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Illuminating a novel imaging technique, this eye-catching nano objet d’art zooms in on tiny cell-like bubbles called liposomes which encase gold nanoparticles attached to fluorescent materials. Liposomes are often used today to “transport” drugs which target cancer cells within the body.

The first-place winner in the 2017 Nano Art Competition held at the Bar-Ilan Institute for Nanotechnology and Advanced Materials (BINA), this nano picture was captured using Fluorescent Lifetime Imaging Microscopy (FLIM) by Eran Barnoy, a PhD candidate in the Nano-Photonics and Fluorescent Microscopy Lab headed by Prof. Dror Fixler, of BIU’s Alexander Kofkin Faculty of Engineering and the director of BINA. The lab is working to create a smart system that will react to environmental changes and will be able to detect abnormalities and ultimately diagnose diseases.
BIU’s Open Campus: Interconnecting with the Neighbors

Bar-Ilan University’s newly appointed president is actively working to make BIU’s award-winning grounds accessible to the general public and to significantly enhance the academic institution’s relationship with the surrounding community.

“Bar-Ilan University will be a vibrant, integral part of the urban tapestry, an intellectual and cultural hub for our surrounding community.” This is the vision that the BIU President, Prof. Arie Zaban, has for the university.

Prof. Zaban envisions the university as a place that draws people at all hours to think, create and grow. “We may not be able to take down the physical walls around the campus,” he explains, “but we can definitely break down the metaphorical walls that separate the institution from the surrounding community and welcome our neighbors.”

Once the divide between the university and the world beyond is removed, people of all ages, from all walks of life, will be drawn to our campus and can benefit from the wide range of resources it has to offer. “Public gatherings that bring together diverse audiences,” says Prof. Zaban, “are fertile grounds for collaboration and for innovative new ideas.”

Lecture Series and Forums

One such example is the Science Bar (“Mada al ha-bar” in Hebrew — literally “Science on the Bar”), a popular evening lecture series featuring leading BIU researchers who share their knowledge and insights in a casual setting. The talks, which are held at Café Greg on campus over beer and snacks, explore such far-ranging topics as smart cities, Israel’s archaeological mysteries, the latest discoveries for curing viruses, and whether the Syrian president will survive the current political chaos in the Middle East.

At the bimonthly current affairs forum, “Bar-Ilan, Corner of Israel,” a BIU researcher hosts an influential Israeli figure for an interactive and lively discussion on hot-button issues on the public agenda. Guests include members of Knesset, actors, mental health activists, legendary television anchors, and more. This year, Prof. Moshe Bar, director of the Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center, will host Israeli celebrity chef Eyal Shani, whose restaurant Maxon now has branches in Paris, Vienna, Melbourne and soon New York, for a conversation on brain and creativity, and Dr. Moshe Helinger, head of the Academic Committee of the Tikvah Program on campus and member of the Department of Political Studies, will discuss religion and controversial issues such as the Temple Mount, with two opposing voices from the Israeli Parliament. “This forum is positioning Bar-Ilan University at the crossroads of academia and society,” notes BIU Rector, Prof. Miriam Faust. “Because of its varied subject matter, each event brings a diverse audience seeking intellectual discourse from a broad spectrum of Israeli society. The experience for both participants and the university is serving as a model for additional communal outreach efforts.”

BIU President, Prof. Arie Zaban: Bar-Ilan University will be a vibrant, integral part of the urban tapestry, an intellectual and cultural hub for our surrounding community.

Jogging Paths and Bikes

Other new initiatives that bring area residents to campus are the clearly marked walking and jogging paths that run through the campus, and bicycle stations strategically located around the grounds, which enable visitors and students to borrow bikes free of charge, offering neighbors a safe and lively environment for exercise and recreation. Likewise, the opening hours of campus cafeterias have been extended later into the evening, and some public events offer refreshments at reduced prices, to make the campus more accessible to all.

Clinics, Jewish Heritage and Professional Development

The clinics that Bar-Ilan operates for the public-at-large have long proven mutually beneficial to the university and the surrounding community. A notable example: the ten legal clinics, where students, with the support of BIU faculty, provide free legal services for individuals with limited resources, while gaining hands-on professional experience. “They become more aware of and sensitive to human suffering, and their social involvement increases,” says Prof. Zaban, adding, “They experience legal battles firsthand and actively learn how to seek justice for their clients.” In addition to the legal clinics, the university also operates communal psychology clinics, social work clinics, and an optometry clinic.

In line with BIU’s unique Jewish identity, the university strives to become the setting of a vibrant, open and modern discourse on Jewish issues. The Jesselson Institute for Advanced Torah Studies (both the Beit Midrash for men and the Midrasha for women), the Faculty of Jewish Studies and the Faculty of Law are expanding their course offerings, as well as their interdisciplinary activities focusing on Jewish heritage, democracy and Israel. “Our campus is sufficiently pluralistic and diverse to not only become the ideal setting for comprehensive, methodical Jewish research and Torah study, but also to make a tremendous impact on the Jewish world,” emphasizes Prof. Zaban.

As part of his Open Campus vision, Prof. Zaban is committed to providing professional development opportunities to a wide variety of practitioners. “In this day and age, with the world changing rapidly, professionals in all fields understand the need to continuously learn and keep abreast of the latest developments. Computer science, biology, chemistry, psychology and teaching are just some of the fields in which there is constant innovation, requiring ongoing learning,” explains Prof. Zaban. “Therefore, one of our key missions is to develop and offer unique new courses and programs that enable these professionals to remain up to date and to become an integral part of our campus.”

As Bar-Ilan opens its campus to the surrounding community, it is clear from the growing numbers of joggers, bikers and attendees at diverse events around the university that BIU is making inroads into becoming a vital part of urban life in Israel’s center.
Improving Our World

Fathoming How the Sea Responds to Pollution

The research team, including BIU professors Yishai Weinstein, of the Department of Geography and Environment, and Ilana Berman-Frank, of the Menas and Everard Goodman Faculty of Life Sciences, have already presented preliminary findings indicating a constant flow of particles from the surface to the bottom of the sea, enabling the transport of organic carbon for safekeeping in the “dark zone” of the sea – more than 1,000 meters (1.6 miles) down – which is part of the “biological pump.”

The findings suggest that the flow of particles and the efficiency of the pump increase during winter storms, when large quantities of dust and materials drifting from the seabed in the coastal region reach the open sea. Next on the agenda is exploring the efficacy of disposal from the sea surface to its floor during pollution events and gauging the impact of global warming on the oceanic biological pump.

Harnessing Sunlight to Create Fuel

IU scientist Dr. Adi Salomon and her research team are on the way to harnessing sunlight into energy in the form of fuel. While studying the interaction between metallic nano-structures and light, Dr. Salomon, of the Department of Chemistry and the Bar-Ilan Institute for Nanotechnology and Advanced Materials, synthesized a new type of material – lightweight metals.

“These feather-light metals are quite different from typical metals,” explains Salomon. “They consist of many intricate networks of metallic nanoparticles, in varied shapes and sizes.” Similar to the porous structure of corals, in which diffuse scattering of light enables efficient symbiotic photosynthesis of algae on coral’s surface, our coral-inspired metal nanostructures are comprised of intricate porous networks. They are lightweight, conductive, and have a huge surface area, and guest materials can penetrate them easily.”

Electric Cars: Fun Driving and Environmentally Sound

Climate changes and futuristic predictions were supposed to turn electric cars into our main form of transportation. But in fact, the rate of adoption of electric cars in the western world (Israel included) is still surprisingly low. This appears to be due to such factors as high price, insufficient travel range and long battery charging time. However, a joint study conducted by Dr. Anat Tchetchik, of BIU’s Department of Geography and Environment, Dr. Yedid Blass, of Tel Aviv University, and MA student Liat Zvi, reveals yet another, often overlooked reason that these vehicles are unpopular. The researchers found that the hedonistic aspect of driving (e.g. acceleration, speed, enjoyable driving experience, design) was ignored by electric car manufacturers, designers and marketers who focused heavily on its environmental components.

“Marketers have assumed that environmentalists will be the first and main market segment to adopt the electric car. This assumption relies on the fact that in its early days (the 1960s) the environmental movement espoused simplicity and resource preservation (‘tree huggers’),” explains Dr. Tchetchik. “However, nowadays the environmental sector has evolved and people are willing to pay for benefits other than environmental ones.”

In light of these insights, the researchers suggest that in Israel, for example, the marketing efforts of Better Place which encouraged trialability (e.g. test driving) of its Renault Fluence on a large scale, were in fact a two-edged sword. The lack of hedonic attributes did not attract so-called “self-indulgent” drivers, regardless of their environmentally inclined attitudes.

In that vein, the more recent success of the American car manufacturer Tesla, which offers highly designed electric cars, has proven Dr. Tchetchik’s thesis. In order for environmental goods to gain market share, designers and marketers should not neglect other aspects such as the indulgent ones.

A Smart Fiber that Measures Multiple Biomedical Parameters

A groundbreaking new technology enables simultaneous monitoring of a patient’s heart beat, blood pressure, and respiratory rate— all made possible by embedding a sensory fiber into his or her clothing. This is the newest in a long line of innovative developments achieved in Prof. Zeev Zalevsky’s lab at BIU’s Alexander Kofkin Faculty of Engineering. The novel technology is currently patent pending.

“The sensor is a special optical fiber, thin as a hair, with a light measuring clasp attached at its end,” explains Prof. Zalevsky, who is also the Director of the Nano Optics Center at the Bar-Ilan Institute for Nanotechnology and Advanced Materials. “Using a laser, the clasp injects photons (particles of light) into the sensory fiber, reads them back and converts them into electrical readings from which a large number of biomedical measures are produced simultaneously, continuously and without requiring tight contact between the sensor and the body of the wearer. The fiber can be used with a wide range of the patient’s clothing and washing or ironing the garment does not affect its performance.”

Most sensors offered today are able to measure only one biomedical parameter and require tight contact between the sensor and the wearer. This new platform measures physiological vibrations (in nanometric precision) and is thus able to monitor many changes pending on movement, such as breathing, blood pressure, pulse and heartbeats. After four years of hard work on this technology, Prof. Zalevsky and his team are now on the verge of commercial applications.
Improving Our World

Targeting Enzymes that Energize Cancer Cells

Metastatic cancer cells have the ability to survive in harsh conditions. They do this by reprogramming their metabolic and energy-generating systems.

Seeking the mechanism responsible for energy production in cancer cells, Prof. Un Nir and his team at the Mina and Everard Goodman Faculty of Life Sciences found a component, the FerT enzyme, which is absent in healthy cells and can generate energy in cancer cells even under stressful conditions. When the researchers damaged the function of this enzyme (located in the mitochondria – the cell’s power stations which produce energy in cancer cells), the malignant cells failed to generate energy – and died.

Using advanced chemical and robotic approaches, the researchers developed a synthetic compound called E260 that attaches itself to the FerT enzyme, disrupts its course of activity and causes the mitochondria to collapse. The cancer cells fight back and try to recover, but this energetic metabolic crisis eventually leads to the death of the metastatic cells.

This enzyme is normally only found in sperm cells – “the only cells that activate their function outside the body,” explains Prof. Nir, whose research was published in the prestigious Nature Communications journal. “Sperm cells and metastatic cells alike are unique in their ability to generate energy under harsh and restrictive conditions. Metastatic cancer cells ‘adopt’ this enzyme from sperm cells, finding a way to utilize it and empower their mitochondria.”

The next step? Prof. Nir and his team hope to move on to clinical trials.

Preserving Youth – Painlessly

Who doesn’t want to maintain their youthful good looks for as long as possible – painlessly? BIU scientists have found a smooth solution for achieving just this. Prof. Dror Fixler, Director of the Bar-Ilan Institute for Nanotechnology and Advanced Materials (BIINA), along with Prof. Rachel Lubart, of the Departments of Chemistry and Physics, and their teams, have developed an innovative, simple technique of synthesizing Hyaluronic Acid (HA) – an organic substance which preserves the elasticity of our skin and joints, and that is used by the cosmetics industry in an expensive, lengthy, invasive and often painful process – into molecules that are less than 100 nanometers long.

“The process we’ve developed preserves the original chemical structure of the HA, thus maintaining its efficiency. The key advantage of this technique is that the nanoparticles are applied to the skin in the form of a facial cream, rather than via invasive and painful treatments,” explains Prof. Fixler. Additionally, the nanoparticles have greater antibacterial and antacid abilities than those of un-synthesized HA.

In order to examine the nanoparticles’ capability to penetrate human skin, the scientists used a revolutionary optical technique, developed by Inbar Yariv, a doctoral candidate in Prof. Fixler’s lab. This novel technique examines the interaction between light and skin tissue, and identifies a range of substances and matters, including nanoparticles. Prof. Fixler notes that this new optical technique also has extensive industrial potential. “For example, imagine that a light beam projected from a UV could identify components of substances on land or at sea from great distances.”

