

# GLOBAL IMPACT

Making  
a



אוניברסיטת בן-גוריון בנגב  
Ben-Gurion University  
of the Negev



BGU students celebrate Holi, the Indian festival of colors (more on pages 8–9)

# President's Message



Photo: Hanoch Grizitzky

BGU President Prof. Rivka Carmi receives her CBE title from British Ambassador Matthew Gould

Dear Friends,

Ben-Gurion University of the Negev was created almost 50 years ago by government decision with the mandate of bringing development to the region. This founding principle, that a university will make a difference in the community, has defined and shaped BGU since its very inception. It is this approach that has led our researchers to reach out – in the Negev, in Israel and around the world – and that we are highlighting in this issue of *Global Impact*.

This summer I received the title of Honorary Commander of the Order of the British Empire (CBE) from my dear friend, former British Ambassador to Israel H.E. Matthew Gould, in recognition of BGU's leadership role in fostering UK-Israel scientific cooperation. Together with the visionary Prof. Raymond Dwek of Oxford University, I have had the privilege to serve as the co-chair of the UK-Israel Life Sciences Council, launch a collaborative water research program that brings together UK-Palestinian and Israeli researchers and expand BGU's relationship with the prestigious Oxford University through the creation of innovative scholarship programs. This is but one of our many initiatives to foster game-changing research in the international arena.

BGU is realizing David Ben-Gurion's dream that Israel be a "Light unto the Nations," creating knowledge while being proactive to ensure that it reaches the people who need it most. This is true when our researchers are invited to participate in collaborative projects, such as developing a culture technology for the production of the African river prawn, while our students are researching the effects of medical discourse on persons living with Alzheimer's, and through our unique programs for international students addressing issues of global medicine and health, as well as life in drylands.

These stories are but a small sampling of the many different ways BGU faculty, students and staff are impacting our world thanks to the support of our friends who share our vision.

Thank you for your partnership in our endeavor,

Prof. Rivka Carmi  
President

# Israel Studies Week for Chinese Students

Five years ago, sensing a strategic opportunity, the political echelon of Israel turned to the Council for Higher Education and asked it to develop a relationship with Chinese and Indian academics, with the goal of deepening ties between these countries and Israel. In response, the CHE launched a number of joint scholarships to offer places at Israeli universities for advanced research students.

Many Chinese students are now studying at Israeli universities, but are often bewildered by life outside the classroom, lacking even rudimentary knowledge about the Bible and the history of the Jewish People.

To close that cultural gap, The Ben-Gurion Research Institute for the Study of Israel and Zionism, generously supported by the Diane and Guilford Glazer Foundation of Los Angeles, CA, has launched a weeklong pilot "Introduction to Israel" program for Chinese students. While the curriculum touches on science and innovation, it is focused on providing the religious, historical, cultural and sociological background that Chinese students are often missing.

"The relationship between China and Israel is growing in importance," says John Fishel, Director of the Diane and Guilford Glazer Foundation.

"The Diane and Guilford Glazer Foundation has a longtime interest in strengthening mutual understanding between Israel and the People's

Republic of China. It believes that not only having the opportunity to study in Israel, but to also get to know the land and people of Israel, will hopefully result in meaningful relationships over the long term for these Chinese students," he says.

With an impressive enrollment of 42 students, The Glazer-BGU Israel Studies Seminar for Chinese Students pilot is getting off to a promising start.

There is a carefully thought-out progression to the curriculum, explains Academic Director Dr. Aryeh Tepper. The week started off by celebrating the Sabbath together, discussing the biblical origins and connection to the Land of Israel and religious holidays.

Subsequent lessons covered the modern Zionist movement in Europe, Aliyah from Arab and Islamic countries, and the absorption of Jews in the Negev, before turning to the democratic side of Israel, the Declaration of Independence, scientific innovation and Israeli culture. Along the way, the students visited the Negev and Tel Aviv, and wrapped up in Jerusalem on the eve of Passover.

"It is amazing and unbelievable how the Jewish People came together to build a new country based on religious values and to recover Hebrew," enthused Lei Ye, an international MBA student at Bar-Ilan University, near David Ben-Gurion's Kibbutz Sede Boqer home.



