American Psychiatric Association, which documents mental disorders.

Solomon, a professor of psychiatric epidemiology and social work, and director of TAU's Renata Adler Memorial Research Center for Child Welfare and Protection, joined TAU in 1992 after serving as a lieutenant colonel in the IDF, where she headed the research branch of the army's medical corps. When the 1982 Lebanon War broke out, she initiated a groundbreaking study of combat stress reaction causalities. For nearly three decades she has been following hundreds of traumatized soldiers, reevaluating them one, two, three and 20 years after the 1982 war.

Commonly known in the past as shell shock or battle fatigue, a CSR



diagnosis covers a range of paralyzing behaviors resulting from the anxiety of battle. Affected combatants typically display symptoms such as weariness, slower reaction time, indecision and disconnection from their surroundings. Left untreated, CSR may turn into PTSD, a more chronic and debilitating stress disorder which also affects non-combatants, including terror survivors.

Solomon compares the two disorders to concrete, which when poured is malleable but turns hard when it dries. “We found that, by introducing a very simple treatment – allowing the body to rest while the brain processes the experience – most trauma can be dealt with while still fresh and won’t ‘harden’ into PTSD later on. This technique, applied with immediate intervention, can save agony and pain.”

The research, which has been published in the *American Journal of Psychiatry*, is “the only documented empirical study supporting this doctrine that has been used by the American, British and other Western

PREDICTING TRAUMA THROUGH BRAIN IMAGING

Brain imaging is revealing differences in the way traumatized and healthy brains respond to the world, and is enabling researchers to detect the covert reactions of traumatized patients. Dr. Talma Hendler of the Sackler Faculty of Medicine and Gordon Faculty of Social Sciences is examining the hypothesis that some people have a predisposition to CSR and PTSD in the way their brains process stimuli under extreme stress.

Using non-invasive brain imaging methods such as functional MRI, Hendler and her team examined 20 IDF combat veterans, half of whom were suffering from PTSD. When exposed to subliminal visual stimuli that were combat related, the PTSD group demonstrated hyperactivity in the visual areas of the brain. “This suggests that the brain is highly sensitive to certain types of content even when it is barely perceptible,” says Hendler. The study further revealed changes in the amygdala – the part of the brain that processes emotions – among PTSD sufferers, suggesting it is a major indicator of susceptibility to PTSD.

These and other studies being carried out by Hendler and her team at the Function and Brain Mapping Unit of the Levie-Edersheim-Gitter Institute of TAU and the Tel Aviv Sourasky Medical Center could help identify abnormal brain responses that would enable the IDF to single out soldiers with CSR who might be in danger of developing the more severe PTSD. “A simple and low-cost EEG brain scan could help direct early intervention for traumatized patients,” says Hendler.

armies,” she notes. But the treatment is not always effective, and not all affected soldiers receive immediate and appropriate care.

“The war does not end for a considerable portion of these individuals

and relatively high rates of combatants continue to suffer from PTSD. They continue to experience the war in nightmares and flashbacks,” she acknowledges. “We liken it somewhat to cancer of the soul.”

Today, Solomon and her students are continuing to study the link between acute and chronic reaction to war trauma, which they and the IDF believe can improve therapeutic intervention for war veterans.

Changing attitudes

According to Solomon, Israel is a “natural laboratory” for conducting studies on soldiers because of its small size and general conscription. But it has not always been easy for Solomon to get IDF soldiers’ cooperation because of the stigma of mental illness.

Many traumatized soldiers were initially reluctant to participate in her studies, she explains, because “seeking help for combat-induced psychiatric disorders was often seen as failure in Israeli society.”

Today, mental health is viewed differently, says Solomon. “People now



reveal their stories and ask for compensation and help right away. There's been a complete change of heart," she says.

Like many mental health professionals, Solomon's interest in CSR

subjects are doctors and psychologists who spent time as POWs.

Prof. Ohry is especially interested in premature aging, as well as issues of self-medication with alcohol and

ferred from sleep deprivation, 37 percent repeatedly relived events, and 27 percent suffered temporary memory loss and a sense of alienation.

"PTSD remains a serious problem for Israel's Jewish majority," says Solomon. "But at the same time Israel is a very resilient, close-knit society. Families are strong, and so is the army. Soldiers pretty much know someone is looking out for them.

"Israel is a nation that has a sense of destiny. The ideology and commitment has been eroded but it's still strong. It's a sustaining force," says Solomon.



Prof. Zahava Solomon and Danny Horesh

and PTSD grew out of her personal background as a means of gaining self-understanding. "My mother spent her youth in Auschwitz. Trauma has not just been an academic issue but also a real-life personal matter that has shaped my consciousness and my career," she says.

Similarly, many of Solomon's colleagues have pursued their academic research as part of their efforts to gain insight into their own trauma. Prof. Avi Ohry of TAU's Sackler Faculty of Medicine, for example, was captured by the Egyptians at the onset of the 1973 Yom Kippur War. That experience led him to devote years to studying prisoners-of-war, including those who fell into captivity in Egypt or Syria. Among the ongoing study's

drugs among trauma victims. His research in collaboration with Solomon has led the Ministry of Defense to revise its procedures for dealing with ex-POWs, notes Solomon.

The impact of terror on non-combatants

Solomon cites her research into the effects on the Israeli public of the 2002 chain of suicide bombings and terror attacks that left hundreds dead and injured. According to the study, which was carried out together with Prof. Avi Bleich of the Sackler Faculty of Medicine, one out of 10 Israelis exhibited PTSD symptoms. Fifty-seven percent of the Israeli public felt despondent, 55 percent avoided public places and did not ride buses, 50 percent suf-

DELAYED ONSET PTSD

Can symptoms of trauma appear for the first time many months or even years after the initial traumatic event? Some experts reject the notion and think that soldiers sometimes provide false reports of the late onset of symptoms in a bid for financial compensation. Danny Horesh, a doctoral student in psychology, believes otherwise. In a study of combat veterans from the first Lebanon War, Horesh found that delayed onset of trauma was in fact quite common among more than 20 percent of those sampled. His research examines whether the delay is a function of soldiers' psychological resilience. "Soldiers who are strong mentally and socially tend to maintain psychological wellbeing for longer periods after a traumatic event, thus delaying the onset of PTSD," says Horesh, whose research is supervised by Prof. Giora Keinan of the Department of Psychology and by Prof. Zahava Solomon. The study also examines whether delayed-onset trauma is a unique subset of PTSD involving less severe symptoms. This could have important practical implications for groups in Israel with known delayed trauma symptoms such as Holocaust survivors and war veterans.

AFTER THE WAR

Six hundred TAU students who served in the Second Lebanon War were monitored for early symptoms of PTSD through the "After the War" project of the Student Welfare and Psychological Services units of TAU's Ruth and Allen Ziegler Student Services Division, in cooperation with NATAL – the Trauma Center for Victims of Terror and War. Demobilized reservists who were identified with early symptoms received follow-up counseling and treatment by TAU therapists.

“I believe that everyone is anti-war,” says Lior Geller, 29, one of Israel’s rising stars in film. “No?”

Speaking without irony or sarcasm, Geller leans in intensely. He’s sitting in a café in Tel Aviv and describing his final student project at TAU’s Department of Film and Television, the 22-minute film, *Roads*. It tells the story of an Israeli soldier and his relationship with an Arab boy who is trying to escape a life of drugs and crime in the Arab-Jewish city of Lod.

nominated for the 2008 Honorary Foreign Film Award, given by the US Motion Picture Academy, which bestows the Oscars.

