Bar-Ilan’s Distinguished Award Winners

We are proud of the following sampling of honors and awards recently and soon to be bestowed upon Bar-Ilan faculty:

The internet site EconPHD ranked BIU’s S. Daniel Abraham Center of Economics and Business 28th and 32nd place respectively in the world and first in Israel in the fields of Public Choice Theory and Political Economics. The site rated the institutes in order to assist scholars from around the world in deciding about where to continue their studies. “This rating is a source of great pride for Israel and Bar-Ilan. Today the academic arena has much to offer the business world,” said Prof. Moshe Kaveh, BIU President.

Prof. Shmuel Feiner is laureate of the 2007 Dr. Meyer-Struckmann Award in the field of Jewish traditions in European culture and society.

Prof. Alfred Hassner, of BIU’s Department of Chemistry, is the recipient of the Israel Chemical Society’s Prize for Excellence for 2007 for his lifelong achievements in chemical research and education and his groundbreaking contributions to synthetic and heterocyclic organic chemistry in Israel and abroad.

On Israel’s 60th Independence Day Prof. Rabbi David Weiss Halivni will receive the distinguished Israel Prize for his seven-volume commentary in Talmud.

Prof. Pnina Klein, one of Israel’s premier experts in early childhood education, has been chosen by the government’s Ministerial Committee on Symbols and Ceremonies as one of 12 torch lighters at the opening ceremony for the country’s 60th anniversary celebrations. Prof. Klein, of the I. B. Harris Program, heads the Edward I. and Fannie Baker Center for the Study of Developmental Disorders in Infants and Young Children. She is the only academian chosen to represent the State of Israel at this historic event.

Prof. James L. Kugel, head of BIU’s Zelman Shamir Bible Dept., is the winner of the prestigious U.S. National Jewish Book Award for his work How to Read the Bible: A Guide to Scripture, Then and Now (Free Press). The honor was presented to Prof. Kugel at the 57th Annual Awards Ceremony held in New York City.

Prof. Shulamit Michaeli was honored with the Israel Microbiology Association’s Ulitsky Prize for her work in microbiology. Prof. Michaeli is the incumbent of the David and Inez Myers Chair in Gene Expression and Infectious Disease.

Prof. Arie Zaban, head of BIU’s Nanotechnology Institute, is the recipient of the Landau Prize for Science Research for his research relating to Solar Energy.

BIU Alumni Corner

BIU economics and business graduate Major General Moshe Kaplinsky was appointed CEO of Better Place Israel, where he will lead the world’s first build-out of an electric recharge grid network infrastructure for electric vehicles. “We will be sharply focused on executing the vision set forth in January to move Israel off of oil within ten years,” says Kaplinsky.

BIU psychology graduate Hagai Levi is the original creator and producer of “B’tipul”, an Israeli TV series about a therapist with his own problems that has been adapted onto a new successful HBO television program called “In Treatment.”
Bar-Ilan Teams up with Microsoft!

Bar-Ilan is the first university in Israel chosen to participate in a project where exceptional students from its Computer Science Department will join the unique Innovation Labs in the R&D center of Microsoft Israel as interns. In the project ten students from Bar-Ilan will join the CTO of Microsoft Israel’s R&D center every year. During their second and third years they will take designated courses and spend hundreds of hours in the labs working alongside the best minds of Microsoft Israel.

BIU’s Computer Science Department (with its 5,000 alumni) is one of the leading Israeli departments in disciplines such as artificial intelligence, robotics, linguistics and more.

BIU Professor Solves Math Puzzle

For thirty eight years mathematicians and scientists have been baffled by a problem which has resisted solution. But now, thanks to BIU math Prof. Avraham Trakhtman, that problem – known as the Road Coloring Problem – has been solved.

Among its many applications, the Road Coloring “solution” mapped out by Prof. Trakhtman enables a person driving in the middle of a snowstorm in an unfamiliar city to find his way to his destination even if he can’t read street names and signs. With simple directions such as “turn left, again left, right, etc.” a driver can, indeed, arrive safely.

The problem is of interest to both mathematicians and scientists, among others, and it can be used to solve problems about computer networks such as the World Wide Web. In addition to showing that road colorings exist, Prof. Trakhtman wrote a computer program that shows how to color roads appropriately.