# Health and Ethics Course Attracts Students from the Four Corners of the Earth



Photo: Dani Machlis

Twenty-eight students from around the world took part in a special course this summer at BGU. The month-long course, entitled "Health and Ethics in the Age of Globalization," attracted students from India, the US, China and Singapore.

The course, in collaboration with the Medical School for International Health, was organized by Prof. Nadav Davidovitch of the Department of Health Systems Management, Dr. Anat Rosenthal, Dr. Yinon Shenkar, and Dan Weksler.

The course offered an enriching blend of lectures, field trips and a weeklong internship with an Israeli NGO, according to Kim Greenberg, 32, a Master's of Public Health student focusing on disaster relief at the University of Illinois at Chicago.

"The comparative analysis of the situation in different countries was very interesting," Greenberg said.

Zaen De Souza, 21, an Economics major at Symbiosis International University in Pune, India,

enjoyed the course's focus on health, economic disparity and inequality.

"Hearing first-hand how medical professionals set priorities on the ground was fascinating. Nadav talked about sending mobile clinics into the West Bank. As an outsider, that was most interesting to me," he said.

De Souza added that exposure to the health situation of Bedouins reinforced his understanding that "every country has those who are marginalized. If you look at the averages in Israel, it seems like everyone is well off health-wise. But the average does not give the whole picture," and that is an important lesson to remember.

Both Greenberg and De Souza praised their teachers for their intelligence, breadth of knowledge and approachability.

"They always have answers to every question," Greenberg said. De Souza added that classes were often very interactive with lots of questions

and answers flowing back and forth, and multiple perspectives voiced. He also appreciated the Journal Club, time set aside each week to discuss a journal article that had been assigned to them.

The instructors also benefited from the opportunity to teach such a diverse group of students. According to Prof. Nadav Davidovitch, the course's organizer, "The option to teach in a multidisciplinary and multicultural atmosphere created an amazing opportunity for students to interact. I myself learned a lot from the students, from their previous experiences and wisdom. The ability to compare between countries and to see

how both the global and local contexts matter were important lessons that I am sure all of us are going to take back to our public health work."

For their internships with various NGOs, the students had to prepare a brief featuring a literature review and analysis that will serve the organizations in the future. "The students' practicum work had an important value for the organizations, dealing with a variety of case studies, ranging from brucellosis prevention to tobacco taxation policies," said Prof. Davidovitch. The students interned at Physicians for Human Rights, Brit Olam, the Israel Medical Association, and more.

## Cameroon Chemistry

Newly minted Dr. Monique-Yolande Bassomo poses with the Cameroonian Ambassador to Israel, Henri Etoundi Essomba, and her supervisor, Prof. Gabby Lemkoff of the Department of Chemistry, at her graduation ceremony.

Bassomo has returned to Cameroon with her children to undertake a university teaching position. Her husband has remained behind as he continues to work at the Cameroon Embassy in Israel.



# Rumors Travel Fast in Nepal

Asher Moser

There is a buzz among the locals – a group of doctors has arrived in Tar, a remote village in the Melamche district of Nepal.

It has been one week since the strongest earthquake in many decades hit the region and evidence of mass destruction is everywhere: the smaller houses made of mud and brick are just piles of rubble, what used to be two- or three-story buildings have collapsed, pancaking the lower floors, while the upper floor now lays awkwardly tilted on top. The houses still bear clear evidence of recent human life – a fluttering drape, a radio hanging from the windowsill, a dinner table with plates overturned.

Above all is the distinct stench of rotting flesh. People tell us heartbreaking stories about dear ones who are still somewhere underneath, unreachable; the landslides prevent any vehicle from coming near. By this point only a few are unaccounted for. Almost all human bodies have been dug out and burnt, in accordance with Hindu tradition.

We arrived the previous day, an eight-member medical rescue team from Israel, joined by a local team of five, hoping to provide relief to the people of Nepal. After a sleepless overnight flight, we were bused from the airport to the city of Melamche, the 100-kilometer journey lasting four hours. A dirt road, badly damaged, led us over the next 90 minutes to the place where the landslide has claimed ownership of the way and we could advance no more. We set up camp at the foothill.