With the technology devised by Prof. Fixler and his colleagues undergoing further development, both the researchers and industry experts believe it is set to revolutionize the pharmaceutical and cosmetics markets.

Do We Really Perceive Reality?

You run into an acquaintance in your neighborhood and say hello. But if you bumped into that same person on a street in Shanghai, would you do the same?

According to Dr. Adam Zaidel, of BIU’s Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center, you may not even recognize that person at all! Although the visual stimulation sent to the brain is identical in both encounters, the sensory data is influenced by other factors, such as context. Dr. Zaidel explores the neuronal mechanisms creating our perceptions of reality. The findings of his collaborative study with American colleagues reveal that the world we perceive is a combination of sensory data AND prior knowledge. This counters the long-held assumption that just the sensory areas of the brain are responsible for perceptual decisions.

“Sensory data is integrated with other information that may be transmitted from higher areas of the brain – prior knowledge, expectations, contexts, etc.” says Dr. Zaidel. “We can’t separate one data source from the other. When sensory signals reach the brain they are already intertwined with non-sensory data.” He gives the example of optical illusions, which expose the gap between visual intake and prior knowledge (coming from higher areas of the brain), which the brain utilizes in the data absorption process. Sensory information alone is often unreliable and ambiguous.

The results of Dr. Zaidel’s innovative study on perception could have various important applications, among them a novel way to understand the perception mechanisms of people on the autistic spectrum.

BIU Launches Its First Ever Massive Open Online Course in Bible Studies

For the first time ever, students from all over the world are taking part in a Bar-Ilan University Massive Open Online Course (MDOOC – a Harvard University designed EDX online learning platform) – “The Bible in Light of the Ancient Near East” developed by Dr. Nili Samet of BIU’s Zalman Shamir Bible Department. Students enrolled in the course live in countries far and wide, including the United States, Europe, China, India, Pakistan, Afghanistan – and of course, Israel.

Dr. Samet’s MDOOC is an introduction to the Bible, set against the background of the rich archaeological findings from the Ancient Near East. The curriculum introduces the students to the captivating world of Israel’s neighboring civilizations in biblical times through comparative study. It discusses an assortment of biblical traditions, genres, and themes.

The course was filmed in high quality and includes video lectures, rich images of many relevant findings, a variety of online activities, and field photography from the British Museum in London. This, the very first MDOOC developed at Bar-Ilan University, is offered free of cost to students across the globe. For Bar-Ilan students, this online course is an alternative and unique option of study which gives university credits just like any other course.

The course is part of the first cycle of innovative programming of the Planning and Budgeting Committee (PBC) of the Council for Higher Education (CHE), together with “Digital Israel”, to make the best of Israeli academia accessible to interested people around the world. This path paved by Dr. Samet shows that the Faculty of Jewish Studies is keeping up with the world’s latest academic trends and is lowering the geographical and cultural barriers between students worldwide.
Improving Our World

Good as Gold: Using Nanotechnology to Predict Success of Cell Transplants

Injecting T-cells or stem cells into cancer patients is an innovative and promising mode of medical treatment today. However, scientists have yet to gather enough information to identify or predict the treatment’s affects or success early on in the process. Several exasperating months may pass before realizing the efficacy of the injected cells. In cases where the treatment is unsuccessful, the time lost may be calamitous to the patient’s chances for recovery. However, thanks to a BIU researcher’s groundbreaking study, conducted as part of the EU’s Horizon 2020 Research and Innovation Program, which has been awarded a research grant of about 7 million Euros, we may be on the way to predicting the success of such cell transplants sooner.

Prof. Rachela Popovtzer, of BIU’s Alexander Keikin Faculty of Engineering and the Bar-Ilan Institute for Nanotechnology and Advanced Materials, is spearheading a study aimed at developing techniques for tracking the injected cells and the level of their absorption in the body. “Before injecting the cells into the patient’s body, the cells are infused with nanoparticles, so we can track them in real time once they are inside the patient. The nanoparticles are made of gold, a magnetic substance and a radioactive material, and they provide us with data about the implanted cells’ advancement and arrival at their destination,” explains Prof. Popovtzer. “So far we were able to infuse millions of nanoparticles into various cells without damaging the cells. This enables us to track the cells’ movement inside the body, thereby leading the way to a speedier and more effective mode of treatment.”

Zapping Liver Cancer Early on and Preventing Recurrence

Liver cancer is a devastating disease. In order to detect it at an earlier, more treatable stage and prevent its recurrence, Bar-Ilan University medical scientists are performing trailblazing research.

Dr. Meital Gal-Tanamy, of BIU’s Azrieli Faculty of Medicine in the Galilee, along with Prof. Salomon Stemmer, Director of the Research Unit and Deputy Director of the Division of Oncology at the Rabin Medical Center, have succeeded in identifying a unique genetic signature for liver cancer, a discovery that may be used as a genetic test for early detection of the disease. Liver cancer may take decades to develop, and thus far has only been detected in later, terminal stages. Thanks to this latest discovery, early detection will enable better treatment and even curing the disease in some patients.

Dr. Gal-Tanamy is also conducting groundbreaking research, together with Prof. Izhak Haviv, also of BIU’s Azrieli Faculty of Medicine in the Galilee, on liver cancer that is caused by the Hepatitis C virus, transmitted through blood. In other words, the disease can be contracted and is spread virally, like AIDS. In such cases, even after the patients are completely cancer free, the infected cells are still affected by the virus, and there is a certain probability that the cancer will recur. The BIU researchers have identified for the first time ever, a unique signature of the virus in the infected cells. As a result, they were able to successfully manipulate and remove the cancerous potential embedded in those cells, thereby eliminating the chances of the cancer recurring.
Today, for the first time in human history, more people live in cities than in rural areas leading many researchers to the conclusion that urban lives can be made easier by turning metropolises into smart cities. The term “smart city” refers to the employment of a range of technologies and solutions aimed to improve and upgrade urban systems.

“Only the implementation of smart city technologies can assure the resilience and survival of 21st century cities, while maintaining a reasonable quality of life on all levels – transportation, personal safety, sanitation, clean air, energy saving and other critical aspects,” says Dr. Eyal Yaniv, head of the Bar-Ilan University Graduate School of Business Administration.

“I started off as an entrepreneur: I’ve only been in academia for about a decade,” says Yaniv, formerly a hi-tech executive and one of the founders of Israel Online [IXL] and Nonstop. “I believe it is our duty, as an academic institution, to generate and distribute information and ensure it improves our lives.” About a year ago, Yaniv, along with Prof. Arie Zaban, then VP for Research and today BIU President, established the BIU Smart Cities Impact Center, a three-fold project including cities, solutions, and research.

The cities participating in the project are seven municipalities adjacent to Bar-Ilan’s campus: Ramat Gan, Givat Shmuel, Kiryat Ono, Bnei Brak, Ganey Tikva, Petach Tikva and Gvatagim, with a total of 700,000 residents. “The neighboring cities are our most obvious clients,” explains Yaniv. “We study their needs and challenges, and aim to implement the solutions developed specifically for them in these neighboring cities. All the mayors were very excited by the project and its real-time implications.” One example of cooperation, he notes, is the implementation of urban learning programs and projects in area schools. High school students are developing technological systems which can be used for navigation and improving quality of life in their cities.

Dr. Eyal Yaniv: Only the implementation of smart city technologies can assure the resilience and survival of 21st century cities, while maintaining a reasonable quality of life on all levels – transportation, personal safety, sanitation, clean air, energy saving and other critical aspects.

Yaniv says that each city has its own particular challenges, be it parking, lowering energy consumption, improving public transportation, sewage, etc. “As relatively small towns, they don’t enjoy the same kind of ‘fixes’ that are implemented in bigger cities, and that is why they want and need our help.”

BIU Living Lab

The second layer in this threefold project is the smart city solutions providers, which include some of the world’s most renowned technologies, such as Waze, Pango and Mobileye, as well as some young, fledgling startups. Within this framework, Yaniv created an on-campus technological incubator for companies and young entrepreneurs. “The incubator enables beginning entrepreneurs to evolve in a vibrant, professionally-supported academic and commercial environment, and to locate potential investors.”

Dr. Yaniv is creating a living lab at BIU, in which the campus will provide a controlled and gated environment for experimentation. “Bar-Ilan University is a microcosm of a small city, with 17,000 students and about 2,000 employees, dorm rooms, roads, security systems, electricity and communication networks, and even bus lines. We can implement pilot projects, and test and evaluate solutions in the field.”

Multidisciplinary Research

The third layer, research, is the heart of the project, engaging some 50 scientists from a range of disciplines – from geography and environmental studies, law, education, botany and management.

The confluence of the three facets – researchers, solution providers and clients – facilitates the promotion of novel ideas, implementing them on campus (as pilots) and later in the cities themselves. Using Big Data will allow for the application of the findings on a larger scale.

Smart Cities Impact Center

Modern cities are complex entities, encompassing a large number of integrated layers: underground water, sewage, electricity and communication infrastructures, crosshatched by transportation and road infrastructure, information networks, and more. Therefore, smart city solutions require a synergetic, multidisciplinary approach, which is what the Smart Cities Impact Center is all about.

For example, one of the issues studied at the center is the Urban Heat Island, a phenomenon typical to big cities. In certain city centers the temperature is constantly two to five degrees higher than in the rest of the city. These are usually crowded, busy areas, with extensive public transportation and polluters.

To tackle this problem the center enlisted experts from the Department of Geography and Environment. “We were examining how to reduce the temperature in highly crowded urban areas,” explains Dr. Rotem. “Public gardens reduce the heat, but what if there are no available grounds to create them? Our solution is vertical gardening: cover the walls with greenery [e.g. ivy], that in addition to reducing temperatures, can also improve air quality.”

In addition to implementing this solution at BIU – where one building was completely covered in greenery – a parallel project is being created at Chengdu University in China in cooperation with BIU, and a funding request has been submitted to the Israel Science Foundation. The study examines a series of parameters, including carbon dioxide, mortality and morbidity levels.

Dr. Keren Agay Shay, an environmental epidemiologist from the Azrieli Faculty of Medicine examining the heat effects on mortality, and researchers from the Graduate School of Business Administration exploring the feasibility and cost effectiveness of this solution.

The micro-climate created in the Heat Islands affects the quality of life and electricity consumption of residents in the area, and statistical tests also found harmful effects on health, mainly of babies and pregnant women. Previous solutions mostly included unsuccessful attempts to neutralize the heat sources. The BIU Smart Cities Impact Center team is attacking the problem from a different angle.

This project is an extension of the work of Dr. Orit Rotem, a senior lecturer in Urban Geography (collaborating with Prof. Ilmar Lansky, head of the Department of Geography and Environment.) “We were examining how to reduce the temperature in highly crowded urban areas,” explains Dr. Rotem. “Public gardens reduce the heat, but what if there are no available grounds to create them? Our solution is vertical gardening: cover the walls with greenery [e.g. ivy], that in addition to reducing temperatures, can also improve air quality.”

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Dr. Keren Agay Shay, an environmental epidemiologist from the Azrieli Faculty of Medicine in the Galilee, examines
the health influences of the Urban Heat Island. “Higher temperatures directly increase health risks and the influences of air pollution, to the point of endangering people’s lives. My study examines whether the risks for miscarriages, premature labor and birth defects are higher in these areas.”

Modern cities are complex entities, encompassing a large number of integrated layers: underground water, sewage, electricity and communication infrastructures, crisscrossed by transportation and road infrastructure, information networks, and more. Therefore, smart city solutions require a synergetic, multidisciplinary approach, which is what the Smart Cities Impact Center is all about.

Following the successful on-campus pilot, Dr. Hadas says it was implemented on one of the Metropolitan bus lines, and that the next stage will be to extend the abilities of this smart system beyond mobility planning. “The system will be able to detect which line bus is approaching and report it on the sound system, helping tourists and the visually disabled.”

Yet another venture conducted at the Impact Center uses sensors to measure pollution levels. The data gathered will be transmitted to a monitoring center, where it will be mapped and reveal local pollution levels in real time, in sensitive areas like kindergartens, schools and hospitals.

The success of such urban projects depends on adapting them to the target audience’s needs and expectations. In order to evaluate the level of success, the Impact Center is working on a mobile app that will present question and decision-making options to the target audience.

“Tuning in to the Cocktail Party Effect”

Dr. Elana Zion Golumbic, of BIU’s Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center, is making significant headway in understanding this “cocktail party effect” and its implications for everyday speech.
“M” out of the time, we find ourselves in a noisy environment, with many distractions and a lot of things going on simultaneously,” notes Dr. Elena Zion Golumbic of BIU’s Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center. “It is a huge challenge for the brain to manage these multiple events and figure out what is going on in any given situation, which sounds to pay attention to and which to ignore.”