Some four years in the making, *Roads’* storyline was painstakingly weaved together with real-life research into the hard-knock life of drug dealing families in Lod. “Nobody ever looks at these people. They just don’t count. I wanted to tell their story,” says Geller.

Ideally Geller would have shot the entire film in Lod to tell his fictional

ment in Tel Aviv for about two weeks while shooting. They came with a goat, one of the character’s pets in the film, on loan from a nearby kibbutz.

An unlikely friendship

Shot mainly in Arabic with Hebrew and English subtitles, the movie hinges on the encounter between Ishmael and an ex-Israeli soldier, Daniel. Ishmael and his brother both work for one of the biggest drug lords in town, but want a better life. They befriend Daniel, who is buying drugs to cope with the trauma of having accidentally shot an Arab child while on military duty. “Here, deep in the sewers of Israeli society, they just might find in each other

22 Minutes with Lior Geller

An interview with the TAU film graduate on his prize-winning short film, *Roads*

“Young filmmakers at TAU are encouraged to give voice to Israel’s unique cultural and artistic identity and challenging reality,” says Dr. Dubi Rubinstein, Chairperson of the Department of Film and Television at TAU’s Yolanda and David Katz Faculty of the Arts. The department, which is ranked among the world’s top 15 film schools, has had more impact than any other institution in Israel on the quality, creativity and international standing of film-making in the country. “Students and alumni have won numerous awards worldwide including at Cannes and the Oscars,” says Rubinstein who, together with colleague Reuven Hecker, mentored Geller.

Roads, which has won Geller eight international awards, was recently



story of 13-year-old Arab boy Ishmael. But both filming and onsite research became too risky. A cameraman was pelted by stones one day while shooting, and Geller was given a warning by a drug family to leave.

Moving the production over to Tel Aviv wasn’t simple, but Geller befriended the young Arab cast of four and invited them to stay at his apart-

ment in Tel Aviv for about two weeks while shooting. They came with a goat, one of the character’s pets in the film, on loan from a nearby kibbutz.

“At every film festival I go to now in Europe and in the United States all eyes are now on Israeli filmmaking. And with each successful Israeli film on the international scene, we, as the newest generation of Israeli filmmakers, have to take it up a notch.”

By Karin Kloosterman



Director Lior Geller (left) on the set

The group
at the
Northwestern
campus



For Justice's Sake

Israeli
attorneys
weigh in on
TAU's new
master's degree
in public
law awarded
jointly with
Northwestern
University

For Rania Haddad Sruji, 33, an Arab-Israeli criminal lawyer and prosecutor in the District and State Attorney's office in Haifa, completing TAU's joint master's degree with Northwestern University's law school has become an important step in advancing her career.

Sruji was one of 37 young lawyers – most of them leaders in their fields – to graduate from the program's first class. Now in its second year of operation, the program is the only one of its kind in Israel to offer a joint master's degree in law from both an Israeli and a foreign institution.

"Northwestern's joining with TAU is an expression of confidence in TAU's standing as the top law school in Israel and one of the top 20 in the world," says TAU President Zvi Galil.

The program operates within the framework of an ongoing cooperation agreement between TAU and Northwestern University that includes annual student and faculty exchange, as well as the hosting of

joint conferences. It was designed to broaden the academic horizons and professional skills of distinguished, mid-career Israeli lawyers.

According to the Dean of Law, Prof. Hanoch Dagan, "The TAU-Northwestern Program furthers TAU's strategy to upgrade the quality of legal education in Israel and train professionals to face the increasing complexity of the global legal environment."

Alumni of the program include lawyers from the Israel Defense Forces, the Supreme Court, the Ministry of Justice and non-governmental organizations. The highly diverse group of graduates range from an Ethiopian-Israeli lawyer to a lawyer representing Palestinian rights.

Global relevance

For lawyers like Sruji who are already experienced in their field, the collaboration with a top American law school like Northwestern University was key to the decision to enroll in the program. Explains Sruji, "It is



obvious that we are now working in a global environment and as a prosecutor it is important for me to take into consideration the law of other countries."

As an Israeli Arab, Sruji says she lends a certain expertise to the Israeli justice system. "During the last few years the Israeli government has been promoting Arabs in the Ministry of Justice. They look at Arab women as

uncomfortable position of having to defend perpetrators of hate crimes against Arabs.

Minority rights

Sruji took time off from the courts last summer and joined the other lawyers on the program for a month of legal learning at the Northwestern campus in Chicago. Taught by Northwestern professors in English, course subjects included constitutional, administrative, environmental and human rights law.

Although Sruji had been to America before, she was particularly taken by a lecture on black history and how this underdog population fought for its rights in the US Supreme Court. Identifying with her own Arab minority group in Israel, Sruji says: "I also think Arabs in Israel face discrimination and we should fight it, but not through violence. Rather, in peaceful and intelligent ways."

Sruji notes that for her and other lawyers on the program, the trip to Chicago helped forge and solidify professional bonds that will no doubt

“ In one or two decades these lawyers are the people who will shape the face of public service in Israel.”

unique and give us a push," she says. Earlier in her career when she was in the private sector and clients could choose their own lawyer, practicing law as an Arab woman was tougher, she notes.

The mother of one, who lives with her doctor husband in a predominantly Jewish neighborhood in the Haifa area, makes a point to integrate her daughter in a Hebrew-speaking kindergarten. Her verbal skills in Arabic are a big asset to the courts: she is often called on to interview witnesses from the Arab-speaking population and has also been in the

last a lifetime. "We had good discussions about cases and many political discussions also," she says.

Networking opportunities

A desire to build bonds with top Israeli lawyers was one of the reasons why Rabbi Gilad Kariv chose to enroll in the TAU program. Kariv is an outspoken attorney who champions human rights as director of the Israel Religious Action Center, the public and legal advocacy arm of the Reform Movement in Israel.

"The connections I made on the program have proved extremely use-

ful to my work," says Kariv. If not for the program, he would probably never have had the opportunity to meet lawyers like Sruji. He says about the people who studied with him: "In one or two decades these lawyers are the people who will shape the face of public service in Israel."

Kariv, who is involved in current Knesset discussions on the constitutional challenges facing Israel, says the program has sharpened his understanding of the multicultural issues he deals with in his work. "I have gained knowledge that is enabling me to balance legitimate rights with constitutional law," he says. "If, for example, I want to petition the Supreme Court to enforce the teaching of mathematics and English in the Ultra-Orthodox school system, I now know that I must take into consideration the legitimate right of this population to maintain its special character," says Kariv.

Fellowships available

To help put lawyers from the public and private sectors on par, those who come from the low wage-earning public sector are eligible to win a fellowship from the Legacy Fund and other donors who recognize the contribution of the program to the legal profession in Israel, notes Prof. Ron Harris, Head of the program.

Says Prof. Harris, "Israeli lawyers face public law issues with an intensity that no other country in the world experiences. Our students, as promising mid-career lawyers, are at the heart of these issues. This new program recruits and teaches Israel's future legal leaders – some of whom are in a position to influence well beyond the legal community."



Rania Haddad Sruji



By Karin Kloosterman & Louise Shalev

Bringing Government to Every Computer

E-government is growing as a means of providing more flexible municipal services to citizens, but a TAU study finds that negative attitudes to the Internet and to government are preventing disadvantaged populations from making use of these services. The study was conducted by TAU's Netvision Institute for Internet Studies and Interdisciplinary Center for Technological Analysis and

Forecasting (ICTAF) as part of the European Union's ELOST project (E-government for Low Socio-Economic Groups).