An emergency meeting with local officials was called, laying out the grim picture: hundreds dead,

most houses in ruins. The encouraging news is that there is a school in the village that has several rooms still standing, which can be used as a makeshift medical clinic. The most urgent problem preventing immediate care is the lack of roads, meaning that we will have to climb the mountain on foot – a hike of two and a half hours.

At sunrise we set off for Tar. As we walk up we experience, first hand, the extent of the destruction. Livestock, now “deadstock” – cows, chickens and goats – which usually inhabit the ground floor, are caught under the buildings, and are the major source of the distinct stench of rotting flesh.

The scenery around us, if one manages to ignore the damage, is of serene mountains, lush green and yellow terraces.

Daylight dictates our daily schedule. Our early start means we can begin treating people at noon. Sure enough, the rumor has traveled far and wide; dozens of people are already waiting patiently to be seen. A makeshift triage is set up to direct those in need to our orthopedic surgeon, minor cuts and bruises are treated at another station, chronic cough and back pains are seen by our internist (aged 74, but what a spirit!), while I have all the fun seeing the children!

People keep coming; those further away take more time to arrive at our small camp. Those less severely injured assist those in greater need. Some have walked for hours. The Nepalese do not complain out loud; we learn that they have a high threshold for pain.

***A 10-year-old boy is brought in by his father in a large basket... The boy has a broken femur... It takes six hands to realign the bone and set his leg in a cast... An hour later, the child is happily reinserted into the basket and the father sets off on their journey back.***

In mid-afternoon, a 10-year-old boy is brought in by his father in a large basket strapped to his forehead, usually used to carry bundles of firewood. The boy has a broken femur; a makeshift bamboo support prevents his leg from drooping and offers some comfort to the unstable limb.

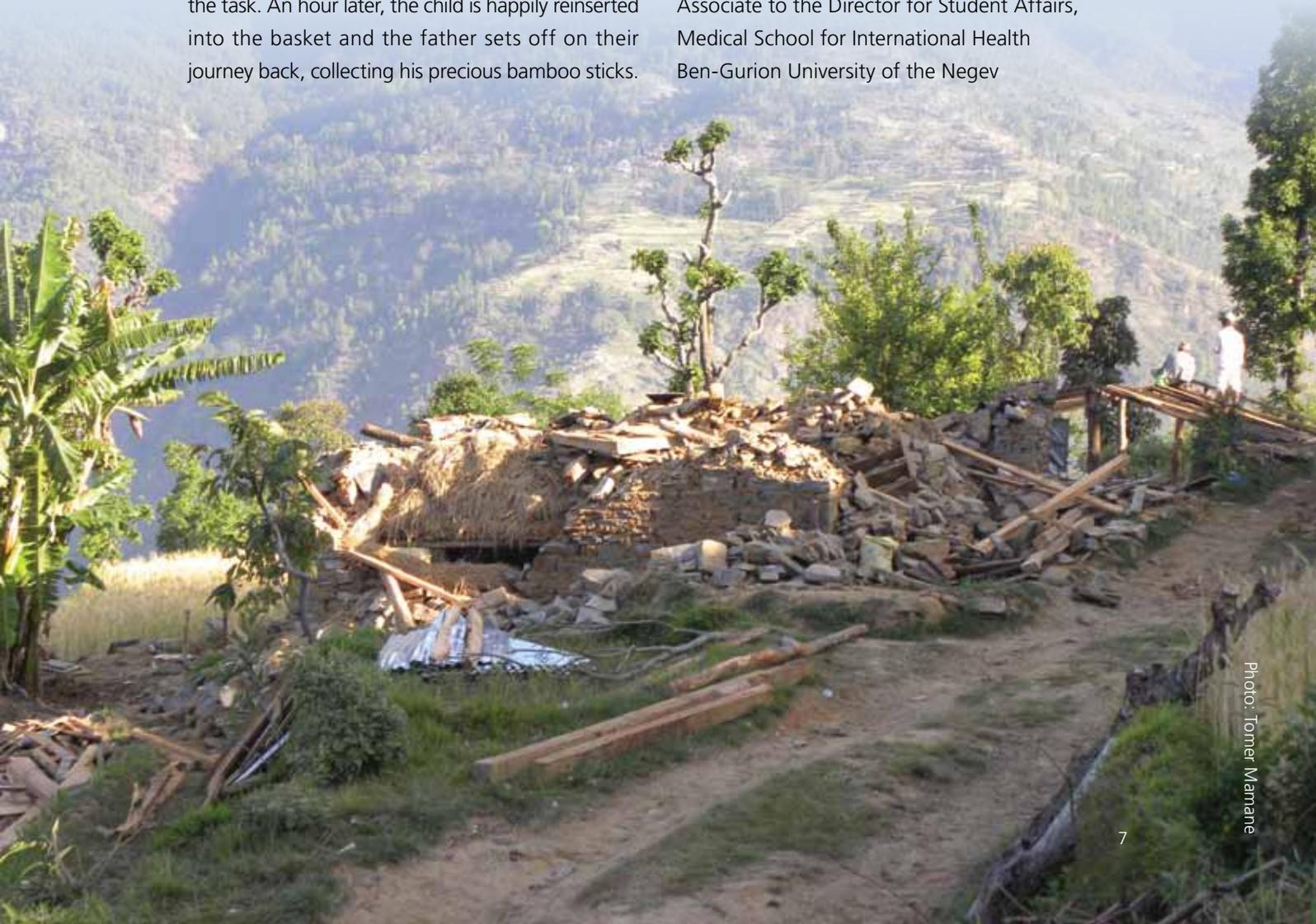
A quick assessment by the orthopedic surgeon reveals that the bone needs to be realigned and set in a cast to enable the best recovery. He shares his concern that this is probably going to hurt the boy very much. I volunteer to administer pain killers and sedatives, acting as the anesthesiologist. We attempt to withdraw him from his basket only after the first dose of pain killers has begun to work, gently placing him on a school desk covered with fresh paper. Only then do we remove the bamboo sticks and get to work. It takes six hands to complete the task. An hour later, the child is happily reinserted into the basket and the father sets off on their journey back, collecting his precious bamboo sticks.