What Golumbic, a cognitive neuroscientist, is referring to is, of course, the well-known “cocktail party effect,” the human brain’s wondrous ability to filter out noise and focus on conversation in a crowded room. When people examine a complex image, they can shift their eyes to selected points. Ears, on the other hand, absorb all auditory information. They do not have a motor mechanism that prevents certain sounds from passing through the ear canal. It is up to the brain to filter desired noise from unwanted sounds. Golumbic’s research on this phenomenon provides the first clear evidence of neural locations mapped according to exclusive representation of attended or ignored speech, a study she happily chanced upon while conducting post-doctoral research at Columbia University.

“My background is actually in physics,” she recalls. “Ever since I was in high school, I really loved science and being able to explain phenomena that exist within our world. While studying undergraduate degree physics, I learned that I was most interested in what enables our bodies to engage in complex behaviors. I took a few neuroscience courses and began to apply a physics approach, like you would to any other field in the sciences, to the human brain. I was hooked, and saw my future in brain studies.”

Top-Down Processing

Over the years, Golumbic has researched how top-down processes such as speech, memory, facial composition, and attention, shape and change the neural representation of sensory input absorbed from one’s surroundings. “Usually, I try to select topics that I feel are relevant to my own life or that people around me encounter or struggle with,” Golumbic says. “The subject of ‘attended speech’ is so relevant and so important to everyday functioning—that’s part of what attracted me to the subject.”

Another factor that drove Golumbic to study the cocktail party effect was her work with top scientists and access to the latest technological equipment at Columbia and New York University. While obtaining her post-doctorate degree abroad, she and her colleagues examined the neural responses of six hospital patients who viewed three videos. The first video was of a woman speaking, the second was of a man speaking, and the third had both man and woman speaking simultaneously.

As the patients watched the videos, Golumbic and her colleagues recorded their electrical brain activity, later using a mathematical model to discover that the brain manages multiple communications in a single instant, deciding which to “attend to” and which to ignore. While the subjects heard all of the communications, their brains registered the attended and ignored speech in different areas of the brain. “We, as scientists, want to understand the brain. We want to know how it works,” Golumbic explains. “And even though questions like these surrounding the cocktail party effect are really important, they are also really difficult to study. My work, which began at Columbia and was enabled by technological advances and cutting-edge methodology, made it possible to make significant discoveries. In essence, my time in New York exposed me to an entire world of technology capable of studying brain phenomena.”

For Golumbic, this initial exposure to cognitive neuroscience and the cocktail party effect served as a unique and inspiring “aha moment.”

At BIU’s Gonda Brain Research Center, where this mother of four is now a faculty member, Golumbic found that ignored speech registered in neural areas linked to sound, while attended speech registered in regions associated with higher cognitive functioning. Even though the sensory input to the ears was identical, when subjects switch attention between two speakers, the brain dramatically shifts the way it processes—and responds to—the auditory information.

Using MEG to Pinpoint Brain Activity

Golumbic’s studies use Magnetoencephalography (MEG) technology, an imaging technique used to measure the magnetic fields produced by electrical activity in the brain with help from extremely sensitive devices called SQUIDs. It allows her to record signals and pinpoint brain activity directly related to the presented speech triggers. BIU’s Electromagnetic Brain Imaging (EMBI) Unit in the Gonda Brain Research Center is home to the country’s and the Middle East’s only MEG setup, open for use by all interested researchers in Israel. In addition, the EMBI Unit works in cooperation with BrainMap, LTD, to obtain clinical and diagnostic services on monitored brain activity.

Research on the cocktail party effect is ongoing, with current findings illuminating how the brain deals with many different sensory inputs at a sensory level and results pointing to various applications for the general population and for those with special needs. “One focus would be people with ADHD and helping them manage their internal resources so that they can focus on what they need to,” Golumbic says. “Another application would be partnering with the auditory or hearing aid industry. People who have hearing deficits or wear hearing aids are most challenged by cocktail party-like scenarios. Hearing aids amplify all sounds so you can hear better, but are unable to filter out irrelevant or secondary auditory noise. The ear absorbs everything, but how does the information separate when there are different speakers, saying different things, with different noises in the background? We’ve been able to pinpoint a trajectory for the information flow.”

Listening and Focusing Skills

A third application Golumbic’s research aims to address is how attended speech affects high-functioning, normative people on the job. “There are a lot of professions where you need to multitask better than the average person,” Golumbic explains, “like call center agents or army personnel, for example. Some of the things we’re looking into at the moment is discerning differences between individuals. Some people are really good at focusing attention, while others have a really difficult time with it. Our ongoing studies are examining a range of populations and trying to understand the basis of an ability or disability on an individual level. Perhaps this can enable us to figure out how to help people improve their listening and focusing skills.”

As for her latest research paths, Golumbic’s plans are exciting and technologically savvy. “So far, most of our experiments have been auditory. We play sounds to people through earphones. Now, we want to make the entire experience much more realistic. So, we’ve started using virtual reality technology to immerse people in different places and among animated speakers. We can virtually add distractors like a plane flying over head or place our participants in a classroom setting and watch as they attempt to listen to the teacher while another ‘student’ whispers. It really opens up a whole new realm of possibilities,” she exclaims.

Another direction Golumbic is considering is delving further into the mechanistic understanding of the brain. “How does the brain separate speech, as opposed to other kinds of sounds? Does separating speech inhibit comprehension or the ability to differentiate sounds? While there remain many unknowns surrounding the cocktail party effect, what’s certain is that Golumbic will most definitely have many more ‘aha moments’ in her promising future as a cognitive researcher.”
Freedom and the Autonomous Car

Gearing up for the onrush of autonomous cars, Dori Oriyan, a PhD candidate in BIU’s Science, Technology & Society Program, gauges how the new “species” will affect our lives and freedom of movement.

How will the autonomous car change our lives? It might alter the face of our cities. The city as we know it revolves around vehicles. Roads, parking lots, pollution. The new opportunities the autonomous car offers challenges every basic assumption and lifestyle choice we have. For example: why look for a nearby parking spot when we can simply have the car come to us when we need it? Why buy a car when you only use it for a few hours a day? Why get stuck in traffic when traffic flow can be managed like the blood flowing in our veins? If we have to spend so much time traveling, shouldn’t we take advantage of the benefits of the autonomous car in order to use this time to do something more productive? Why limit people’s mobility according to their age? Or physical limitations? Why confine people just because they can’t drive?

A car, as we know it today, serves as a mobile personal space which reflects a person’s values, social status and even masculinity. It also offers us the freedom and power to get into our cars at any given moment and drive anywhere. The autonomous car is a new “species” altogether. In order to function, the autonomous car has to maintain contact with a range of networks, both for security and navigation reasons, which means the car’s whereabouts are monitored and known at any given moment. How will the autonomous car change our lives? It might alter the face of our cities. The city as we know it revolves around vehicles. Roads, parking lots, pollution. The new opportunities the autonomous car offers challenges every basic assumption and lifestyle choice we have. For example: why look for a nearby parking spot when we can simply have the car come to us when we need it? Why buy a car when you only use it for a few hours a day? Why get stuck in traffic when traffic flow can be managed like the blood flowing in our veins? If we have to spend so much time traveling, shouldn’t we take advantage of the benefits of the autonomous car in order to use this time to do something more productive? Why limit people’s mobility according to their age? Or physical limitations? Why confine people just because they can’t drive?

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Freedom of Movement vs Efficiency

But most of all, the autonomous car isn’t “free.” Its navigation system will not only know where we are and where we are headed at any given moment, but will also “approve” and make final decisions about our destination for us.

Imagine a situation where Google is the autonomous car system provider and it crashes with the city of New York over the amount of taxes it should be paying for its services. Google could decide that its cars will no longer travel to Manhattan, and thus essentially boycott and paralyze the city of New York.

So basically, the autonomous car can chip away at our sense of ownership, privacy, and even freedom of mobility. Why, then, is the autonomous car such an obvious part of our near future? The answer is simple: efficiency.

Why, then, is the autonomous car such an obvious part of our near future? The answer is simple: efficiency.

Modernism sanctifies efficiency as the key parameter in evaluating objects (from a simple plastic toy to social processes). The car, as we know it, is considered to be a part of the modern world, but today it is also an expression of individuality, prowess and power, which basically has nothing to do with the modern, efficiency-driven world, in which the objective of a car is to bring us from point A to point B as fast and as efficiently as possible. The autonomous car does away with imbuing the car with these personal values, and instead, will doom the classic car, in favor of more efficiency.

I would guess that had Thelma and Louise had an autonomous car, when Thelma tells Louise to drive over the cliff in the last scene of the movie, the car would not have allowed this to happen, chirping that “this action stands against the user agreement you signed. Should we switch to commercials now or online shopping until the police arrive?”

The autonomous car can clip away at our sense of ownership, privacy, and even freedom of mobility. Why, then, is the autonomous car such an obvious part of our near future? The answer is simple: efficiency.
Opinion

Five Principles in Jewish-Economic Thought

Integrating Torah knowledge with a lucid understanding of economics, Aharon Ariel Lavi zeroes in on the Jewish view of economic thinking. A member of the Nitzotzot Forum at the Jesselson Institute for Advanced Torah Studies and a graduate of BIU’s Science, Technology & Society Master’s Program, Lavi has edited an anthology on Judaism, society and economics. He offers his insights herein.

Economic forces have powerful influence on human society and can affect individual lives. The economy – which reflects social values – focuses on the here and now among people. Every transaction made, commercial watched, or article read, signifies an economic action. While economists examine diverse methods of economic management and analysis, at the end of the day the questions are primarily ethical: what relationship should we have with money? Should we invest in new technologies or improve the existing ones? Should we educate our children to competitiveness or reciprocity?

1. Human beings are imperfect and act with free choice

This principle is the base of contention between the various economic approaches. For example, if I believe that people can achieve intellectual wholeness and that all their choices will be dictated by pure wisdom (an ancient philosophical belief) then I can support the establishment of a powerful government managed by wise rulers, which will benefit all citizens. Those believing in free economy don’t disagree, but claim that in reality, people can’t, under any circumstance, act purely intellectually, and so minimal power should be accorded to the ruling power, and only to the extent that it’s essential for the normal functioning of society.

2. The world was created by God, but he left it to the care and cultivation of man

The key economic issue here has nothing to do with the creation vs. evolution discussion. It is about the connection between matter and spirit: if the world was created for humankind, and part of its life mission is to develop and care for the world, then being active in the material world doesn’t clash with activity in the spiritual realm. On the contrary, it can be considered a foremost spiritual activity in and of itself. This is contrary to the view which sees the material world as ungodly or a necessary evil. From a Jewish standpoint, materialism is considered a foremost spiritual activity in and of itself and thus is a part of its life mission.

3. Ownership is the Lord’s, and He delegates to those who can act honestly and responsibly

The question of ownership is a key issue in Jewish and economic thought. The very premise is that the only one who can claim ownership is God, Creator of all, and any form of private ownership stems from Him. As such, our ownership of natural things doesn’t give us any right to use or trade them, but first and foremost requires us to use them intelligently and avoid ruining them.

4. The economic system is designed to fluctuate between growth and decline

This principle differs from the common (and perhaps overlyoptimistic) belief in the probability of constant growth. Every growth surge will be followed by a decline. Judaism also provides the means, such as the Sabbath, the Sabbatical Year and the Jubilee, to cope with these waves and moderate their detrimental effects. Assigning time for rest and preparing for the next wave in advance could benefit the economic system and all of humankind.

5. It is the responsibility of each individual – and at the same time, the entire community – to care for and support those who are struggling financially

This is the most obvious principle, but it is only one part (however important) of a broader view of the relationship between man and nature and man with himself. The Halakhic obligation to care for the needy is complex: on one hand, a rich man who lost his fortune is entitled to more charity than other poor people, and the community is required to help him get back to his former lifestyle. On the other hand, swindlers are not entitled to any charity whatsoever, and those who can earn a livelihood and instead rely on the community to support them are considered public and Halakhic criminals.

In Conclusion

Naturally, each of the above principles should be further developed. And there is no intention to agree upon one set of suppositions and values. The very discussion is an important part of the advancement of Jewish economic thought in our generation.
Matching the Treatment to the Patient through Personalized Medicine

Personalized medicine opens vast new horizons in many medical fields, and brings renewed hope to cancer patients. BIU VP for Research Prof. Shulamit Michaeli is spearheading the new Dangoor Personalized Medicine Impact Center that will focus on efforts to improve treatments by modifying them to each patient’s physical attributes, symptoms, and condition.