Underscoring the fact that Prof. Trakhtman, who made aliya from the former USSR, worked as a guard for five years before finally landing a job at Bar-Ilan, Prof. Moshe Kaveh, BIU President, noted that “the government must fulfill its commitment to invest in the absorption of immigrant scientists and bring Israeli scientists home from abroad.”

BIU Physicist Uses Molecular Dynamics to Improve Micro-robots

A recent article in NewScientistTech reports that racing tiny mechanical swimmers against one another in a virtual environment should help scientists design medical micro-robots that can swim, wriggle or crawl more easily through the human body. The article goes on to say that BIU physicist Prof. Dennis Rapaport uses a technique called molecular dynamics which stimulates the way atoms and molecules interact, to test different modes of locomotion for swimming micro-robots that are even smaller than the ones previously developed.

Prof. Rapaport compared the performance of a range of different micro-swimmer designs by simulating the interactions between the atoms in their bodies with a soup of surrounding liquid molecules. Noting that “more extensive simulations are needed to evaluate different designs fairly” he is now working on simulating micro-swimmer races in three dimensions. “I already have some early results,” he says, adding that since his modeling approach is limited only by computing power, “it has the potential to play an important role in the study of micro-robotic swimming – a field holding enormous industrial and therapeutic promise.”

Children’s Art at Bar-Ilan

A conference on “Language and Creativity” held in December by the Psychology Dept. launched a unique exhibition of children’s paintings and revealed new studies related to those paintings. One of these studies, on bilingual children, was presented by Dr. Esther Adi-Japha from the School of Education and the Gonda Multidisciplinary Brain Research Center. This study shows that four-year-old bilingual children have the ability to demonstrate drawing skills usually ascribed to seven-year-olds.

Bilingual children have “Inhibition Mechanisms” which enable them to switch on and off from one language to the other. These mechanisms and the flexibility they must express in their language are believed to be responsible for their ability to demonstrate several meanings to a single object. For instance, bilingual children, when asked to draw a non-existing flower, drew a flower as a giraffe or a house with wings, while single-language children usually deleted parts and drew a leafless flower.

“The nourishment of creativity and the artistry among school children which is crucial for their development is greatly lacking at schools,” concluded conference organizer, Prof. Rachel Ben Ari.

On another artistic note, BIU is hosting an international conference, “Advancing Children through the Arts,” celebrating the 60th anniversary of the State of Israel and the inauguration in Israel of the MUS-E Activities. MUS-E is a program of the International Yehudi Menuhin Foundation (IYMF) focusing on Arts at School. The conference is being held in cooperation with IYMF and the Jaffa Institute.
International Women’s Day at BIU

A major international conference took place at BIU in March, marking the fifth anniversary of the passing of Prof. Dafna Izraeli z”l, founder of the University’s Rachel & J.L. Gewurz Center for Gender Research and International Women’s Day.

The aim of the conference, entitled “Employment Welfare and Families: Israel in a Comparative Context,” was to raise awareness of the crucial significance of quality jobs with good employment conditions for women with families in Israel. Dafna Izraeli’s contributions were highlighted, along with suggestions for an updated framework in these areas for further thought and discussion. The conference was organized by BIU’s Fanya Gottesfeld Heller Center for the Study of Women in Judaism, the Gewurz Center and the Sociology Dept., as well as the Gender Section of the Israeli Sociological Association.

“This conference is highly symbolic of Dafna’s personality and career,” noted Prof. Tova Cohen, Director of the Heller Center for the Study of Women in Judaism. “The subject of the conference also recalls her research and concern about women’s equality in work, in family and in society.”

Science Fiction and Fantasy Explored at Bar-Ilan Conference

Bar-Ilan, in collaboration with the Israeli Society for Science Fiction and Fantasy, hosted the distinguished writer Larry Niven, one of the foremost science fiction and fantasy writers today, at a conference entitled The Realm of Imagination: Fantasy and Science Fiction at the Outset of the Third Millennium. Among the subjects explored at the conference: Harry Potter; Jewish fantasy in the legends of the Sages; the connection between science and science fiction and how we can protect our small spot in the universe in the event of attack.