In the first six hours we treat 120 people; we stop as night falls. Somehow the people from the faraway villages, who were waiting in line, have dispersed to spend the night with the locals; they will be back at dawn, patiently waiting their turn to be seen.

Medicine is important, but a primary concern is to erect shelters, temporary housing, as the monsoons will soon strike with intense force. We hope that the rumor of our arrival has reached enough people to have made a small impact, enabling the sick and wounded to gain enough strength to resume their regular lives.

**Asher Moser, M.D.**

Head, Pediatric Hematology Clinic,  
Soroka University Medical Center  
Associate to the Director for Student Affairs,  
Medical School for International Health  
Ben-Gurion University of the Negev



Students celebrate Holi, the Indian festival of colors, as part of the annual Purim carnival on the Marcus Family Campus



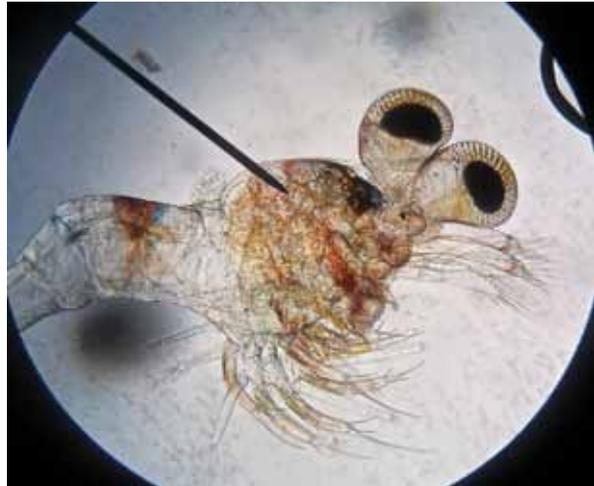


# Developing Novel Aquaculture in Africa

Tiran group, in collaboration with Prof. Amir Sagi's laboratory, will adjust its existing biotechnology of gene silencing and all-male culture of prawns to establish a novel aquaculture activity in Nigeria. This project aims to develop a culture technology for the production of the African river prawn, through the use of a cutting-edge, but simple-to-implement, RNAi-based biotechnology for all-male aquaculture. This innovative technology will contribute to increased prawn yields and, hence, to the income and food security of local farmers in Africa.