Prof. Shulamit Michaeli

Although chemotherapy is generally the accepted mode of treatment for cancer patients, it often turns out to be a painful and unnecessary method of dealing with the disease,” says highly acclaimed microbiologist, Prof. Shulamit Michaeli, current VPR, past Dean of the Mina and Everard Goodman Faculty of Life Sciences and founding director of the Nano-Medicine Center. “The main reason chemotherapy fails is that it isn’t tailored to the specific patient.” Prof. Michaeli is in the process of setting up the Dangoor Personalized Medicine Impact Research Center at Bar-Ilan University that will focus on personalized medicine, and work to improve treatments by modifying them to each patient’s physical attributes, symptoms, and condition.

The Dangoor Personalized Medicine Impact Center will bring together 40 experts in medicine, life sciences, exact sciences and psychology. “By using the genetic sequence (reading the genetic code) of the tumor, we can identify its unique mutations, and then modify the treatment to suit the patient’s specific medical needs,” explains Prof. Michaeli. “Another cancer treatment option in use today is immunotherapy – the utilization of the body’s own immune system to eliminate cells. It, too, isn’t always the best course of treatment, because often there is a discrepancy between the chosen treatment and the microbiome (the body’s bacterial population).”

In addition, Prof. Michaeli notes that there is a correlation between the composition of germs in the body and diseases such as diabetes, as well as psychiatric conditions. In these cases, personalized medical treatment includes modifying the patient’s diet.

Prof. Michaeli cites recent depression studies which have found alterations in patients’ RNA as a result of mental, cognitive and medicinal treatments (the RNA serves as a messenger, and determines which components of our DNA will be expressed and which proteins our body will produce, dependent on environmental and anxiety factors). Identifying these changes and comparing DNA and RNA pre- and post-treatment, she continues, enables us to determine whether the course of mental therapy is effective, and in many cases, prevents further, expensive additional treatments which only cause more discomfort to the patients.

Finally, Big Data is an important aspect of personalized medicine, used to predict the occurrence of diseases. A review of leukemia patients’ records, for example, detected recurring findings in their blood work, which enabled physicians to prescribe the appropriate preventative course of treatment.

The Dangoor Personalized Medicine Impact Center Team

The experts and scientists taking part in the Dangoor Personalized Medicine Impact Center hail from numerous disciplines. Three of them personify the creativity and “gospel” of personalized medicine, and bring hope for a more effective, less painful treatment for cancer and other diseases.

Among the scientific luminaries: Prof. Cyrille Cohen, head of BIU’s Cancer Immunology and Immunotherapy Lab, is leading a study about the interaction between T-cells and cancer cells. “Understanding the reciprocity between these two types of cells enables us to engineer the reaction of the patient’s immune system to be more effective,” he explains. “We have found that on the macro-level, there might be no obvious difference between different patients’ tumors from the same cancer types. However, on the micro level, the specificity and the reactivity of T-cells to those tumors varied from one patient to another. In fact, there was no common mutant protein (mutation product) among any of the studied patients.”

His research team studied several skin cancer patients, and using genomics – a deep genetic sequencing of the cancer cells – mapped the cancer cells’ mutations.

“By drawing blood directly from the tumor, we can extract the T-cells we are interested in treating, genetically upgrade them to reinforce their ability to fight against cancer, and then reinject them into the patient. This treatment method is very specific and personal and only suited for this particular patient’s specific mutations. As a result, the patient should only experience very minor side effects, compared to those of chemotherapy,” states Prof. Cohen.

His team continues their study in collaboration with Prof. Yoram Luzon of BIU’s Department of Mathematics, as well as with the National Cancer Institute in Bethesda, MD, and other medical centers in Israel. “We must improve the methods used to identify the mutations in the immune system, and accelerate the process, in order to make it faster and more accurate.”

Prof. Rachela Popovtzer, of BIU’s Alexander Kofrin Faculty of Engineering and the Bar-Ilan Institute for Nanotechnology and Advanced Materials,
Setting their Sights High

Bar-Ilan University’s new School of Optometry and Vision Science is a unique center dedicated entirely to vision, offering a BSc in optometry, in addition to MSc and PhD vision science programs. The founders – Prof. Uri Polat, head of the school, and Dr. Yossi Mandel – reveal an inspiring initiative aimed at becoming an international hub for vision science, combining cutting-edge R&D with clinical studies and joint ventures with industry. The school, demonstrating a deep commitment to community, provides free services to the general public, including eye-screenings for underprivileged communities.

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Prof. Erez Levanon: By creating its own sequences, resilient to the body’s natural defense systems. However, this powerful innate RNA mechanism can be used to actually treat the disease. "Correcting the RNA sequence without upsetting the DNA dramatically reduces the inherent risk of genetic treatment," he says.

Prof. Levanon’s team has already identified numerous mutations in the RNA sequence, more than 100 of which are common to certain patients and/or certain cancer types. Studying the characteristics of these mutations may enable the development of alternative drugs.

The newly formed Dangoor Personalized Medicine Impact Center, and the brilliant interdisciplinary scientists within, bring hope for a more effective, less painful treatment for cancer and other diseases.

The optometry program at BIU has existed for more than a decade, offering courses in basic sciences and a BSc degree in optometry. "Three years ago, the university approached Dr. Mandel and myself, requesting that we establish a new school. We immediately understood the magnitude of the opportunity for creating something truly remarkable," reminisces Prof. Uri Polat, head of the new program. “Our aim was to bridge clinical aspects of normal and abormal vision with brain research, vision rehabilitation, and visual enhancement techniques.”

Researchers Dr. Sharon Gilaie-Dotan and Dr. Yoram Boneh were recruited, and the Masters and PhD programs in Vision Science and Technology were established. The school began to accept postdocs, and in 2017 the program was officially founded under its new name: the School for Optometry and Vision Science.

The school has four main activities, which are synergistically interconnected:

1. BSc optometry training program including studies in basic sciences, and clinical practice in optometry, aimed at obtaining the Ministry of Health Optometrist license.
2. Research in vision science and technology with graduate studies in vision science.
3. Technological developments and collaborations with industry.
4. Strong commitment to the community – free screenings and subsidized, specialized eye-ware for underprivileged visually-impaired communities, offered at BIU and ofsite.

The graduate program, with a current enrollment of 40 graduate students, PhD and postdoctoral fellows – including 10 new master students each year – offers courses and cutting-edge research in neuroscience, optometry, biomedical engineering and
BIU’s new School of Optometry and Vision Science is “one-of-a-kind” — the only program in Israel that combines academic studies with R&D, and also conducts screenings for underprivileged visually-impaired communities.

Dr. Yossi Mandel, a certified ophthalmic surgeon with a PhD in bioengineering, who heads the Ophthalmic Science and Engineering Lab, defines it as a “one-of-a-kind school — the only program in Israel that combines academic studies with R&D, and also conducts screenings for underprivileged visually-impaired communities.”

In April 2017 BIU hosted its first annual conference on vision science, attended by prominent vision scientists in Israel as well as world-renowned scientists in the field. “Looking forward, we plan to increase the number of students, raise the level of education and treatment, and become a leading center for research and education in optometry and vision,” Mandel says.

Dr. Prof. Uri Polat

ERC Starting Grant

In July 2017 Dr. Mandel was awarded the prestigious ERC (European Research Council) Starting Grant of 1.5M Euros for a period of five years. The highly competitive ERC Starting Grants are designed to support outstanding researchers at the beginning of their independent research careers. Specifically, the grants are awarded for pioneering innovative, cross-disciplinary research in emerging fields.

Dr. Mandel’s lab conducts cutting-edge research and develops techniques for vision restoration in patients suffering from retinal degeneration. With the ERC award, his lab aims to develop a breakthrough in retinal prosthesis technology. “Our idea is to devise a hybrid retinal implant composed of neurons integrated within a high-density electrode array. By taking this unconventional approach, we hope to restore vision in blind patients, and reach near-natural visual acuity and quality,” explains Mandel.

Bionic-eye implant indicates bright future

The retina, located in the back part of the eye, contains three main layers of cells which convert light into neuronal information. The first layer, the photoreceptor cells, converts the light into a neuronal signal. The second layer — the bipolar cells — processes this information and transfers it to the third layer — the Ganglion cells — upon which the data is digitized and transferred to the brain, resulting, ultimately, in our ability to see.

Mandel describes two main diseases that lead to degeneration of the photoreceptors. “Retinitis pigmentosa is a genetic disorder of the eyes that causes loss of vision and even blindness, affecting more than one in every 2,000 Israelis. The other disorder is AMD (Age-related macular degeneration), the most common cause of blindness in the Western World, caused by age-related processes that occur in the retina,” he explains.

Despite the debilitating outcomes of these two diseases, they actually only affect the retinal photoreceptors, while the other cell layers remain relatively functional. Mandel points out that there are several methods for treating these diseases — one of which is through the use of an FDA-approved artificial retinal prosthesis. “This technique is based on electrodes implanted below or above the retina, which basically replace the photoreceptors and stimulate the bipolar or Ganglion cells. However, the use of this technology is limited in that it can only really help people who are completely blind, enabling basic maneuverability and seeing certain large objects, but not reading or facial recognition,” Mandel points out.

“This led us to an out-of-the-box approach: we thought that if we could simulate natural vision, we could effectively restore eye-sight. To achieve this, we are now adding live cells to the electrodes, which will emulate the original retina more effectively, providing a resolution of 10 micro-meters. If we succeed, we hope that in the future this might enable higher, near-natural vision sharpness — up to 100 times better than what has been reached until now,” notes Mandel.

Looking Forward

With its multiple foci on high-level training, cutting-edge research, novel technological developments and communal outreach, Bar-Ilan University’s School of Optometry and Vision Science uniquely aims to become an international hub in the field, which will work to preserve and improve eyesight, and illuminate the intricate workings of one of our most vital senses.
The Road to Equality Runs through Academia

In his landmark speech in 2015, President Reuven Rivlin, Israel’s 10th President, presented his vision for a “new Israeli order” – one which brings together under one roof the “four tribes of Israel.” With Israel’s Council for Higher Education (CHE) taking up this challenge, these days, you are just as likely to find children of secular Zionist, religious Zionist, Haredi and Arab origin in Israel’s educational institutions as you are on the bustling streets in downtown Jerusalem – sparking hope for greater equality and coexistence on and off campus.

The percentage of Arab university students in Israel – and at BIU – has risen significantly in recent years, thanks to national efforts to make academia more accessible to the Israeli Arab sector, helping them overcome challenges such as their socio-economic status, language, transportation, pre-academic preparation and housing.

During the 1995-6 academic year, Arab students made up only 7% of coeds attending Israeli colleges and universities. In 2000, that number grew to 10% and further swelled to 14% in 2016, to the point that roughly 36,000 out of the 310,000 men and women attending academic institutions in Israel came from the Israeli Arab sector.

While these numbers are still far from representing the Arab sector’s share in Israeli society – 20% of Israel’s population is Arab – they do point to a consistent and significant growth in the number of Israeli Arabs seeking a more promising future by acquiring advanced education.

In 1986, when I was studying for my undergraduate degree at Bar-Ilan University, I was the only Arab student in my department other than one PhD candidate. Few Arab students could be found on campus,” recalls Prof. Elinor Saiegh-Haddad, the current head of BIU’s English Language and Linguistics Department. “However, this year alone, 50% of the students in some of our first-year courses are Arab.”

One way for Israeli academic institutions to meet the CHE’s goals is through the Weseqim (accomplishments) program, which promotes academic studies and success among those living in Israel’s social and geographic periphery, particularly Arab youth.

“At part of Weseqim, I visited 30 towns and villages, from the Bedouin town of Rahat in the south to Magal Shams in the north to promote BIU,” shares Rifat Sweidan, BIU’s Academic Consultant for Minority Students.

“At Bar-Ilan, we offer Arab students a three-week course for academic studies, including an orientation and academic English and Hebrew classes. We prepare our prospective students for the realities of a multicultural campus such as BIU – during and outside of their academic studies.”

BIU offers Arab students longer exam times, special considerations during religious holidays (for Muslim, Christian and Druze students) and Muslim prayer rooms. BIU’s website offers Arabic translations of relevant texts and campus electronic message boards offer holiday cheer in Arabic during Muslim, Christian and Druze holidays.

“What’s more, BIU runs social activities, including field trips, theatrical productions, and musical dialogues (offered by the university’s own Music Department), which aim to create a cultural dialogue between Jews and Arabs.”

Currently, some 1,350 Arab students learn on campus – double the enrollment five years ago. “For many years, Bar-Ilan University was not the first institution of choice for Israeli Arabs,” says Prof. Saiegh-Haddad. “But today, things have changed. BIU makes tremendous efforts to recruit and accommodate Arab students. As you can see, these efforts are proving to be successful.”

