Prime Minister Benjamin Netanyahu addresses the Jewish Nation – and the world – during his landmark speech at Bar-Ilan University’s Begin-Sadat (BESA) Center for Strategic Studies. BIU was a natural choice of venue for this important event due to BESA’s stellar international standing as one of the nation’s top political think tanks, and the University’s reputation for tolerance and excellence.

BESA Researcher: Flu Pandemics Hiding in the Ice

The next flu pandemic may be hibernating in an Arctic glacier or frozen Siberian lake, waiting for rising temperatures to set it free. Then birds can deliver it back to civilization.

New research suggests an influenza virus could go into hiding in the ice when earlier generations of humans, birds or other hosts developed immunity strong enough to drive the virus to extinction. It’s a sort of evolutionary loophole.

Dr. (Lt. Col. [Res.] Dany Shoham, of the Department of Political Studies, and a senior researcher specializing in biological warfare at BIU’s Begin-Sadat (BESA)
First sidled up to the idea that influenza viruses may hide in ice during the 1990s. As influenza viruses pass from one person, or bird, to another, they normally pick up random changes in their genes because of errors in viral replication. This “genetic drift” happens at a constant rate. But Shoham noticed something strange: Influenza viruses isolated decades apart sometimes showed little sign of genetic drift. One strain that came from Russia in 1977, was nearly identical to a strain of the virus last seen in 1950. “In some cases,” he said, “they are absolutely identical.”

To Shoham, it seemed as though these viruses spent the intervening decades not infecting birds or people, but rather frozen in suspended animation — something like Buck Rogers spending 500 years drifting in space.

Shoham and environmental biologist Scott Rogers of Bowling Green State University in Ohio, believe that ice provides a perfect explanation. When they tested their theory with Siberian lake ice in 2006, they found an influenza virus almost identical to one that had infected people in the 1930s, and again in the 1960s. “This phenomenon may take place regularly,” Shoham said, “far beyond what we witness.”

They are now trying to prove the viruses found in lake ice can actually survive well enough to re-infect birds when the ice melts. So far it has been shown only in lab experiments, but there’s already some indication that influenza has evolved a special capacity for surviving cold.

Multidisciplinary Schizophrenia Research at BIU

Drug for Schizophrenia also Improves Cognitive Skills

BL-1020, an orally available antipsychotic for the treatment of schizophrenia, was invented by Prof. Abraham Nudelman, of BIU’s Department of Chemistry, and Dr. Ada Rephaeli, Prof. Abraham Weizman and Dr. Irit Gil-Ad, of Tel-Aviv University’s Faculty of Medicine,

BioLineRx, the pharmaceutical company that produces BL-1020, has announced that pre-clinical studies have shown that it is a new generation antipsychotic with minimal side effects and greater tolerability, which now also has been shown to have the potential to improve cognition, an unmet medical need in schizophrenia.

Long-Acting Drug Shows Benefits in Recent-Onset Schizophrenia

At the recently-held 9th World Congress of Biological Psychiatry, Prof. Jonathan Rabinowitz, of BIU’s Weisfeld School of Social Work, and colleagues reported that patients with early-onset schizophrenia who were treated with Risperidone long-acting injectable (RLAI) showed statistically significant improvements. (RLAI) is effective and well tolerated for the treatment of recent-onset schizophrenia, the researchers stated. Overall, the results suggest that using a long-acting injectable antipsychotic may improve treatment adherence and possibly effectiveness in recent-onset schizophrenia, according to the authors.
BIU Researcher Proves Men Like to Cuddle their Babies

New research provides evidence that men really are hard-wired for parenting. Of course, few topics are more complicated than male-vs.-female brain chemistry, or parenting impulses in general. But the study, by Dr. Ruth Feldman, of the BIU Department of Psychology, and an adjunct assistant professor at Yale University, suggests men are just as well equipped as women to enjoy cuddling their babies.

After measuring 80 couples' levels of oxytocin — the "cuddle hormone" that supports touching, hugging, holding and trusting others — Dr. Feldman found fathers as well as mothers post increases after childbirth. Oxytocin has a powerful effect on the brain, making people feel less anxious and more calm, trusting and connected.

Oxytocin is usually studied in connection with women and bonding, labor, delivery and breastfeeding. But fathers of newborns actually have oxytocin levels comparable to mothers, based on Dr. Feldman's findings. The parents' levels exceeded those of single men and women who weren't in romantic relationships, she says, suggesting infant care stimulates the hormone for both parents.

The more the men in the study cuddled their babies, the more their oxytocin levels rose. "It's like a feedback loop," Dr. Feldman says. "The more you touch, the more oxytocin you have; the more oxytocin, the more you touch. But you need to initiate this feedback loop, by holding and touching and kissing your baby."

Also, she found a link between the oxytocin levels of partners. Mothers' levels predicted fathers' levels later on, "as if fathers somehow get biologically attuned to their wives," Dr. Feldman says.