Another interesting aspect is the option to use the prawns as biological control agents against snails hosting the parasitic transmitted disease Schistosomiasis (Bilharzia). It is this "snail fever," contracted by ingesting parasites, that causes the characteristic swollen belly in African children. The chronic illness can damage internal organs and lead to slowed growth and cognitive development. In adults, it carries an increased risk of bladder cancer.

As the prawns are quite delicate and hard to grow, particularly in captivity, Tiran group seeks to use advanced, innovative breeding methods based on Prof. Amir Sagi's decades of research on prawns and crustaceans. Once the prawns are introduced into the water, they eat the snails that harbor the parasite and a negative cycle comes to an end.



Tiran is the worldwide exclusive licensee of the patent for the production of all-male prawns developed at BGU. Prof. Amir Sagi from BGU's Department of Life Sciences and the National Institute for Biotechnology in the Negev was among the winners of the 2014 Grand Challenges Canada. He also received the 2013 Global Aquaculture Innovation Award and the 2014 Landau Prize for Sciences and Arts.



Prof. Amir Sagi with students at Gaston Berger University of Saint-Louis, Senegal

# Transcontinental Innovation



Can innovation be taught? BGU and Australia's Monash University are betting that it can. That's why they initiated a unique international course on innovation and entrepreneurship for a small group of students from both universities.

"Technological Entrepreneurship" is a yearlong academic course integrating theoretical knowledge with practical business activities, which takes place in both Israel and Australia. The course,

take it further. I wanted to learn more about commercialization. This group is diverse. We have someone with a background in finance, one who works for an Israeli aeronautical company in human resources and a patent attorney. Every lecture I learned something new," he said.

More seasoned entrepreneur Israeli Shahar Netanel was grateful for the international exposure to another country's business climate and the

## ***The Australian innovation culture can learn some of the lessons that have helped Israel succeed.***

put together by Prof. Dafna Schwartz, Chair of The Bengis Center for Entrepreneurship and Innovation at BGU, and her counterpart at Monash, Prof. Michael Vitale, is part of the Entrepreneurship & Hi-Tech track within the Department of Business Administration of the Guilford Glazer Faculty of Business and Management.

"A great implementation of a mediocre idea is often better than a mediocre implementation of a great idea. Execution counts for a lot. There are many good ideas out there, but it's the quality of execution that turns them into companies," says Vitale. That's what the course is attempting to teach – the tools and know-how to push forward ideas.

For Bart Kolodziejczyk, a materials engineer who just finished his PhD, the course was a revelation.

"Most of the research at universities is just to publish a paper and move on. They don't

opportunity to network both here in Israel and in Australia. He was especially pleased to meet BGU graduates in Australia.

Not faced with the adversity that Israel does, Netanel feels that the Australian innovation culture can learn some of the lessons that have helped Israel succeed.

"It was fascinating to see incubators and start-ups from a different country and learning from Australian professors. I got ideas and approaches that I don't get here," he said.

Summarizing the first year of this course offering, Prof. Schwartz said, "The students had the chance to experience multicultural, multidisciplinary and team-oriented activities. Such a unique program provides students of both institutes with a great chance to broaden their horizons, develop new skills and discover significant opportunities."

# First Rivka Carmi Fellow Reflects on Her Experiences at Oxford

Liza Futerman, the first Rivka Carmi Fellow at Oxford University, attributes much of her current success to the meaningful experience she had at Oxford after receiving her Bachelor's and Master's degrees from the Department of Foreign Literatures and Linguistics at BGU.

"I hadn't considered going to Oxford until I heard about the Rivka Carmi Fellowship; it was my first experience living abroad and it turned out to be a very productive one, both academically and socially," she says.

In terms of academic standards, Futerman was pleased to discover she was well prepared to undertake a Master's degree at Oxford after her studies at BGU.

"It took time getting used to living abroad and being at Oxford – the very same Oxford as the dictionary; the Oxford of J.R.R. Tolkien and Lewis Carroll. To walk the same streets and sit on the same benches," she enthuses.