She notes a significant increase in the number of Arab students working towards degrees at BIU in general. The English Department has seen particular growth. “It is entirely possible that the fact that the department head is Arab is a driving factor. Arab students might feel more comfortable, or on a more equal playing field with an Arab academic in charge.”

As for the relationships between Jewish and Arab students, Prof. Saiegh-Haddad feels that there is good rapport and that the environment within the department is amicable and collegial.

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Isiﬁcal Arab students tend to seek acceptance in paramedical and education-oriented fields, including medicine, physical therapy, and engineering, popular among Israeli Jews and Israeli Arabs alike. About 15% of Arab students ultimately enter these fields, as opposed to only 8% of Jewish students. Approximately 3% of all Arab students apply to medical school – twice as many as Jewish applicants. In the fields of social science and business administration, the sectors are almost balanced: 33% Arabs and 34% Jews.

“Most challenging are the language (Hebrew) and the different social norms,” notes Hiya Abu Gosh, from Kfar Ara, a recent alumna of BIU’s School of Optometry and Vision Science. “Growing up, I was surrounded by Arabs. But at the university, I suddenly found myself in a Hebrew-speaking environment. I knew Hebrew, but I wasn’t accustomed to ‘living’ in it and studying in it.”

Hiya praises not only the academic support offered by the university to non-native Hebrew speakers, but also the social activities, including the common field trips and the cultural dialogue program which promote co-existence. During her studies, Hiya served as the Arab students’ representative at the BIU Student Union. “The university focuses on cooperation and co-existence and doesn’t place much emphasis on politics,” explains Hiya, noting that this is essential to fostering a positive relationship between Jewish and Arab students on campus.

Prof. Saiegh-Haddad adds that any activity aiming to promote dialogue between Jews and Arabs is welcome. “Even if we don’t end up changing the world, we are still bringing both sides together, enabling them to join in on the conversation and listen to each other, without resorting to animosity or combativeness. That in itself is no small feat.”

Prof. Elinor Saiegh-Haddad

Rifat Sweidan

Hiya Abu Gosh
Harnessing Network Science to Prevent the Next Pandemic

Nearly all of our daily actions are dependent on the regular functioning of complex networks: electricity, internet, aviation, human society, our bodies and brain function. Any malfunction can be critical. Dr. Baruch Barzel develops mathematical tools to predict, avoid and correct malfunctions in complex networks.

Dr. Baruch Barzel, head of the Complex Networks Dynamics Laboratory in Bar-Ilan University’s Department of Mathematics. “If you examine the brain’s basic components – neurons – individually, they don’t know how to feel, think, or order our body to act. The brain’s structure is vastly different than its building blocks. What differentiates the brain from its neurons is its network. The neurons are attached to each other and can transfer information. This is true of all biological, technological and social networks.” Thus, explains Dr. Barzel, “every individual in the world is a ‘simple building block’. He or she can have the flu, or not. Buy a smartphone, or not. But the system itself is much more complex.

It has epidemics, social revolutions, and economic collaborations. It doesn’t have one individual administrator managing it, or someone familiar with every single aspect of it.”

BIU’s New Network Science Impact Center

Dr. Barzel leads BIU’s new Network Science Impact Center, where leading world scientists study mathematical, social, engineering, biological, legal and other aspects of complex networks. Together, they provide multidisciplinary solutions to real-life challenges. With a post-doc in networks analysis from Northeastern and Harvard universities, Dr. Barzel’s groundbreaking studies have been published in leading international scientific journals, including Nature, Nature Physics, Nature Communications and Nature Biotechnology.

“About 20 years ago scientists began mapping these complex systems. They identified each neuron in the chain, noted which genes communicated with others and which websites were interconnected,” continues Barzel. “They made an amazing discovery. Each of these systems had universally common features and a uniform structure. That is, all networks, of all kinds, act in a similar way. For example, there is no average for any of these systems. Instead, there is extreme diversity – heterogeneity. “The average person can have 10 friends on social networks. But some have 10, 100, or 1,000 times more friends. Finding a person 1,000 times more connected than the average individual is like meeting a person who is more than one mile high! This type of phenomena – something of this nature that will never be able to happen – is characterized and predicted by complex systems,” explains Barzel. “Consider the ‘small world’ phenomena. There are 7.6 billion people in the world, each separated by only five to seven handshakes from any other. It only takes a super short path to connect between any two random people in the world. Similarly, on the internet, an e-mail would never arrive to its recipient if it had to go through the number of routers existing in the network. The path of any email is super short.

The Threat of a Global Pandemic

“Supposedly, according to the ‘small world’ theory, every sneeze in China can cause a global pandemic. In the broader sense, all these systems are theoretically very unstable. But the reality is completely different. One of the basic traits of these systems is that they function excellently. However, they, too, suffer malfunctions, and in rare cases this could prove to be disastrous. For instance, one broken power cord could cause a power outage in the entire East Coast – medical and public transportation systems could shut down and people could die. My research attempts to predict when such systems will collapse, and to take steps to strengthen the systems and prevent these collapses from happening, or at least identify how to recover the collapsed system. This is my life’s work,” says Barzel.

“If we are able to predict how diseases are spread through the international transportation network, which we are quite familiar with, we won’t have to shut down every single airport in the world in case of an outbreak – which could be catastrophic: regimes will collapse, people will starve, wars will break out.

“Regimes will collapse, people will starve, wars will break out. We will be able to use minimal intervention to stop the disease from spreading, while avoiding an overall collapse due to transportation stoppage.

“We will be able to use minimal intervention to stop the disease from spreading, while avoiding an overall collapse due to transportation stoppage.

“Thus, I would like to know, for example, in a case of a life-threatening flu outbreak in Berlin, how long would it take to get to New York or Tel Aviv, and how hard it will hit those cities. Due to the unique, heterogenic structure of the network, it may very well be that a pandemic outbreak will spread much faster between Berlin and New York, with thousands of people flying between these cities every day, than between Berlin and Hamburg. If we are able to predict how diseases are spread through the international transportation network, which we are quite familiar with, we won’t have to shut down every single airport in the world in case of an outbreak – which could be catastrophic.

“The threat of pandemics to humanity is a very real and disturbing possibility. For instance, it’s hard to imagine what would have happened had Ebola spread throughout the world today. An outbreak can spread through airports and flights within hours. I am currently collaborating with epidemiologists from Berlin University to prevent such a disaster. I would like to know, for example, in a case of a life-threatening flu outbreak in Berlin, how long would it take to get to New York or Tel Aviv, and how hard it will hit those cities. Due to the unique, heterogenic structure of the network, it may very well be that a pandemic outbreak will spread much faster between Berlin and New York, with thousands of people flying between these cities every day, than between Berlin and Hamburg. If we are able to predict how diseases are spread through the international transportation network, which we are quite familiar with, we won’t have to shut down every single airport in the world in case of an outbreak – which could be catastrophic.

“Using those tools, we would be able to identify which gene needs to be restrained in order to stop cancer from spreading, how to defend our electric and internet systems from hacking and malfunction; and how to identify one bee species and cultivate it in order to preserve other bees and thereby save our agriculture. Now that’s bringing networks to life in order to sustain life and improve quality of living.”
An Insider’s View of Literary Review

BIU Today gleans insights from Israeli novelist, critic and literary scholar, Dr. Arik Glasner, about the field of literary criticism and his experiences as a PhD student on campus.

“In some editors are failed writers, but so are most writers,” said American-English poet and literary critic T.S. Eliot. Is that true for literary critics as well? “Of course!” says novelist and literary critic Dr. Arik Glasner, who is considered one of the most influential voices in Israeli literary and cultural criticism. “I think many critics are aspiring writers. I mean writing literary criticism and writing literature require two very different skill sets, but that wouldn’t prevent a critic from becoming a writer. Some literary critics have gone on to become great authors. Others, remained great critics, but never became authors.”

Glasner (44) grew up in a Zionist religious family. He studied in yeshiva and planned to become a Rabbi, but then he began questioning the religious and secular, he enrolled at Tel Aviv University before moving on to Bar-Ilan University’s Joseph and Norman Berman Department of Literature of the Jewish People, where he wrote his doctoral dissertation about literary criticism in post-modern Israel. He says his supervisor, Dr. Rachel Albeck-Gidron, was “attentive and empowering, and didn’t hesitate to share her views when they differed from mine, but once she was convinced that I had thoroughly thought them through, she encouraged me to pursue my path.”

Appreciative for the “genrous university scholarship which enabled me to concentrate on my studies,” Glasner also notes the “wonderful heterogeneity among students and faculty – religious and secular individuals with varying political outlooks study and work together on a regular basis.”

Did the post-modern age blur the lines and end the ideology?

“We are living in an age of post-postmodern quest. A critic needs to have an ideology. If a critic only expresses his own personal taste, his ‘raison d’etre’ is devoid of legitimacy,” This, in short, is the essence of Glasner’s doctoral thesis. He admits that in retrospect, he now understands that the world isn’t so black and white.

“Today, literary criticism is in crisis. The ideological climate weakens the critic’s stand, yet creative critique still appears in newspapers, proving that there is still life to literature and art,” explains Glasner.

At Bar-Ilan University there’s a wonderful heterogeneity among students and faculty – religious and secular individuals with varying political outlooks study and work together on a regular basis.

Literary influences and the significance of literature

In 2004, Glasner published his first novel, And at This Season which recounts the story of a man who has left the Jewish Orthodox way of life for the secular world. His next book, Why I Don’t Write, deals with the protagonist’s relationships with his father who commits suicide, with women, and his literary influences. It tackles the love of literature and fame, masculinity and maturity, sexuality and love, attempting to balance life’s contradictions. “It’s a semi-autobiographical novel,” says Glasner. “I used my own life experiences in an attempt to understand myself. I tried to present an essay in self-analysis.”

He relays that “the realm of feelings is very wide and deep, and literature provides answers I never found in religion. An author tells a story and analyses his feelings in an open way, and the reader undergoes a self-reflection process through literature. At 19, I had already realized I wanted to go into literature. And getting there took very little time.”

My draw to literature prompts me to find the perspective or philosophy expressed in the text I’m reading. Each book challenges me to ask “what is literature? What do I want to get out of it?”

The award-winning Glasner today writes the literary blog, “Free Critic,” teaches in various academic institutions, and has gained prominence for his literary critiques appearing in leading Israeli newspapers.

How much pleasure do you derive from reading?

“My draw to literature prompts me to find the perspective or philosophy expressed in the text I’m reading. Each book challenges me to ask ‘what is literature? What do I want to get out of it?’”

“A book should be ‘enjoyable,’ even if some of the story is sad and depressing. An enjoyable book is one designed in an uplifting, esthetic manner by its creator. Novels are an important genre describing the personal journeys of people in certain social settings, and their innermost thoughts and quests. A novel’s social significance is irreplaceable.

Who are your favorite English-language authors?

“Saul Bellow and Philip Roth. I’m intrigued by their literary works which grapple with masculinity, Jewish identity and their self-identity as intellectual authors. The drama of Scott Fitzgerald’s life and writings – his attempt to take a moral stand against wealth and publicity, even though he himself was so immersed in that way of life – is also very close to my heart. British novelist Doris Lessing’s The Golden Notebook is in my opinion one of the five great literary works of the second half of the 20th century. I can really connect to its straightforward existential feminism.”

Literary critics are often accused of rushing to judgement, and the internet is swarming with self-appointed critics. “There are many books, and each should be reviewed. I think there is value in initial reading and there is value to initial criticism. Of course one should also have a second and third read, but time is indeed a factor. I believe in professional critics who were hired to express their criticism. They are devoted to their task, and are the responsible, obvious source of literary criticism for readers. And still, I have no problem with online critiques by someone who has acquired a reputation and an audience. The latter is as much a critic as the former.

Is it easier for you to criticize a translated book than one by an Israeli author?

“Much, much easier. The Israeli literary scene is very small, and sooner or later, you are going to run into the author your criticized, and that can be unpleasant. I’ve experienced that first hand. However, you must keep your negative criticism professional, polite and well rationalized. Unless it’s one of the rare cases in which the book can be a menace to public safety. For example: Ayn Rand (author of The Fountainhead and Atlas Shrugged). I think her philosophical views are dangerous, and her books still have a great influence on young people.”

How do you feel about best seller lists?

“I don’t object to them. They have journalistic value and should be made known to the public, although not as often as they are now. Personally, I never judge a book by these lists.”
BIU’s Promising Schulich Leaders

Close to fifty outstanding BIU students majoring in the exact sciences, engineering and brain research have received Schulich Leader Scholarships over the past six years. Awarded to students for their duration of their degrees on the basis of excellence, national or military service, social involvement, and potential to make a difference in society, this prestigious scholarship was established by Seymour Schulich of Toronto, Canada. BIU Today meets with three Schulich Leaders to hear about their specialty areas and how the grant is empowering them to succeed in their academic and professional careers.