Dr. Tal Soffer of ICTAF said the project was initiated by the European Union as part of its goal of closing the digital divide in member countries by the year 2020. "Our final goal was to formulate policy recommendations to boost e-government use among low



A TAU study on e-government in Europe found a growing gap between the digital "haves" and "have-nots"

A drug candidate based on research by TAU's Prof. Illana Gozes was shown to significantly improve the memory of patients suffering from the mild cognitive impairment that precedes Alzheimer's disease. The successful clinical trials were for a drug called AL-108, given in the form of a nasal spray, which not only improved functioning but was confirmed to be safe and well toler-

ated by participating patients, demonstrating its potential to serve as an effective therapy for the disease. Prof. Gozes, Director of both the Adams Super-Center for Brain Studies and the Levie-Edersheim-Gitter Institute for Functional Brain Imaging and the incumbent of the Lily and Avraham Gildor Chair for the Investigation of Growth Factors,

has been investigating the function of natural brain proteins for many years. Together with colleague Dr. Douglas Brenneman of the US National Institutes of Health (NIH), she discovered new compounds with the unique ability to defend brain cells against damage by Alzheimer's disease. The active component of the AL-108 drug is a fragment derived from a naturally occurring neuro-

Over 12 weeks, 144 patients at several sites in the United States were divided into three groups and given a placebo, a low dose or a high dose of the drug. Their functioning was tested at regular intervals throughout the 12-week trial and 4 weeks following cessation of treatment. The group treated with a high dose showed a significant improvement in tests that checked short-term and working memory. Significantly, the improved functioning was shown to remain with the high-dosage patients for four weeks after the end of the trials.

"It is important to note that the trials confirm ADNP as a human validated drug development target, meaning that other therapies we are developing based on this platform have clear relevance for other central nervous system diseases," says Gozes.

AL-108 and other brain protective drug candidates discovered and studied by Prof. Gozes at TAU are licensed exclusively for development to the Canadian company Allon Therapeutics, of which Gozes is founder and Chief Scientific Officer.

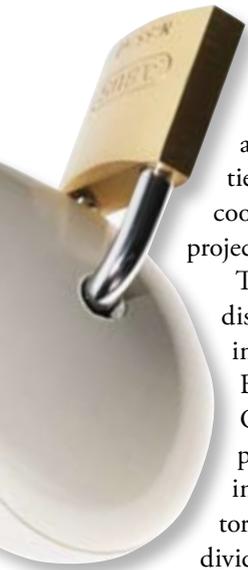
Improving Memory Function



ated by participating patients, demonstrating its potential to serve as an effective therapy for the disease.

Prof. Gozes, Director of both the Adams Super-Center for Brain Studies and the Levie-Edersheim-Gitter Institute for Functional Brain Imaging and the incumbent of the Lily and Avraham Gildor Chair for the Investigation of Growth Factors,

protective brain protein known as activity dependent neuroprotective protein (ADNP), which Gozes and her colleagues discovered in 1999. The active protein fragment has been shown to restore the function of structures in the brain – known as microtubules – which are critical for communication in and between brain cells.



wage earners, the unemployed, immigrants and people with disabilities,” said Dr. Soffer, who coordinated the TAU-led project.

The study, which surveyed disadvantaged populations in Israel, Austria, France, Bulgaria, Finland and Germany, found that age, poor education and low income were major factors underlying the digital divide in those countries. In

France only 8% of those surveyed said they use the Internet, compared to between 24% and 27%

in Austria, Israel and Finland. From this group of users, only 10% in all of the countries used e-government, although awareness of these services was as high as 80% in Finland. Forty percent of Israelis demonstrated a willingness to learn the skills needed to use e-government compared with 25% in the European countries. The most common reasons for not using the Internet were lack of need, lack of computer skills and lack of financial resources.

So why isn't e-government catching on among disadvantaged groups? Distrust of both new-fangled technologies and government, as well as computer illiteracy, were among the

main reasons. This can be improved through education and the use of user-friendly technologies such as interactive TV, advanced language processing techniques and virtual kiosks, say the researchers. They also recommend teaching digital skills through community centers and subsidizing use of the Internet and other services.

According to Soffer, one of the most important outcomes of the project is the launching of an interactive website, called the “e4 Expert Exchange System,” which addresses e-government policy and technologies in European countries, and provides a platform for sharing information on e-government (www.e4-info.eu).

A possible link between intense lightning in eastern Africa and hurricanes in the United States could help experts predict the nature and severity of future hurricane seasons, say a team of TAU-led atmospheric scientists. Prof. Colin Price of TAU's Department of Geophysics and Planetary Sciences, Raymond and Beverly Sackler Faculty of Exact Sciences, and colleagues from Israel's Open University compared lightning activity over Africa with tropical storm formation in the Atlantic ocean during the 2005 and 2006 hurricane seasons. The findings showed that hurricane formations can be predicted three weeks in advance by tracking thunderstorms over the African continent.

The research, which was published in *Geophysical Research Letters*, showed that 90 percent of Atlantic hurricanes formed following a period of above-average lightning activity over the Ethiopian highlands. The thunderstorms in East Africa disrupt the flow of winds in the lower atmosphere that stream westward over Africa, say the researchers. The resulting turbulence creates “atmospheric waves” – some of

Making Atmospheric Waves

A study linking lightning in Africa with hurricane Katrina was ranked 25th best science story of 2007 by Discover Magazine

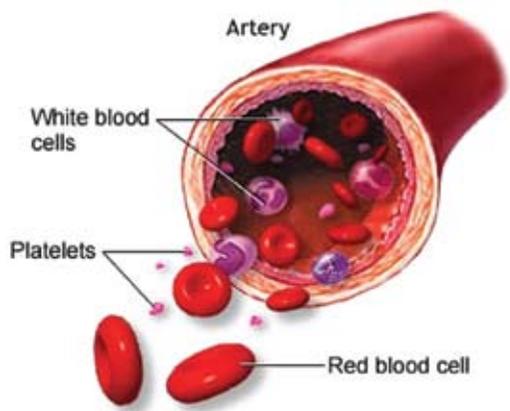
which can stretch 1,500 miles long – that race across Africa and into the Atlantic, producing lightning and rain storms.

“If you know there's a lot of lightning in East Africa today, there's nearly a 100 percent chance that one of these atmospheric waves will hit the Atlantic Ocean in a week's time,” says Price. And if other factors, such as sea surface temperature and wind patterns above the Atlantic, are just right, that wave will grow into a hurricane.

The research could help meteorologists predict the origins of some of the most devastating hurricanes on record, notes Price. “This would enable people to prepare before another Katrina-sized hurricane hits the United States.”

The research was partly supported by the Open University Research Fund.





Saving Hearts

A non-invasive device for early detection of cardiovascular disease is being brought to the marketplace

A new technology for diagnosing people at high risk for heart disease has been developed by Dr. Giora Amitzur of TAU's Sackler Faculty of Medicine, Prof. Shmuel Einav of the Fleischman Faculty of Engineering and Eran Peleg of the Hadassah Medical Center in Jerusalem.

The device tests the endothelial health of patients. Endothelial cells, which line the inner layer of the artery, release substances that enable the artery to contract and expand while transporting oxygen to the body. Among these is nitric oxide, an important blood vessel relaxant that protects against atherosclerosis – the disease that commonly precedes heart attacks and strokes.

Malfunctioning of the endothelium due to risk factors such as hypertension, obesity and diabetes reduces or prevents the release of nitric oxide in the arteries, which in turn can lead

to atherosclerosis. The condition is often asymptomatic and can go unnoticed for several years until a full blown heart attack occurs.

The device works by attaching pressure sensors to the patient's arms and wrists and temporarily blocking the blood flow. Gauging the expansion of arteries as a response to this pressure will indicate endothelial health. The test is as simple as taking blood pressure and just as fast.