“The eagerness shown by researchers who accepted an invitation to take part was much greater than anticipated,” says Dr. Danielle Gurevitch, organizer of the conference on behalf of BIU’s Faculty of Humanities, adding that “in the big world, fantasy and science fiction are regarded as not only popular genres but also as completely legitimate subjects of serious academic research. Israeli academia is now joining them.” Indeed, more than 50 lecturers took part in the event.

Apart from the stories in the known space, Niven has written a number of series and stand-alone stories in the area of fantasy, as well as science fiction stories which are unconnected to his central series. Many of his books have been translated to Hebrew, including: The Long Arm of Gil Hamilton, The Smoke Ring, Neutron Star, Protector, Footfall, A Gift from Earth, Fallen Angels, Convergent series, The Ringworld series, World of Ptavvs, A World Out of Time, The Mote in God’s Eye, The Integral Trees, Dream Park, Lucifer’s Hammer, and more.

Special Computer Program for Medical Diagnosis Designed by BIU Researchers

Dr. Ronen Tal-Botser of BIU’s bio-informatics program built a special computer program to assist doctors in their decision-making in determining a medical diagnosis. The program has an artificial intelligence system which will contain fundamental information such as the patient’s medical history and test results, then weighs all the data, and offers possible diagnosis.

Recently Dr. Tal-Botser has been examining the possibility of developing the software for commercial use so that doctors from around the world can employ it. Dr. Tal-Botser, who wrote the program under the instruction of Prof. Avidan Neumann, hopes that the program will help doctors in third world countries, where the level of medical practice is poor or at times when there is no one to ask for a second opinion.
New Drug Developed by BIU Scientist

BL-1020, a revolutionary drug designed to treat schizophrenia, has successfully passed the first half of Phase 2 clinical testing on severely ill treatment-resistant patients with psychosis. BL-1020 showed statistically significant efficacy with no severe or unexpected adverse effects and no significant change in weight. The drug was synthesized in the research laboratory of Prof. Abraham Nudelman, head of BIU’s Bernard W. Marcus Center for Pharmaceutical and Medicinal Chemistry, and its biological activity was tested in the laboratories of Dr. Irit Gilad, Dr. Ada Rephaeli and Prof. Avraham Weizman of Tel Aviv University and the Felsenstein Institute at Beilinson Hospital.

BL-1020 is being developed by BioLineRx, Ltd. under a worldwide exclusive license from Ramot at Tel Aviv University Ltd. and Bar-Ilan Research and Development Company Ltd., the technology transfer arms of Tel Aviv and Bar-Ilan universities respectively. BioLineRx is expected to begin the second half of Phase 2 clinical testing in the second quarter of 2008. The upcoming round of testing, to be conducted over a period of approximately six weeks, will evaluate the efficacy, safety and tolerability of BL-1020 in comparison with other medications which have already received approval for the treatment of schizophrenia.

Three hundred sixty individuals who suffer from schizophrenia are expected to participate in the next stage of clinical testing, which will be conducted at 40 locations in the United States, Europe, India and Israel. It is estimated that 1% of the world’s population suffers from schizophrenia, which generally surfaces between the ages of 15-25. Schizophrenia is the most common severe mental illness. Twenty four million people suffer from schizophrenia worldwide.

BIU Study on Internet Support Group for HIV/AIDS

Dr. David Rier of BIU’s Sociology and Anthropology Dept. is conducting a new study on Internet support groups for HIV/AIDS. Both researchers and participants generally consider such groups to be “safe spaces” which allow people to cope with their illnesses, express their hopes and fears, and to give each other suggestions and encouragement. This is considered especially important for those with HIV/AIDS who are contending with stigma, prejudice, and moral judgment in the “offline” world.

Dr. Rier has built a database of 16,000 pages from observations of 16 support groups. Data from the study focusing on discussions about the ethics of HIV disclosure show that these groups actually can foster very sharp arguments, sometimes including very harsh moral judgments. The data also reveal that, while participants rarely generate genuinely new moral discourses, they do try to establish social norms and to disseminate them to a larger audience. Longer term, Dr. Rier plans to explore disclosure, blame, and responsibility as they are handled on Internet support groups for other diseases.