Dr. Feldman’s findings might help explain that rush of emotion many men experience upon seeing their babies born and holding them. The Week
BIU Robot Soccer Players Put Best Foot Forward

For the first time, Israel sent a delegation to the RoboCup 2009 soccer tournament, in Graz, Austria. In this tournament, the 25 teams have only three players, the players are all autonomous robots and the ultimate goal is to promote research and development in the fields of robotics and artificial intelligence.

RoboCup and its accompanying conferences have become an annual event since their inception in 1997. The Israeli delegation participated in the RoboCup's standard platform league tournament, which is generally for graduate students and professors from leading universities worldwide. “Maybe people don’t think of Israel when they think of robotics,” said Gal Kaminka, the head of the Israeli team and an associate professor at BIU’s Department of Computer Science. “But maybe they should.”

RoboCup’s aim is to use soccer and other athletic activities as a means to advance humanoid robotics - the types of robots that resemble humans and can assist with human activities, such as household tasks, said Kaminka. Each country had a team of three robots - two players and a goalie - each of which is half a meter high. To ensure that the teams began on an even footing, the delegations used identical robots from one manufacturer. It was then up to the individual teams to customize their robots' software. “It really is a brain competition - who can program the best brain,” Kaminka explained.

The Israeli team’s human element comprised nine graduate students, programmers and researchers, including Kaminka, who specializes in artificial intelligence, robotics and applied philosophy, and Dr. Eli Kolberg of BIU’s School of Engineering. The team's members have been running their robots through multiple scenarios round-the-clock for the past few months.

Development in a situation like this is unique because it demands more than just programming genius - it also demands teamwork. “If you have a better vision or walking algorithm, that doesn't automatically make you a better team,” said Kaminka. “The challenge is to put everything together.” Kaminka anticipates that based on programming advances made by RoboCup delegations, robots will be used relatively soon in search-and-rescue missions and for domestic chores.

Even though, as first time participants, the Israeli team placed 16th, being part of the competition itself was a big step, Kaminka said. “It is a milestone for Israel, in terms of showing that we’re on the map,” he said. The Jerusalem Post

BIU Applied Research Inspires New Technology that Connects the Dots to Solve Crime

Terrorists, criminals, lawbreakers are usually whizzes at covering their tracks. Tracking them down may be possible in a fast-paced TV show with super star detectives like Horatio H. Caine, Mac Taylor, or Jack Bauer. But, in reality, a staggering number of violent crimes (murder, rape, robbery, aggravated assault) and property crimes (vehicle theft, burglary, arson) go unsolved.

Billions of dollars have been spent on new tools to fight crime and terror in the US alone. One major obstacle in the road to cracking a case or preventing
criminal or terrorist activity, however, is the difficulty of getting data from thousands of agencies who keep their own records and data bases.

Enter Israel's MindCite, a data mining intelligence company, whose technology was originally developed by Dr. Uri Hanani, of BIU's Department of Information Science, and Dr. Shahaf Gal, of Harvard University. Its technology gathers a huge amount of information on key topics, integrates it with data from various sources, and presents a coherent visual map with precise, focused information to intelligence officers.

The system has extra smarts such as artificial intelligence, and neural networks to discover hidden relationships. Semantic trawling connects the dots in the relationship between people, places, objects, events, and ideas and prioritizes the results for clients.

The Homeland Security sector, and other agencies that deal with preventive security breaches, are growing. On-line banking is another area where the need is great. Now twenty-first century detectives can count on MindCite 24 hours a day, to crack a case or to prevent one from happening. Israel 21c

BIU Educator: Israeli Students are Underachieving

Prof. Zemira Mevarech, of BIU's School of Education, coordinates the Organization for Economic Cooperation and Development (OECD) Program for International Student Assessment (PISA) in Israel.

According to a special report issued by the OECD recently, only 10 percent of Israeli students reached the highest level of achievement in any of the three topics covered by the international PISA exam - reading, math and science. This is considerably lower than the international average. Overall, 18 percent of students scored at the highest level in at least one subject in the 2006 exam, on which the report is based.

Moreover, the report found, even among outstanding students, Israel had one of the highest percentages of any participating country of students who said they are not interested in pursuing higher education or working in the sciences.

Unsurprisingly, the report found that a whopping 87 percent of Israel's top students came from relatively well-off families, who can afford to either attend schools that offer extra classes or pay for private lessons. That extra schooling evidently makes a difference: The report found that in the sciences, for instance, Israel's top performers studied science an average of four hours a week, compared to less than 1.5 hours among the lowest achievers. In many other countries, in contrast, high performance was less closely linked with socioeconomic status, noted Prof. Mevarech, who has made it her personal mission to train the country's top educators at BIU to address this problem. Ha'aretz

BIU Alumna as "Memory Detective"

Authors of Holocaust memoirs tend to address an anonymous audience, or sometimes relatives, and thus include them in the act of writing. This personal act is motivated by a sense of mission: to provide testimony and to perpetuate memories among younger generations and, specifically, among the people of Israel. As Hulda Campagnano - an Italian who survived the Holocaust, immigrated to Israel and testified in Adolf Eichmann's trial - wrote in her 1947 memoir "Testimony": "My dear grandchildren, I wrote these pages for you. They cost me in pain and tears, but now I'm finishing them. I again turn my gaze forward, together with you and your dreams."