Futerman greatly enjoyed the international character of the university and its emphasis on interdisciplinarity. "Meeting, living and studying with people from different cultures and ways of life is an extraordinary experience. I found the collegiate system at Oxford particularly inspiring and thought provoking as it provided the opportunity to have daily conversations with computer scientists, historians, medicine and law students, MBAs, artists, engineers, mathematicians,



BGU alumni Liza Futerman and Elad Almog at Christ Church College, Oxford | Photo: Yakir Zur

**“The Fellowship was created in order to offer the brightest BGU graduates the opportunity to further their academic studies and learn from the global interchange of cultures and ideas by undertaking postgraduate study at Oxford University. BGU and Oxford are committed to a shared vision to see these future leaders excel in their fields and grow personally and professionally so that, upon their return, they may contribute more richly to the benefit of their nation and neighboring societies. Liza, the first recipient, is without doubt on her way to fulfilling this vision.”**

**Prof. Rivka Carmi**

and linguists, as well as literary and cultural critics such as myself. These cross-disciplinary interactions gave birth to new and exciting collaborations that could not have been formed otherwise,” she says.

Futerman had just started her studies at Oxford when the weeklong Operation Pillar of Defense took place.

“I started talking to people about the situation in Israel and the conflict. It actually brought me closer to a lot of people around me and made a lot of people interested in Israel’s culture and music and not just in its politics. I’d like to think that my presence there somehow showed the face of Israel, rather than the monstrosity associated with it.

“My supervisor and department at Oxford were extremely accommodating throughout the year, and during that week they were supportive and helpful in every respect. Actually, it was a conversation that I had with my supervisor during Pillar of Defense that drove me to write my dissertation on an Israeli topic. I ended up writing about Israel’s poor reception of Art Spiegelman’s *Maus: A Survivor’s Tale*, arguing that the photographs integrated into the graphic novel make the otherwise popular book unwelcome in Israel – a state that perpetuates the atrocities of the Holocaust through a set of familiar photographs and stories. In my dissertation, I called for the integration of *Maus* in Israel’s high-school curriculum as it invites a reconsidera-

tion of various visual mediums, particularly photography, in revealing truths and realities about pasts and presents.”

After her year at Oxford, Futerman felt confident about applying to PhD programs.

“I was accepted to the University of Toronto’s Center for Comparative Literature. My PhD research focuses on pathological memory loss across disciplines. My current project has benefited tremendously from the interdisciplinary discourse I was a part of at Oxford, such that my PhD research transcends the boundaries of literary and cultural criticism and integrates medical perspectives on Alzheimer’s and other pathologies. I have now stepped into the field of Medical Humanities, which I hope to develop in Israel upon my return,” she says. Futerman’s choice of topic has particular personal meaning for her, which helps motivate her.

“Getting into the University of Toronto has been to a large extent a result of my being at Oxford beforehand,” she asserts. “It gave me a great deal of confidence; if I can do Oxford, I can do anything I put my mind to. It looks great on your CV and it provides you with the social and academic experiences of one of the top academic institutions in the world.”

Futerman strongly recommends applying to Oxford University and for the Rivka Carmi Scholarship. She is happy to be contacted by prospective applicants: [Liza.futerman@mail.utoronto.ca](mailto:Liza.futerman@mail.utoronto.ca)



Prof. Berry Pinshow's team from BGU's Mitrani Department of Desert Ecology excavates aluminum casts of termite burrows in the Kalahari Desert, Namibia | Photos: Stuart Summerfield

## PhD Summer School Held at BGU

The European Neighborhood Policy Chair at the College of Europe, Natolin campus, in collaboration with the Centre for the Study of European Politics and Society (CSEPS) at BGU and the Konrad-Adenauer-Stiftung (KAS) organized the third PhD Summer School on the subject of "The ENP under Pressure: The EU and the Eastern and the Southern Neighbourhoods," from June 23 to July 5, 2015, held in part at BGU.

The PhD Summer School concentrated on the dynamics between the European Union and its eastern and southern neighborhoods, and the Israeli-Palestinian conflict, with a special focus on the revised European Neighbourhood Policy (ENP) framework. Participants analyzed the evolution and implications of the ENP, the social and political transformations in the neighboring countries, and

issues related to conflict and territorial occupation, and discussed how the most recent developments in the ENP countries, as well as in the Israeli-Palestinian conflict, influence EU policies and politics.