Naftali Stoch: Probing the Brain

Drawn to BIU’s “fascinating multidisciplinary Program in Neuroscience – the only one of its kind in Israel to offer a BSc degree in the field” – Naftali Stoch, a Beit Shemesh resident, relates with a grin: “I knew I made a good decision when I got a call about the Schulich scholarship.” Enrolled in his second year, he joined Prof. Izhar Bar-Gad’s Neural Interfaces (“Neurint”) Lab in the Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center. The lab examines the bi-directional interaction between computerized systems and the central nervous system. Its long-term goal: to provide a deeper understanding of the pathophysiology of neural disorders and to create the electrophysiological basis for the treatment of their symptoms.

“The nervous system is really intriguing,” enthuses Stoch, who works alongside a doctoral student studying Parkinson’s disease, focusing on tremors in animal models.

“At 26, I try to be as financially independent as possible,” relates Stoch, who previously was employed as a teacher in a psychometric prep course. “The Schulich scholarship helped me tremendously, relieving me of the pressures to find work, enabling me to concentrate on my studies and gain valuable hands-on lab experience.”

Stoch who volunteered for several years in Magen David Adom and the Israeli Civil Guard, and is currently a student rep in his department, says “the neuroscience staff is really good, and my classes are quite interesting. I have made wonderful friends in the program. We are an eclectic group – comprising a strict vegan, a secular Tel-Avivian, and a religious student from Haifa, among others.”

When he’s not focused on the brain, the Jerusalem-born undergrad may be globetrotting. An avid traveler, he has been to Hungary, the Czech Republic, Italy, South Africa and the United States, where he also spent the first four years of his life while his father served as Israel’s economic attaché on the West Coast. He used to love to play soccer and basketball but can’t do that anymore due to a serious knee injury incurred during his basic training in the IDF (the remainder of his arm’s service he spent in the “Hamal” – the military operations room). “I’m grateful that it’s not any worse,” says Stoch who underwent surgery and intense physiotherapy to overcome his limp and learn how to deal with the pain. “I know there are those who suffer more.”

And bearing that in mind, the Schulich Leader hopes to do his part to mitigate suffering. He plans to continue in the field either in BIU’s direct four-year MA program in neurology or neuroscience, or in its six-year MD/PhD program at the Azrieli Faculty of Medicine. His ultimate aim: to engage in medical research seeking to track down cures for devastating neurological disorders which afflict millions worldwide.

Adi Uzan: Programming for Success

A third-year computer engineering undergrad at BIU’s Alexander Kofkin Faculty of Engineering, Adi Uzan is enthusiastic about her studies. “I love programming and writing algorithms. I enjoy the way of thinking and learning how the computer works – the interface between software and hardware, and how to integrate the program that will work the best.”

A Schulich Leader since her freshman year, Uzan finds time in her busy weekly schedule to volunteer in the organization, ELEM – Youth in Distress, helping to provide a warm, supportive environment for teens at-risk. “My dream is to combine technology with community outreach – to help the disadvantaged by giving them the tools and encouragement to succeed.”

Born and raised in the northern village of Yavniel, Uzan attended high school in Tiberias, where she majored in computer studies. After a year of volunteer service in a youth village with new immigrants from Ethiopia, Russia and the Ukraine, she joined the IDI, where she served in the Spokespersons’ Unit – first in the Northern Command (feeding the media information and timely responses following missile attacks and other incidents) and then as a spokesperson for the C4I – the Teleprocessing Corps. There she discovered the allure of cyber – securing sensitive data. At Bar-Ilan she has acquired an in-depth understanding of programming languages and web applications while also gaining exposure to such exciting computer engineering specializations as robotics and cryptography.

“There’s a good, supportive atmosphere at BIU, which is especially important when we are all engaged in intensive study,” notes Uzan. “Our lecturers have an open-door policy so we can easily turn to them with our questions and comments. I like my fellow students – everyone is so willing to help each other.” And Bar-Ilan is in her blood. Her mother studied on campus three decades ago, earning a BSc in biology, and all her aunts are also BIU grads.

“The Schulich scholarship is a huge help,” relates Uzan who is paying her way through university. The oldest of three children, Uzan says that “since I come from the north, I need to live locally. The grant gives me the peace of mind to be able to focus on my studies.”

With one more year to go in BIU’s undergraduate computer engineering program, the talented and highly motivated Uzan is considering future options – to find a job in the high tech sector and eventually continue onward for graduate training in the field. Her ultimate goal is to be a first-rate computer engineer who can contribute to Israel’s security and scientific and technological growth.
BIU’s Promising Schulich Leaders

Ariel Ashkenazy:
Taking a Quantum Leap into Electro-Optics

Bem and raised in Bnei Brak, Ariel Ashkenazy attended a haredi Yeshiva High School in Tel Aviv and later studied in Jerusalem at the prestigious Hebron Yeshiva as well as at a kollel for married men before enrolling at BIU’s Alexander Kofkin Faculty of Engineering.

“My parents did not have the benefit of an academic education but they encouraged my siblings and me to acquire university training. There is no contradiction between Torah and acquiring an academic education, without the need for university training. I chose to have a(Collection) [N.D.] (Jewish community) [N.D.].

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Conceived in Israel’s infancy, Bar-Ilan University has flourished and contributed to the Jewish State since 1955. From an opening class of 70 the university has grown to over 17,000 students. BIU has played a major role in absorbing foreign and returning scientists, welcoming students from all over the world, improving health care, and developing cutting-edge scientific advances— all the while remaining true to its founding credo of combining scientific excellence with traditional Jewish values.

In honor of Israel’s 70th anniversary Bar-Ilan University is proud to share some of our many contributions to the State over the years.

**Azrieli Faculty of Medicine in the North**

BIU’s Azrieli Faculty forms the heart of a new community that is revitalizing academic and medical presence in the north while ensuring a higher standard of living for Israeli citizens. Aside from training Israel’s future doctors, its graduate and post graduate programs draw students who are gaining expertise in all areas of medical research. In addition, it plays an integral part of life in the Galilee through science enrichment, preventative medicine, and health and wellness programs.

**Absorbing Students and Scientists from Around the World**

Over the years BIU has been actively involved in the ingathering of exiles through absorbing scientists and students during the huge wave of Russian aliyah in the late 80s and 90s. Following Operations Moses (1984) and Solomon (1991), the university welcomed Ethiopian immigrant students specializing in such fields as social work, educators, law, biotechnology and political science, who have gone on to serve their communities and the country in these and other fields.

Among the diversity of new immigrants enriching the multicultural campus who hail from France, South America and other countries, BIU also draws a large community of North Americans, British and other English-speaking students and teachers who live nearby in order to take advantage of the many English language programs designed for them.

BIU’s foreign graduate students include over 120 Chinese students who have studied on campus— most under the auspices of the Fred & Barbara Kort Sino-Israel Postdoctoral Fellowship Program. This year, 35 students from across China are studying for their BA, MA and PhD degrees in a variety of departments. Ten will complete their entire degree in Hebrew. They will eventually return home as advocates of Israel, with a greater appreciation of the Jewish nation.

BIU’s International MBA program continues its proven track record in translating the special qualities which have fueled the Israeli business and entrepreneurial machine into a global academic program. The IMBA, which includes a study trip abroad, places BIU at the forefront of producing the next generation of Start-Up Nation innovators.
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In recent years, BIU has absorbed dozens of outstanding Israeli researchers, through the “Returning Scientists Project.” They bring from abroad a wealth of experience in such emerging fields as nanotechnology, engineering, brain science, and cyber, among others.

Scientific Contributions

Bar-Ilan scientists are making breakthroughs that improve life around the globe, among them: a promising drug for making Alzheimer’s symptoms disappear; a special contact lens that enables the visually impaired to see; an aluminum-air battery that recharges in water and extends the electric car’s driving range; gold nanoparticles in textiles to prevent infection; advanced cryptographic systems to counter cyber-attacks; and arteriosclerosis; nanorobots that can be used for biomedical applications; a technique that embeds antibacterial nanoparticles in textiles to prevent infection; advanced cryptographic systems to counter cyber-attacks; an elite robotic team that can make decisions and cooperate in order to achieve the objective; and polymer nanoparticles which can kill parasites that cause serious disease.

Making an Impact with a New Kind of Center

In today’s unstable times society is constantly facing new challenges. BIU’s new president, Prof. Arie Zaban, has established multidisciplinary Impact Centers to create and implement solutions that will have a positive impact and influence:

- Smart Cities Impact Center
- Network Science Impact Center
- University Research Prison Impact Center
- QUEST – Quantum Entanglement Impact Center
- Systems and Circuits Impact Center
- Judaism and Democracy Impact Center
- Cyber Security Impact Center
- Electric Propulsion Impact Center
- Depression Research Impact Center
- Bangor Personalized Medicine Impact Center

Reaching Out to Help Others

Compassion, justice and mutual responsibility are at the heart of Jewish life and law. BIU’s mandatory legal clinics specialize in environmental practice and policy, legal aid for women and family, the disabled, and Holocaust survivors; civil legal aid and practice; criminal law, mediation, Jewish law, criminal justice prosecution, and counseling and legislation. The Faculty of Law is at the forefront in advocacy work and through the Ruth and Emanuel Rackman Center for the Advancement of Women’s Status, actually gets legislation passed in Israel. The Louis and Gabi Weisfeld School of Social Work combines high-level teaching and research with close involvement in government, and volunteer and public organizations. Its clinics offer local residents a variety of therapies. In addition, BIU provides assistance to IDF combat vets who suffer from head trauma at the Rehabilitation Center in Jaffa, in cooperation with the Ministry of Defense.

Reaching out to the intellectually disabled, the Pinkhos Churgin School of Education’s unique Ozmot (Empowerment) Program enables these students to pursue an academic degree. The MA Program in Applied Criminology requires its students to apply the concepts, theories and methods they learn in class to prisons, the Police Force, youth-at-risk intervention programs, and courts of law.

BIU’s popular Religious-Secular Dialogue Program teaches respect for the “other,” while the Division for Science Activities (Empowerment) Program enables these students to pursue an academic degree. The MA Program in Applied Criminology requires its students to apply the concepts, theories and methods they learn in class to prisons, the Police Force, youth-at-risk intervention programs, and courts of law.

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BIU Alumni Are Making a Difference

With over 130,000 graduates, BIU is proud of its many alumni who today are eminent leaders in the financial, industrial, educational and public sectors, and in society as a whole. In fact, 14 Members of Knesset are BIU alumni! Our graduates convey the spirit of education, moderation and tolerance they have acquired within the university’s gates, serving as ambassadors of good will for our university while making a meaningful imprint on Israeli society and culture.

BIU’s Historic Role

As the State of Israel celebrates its 70th anniversary, Bar-Ilan University may take pride in its historic role in building up the country through its contributions in areas ranging from academia, Jewish scholarship and science to health care, the economy and society at large. With an eye toward the future, the university looks forward to its continued active partnership in advancing the State of Israel and helping it to meet tomorrow’s challenges.
Awards & Prizes
This past year an unprecedented number of prizes and grants were awarded to BIU academicians