"All the products on the market cannot diagnose cardiovascular disease at such an early stage," says Dr. Amitzur. "Other methods make the diagnosis at much later stages of arterial blockage."

The monitor, Endotect, is being developed by Cardiatec, and has successfully completed the first round of clinical trials at the TAU-affiliated Chaim Sheba Medical Center. It is now undergoing a second round of trials.

Women may be more skilled at business negotiations than men, finds a TAU study on the role of gender in management. Despite this, fewer women than men are involved in high-profile international business deals.

Dr. Yael Itzhaki of TAU's Faculty of Management—Leon Recanati Graduate School of Business Administration carried out simulations of business negotiations among 554 Israeli and American management students at TAU and at Ohio State University in the USA.

The simulations involved negotiating the terms of a joint venture, including the division of shares. The point of the simulations was to examine how women behave in business situations requiring cooperation and competition.

The results indicated that in certain groupings, women allotted more shares than men to reach an agree-

ment. Additionally, women were good at facilitating interaction between the parties. "Women are more generous negotiators, better cooperators and are motivated to create win-win situations," says Itzhaki.

Paradoxically, says Itzhaki, these days men have been incorporating feminine strategies into their negotiating styles. "Women in mid-management positions are criticized for being too 'cooperative' and 'passive' so they don't get promoted; then men come in and use the same tactics that women are criticized for!"

Itzhaki's conclusion: More women should be promoted and given the opportunity to take a leading role in business negotiations.

The Feminine Touch

Women are ready to go that extra mile to clinch the deal, finds a TAU researcher



Itzhaki is the founder of Netta, a non-profit organization that promotes the advancement of women in the workplace through enrichment programs, networking opportunities and research.

The possibility of life on another planet might sound like it belongs to the sci-fi world of UFOs and little green men, but data collected by two TAU astronomers could help lay the groundwork for hard evidence of such a phenomenon. Prof. Dan Maoz and Dr. Shai Kaspi of TAU's Raymond and Beverly Sackler Institute of Astronomy played a critical role in the discovery of a new solar system that bears a striking resemblance to ours, setting the stage for discoveries of other solar systems that might contain Earth-like planets and, possibly, Earth-like life forms.

Life on Another Planet? Not So Far-Fetched.

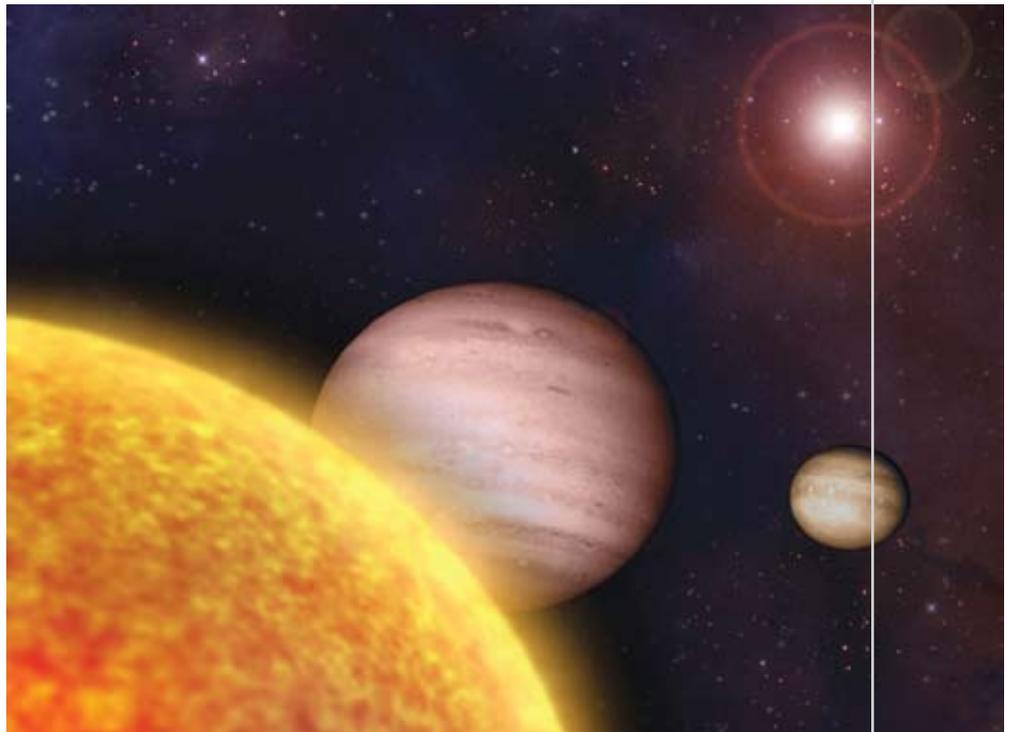
TAU astronomers play key role in discovery of mini solar system similar to our own

"The 21st century is a golden age of astronomical discovery, and TAU scientists are making a significant contribution. Discoveries of new planets, measurements of black hole masses, observations of the most distant supernovae, and insights into the properties of dark matter are only some examples of our internationally recognized achievements," says Prof. Hagai Netzer, incumbent of the Jack Adler Chair of Extragalactic Astronomy at TAU.

The new solar system, which appears to be a mini version of ours located an estimated 5,000 light years away, includes a Saturn-like planet and a Jupiter-like planet that orbit a star about half the size of our sun. The planets are smaller than Saturn and Jupiter but have a similar mass ratio, and they orbit their star at distances roughly proportional to those of Saturn and Jupiter from the sun. The findings, made by an international team observing the same part of the sky for a two-week period in 2006, were recently reported in the journal *Science*.

was absolutely critical in the discovery and interpretation of the second planet in the system," said Dr. Scott Gaudi of Ohio State University, who led the project.

The discovery of the solar system – and the implication that such systems are likely common in our galaxy – has encouraged the astronomers to find planetary systems that are even more similar to ours in the sense that they could have Earth-mass planets, said Maoz. "This is a precondition for life as we know it, to have a planet similar to Earth – meaning a solid, rocky planet at a distance from its star that would



The Jupiter-like planet was detected from TAU's Florence and George Wise Observatory in Mitzpe Ramon. "The time that we were carrying out the observations in Israel was exactly the time when the planet left its signature," said Kaspi, referring to the effect the planet had on the light of a very distant star, which led the scientists to deduce the planet's existence.

"The Israeli contribution of data taken from the Wise Observatory

enable the existence of liquid water.

"Certainly at the back of everybody's minds when they're doing this is the question of is there life in the universe outside the Earth," he said. "And before you answer that question, you have to find out if there are conditions for life anywhere else, and conditions for life as we know it means an Earth-like planet."



Water could replace environmentally harmful organic solvents used by the chemical industry, say TAU scientists

Greener, Cleaner Chemistry

It can take from between 10 to 20 chains of chemical reactions to produce a chemical compound, and each step in the process usually uses organic solvents. However, organic solvents, which are also used in paint, nail lacquer remover and other household products, generate considerable amounts of hazardous waste that can cause widespread soil and water contamination.

“The pharmaceutical industry, for example, can generate 100 kilo-

grams of waste for every kilogram of chemical compound it produces. Disposing of the waste is a major problem,” says Prof. Arkadi Vigalok of the Raymond and Beverly Sackler School of Chemistry, who, together with PhD student Nelly Shapiro, has discovered a way to replace the use of solvents with water. The research was published in *Angewandte Chemie*.

The team found that when common chemical compounds known as aldehydes are mixed with water, they

can be readily oxidized without using solvents. The team has used the method to prepare carboxylic acids, important chemicals used in the resin trade and other industries.