"For the first time in Israel and at BGU, the College of Europe organized such a PhD summer school, and Israeli and international students were trained in theoretical, empirical and research-strategic issues in the field of European Union foreign policy analysis and European Neighbourhood Policy (ENP)," said Dr. Sharon Pardo, Jean Monnet Chair *ad personam*, Department of Politics and Government and Chair, The National Jean Monnet Centre of Excellence – The Centre for the Study of European Politics and Society (CSEPS) at BGU.

# From Hyde Park to Sede Boqer

Physics major Leo Allen, 20, was looking to stretch his legs. Raised in Hyde Park next to the University of Chicago, where he is a rising junior, he was looking for a way to get out of town and do some interesting research. After working for an astrophysical chemist, he decided to change gears and work for BGU's Prof. Jack Gilron at the Zuckerberg Institute for Water Research on BGU's Sede Boqer Campus, looking at ultrasonic time domain reflectometry to detect mineral buildup on reverse osmosis membranes.

While not a chemistry major, he did have prior lab experience, which stood him in good stead when the University of Chicago's Institute for Molecular Engineering ("they do a lot of really cool stuff") posted the summer research opportunity. Leo arrived at the end of June and will be leaving at the beginning of September.

"The research has been going well, it's been pretty fun," he said about a month into his ten-week stay. He said he would never get used to Israel's Sunday to Thursday workweek, but was having fun overall. The social crowd at Sede Boqer was a bit older, which "has been kind of interesting," and a mix of Israeli and international students.

This is not his first time in Israel – he was here as a high-school sophomore with his mother when she taught in Jerusalem for a month. So far, he has been to Jerusalem, Tel Aviv and Beer-Sheva and plans to visit family in the north before returning to Hyde Park.

While he does not have the opportunity to do similar research back in Chicago, he has already discovered that similar research is being conducted in Boulder, Colorado, and might head there next summer.

But he is keeping his options open: "I might want to continue in this field, or do quantum computing."



**Ben-Gurion University of the Negev** aspires to fulfill the vision of Israel's first Prime Minister, David Ben-Gurion, who believed that Israel's bright scientific future lay in the development of the Negev, Israel's vast southern desert. Today, at its campuses in Beer-Sheva, Sede Boqer and Eilat, close to 20,000 students are enrolled in the Faculties of Engineering Sciences, Health Sciences, Natural Sciences, Humanities and Social Sciences and the Guilford Glazer Faculty of Business and Management.

BGU conducts major world-class research in biotechnology, conversion and inter-religious encounters, cyber security, energy, European politics and society, Hebrew Literature, Jewish Thought, nanotechnology, neuroscience, robotics, and water and agriculture.

As it counts down to its 50<sup>th</sup> anniversary, the University welcomes exciting challenges in innovative fields of research of global importance and strives to bring new opportunities to Beer-Sheva and the Negev, such as the Advanced Technologies Park and CyberSpark Initiative. Thousands of students take part in community-oriented activities and special tutoring projects, while pursuing academic excellence.

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### **International Academic Programs**

BGU accepts applications to a variety of graduate, undergraduate and short-term non-degree granting programs:

#### **Graduate Programs**

The Medical School for International Health  
The Albert Katz International School for Desert Studies  
MSc in Hydrology & Water Quality  
MSc in Information Systems Engineering  
MSc in Biomedical Engineering  
MSc in Chemical Engineering  
MSc in Communication Systems Engineering  
MSc/PhD in Mathematics  
MSc/PhD in Physics  
MSc/PhD in Chemistry  
MSc/PhD in Life Sciences  
MSc/PhD in Geological and Environmental Sciences  
PhD in Computer Science

MA in Israel Studies

MA in Linguistics

MA in Literature

#### **Undergraduate Program**

BA in Literature and Linguistics

#### **Non-Degree Programs**

Intensive Hebrew Language Ulpan

Intensive Spoken Arabic Ulpan

German Summer University

Ginsburg-Ingberman Overseas Student

Program (OSP):

Global Health, Sustainable Development,

Israel Studies and more

Academic Research Internship Program

[www.bgu.ac.il/international](http://www.bgu.ac.il/international)

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