- Prof. Dotan Arad, of the Israel and Golda Koschitzky Department of Jewish History and Contemporary Jewry, was appointed a member of the Forum for Young Scientists at the Israel Academy of Sciences and Humanities.
- Prof. Doron Aurbach, of the Department of Chemistry and the Bar-Ilan Institute for Nanotechnology and Advanced Materials, won the Frumkin Memorial Medal, in recognition of his achievements in fundamental aspects of electrochemistry, particularly in the area of batteries.
- Prof. Judit Bar-Ilan, of the Department of Information Science, has been awarded the De-Solla Price Award, which is bestowed biannually upon scientists with significant contribution to the field of quantitative studies of science.
- Prof. Mira Bar-Daad, of the Mina and Everard Goodman Faculty of Life Sciences, has been elected President of the Israel Immunological Society.
- Prof. Eli Barkai, of the Department of Physics, has been awarded the Alexander von Humboldt Prize for research collaborations with leading scientists in Germany.
- Prof. Rami Benbenishty, of the Louis and Everard Goodman Faculty of Life Sciences, has been inducted as a Fellow of the Society for Translation Studies.
- Prof. Shmuel Feiner, of the Israel and Golda Koschitzky Department of Jewish History and Contemporary Jewry, has been reelected for a second term as Vice President of the Leib Baer Institute, Jerusalem.
- Dr. Shlomo Guzmen-Carmeli, of the Department of Sociology and Anthropology, was awarded the Bahat Prize for his thesis entitled “Encounters around the Text, An Ethnographic Study of Jewish Textualizing.”
- Dr. Agay Hendel, of the Mina and Everard Goodman Faculty of Life Sciences, was appointed a member of the Forum for Young Scientists at the Israel Academy of Sciences and Humanities.
- Prof. Yaakov (James) Kaduri (Kugel), of the Zalman Shamer Bible Department, was elected to the Israel Academy of Sciences and Humanities.
- Dr. Beena Kalisky, of the Department of Physics, won the Israel Physical Society’s 2017 Nathan Rosen Prize in Experimental Physics for a Young Researcher.
- Prof. [Emeritus] Yaacov Katz, of the Churin School of Education, was selected as a member of the IFP (International Federation for Information Processing) International Task Force, which includes 13 members from 9 European countries.
- Prof. Nathan Keller, of the Department of Mathematics, was chosen by The Marker magazine as a promising young scientist.
- Prof. [Emeritus] Jacob Klein, of the Department of Hebrew and Semitic Languages, was chosen as an honorary member of the International Society for Assyriology.
- Dr. Ozym Koren, of the Azrieli Faculty of Medicine, was appointed a member of the Forum for Young Scientists at the Israel Academy of Sciences and Humanities.
- Prof. Yehuda Lindell, of the Department of Computer Science, won the Best Paper Award in the 24th ACM Conference on Computer and Communications Security (2017) for work done in the BIU Center for Research in Applied Cryptography and Cyber Security.
- Dr. Adi Solomon, of the Department of Chemistry and the Bar-Ilan Institute for Nanotechnology and Advanced Materials, was awarded the 2018 Krill Prize for Excellence in Scientific Research and was named one of Globes’ 2017 “Women of the Year.”
- Dr. Ori Schwartz, of the Department of Sociology and Anthropology, has been awarded the prestigious 2017 SAGE Prize for Innovation and Excellence for his journal Cultural Sociology.
- Prof. Shlomo Shapiro, of the Department of Political Science, has been awarded the prestigious Lifetime Achievement Award in Intelligence Studies by the Netherlands Intelligence Studies Association (NISA).
- Prof. Hamutal Slovin, of the Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center, was named one of Globes 2017 “Women of the Year.”
- Dr. Manal Tanty-Jubran, of the Faculty of Law, was chosen at an event sponsored by the Calcalist and Bank Hapoalim, as one of the ten young Arab leaders most likely to generate change.
- Prof. Eli Yakh, of the Department of Psychology, received the Distinguished Career Award from the International Neuropsychological Society (INS) in the US.
- Prof. Rachel Weissbrod, head of the Department of Translation and Interpreting Studies, has been elected a member of the Board of Directors of the Doctoral Studies Committee founded by the European Society for Translation Studies.

Israel Prize Laureate in Physics and Chemistry
Prof. Shlomo Havlin, of the Department of Physics, is the winner of the coveted Israel Prize in Physics and Chemistry for 2018. The Prize Committee noted that he is “one of the trailblazers in multiple areas of statistical physics and its implications for complex systems. He is among the most oft quoted Israeli scientists internationally, he devotes his time to entrusting contemporary science to youth and contributes to creating scientific relationships between Israel and the world.” Prof. Havlin deals with the application of knowledge in physics to the broadest disciplines such as social networks, technological networks, economic networks, physiological systems and DNA function.
Select Academic Conferences and Events

A sampling of academic conferences and events that took place in the past year

June 2017
- The Second Annual International Conference: Rethinking Responsibility in a Changing World [Faculty of Law]
- International Isaac Breuer Symposium Marking the Publication of the First Volume of Isaac Breuer's Works [German-Israeli Foundation for Scientific Research and Development, GEF, and BIU]
- International Conference: Fifty Years since the Six Day War - Theological Aspects [Department of Jewish Thought]
- Seminar: How to Deal with the Academic Boycott [Rektor's Office, Center for International Communication - CIC]
- The French Community: An Educational and Social Challenge [CNET, Yad Ben-Zvi Institute, Aharon and Rachel Dahan Center for Culture, Society and Education in the Sephardic Heritage]
- Dialogues of Change: Women and Feminism [Gender Studies]
- Panel Approaches to Resolving the Israeli-Palestinian Conflict [Begin-Sadat Center for Strategic Studies]
- Symposium Marking the Publication of the Book: Darkhei Daniel Research in Jewish Studies – In honor of Rabbi Prof. Daniel Sperber [Nachali Haflife Department of Talmud and Oral Law]

July 2017
- Primary and Secondary School Librarian Seminar: Moving Forward – Update and be Updated [Ministry of Education Pedagogical Administration]
- The 25th Annual Conference of the Institute for Research on the Human Factor in Road Accidents [Department of Management]
- The 11th ILIAS Conference [ILIAS – Israel Association for Information Systems, Graduate School of Business Administration]

August 2017
- From Destruction to Redemption: Reflections [Office of the Campus Rabbi]
- The 8th International Conference of the Society for Judaico-Arabic Studies [Department of Arabic, Lechter Institute for Literary Research. Lewis Family Foundation for International Conferences in the Humanities, Yad Izhak Ben-Zvi]

September 2017
- Child Support in Israel Following the Family Appeal – 918/15 [Faculty of Law, Ruth and Emanuel Rackman Center for the Advancement of Women's Status]
- The Sixth Graduate Student Conference in Genetics, Genomics and Evolution [Bar-Ilan Institute for Nanotechnology and Advanced Materials, Genetic Society of Israel - GISI, Syntezza, I-CORE, Tivan-Biotech Ltd.]
- European Scientists Nigh-Humani in 2016 [Ministry of Science Technology and Space, European Union, Ramat Gan Municipality]

October 2017
- Pathways to Healthly Longevity. 2017 [Ministry of Science Technology and Space, Israeli Longevity Alliance, American Federation for Aging Research. AARF, Hekim Institute]
- The Jews of Eden [Aharon and Rachel Dahan Center for Culture, Society and Education in the Sephardic Heritage, Yad Izhak Ben-Zvi, Ministry for Social Equality]
- Lecture: “The Rational Torah: Why the Torah Should be as important to You as it was to Moses” by Dennis Prager, Author, Columnist and US Nationally Syndicated Radio Talk Show Host [Faculty of Jewish Studies, Zalman Shmary Bible Department]
- Journey Culture: Voyages, Pathways and Everything Between Them – East and West from the Middle Ages onward [Joseph and Norman Berman Department of Literature of the Jewish People, Department of French Culture, Lechter Institute for Literary Research. Lewis Family Foundation for International Conferences in the Humanities]
- Kurdistan After the Referendum: Significance and Implications [Begin-Sadat Center for Strategic Studies]

November 2017
- To be a Muslim in India. Mr. Shri Zafer Sareeshwala, Chancellor, Madanaz Arad National Links University [MANLU], Hyderabad India [Faculty of Humanities]
- Safe Journey Between Attachment and Separation – Studies Based on Attachment Theory in Academia and in the Clinic [Louis and Gaba Westfeld Social School of Work]
- Seminar: 40 Years Since Sadat's Visit to Jerusalem [Israel Ministry of Foreign Affairs, Begin-Sadat Center for Strategic Studies]
- Polish Jewish History Revisited Conference in Honor of Professors Jerzy Bacon and Moshe Rosman [Office of the Vice President for Research, Marcell and Maria Roth Chair in the History and Culture of Polish Jewry, Israel and Golde Kobeszk traders of Jewish History and Contemporary Jewry, Stephen Roth Institute for the Study of Contemporary Antisemitism and Racism – Tel-Aviv University]
- Launch of Journal, Democratic Culture, on “Modern Ultra-Orthodoxy” [Faculty of Law]
- The Jews of Libya: Identity and Heritage [Aharon and Rachel Dahan Center for Culture, Society and Education in the Sephardic Heritage, Ashkelon Academic College, World Organization of Libyan Jews WOJL]
- Seminar on Prisoners' Rights: Law and Court Rulings [Department of Criminology]
- Lecture by Nobel Prize Laureate Prof. James Heckman, of the University of Chicago, on “Understanding the Multi-Faceted Life-Cycle & Benefits of an Influential Early Childhood Program [Department of Economics]
- Science on the Bar – The Lion King: The Survival Story of Syrian Ruler, Bashar Assad, in the Middle Eastern Jungle [Office of the President]
- “Young Entrepreneurs Doing Business” [Junior Achievement – Young Enterprise Europe]

December 2017
- Dialogue Course for Arab and Jewish Students – Traveling with Montessori in Ace [Sai Vian Gelder Institute for Holocaust Instruction and Research, UNESCO – Dr. Josef Burig Chair in Education for Human Values Tolerance and Peace, Chugrin School of Education]
- The Clinic for the Rights of People with Disabilities: Public Lecture by Alysha Kamara [Faculty of Law]
- The NCNST – Bar-Ilan Workshop on Nanoscience and Nanotechnology [Bar-Ilan Institute for Nanotechnology and Advanced Materials, Israel National Center for Nanoscience and Technology – China]
- Conference of the Biblical Crop Society of America: Discussion on Traditional Variation in Jewish Sources – Genetic Potential for Wheat Enhancement [Mina and Everard Goodman Faculty of Life Sciences]
- Open Minded Professional Intervention Joint Research Conference [Louis and Gaba Westfeld Social School of Work, TWC – Therapeutic Riding Center in Israel]
- Expanding the Boundaries of Creative Expression - International Conference: Research and Creation of Music and Technology [RMA – The Center for Interdisciplinary Research in Music and Mind, Department of Music]

January 2018
- Launch of the Book. "The Zivil Sikla - Studies in Zion and Poetry," Joseph and Norman Berman Department of Literature of the Jewish People, Faculty of Jewish Studies]
- Hebrew Poetry Readings [The Balilak Foundation, of the University of Jerusalem, London Business School, ECGID, IC, Core, Norges Bank, Raymond Ackerman Family Chair in Israeli Corporate Governance]
- Happiness in Medieval Philosophy Symposium in Honor of Prof. Samuel Harvey [Department of Jewish Thought]
- “Egypt and the Struggle for Power in Sudan" by Rami Ginz [Department of Political Studies]
- The Public Platform for Jewish and Democratic Discourse: The First Session of the Series "Rabbinate: Religion and State" [Begin-Sadat Center for Strategic Studies]
- The Rector's Forum for Academia and Society, "My Son - His Brother" [Rektor's Office]
- Federalism as the Basis for Regulating the Conflict between Jews and Arabs [Begin-Sadat Center for Strategic Studies]
- Ethics of using National Resources: Discourse from a Jewish Perspective [Center for Jewish and Democratic Law, Faculty of Humanities]

February 2018
- "Elements of Arabic Music" Directed by Mohammed Hakeem, of the Department of Humanities, Department of Music]
- Faith and Truths – An International Conference on Spirituality in Academia [Ludwig and Erica Jesselson Institute for Advanced Torah Studies]
- Final Event of the 21st Biology Olympics: "Biology in Practice." [Mina and Everard Goodman Faculty of Life Sciences; Division for Science Activities for Youth]
- International Conference: Strategic Challenges in Saudi Arabia, Iran, and the Gulf [Begin-Sadat Center for Strategic Studies, Bar-Ilan University]
- Conference, Promotion and Accessibility of Women’s Rights in Family Law in Israel – “From Planning to Action” [All Rights, Ruth and Emanuel Rackman Center for the Advancement of Women's Status]
- "Lehre" Conference for Exhibitions: Outside the Office Walls – Tar Geva's Paintings [Department of Jewish Art]
BIU Hosts Academic Visitors from Far and Wide
A selection of recent events

Best-selling author, columnist and USA nationally syndicated radio talk show host Dennis Prager visited Bar-Ilan University and lectured on “The Rational Torah: Why the Torah Should be as Important to You as it was to Moses.”

The BIU President, Prof. Arie Zaban (r) presents Dennis Prager with a Tanach inscribed with the BIU logo and his name prior to the lecture organized by Dr. Leeor Gottlieb of the Zalman Shamir Bible Department with the support of Department Chair Prof. Michael Avioz and Jewish Studies Dean Prof. Elie Assis.

During a visit to the BIU campus, Israeli MK Dr. Ahmed Tibi (4th from right) and fellow Knesset members from the Joint Arab List meet with senior university officials, students from the Arab sector and the Academic Consultant for Minority Students Rıfat Swidan (3rd from right), as well as tour BIU labs with Prof. Yaakov Ganimi (2nd from right), Director of the Bar-Ilan Institute for Nanotechnology and Advanced Materials (BINA); Dr. Yossi Ta’alosef (far right), BINA Administrative Manager; and Prof. Doron Gerber (not pictured).