Vigalok and Shapiro belong to a new brand of chemists working to introduce greener thinking into the design of chemical compounds. Known as green chemistry, its devotees advocate chemical reactions that produce as little hazardous waste as possible. “When solvents first became widespread, environmental concerns were not a factor,” says Vigalok. “However, if society demands safer processes then chemists must deliver the solutions.”

“I am not saying that water can replace every organic solvent in every chemical process, but if we can use water to replace some of them, this would be a step toward a better future,” says Vigalok.

Nelly Shapiro’s doctoral research was supported by the Israel Science Foundation and the Porter School of Environmental Studies at TAU.

All Seeing Eyes

Dr. Arieh Solomon, Head of Experimental Ophthalmology at TAU’s Goldschleger Eye Institute, Sackler Faculty of Medicine, has achieved a breakthrough in eye tests with a compact device that can be worn over the eyes like goggles.

The device automates a process called “visual field testing,” which is a method of examining an individual’s entire scope of central and peripheral vision. The test is used by eye doctors and neurologists to examine the function of the retina, optic nerve and pathway to the brain, and to detect disease. It is also required for driving licenses and piloting. Although painless, the test is time-consuming and

requires patients to look at the center of a field in a machine and activate a button every time they see a flicker of light on the screen. Lack of concentration during testing can result in numerous false-positive results, making it almost impossible to test children.

The new TAU-developed device, by contrast, performs the test automatically without requiring the patient’s active participation by pushing the button. Furthermore, the test can be carried out on people with disabilities who are confined to their beds or wheelchairs.

The device, VIP—Virtual Perimetry, was patented by Ramot, the technology transfer arm of TAU, and was



developed by Iview Ltd. at the Orit Incubator by a team of engineers led by Arieh Bar-Zeev. To date two prototypes have undergone successful clinical trials at medical centers in Israel. The project received support from the Chief Scientist of the Ministry of Trade and Industry.

The largest number of Jewish and Israeli aid groups ever assembled in Israel was brought together by TAU to discuss a common mission: the imperative to take part in the global effort to overcome the world's most serious afflictions of poverty, hunger and disease. One hundred and twenty representatives of more than 50 Jewish and Israeli humanitarian groups participated in the two-day workshop entitled, "Faith and International Development."



Dr. Eli Fried

The event was organized by TAU's Hartog School of Government and Policy, which is researching Israel's international aid policy and looking at ways to forge a

joint agenda between Israel and the Jewish world in international development. The workshop's goal was to deepen the academic and spiritual content of the work done by Jewish and Israeli groups and to investigate platforms for boosting existing efforts. Policy analyst and projects director Eli Fried of the Hartog School said, "The core of the project is to encourage Jews to fulfill their personal responsibility to humanity in the spirit of Jewish tradition. We believe that this agenda can also give rise to a new age in the relations between Israel and the Jewish world," he said.

Highlights of the conference included a keynote address by Ad Melkert, UN Under-Secretary General and Associate Administrator of the United Nations Development Program; interactive sessions with faith-based development organizations; a discussion with major Jewish foundations on augmenting coordinated Jewish and Israeli endeavors in the developing world; a session aimed at formulating a new Jewish-humanitarian vocabulary; and an address by Katherine Marshall, a senior advisor at the World Bank.

Coming Together to Mend the World

A workshop of TAU's Hartog School of Government and Policy sets a new humanitarian agenda for 21st century world Jewry

Trevor Pears, Executive Chair of the Pears Foundation, the primary supporter of the event, said, "The workshop builds on the current momentum of placing issues of social justice and social action at the heart of Jewish identity."

Ruth Messinger, President of the American Jewish World Service, said that despite objections by people that the Jews have enough troubles of their own, she believes that "the Jewish community in the US has attained a level of wealth that our grandparents could never have imagined and that obligates us."

One of the proposals to emerge from the conference was the establishment of an international service corps that would send thousands of young Jewish and Israeli volunteers for service in the developing world. Dr. Reuven Gal, Head of the Civilian Service Administration in the Prime Minister's Office, raised the possibil-



ity that serving in such a framework could be deemed an official form of civil service.

A survey commissioned by the Hartog School revealed that 65% of Israelis – both Arabs and Jews – believe that providing humanitarian aid to developing countries strengthens Israel's international image. Surprisingly, 70% of the Israeli Arab public felt proud when hearing that Israel has helped needy people somewhere around the globe. "This capacity to identify with the State could open up significant opportunities for bringing together Arabs and Jews around this issue," said Fried.

Stanley Bergman, who heads the Hartog School's international advisory board, argued that humanitarian efforts bring Diaspora youth closer to Israel: "Today they are losing their connection to Judaism and to Israel and this thing can help them connect to Jewish values.



Stanley Bergman



"We're not just talking about volunteers, but also about the generation of younger donors, for whom the Holocaust and the establishment of the State of Israel are part of their history books," he said. "There is a very large amount of money that at the moment is not budgeted and is not reaching Jewish causes, and this is a way of connecting the two," Bergman stressed.

Chairman of the TAU Board of Governors Robert Goldberg praised the Hartog School for the event's huge success, which he said had made a considerable contribution to the university's impact and standing.

The conference was supported by numerous Jewish foundations, among them the Andrea and Charles Bronfman Philanthropies, the Charles and Lynn Shusterman Family Charitable Foundation, the Pears Foundation, and the Stanley and Marion Bergman Family Charitable Fund.



Ruth Messinger

Visualizing Jewish Art

Is there such a thing as Jewish art? What makes an object or picture Jewish? Do Jewish art objects draw their inspiration from Jewish tradition or from changing contexts of time or place? Is Jewish art made only by Jewish artists?

These and other issues are addressed by the new Jewish Art and Visual Culture Research Project at TAU's Goldstein-Goren Diaspora Research Center.

The project was initiated by Dr. Simha Goldin, Head of the Goldstein-Goren Center, and Dr. Naomi Feuchtwanger-Sarig, the project's principal investigator. According to Feuchtwanger-Sarig, Jewish visual art has only been recognized as a distinct research field for about one hundred years. "Before the emancipation there was no secular Jewish art. Jewish art was not regarded as worthy as mainstream art and was considered an inferior mode of representation or 'folk art,'" says Feuchtwanger-Sarig.

As part of an awakening of Jewish studies pursued as an academic discipline by Jews, there was an attempt to prove that Jewish culture did not cease with the bible but made a major contribution to mainstream world culture, she says. The subject combines the study of several fields: Jewish studies, art history, folklore and popular culture and other areas affecting life in the Diaspora.

The project was inaugurated at a conference held by the Goldstein-Goren Center on "Jewish Art in Context: The Role and Meaning of Artifacts and Visual Images," attended by 46 scholars from 10 countries. Among the topics discussed were the discovery of an ancient synagogue in Israel, illustrations in Hebrew manuscripts, synagogue architecture and the conservation of Jewish sites around the world.

TAU Launches New Four-Year Med School Program

TAU has taken a significant step in boosting the number of physicians in Israel by introducing the country's first US-style medical school program. The program, which will open next academic year, will qualify medical students with bachelor's degrees in the sciences as physicians in four years instead of six. Both programs have a mandatory one-year rotating internship.

The program is based on the American and Canadian medical school model and existing programs for American students at Israeli universities such as TAU's New York State/American Program, which admits students who have completed their undergraduate degrees.

Dean of Medicine Yoseph Mekori says the program's added value will be to "admit medical students with more diverse academic backgrounds who are mature and confident about entering the profession."