Literary researcher Dr. Shilhav Kest, an alumna of BIU's Department of Jewish History, is focusing on the moment when private memory becomes public, collective - on what she calls "memory narrative." She uses the term to describe memoirs of certain World War II survivors, as distinguished from canonical Holocaust literature like that of Primo Levi, Eli Wiesel and Aharon Appelfeld. In her doctoral thesis, Kest defines this form of narrative as a genre unto itself, in which literary elements and the act of bearing witness are closely intertwined.

Kest believes the genre and its authors have suffered an injustice, which stems from the dismissive attitude literary and history scholars have taken toward them, an attitude that pours salt on the survivors' open wounds.

"Historians dismiss 'memory narrative' and are dubious about the credibility of the testimonies revealed in it, while literary researchers simply claim it isn't literature," Kest explains. "But these are unique texts, which stand on their own and have their own narratives - these are not regular narratives." Ha'aretz
New Books Corner:

BIU Alumna Remembers Nehama Leibowitz

Yael Unterman’s book Nehama Leibowitz: Teacher and Bible Scholar (Urim Publications) is in part a kind of oral history based on the memories of English speakers who knew Leibowitz. Unterman, a BIU alumna of the Shaindy Rudoff MA Program in Creative Writing and a BA in psychology and Talmud, makes it clear that her book reflects, "more than how Nehama actually was, how she is remembered - a composite remembering based on each person's own Nehama."

Overall, Unterman’s familiarity with her material, extensive interviews and clear writing come through in her book. Nehama Leibowitz: Teacher and Bible Scholar is a worthy read for English speakers looking for a critical and in-depth analysis of Leibowitz’s beliefs and writings, as well as insight into the way her students viewed their revered teacher. Ha'aretz

BIU Historian Translates a Jewish Memory Book

The Jews of Pinsk, 1506-1880, by Mordechai Nadav, and its companion volume by Azriel Shohet, which continues through the years 1881-1941, are without a doubt the best studies on the subject of the Jewish community of this Belarusian (formerly Lithuanian) city, whose presence there went back to the early 16th century. They were commissioned by the organization of former Pinsk inhabitants in Israel, and first appeared in Hebrew in 1973. Nadav's work has now been published by Stanford University Press, in the excellent English translation of Prof. Moshe Rosman and Faigie Tropper; Rosman also co-edited the volume, with Mark Mirsky.

Prof. Rosman, of BIU’s Koschitzky Department of Jewish History, explains that the decision to render the volume into English was made because of its singular quality as a memory book, with the hope of bringing it closer to audiences unable to read the majority of such works, which were generally published in Hebrew and Yiddish. Ha'aretz

BIU Geographer on the "Business" of Jewish Settlement

In The Business of Settlement: Private Entrepreneurship in the Jewish Settlement of Palestine, 1900-1914 by Prof. Yossi Katz, of BIU's Department of Geography and Environmental studies, explains why there are so many streets in Tel Aviv named after non-socialists such as Meir Dizengoff, Zalman Levontin, Menachem Sheinkin, Arthur Ruppin and Eliahu Kaplan.

From 1900 until the beginning of British rule in Palestine after World War I, wealthy Russian Jews set up investment companies to buy land in Palestine. This was after the French Rothschilds started to invest in the 1870s in Zichron Yaacov, Rishon Lezion and Rosh Pina, but by 1900, had given up.

What Prof. Katz has done is dive into a hitherto unknown area of Zionist history - as there is almost nothing written in the established Zionist historical record on this period. The history lessons we teach our children state that the Jewish economy in Palestine had its origins in socialism, the quasi-public enterprises of the Histradrut (labor unions) and the kibbutzim. The private sector's achievements are not part of the story.

What this research reveals is that Israel's economy and its private sector has its roots in capitalist Russia, not in socialism. The fact is that the brand of Eastern European socialism that arrived in Palestine in the late 19th century was never the ideology of more than a small part of the population, and had absolutely no impact or influence on the future of the region's economy. It was only a few decades later, when the British arrived, and with the birth of the Jewish Agency, the Histradrut, and the Anglo-Palestine Bank (all of which were registered in the UK, not Palestine), that socialism became the dominant force in Palestine, at least politically. Economically, the private sector persevered and eventually would come to dominate Israel's national economy.

Prof. Katz has done a great service to correct the historical record on the issue of Israel's true economic origins and roots. According to Prof. Katz, socialists didn't redeem the land of Israel; capitalists and private entrepreneurship did. Ha'aretz