A joint delegation of the global Jewish advocacy organization AJC and American university presidents toured Bar-Ilan University and met with senior BIU officials to discuss collaborations. Pictured: Lt. Col. (res.) Avital Leibovich (3rd from left), Director, AJC Jerusalem; Marvin Israelow (4th from left), Chair, AJC; Jerusalem; Prof. Shula Michaeli, VP for Research (center); Judith Haimoff (3rd from right), VP for External Relations; President Arie Zaban (R back center); and Ruth Cohen (far left), Director of VIP Visits.

During his visit to Bar-Ilan University, Dr. László Palkovics (front row, center), Minister of State for Education of Hungary, signs a collaboration contract and discusses further collaborations with BIU VP for Research Prof. Shulamit Michaeli (front row, right) and Ferenc Pártos (left), President of Milton Friedman University. Also pictured: (back row) Chief Rabbi of the Unified Hungarian Jewish Congregation Slomó Köves, H.E. Andor Nagy, Ambassador of Hungary, BIU Deputy President Prof. Moshe Lewenstein and Dr. Eli Evan, Director of the BIU Research Authority.

H.E. Gianluigi Benedetti, Ambassador of Italy to Israel, came to campus to congratulate BIU Physics Prof. Shlomo Havlin on winning the 2018 Israel Prize. Prof. Havlin previously received the prestigious “Order of the Star of Italy.”

Pictured (l to r): Prof. Stefano Boccacetti, Scientific Attaché of the Italian Embassy in Israel and Senior Researcher at the CNR Institute for Complex Systems; BIU President Arie Zaban, Physics Prof. Shlomo Havlin, and H.E. Gianluigi Benedetti.

H.E. Konstantinos Bikas, Greece, H.E. Mr. Pajo Avirovikj, Macedonia, H.E. Ms. Barbara Sušnik, Slovenia, H.E. Mrs. Helene Le Gal, France, H.E. Dr. Bardhyl Canaj, Albania, H.E. Mr. Martin Weiss, Austria, H.E. Mr. Pavan Kapoor, India, H.E. Mr. Milutin Stanjevic, Serbia, and H.E. Peter Huleny, Slovakia.

Lt. Gen. (ret.) Moshe (Bogie) Ya’alon, Former Israeli Minister of Defense and Chief of General Staff, gives the keynote address “The Current Security Situation in Israel” at BIU’s 16th Ambassadors Forum, “70 Years after the UN Partition Vote: Vision vs. Reality.” The event, moderated by Political Studies Prof. Gerald Steinberg, also featured a talk by Dr. Ziv Bohrer of BIU’s Faculty of Law on Transnational Conflicts: A “New” Kind of War.

During his visit to Bar-Ilan University, BIU hosted Dr. Nenad Popovic (left), Minister of Innovation and Technological Development of Serbia, along with H.E. Dan Oryan, Ambassador of Israel to Macedonia, and H.E. Milutin Stanojevic, Ambassador of Serbia to Israel. Pictured: Dr. Popovic and BIU Deputy President Prof. Moshe Lewenstein.

Dennis Prager addresses an auditorium packed with students, faculty and local residents, and hears personal testimony from an American-born student who credits Prager’s thought-provoking lectures in the US with convincing him to visit Israel and “make Aliyah.”

BIU hosted Dr. Renad Popovic (left), Minister of Innovation and Technological Development of Serbia, along with H.E. Dan Oryan, Ambassador of Israel to Macedonia, and H.E. Milutin Stanjevic, Ambassador of Serbia to Israel. Pictured: Dr. Popovic and BIU Deputy President Prof. Moshe Lewenstein.

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In Memoriam - Leslie Gonda, z”l

Leslie Gonda, a Hungarian survivor of the Holocaust, who provided the fuel for Bar-Ilan University's scientific “renaissance” in the first decade of the 2000s, in the same way that he transformed the global commercial airline industry, passed away on March 16, 2018 at the age of 98.

Friends in Action Highlights from Israel and Across the Seas

Leslie Gonda, a Hungarian survivor of the Holocaust, who provided the fuel for Bar-Ilan University's scientific “renaissance” in the first decade of the 2000s, in the same way that he transformed the global commercial airline industry, passed away on March 16, 2018 at the age of 98.

But perhaps his projects at Bar-Ilan made him the proudest because they were in the State of Israel. There are three buildings on Bar-Ilan’s campus that carry the name Gonda (Goldschmied). The Medical Diagnostic Building, the Multidisciplinary Brain Research Center and the Nano-Technology Triplex. Together these buildings host hundreds of researchers looking for clues to cure the diseases that plague mankind.

It is a selfless, living legacy of gargantuan proportion, especially when you realize that Leslie Gonda never set foot on Bar-Ilan’s campus. “I don’t have to see it to understand the research miracles being achieved every day at Bar-Ilan,” said Leslie. “I am a simple airplane peddler who was lucky enough to help provide a home for outstanding research scientists.”

The entire scientific community of Bar-Ilan owes a huge debt of gratitude to this “peddler” who changed the face of scientific research in Israel for decades to come.

USA

Special greetings to major BIU benefactor Max Webb celebrating his 101st birthday in Los Angeles! Front row (l-r): Steve Bryan with Max Webb. Back row: AFBIU West Coast Executive Director Karen Paul Reuven and Max’s daughter, Rose Roven.

Earlier in the year, three generations of the Max Webb Family visited BIU as they celebrated the bar mitzvah of Max Webb’s great grandson, Jordan, in Israel. The family arrived at Webb Street before touring the Webb and Family Psychology Building. Gathered at the entrance: [front row l-r] granddaughter Natalie Schreyer; daughter Chara Schreyer; sisters Yelli and Zoe Lewin; brothers Evan and Jordan Podell; Gary and Pamela Schreyer. [Back Row l-r] Howard Lewin, granddaughter and mom Justine Schreyer Lewin, Greg Podell, Terry Podell, Renee Manger (r), Trustee of the B. L. Manger Foundation, is welcomed by Dr. Tova Ganzel, Director of the Midrasha.

From the past to the future: The children and grandchildren of Drs. Monique and Mordecai (former BOT Global Chairman) Katz dig up the past in the Biblical Archaeology Lab. Pictured are Gail Katz and Mayer Bick with Sophia, Sam, Aiza and Ayala.

Renee Manger (r), Trustee of the B. L. Manger Foundation, is welcomed by Dr. Tova Ganzel, Director of the Midrasha.

[+] BIU President Prof. Arie Zaban and Dr. Oiga Gersevitz give Ruthy & Steven Rosenberg a tour of the Bar-Ilan Institute for Nanotechnology and Advanced Materials.

Martin Rozenblum (r) is briefed on the Nanotechnology Institute’s particle accelerator by Nano-Bio-Photonic Laboratory Director Prof. Yuval Garni.

As part of the annual mission in memory of the late Jack E. Gindi, the Gindi family of Los Angeles visited the Martin (Szusz) Department of Land of Israel Studies and Archaeology where they were hosted by Biblical archaeologist Dr. Amit Dagan(r).
Friends in Action  Highlights from Israel and Across the Seas

USA

The BIU President, Prof. Arie Zaban, with Henry Sherman at his Florida home

Elaine and Joseph Rackman (far left), son of former BIU Chancellor Rabbi Emanuel Rackman z”l, gather with their children and grandchildren at the entrance of the Ruth and Emanuel Rackman Center for the Advancement of the Status of Women

Lee Khorman [center] and his son, together with VP for Research, Prof. Shulamit Michaeli, celebrate the dedication of the new microscope purchased by the David and Inez Myers Chair in RNA Silencing of Diseases

Prof. Yehuda Lindell [center], Director of the Cybersecurity Center, stands with Ralou & Ronnie Stern [left] and Jane Stern Lebell and Don Lebell during a recent visit to New York City

Prof. Gal Kaminka [left] and one of the “members” of the Robotics laboratory welcome Board of Trustees Chairman Michael Jesselson, and Phil Friedman and his son Jeffrey to campus

Business Forums

Spotted at the Israel Desk’s recent business forums (l-r): Avi Gabay, Chairman of the Labor Party, Oded Lusky, Niblite Insurance Group; Moshe Reuveni, IPG - Reuveni Pridan Ltd; Adv. David Hodak, head of GKH Law Office; and Gad Propper, Chairman of Gad-Pro Investments Ltd

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Eli Yones [right], Chairman of the Israel Friends of BIU, welcomes keynote speaker MK Yehezkiel Pataki, Member of the Economic, Foreign Affairs and Defense Committee, to the business forum.

Moti Keinan with Karin Singer, Head of Global Resource Development

Israeli journalist Dana Weiss addresses the forum.

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Friends in Action Highlights from Israel and Across the Seas

Israel

Azrieli Faculty of Medicine Dedication

And now it’s official – BIU’s Medical Faculty receives its official name – The Azrieli Faculty of Medicine!

The honored guests at the Azrieli Faculty of Medicine dedication: (l-r) Danna Azrieli, Chairman of The Azrieli Foundation Israel and the Azrieli group; Dr. Naomi Azrieli, Chairman & CEO of The Azrieli Foundation Canada and Director of the Azrieli Foundation Israel; Mrs. Stephanie Azrieli; and Dr. Sharon Azrieli, Director of The Azrieli Foundation Canada and Israel and the Azrieli Group

UK

BFBU Chairman Romi Tager QC and his wife Esther hosted a “Meet the President” event in their London home in honor of Prof. Arie Zaban.

[1-r] BFBU Director Adv. Shlomo Rechtshaffen, Esther Tager, Prof. Zaban, Romie Tager, Eva Greenspan and Dr. Merav Galili

Prof. Eitan Okun of BIU, Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center gave a keynote address on advances in diagnosing and preventing Alzheimer’s disease

(l-r) Dr. Paul Nathan and his mother Judi Piggot with Prof. Okun

BIU President Prof. Arie Zaban and VP for Development Dr. Merav Galili are welcomed to the BFBIU board meeting

[1-r] BFBU Development Director Sophie Ezra, Dr. Merav Galili, Adv. Shlomo Rechtshaffen, Prof. Zaban, Doron Cohen, BFBU Chairman Romie Tager, Eva Greenspan and David Gradel

Ibero-America

BIU’s expert in Islam and the Middle East, Dr. Mordechai Kedar, is a guest lecturer at the Buenos Aires community. Pictured Prof. Kedar (4th from left) with members of the Halac family

A Presidential welcome at the Grosskopf home in Punta del Esta. (l-r) Ibero-American Desk Director Yossel Ban-Magen, Sergio and Kuky Grosskopf, VP for Development Dr. Merav Galili and newly installed BIU President Prof. Arie Zaban

Canada

Irene Bettinger (left) enjoying a recital in the Department of Music

Newly appointed Canadian Friends Director Harold Heilbut (r) meets with Ritat Sweidan (l), BIU advisor for Arab students, and Tezeta Germay (center), Coordinator of Ethiopian students
en BIU alumni who hold senior positions in their fields volunteered in a novel mentoring initiative, which provides students and new graduates of their alma mater with counsel and guidance in taking on the job market and embarking upon their future careers. Launched by BIU’s Alumni Community (Kehillat HaBogrim), the new “Graduates for Graduates” Program enables mentees to share their experiences, successes and failures with their mentor, who can direct them on how to best achieve their goals and which opportunities to pursue.

Most of the matches in the first mentorship group were very successful. One mentee noted that the meetings with the mentor “opened my mind to an interesting and different career path that I had not thought of before.” Another participant decided to pursue doctoral studies as a result of the mentoring sessions. Summing up the experience, a student related that the mentoring helped him “to acquire practical tools to get better and farther in much less time.” The mentees came from a wide range of academic disciplines.

A First Executive Vice President of one of Israel’s largest banks (Class of 2001, Economics, Accounting, and Computer Science) said that the mentor program is a welcome initiative and she feels “it was time for me to give back.” A media personality and communication lecturer (Class of 2012, Interdisciplinary Studies, Conflict Resolution) said he joined as a mentor to transmit his knowledge to young people in the field, and to “convey the message that in the world of communications, one must always dream and aspire to the highest heights as there is no way of knowing where you may land.” A company founder and CEO (Class of 1984, Biology) noted that after many years in the world of academia and development, she is “happy to participate in a program that exposes her to the younger generation.” She said that “the energy of the kick-start is exciting and I’m pleased to pass on my experience and advice.” Another mentor who directs the Education Division of the Rosh Ha’ayin Municipality (Class of 1987, Social Work) provides a powerful role model for members of the Ethiopian community.

Through mentoring in the new “Graduates for Graduates” program, BIU alumni can serve as an example for younger graduates, thus playing an important role in training the next generation and in strengthening Israeli society and the local economy.

Students wishing to register for the next cycles should see the BIU Alumni Community website http://www.biubogrim.org.il/ or the Facebook page.
Bar-Ilan University invites you to apply to its world-class English-language study programs

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