The program has been approved by the Council for Higher Education to address the shortage of physicians in Israel and reverse the trend of Israeli students pursuing medical degrees abroad. According to published estimates, the number of doctors in Israel will decline from its current level of 3.5 per 1,000 residents to 2.5 per 1,000 in less than 10 years – a dangerously low level. The new MD program is designed to increase the number of young physicians graduating from TAU by 50%-75% annually.

The Sackler School of Medicine currently trains 120 students each year and



the number will rise to 180 once the new program is underway. The number could increase further if a current shortage of clinical training opportunities in hospital departments is redressed. Prof. Mekori anticipates that if successful, the program could replace the current six-year system.



TAU Technology Innovations Cited

Two technologies developed at TAU were among the top 100 technology transfer innovations to be cited by the *Better World Report* of the AUTM (Association of University Technology Managers.)

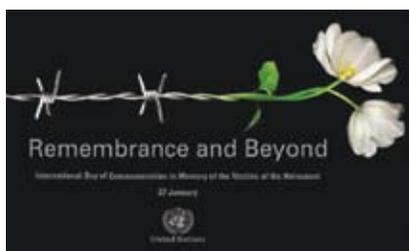
The technologies, which were commercialized by Ramot at Tel Aviv University, include a cinnamon extract with anti-viral properties developed by Prof. Michael Ovadia of the Department of Zoology, which has been licensed to Frutarom Industries, and a new drug for treating Alzheimer's disease developed by Prof. Ehud Gazit of the Department of Molecular Microbiology and Biotechnology, licensed to Merz Pharmaceuticals.



Remembering through Sounds

In a profoundly moving statement on Jewish culture and renewal, TAU's Buchmann-Mehta School of Music Symphony Orchestra performed a Holocaust memorial concert under the baton of Zubin Mehta at the United Nations General Assembly in New York.

The event, marking the UN's third annual observance of the International Day of Commemoration in Memory of the Victims of the Holocaust, was sponsored by major TAU benefactor Josef Buchmann, himself a Holocaust survivor, and his wife Bareket.



The 90 students in the TAU orchestra, among them third generation descendants of Holocaust survivors, performed to enthusiastic acclaim. One of the students was 24-year-old Julia Garfinkel, a new immigrant from the United States, who said that despite all the dignitaries present, her main audience were her grandparents, Ilse and Walter Loeb – both Holocaust survivors.

Prof. Tomer Lev, Head of the Buchmann-Mehta School of Music, wrote

in the program notes, “The students embody a link between our generation and a dynasty of distinguished Jewish musicians who flourished in Europe in the 19th and 20th centuries. These musicians, who headed the continent's most important orchestras, academies and ensembles, and formed Europe's cultural elite, were nevertheless doomed to perish in the ghettos and extermination camps. The Buchmann-Mehta School students are thus continuing the artistic legacy of the few who managed to escape to Israel. They are a living, breathing monument to an entire generation of Jewish musicians lost in the Holocaust.”

In selecting the works for the evening's program, Maestro Mehta wished to communicate a message about the continuity of Jewish music and culture in the land of Israel after the Holocaust. Prof. Lev described the works as having deep symbolic meaning, “starting with *Psalms*, a work by a founding father of Israeli music, Paul Ben-Haim, who fled from Munich to Tel Aviv in 1933 and became one of the early founders of the Mediterranean School of Composition; through Max Bruch's *Kol Nidre*, a work by a non-Jewish composer who lovingly appropriated one of the most sacred prayers in the Jewish liturgy; to Ludwig van Beethoven's *Fifth Symphony*, a cornerstone in human

culture that expresses the universal hope for man's redemption in his struggle with fate.”

Lev noted that the Fifth Symphony's famous four-note motif was used by the BBC during World War II to introduce its radio news broadcasts because it evoked the Morse code letter “V,” for victory.

Addresses at the event were given by UN Secretary-General Ban Ki-moon, through video message; Permanent Representative of Israel at the UN Daniel Gillerman; and US Senator Tom Lantos, through his daughter Katrina Lantos Swett (he passed away shortly thereafter).

The Buchmann-Mehta School orchestra is the preparatory orchestra of the Israel Philharmonic Orchestra. The orchestra has performed in central venues worldwide with Zubin Mehta, Gustavo Dudamel, cellist Yo-Yo Ma, and violinists

Itzhak Perlman and Maxim Vengerov, among others. All orchestral training program students receive full scholarships to study for bachelor's and master's degrees in music at TAU.

Zubin Mehta conducts the Buchmann-Mehta School Orchestra at the UN.



As environmental concerns become increasingly central on the world stage and start to permeate daily life, it's hardly surprising that they should also influence art. The fast-growing field of "ecocriticism," which is the study of literature through the lens of current ecological awareness, was the focus of a Tel Aviv University conference that brought together the seemingly contradictory worlds of art and ecology for the first time in Israel.

Dr. Milette Shamir, Chairperson of the Department of English and American Studies and co-organizer of the event along with colleague Dr. Karen Alkalay-Gut, said the idea of the conference was "to provide a meeting ground for environmental scientists and two other groups: scholars in the humanities who are interested in the environment, and also practitioners – poets

and artists who are producing work about the environment."

and artists who are producing work about the environment." The result was a conference that put researchers from TAU's Porter School of Environmental Studies on panels alongside artists, poets and academics from the humanities. Guest lecturers included former United States poet laureate Robert Hass and Dr. Una Chaudhuri of New York University's Department of English and Drama. Among topics discussed were the environment in Jewish writing; envi-

Are Science and Art Natural Partners?

A TAU conference on literature and the environment makes for strange bedfellows

In Hass's view, environment is intrinsically connected with literature because people are affected by their surroundings and this effect is transmuted into the language they choose to express themselves. Hass gives the example of Israeli and American writers as artists who are still in the process of discovering their countries' landscape and how to write about the land. He contrasts them with the Japanese, who have been living in the same place for so long that they have developed a literary perspective of their environment over

the course of thousands of years.

One environmental researcher who lectured at the conference is Dr. Tovi Fenster of TAU's Department of Geography and Human Environment. Fenster's work analyzes the human experience of living in urban settings – which she refers to as "human ecology" or "built environment." Her lecture explored the emotions that people experience as a result of living in human-constructed environments. Emotion, Fenster noted, is an important element in the arts as well.

While the connection between the arts and environmental studies may appear tenuous, Shamir argues that both fields have great potential to enrich one another. As an example, Shamir cites the idea of interrelatedness in ecology and how it can influence the perspective of the humanities. "Everything is related in ecosystems – various natural elements or organisms are all connected," says Shamir. This idea, she says, can be applied to the arts by viewing the human being in the larger context of ecological surroundings, rather than as a discrete entity that stands out of context.

Conversely, literature can send messages to the field of science. "There's a tradition of literary writing that imagines nature as speaking," remarks Shamir. "That's very different from science, which regards nature as a silent, passive object." At its most insightful, she adds, ecocriticism can lead people to "rethink the cores of both disciplines."

Despite a major increase in the number of female graduates in computer science and related fields over the last decade, few women hold top-level positions in either industry or academia. To raise awareness of this situation, TAU held a workshop, "Women in Computer Science," that brought together women in high-level posts with female students in the field. The women gave technical lectures on their area of expertise.

"This was an opportunity for women in leadership positions to provide a role model for aspiring female computer scientists," said Dr. Julia



Dr. Orna Berry

Tapping Women Power in the Sciences

A TAU workshop encourages aspiring female computer scientists to aim for leadership positions in academia and industry



Robert Hass

Kempe of TAU's Blavatnik School of Computer Science, who co-organized the workshop together with Dr. Svetlana Olonetsky, also of the school.

The statistics are worrying. In Germany, for example, almost 25% of women PhD graduates specialized in computing, mathematics, science and engineering in 1999, while only 9% were employed in industrial research in that country. In France, against 50% of women graduates with doctorates in the sciences, a mere 20% were employed by industry. The data were presented at the workshop by Dr. Orna Berry, Chairperson of Israel Venture Association, Venture

Partner at Gemini Israeli Funds, and former Chief Scientist at the Ministry of Industry and Trade. These results indicate the large untapped potential of women and show that "industry is missing out on a huge pool of highly qualified people," said Berry.

Prof. Hagit Messer-Yaron, Vice President of Research and Development at TAU and founder of the National Council for Women in Science, explained that for men, career goals are based on competitiveness and power gain, while for women they mean acquiring competence and responsibility. "For men scientific interests and career aspirations coincide;

for women scientific interests often prevail over career goals," she said.

Other speakers at the workshop included Sophie Cluet, Chief Scientist for Information and Communication at the French Ministry of Science; Michal Geva, General Manager of Sun Israel Development Center; Yoelle Market, Head of Google Haifa; Prof. Daphne Koller of Stanford University; and Prof. Eva Tardos of Cornell University.

The workshop was supported by the Marc Rich Foundation through the Mortimer and Raymond Sackler Institute of Advanced Studies at TAU and by Sun Microsystems, Israel.



Ziegler Merit Scholarships

Forty outstanding TAU undergraduate students were awarded scholarships by the Ruth and Allen Ziegler Student Services Division. The merit scholarships, donated by Ruth Ziegler, were awarded for the first time as part of a new initiative by the Dean of Students to encourage high-achieving undergraduates at the beginning of their academic studies. The students were selected by the deans of the various faculties and on the basis of strict academic criteria.

Number One in Europe

Dr. Julia Kempe of TAU's Blavatnik School of Computer Science, Raymond and Beverly Sackler Faculty of Exact Sciences, was ranked highest in a group of over 9,000 junior researchers of 88 nationalities who submitted research proposals to the European Research Council. Dr. Kempe received a perfect score of 10 for personal excellence and for the high quality of a research proposal she submitted to the council on quantum computing.



Other high-ranking TAU researchers were Dr. Oded Regev, also of the Blavatnik School, who scored 9.76 and placed 56th; Prof. Nissan Itzhaki of the Raymond and Beverly Sackler School of Physics and Astronomy, who scored 8.9; and Dr. Miriam Shefer-Mosenzon of the Entin Faculty of Humanities, who scored 7.9.

The European Research Council was founded by the EU in 2007 to support frontier research and encourage the very best, truly creative scientists. It awarded Kempe and Regev a \$1 million grant each as part of its first ever round of research funding.



Dr. Julia Kempe

Research Prize Rewards High Output

Prizes recognizing the competitive standing of TAU researchers within the university were awarded for the second year by TAU Vice President for Research and Development Hagit Messer-Yaron. The prizes reward researchers who have submitted an unusually high number of research proposals, received substantial research funding from outside sources or filed for numerous patents.

The prizes for 2007 were awarded to Prof. Martin Kupiec of the De-

partment of Molecular Biology and Biotechnology, Wise Faculty of Life Sciences, for his large number of research proposals and grants, and to Prof. Illana Gozes of the Department of Clinical Biochemistry, Sackler Faculty of Medicine, for success in applied research and large number of patented inventions. Special recognition was given to Dr. Nurit Guttman of the Department of Communication, Gordon Faculty of Social Sciences, for her numerous research grants.



From left: Dr. Nurit Guttman, Prof. Martin Kupiec and Prof. Illana Gozes

Young Scholars Forum at Israel Academy

Dr. Orna Harari of the Department of Classics and Dr. Tamar Herzig of the School of History, both at the Entin Faculty of Humanities, and Dr. Eran Neuman of the Azrieli School of Architecture, Katz Faculty of the



Arts, were three of 10 young scholars from throughout Israel to be elected to the Young Scholars Forum of the Israel Academy of Sciences and the Humanities in the humanities division.

Members of the forum take an active part in determining future research areas of preference in the humanities, social sciences, arts and law. "This is a carefully selected group of ten academics in the early stage of their careers who meet regularly to discuss topics of academic interest," said Prof. Benjamin Isaac, Chairperson of the Classics Department and 2008 Israel Prize laureate.

All three lecturers said that membership in the forum has given them a fresh multidisciplinary perspective on fields of specialization.

From left, Dr. Tamar Herzig, Dr. Eran Neuman and Dr. Orna Harari

people

London Calling

Lord Mayor of the City of London David Lewis arrived on the TAU campus as part of a visit to strengthen business links between London and Israel. He toured laboratories specializing in renewable energies at the Fleischman Faculty of Engineering, participated in a round-table discussion with scientists led by TAU Vice



Lord Mayor of London David Lewis (center) being informed about solar energy by PhD student Mordechai Arenson (far left)

President for Research and Development Hagit Messer-Yaron, and met scientists in the exact and life sciences.

UNESCO Chief Pays a Visit

Koichiro Matsuura, Director-General of UNESCO (United Nations Educational, Scientific and Cultural Organization), visited TAU and was hosted by Prof. Hagit Messer-Yaron, Vice President for Research and Development. In his address, Matsuura



UNESCO Director-General Koichiro Matsuura

stressed UNESCO's goal of preserving cultural diversity and heritage and noted that in 2006 UNESCO established a chair in modern heritage at TAU's Azrieli School of Architecture for enhancing public awareness of the link between architecture, culture and community. The chair operates within the framework of the school's Tel Aviv Institute for Architecture, Environment, Culture and Community, which also provides assistance and study programs in urban and rural planning to communities in Africa, Asia and the Middle East. UNESCO recognized Tel Aviv's "White City" as a World Heritage Site in 2003.

community

Technology mentoring for high school pupils

Cisco Israel, TAU's Blavatnik School of Computer Science and the Unit for Social Involvement of TAU's Ruth and Allen Ziegler Student Services Division have joined forces in a technology mentoring project for high school pupils. The project, which is now in its second year, matches TAU student mentors with high school pupils learning communication network management in Cisco's Certified Entry Networking Technician Program. The TAU students are granted scholarships for their activity as mentors.

This year 10 TAU students are mentoring 50 high school pupils at



learning centers in the central region run by Cisco, the Jewish Agency, Keren Hayesod-UJA and the Tapuach organization as part of Net@ – a program for fostering excellence and leadership in Israel's social periphery. "The project is in high demand among TAU students, and the feedback we received from the learning center instructors indicates that this is a winning combination," says Prof. Dan Halperin of the Blavatnik School, who initiated the project together with Prof. Yehuda Afek, also of the school and a senior executive at Cisco Israel. The project is funded by Cisco Israel.

TAU student Shuki Kapon (left) teaching a pupil at the Cisco learning center in Ramle

Four TAU Faculty Receive 2008 Israel Prizes



Prof. Noga Alon – Israel Prize for Mathematics

Noga Alon specializes in pure mathematics and computer science, with a focus on combinatorics and graph theory applications. He was recognized for his work in these areas, which has changed the face of modern combinatorics and has led to new concepts, structures and methodologies. Alon is an influential world authority on the applications of probability methods in discrete mathematics, and has solved mathematical problems that had previously remained unanswered for years.

Prof. Benjamin Isaac – Israel Prize for General History

An authority on the history of Rome and its eastern provinces, including the Land of Israel, Benjamin Isaac is one of few classicists worldwide to combine expertise in Greek and Roman sources, archaeological finds and Talmudic literature. He was additionally cited for his findings on the roots of racism in the ancient world, which have had sweeping implications in the field; his in-depth and systematic analysis of Roman rule in the Middle East; and his standing as an exceptional teacher.



Prof. Anita Shapira – Israel Prize for Jewish History

Anita Shapira is one of the most influential historians of 20th century Jewish, Zionist and Israeli history. Shapira was recognized for her impact on intellectual discourse concerning the establishment of Israel and the history of Zionism; her outstanding biographical works; and her important contribution as an educator in training generations of students and researchers in the field.

Prof. Rina Yerushalmi – Israel Prize for Theater

Choreographer, director, teacher and theatrical innovator, Rina Yerushalmi is a trailblazer in the study and performance of theatrical works. She was cited for her work with the “Itim Ensemble,” a theatrical laboratory that she founded in 1989 and whose productions have gained worldwide acclaim; her inimitable directing style that encourages dialogue between director, actors and the audience before finalizing a production; her role in bringing back the Bible to mainstream Israeli culture; and her contribution to fostering generations of actors and creative artists in Israel.



Elam Kott has been appointed Head of the Development and Public Affairs Division. Kott was deputy spokesperson for the Israel Defense Forces (IDF) from 1997 to 2002, dealing with, among other things, media and communications.

His most recent position was Deputy President of the UJC (United Jewish Communities – The Federations of North America) in New York, USA, responsible for the Israeli Education Fund.

Appointments: **Prof. Gad Ariav**, Management, Director of the Max Perlman Center for Global Business • **Prof. Zvi Fogel**, Medicine, Director of the Dr. Miriam and Sheldon G. Adelson Center for the Biology of Addictive Diseases • **Dr. Orly Lubin**, Humanities, Head of the Porter Institute for Poetics and Semiotics • **Prof. Alexander Plaveski**, Exact Sciences, Director of the Gordon Center for Energy Studies •

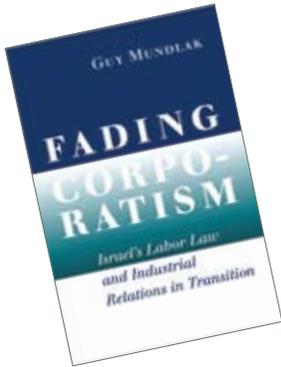
Prof. Lily Vardimon, Life Sciences, Head of the Switzerland Institute for Developmental Biology • **Prof. Ram Zamir**, Engineering, Director of the Advanced Communication Center • **Prof. Dvora Barnea**, Engineering, incumbent of the Nathan Cummings Chair of Mechanics • **Prof. Akiva Cohen**, Social Sciences, incumbent of the Moshe Theumim Chair in Communication • **Prof. Shimon Efrat**, Medicine, incumbent of the Nancy Gluck Regan Chair in Juvenile Diabetes • **Prof. Shimon Levy**, Arts, incumbent of the Hannelore Kipp Chair in the Study of Art History • **Prof. Billie Melman**, Humanities, incumbent of the Henri Glasberg Chair in European Studies • **Prof. Yaron Oz**, Exact Sciences, incumbent of the Yuval Ne’eman Chair in Theoretical Nuclear Physics • **Prof. Freddie Rokem**, Arts, incumbent of the Emanuel Herzikowitz Chair for 19th and 20th Century Art • **Prof. Yossi Shain**, Social Sciences, incumbent of the Romulo Betancourt Chair in Political Science • **Prof. Yossi Shavit**, Social Sciences, incumbent of the Zalman and Sima Weinberg Chair in Political Sociology

Honors: Research Prize of the Jacqueline Seroussi Memorial Foundation for Cancer Research, **Prof. Arnon Nagler**, Medicine • Honorary Fellow of the Open University, **Prof. Arie Vardi**, Arts, • Juludan Prize, **Prof. Meital Zilberman**, Engineering • Yeager Award for Lifetime Achievement, **Prof. Emanuel Peled**, Exact Sciences • Landau Prize for Science and Research, **Prof. Yair Aharoni**, Management, and **Prof. Israel Gershoni**, Humanities • 2008 Krill Prize for Excellence in Scientific Research, **Dr. Shiri Artstein-Avidan**, Exact Sciences

Fading Corporatism: Israel's Labor Law and Industrial Relations in Transition

By Guy Mundlak, Cornell University Press, USA (2007)

Examining the changing nature of labor law and industrial relations in Israel, from European-style corporatism to a pluralist model familiar to North America, this work explains seemingly paradoxical outcomes of transforma-



tion in the spheres of legal norms, human rights, economic regulation and civil society. Guy Mundlak is Professor of Law and Labor Studies at TAU.

Kinship and Diasporas in International Affairs

By Yossi Shain, University of Michigan Press, USA (2007).

This book analyzes the changing role of diasporas in international relations

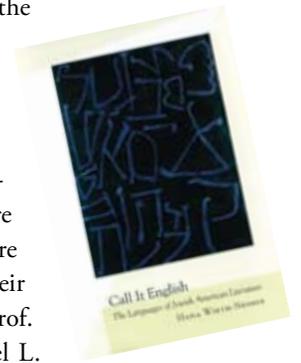


against a backdrop of globalization, international terrorism and mass changes in migration patterns. The author's "politics of belonging" provides a much-needed framework for understanding the power of pan-Islamism, organized crime syndicates and other transnational political phenomena. Prof. Yossi Shain holds the Romulo Betancourt Chair in Political Science at TAU and also holds a position at Georgetown University.

Call It English

By Hana Wirth-Nesher, Princeton University Press (2006)

Named as one of two finalists for the 2007 National Jewish Book Award in the category of Modern Jewish Thought, and selected by *Choice* as one of the most significant books of 2006, this work identifies the distinctive voice of Jewish American literature by recovering the multilingual culture that Jews brought to the US in their creative encounter with English. Prof. Hana Wirth-Nesher holds the Samuel L. and Perry Haber Chair on the Study of the Jewish Experience in the United States and heads the Goldreich Family Institute for Yiddish Language, Literature and Culture.



Recurrent Pregnancy Loss: Causes, Controversies and Treatment

By Howard J.A. Carp, Informa Healthcare, UK and USA (2007)



This book traces advances in the understanding and management of recurrent pregnancy loss, with regard both to basic science and clinical application. Prof. Howard Carp of the Sackler Faculty of Medicine is a member of the TAU-affiliated Department of Obstetrics and Gynecology, Tel Hashomer Hospital, Sheba Medical Center.

Israeli Society, the Holocaust and Its Survivors

By Dina Porat, Valentine Mitchell, UK & USA (2008)

This collection of 20 essays analyzes the encounters of the Yishuv (the Hebrew-speaking community in pre-state Israel) and Israeli society with the Holocaust and its survivors, touching on painful topics that still resonate in the Jewish world today. Prof. Dina Porat heads the Chaim Rosenberg School of



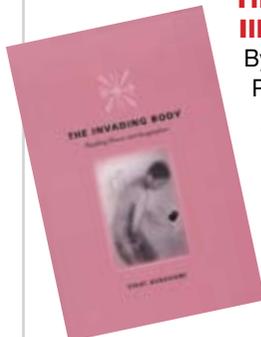
Jewish Studies as well as the Stephen Roth Institute and Alfred P. Slaner Chair for the Study of Contemporary Anti-Semitism and Racism.

The Invading Body: Reading Illness Autobiographies

By Einat Avrahami, University of Virginia Press, USA (2007).

This work analyzes autobiographical testimonies of the terminally ill. Part of the emerging field of narrative medicine, the book gives a voice and platform to the sick, provides insight into the dying process for patients, their families and medical practitioners,

and sheds light on the autobiography genre. Einat Avrahami is Adjunct Professor of English at TAU.



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