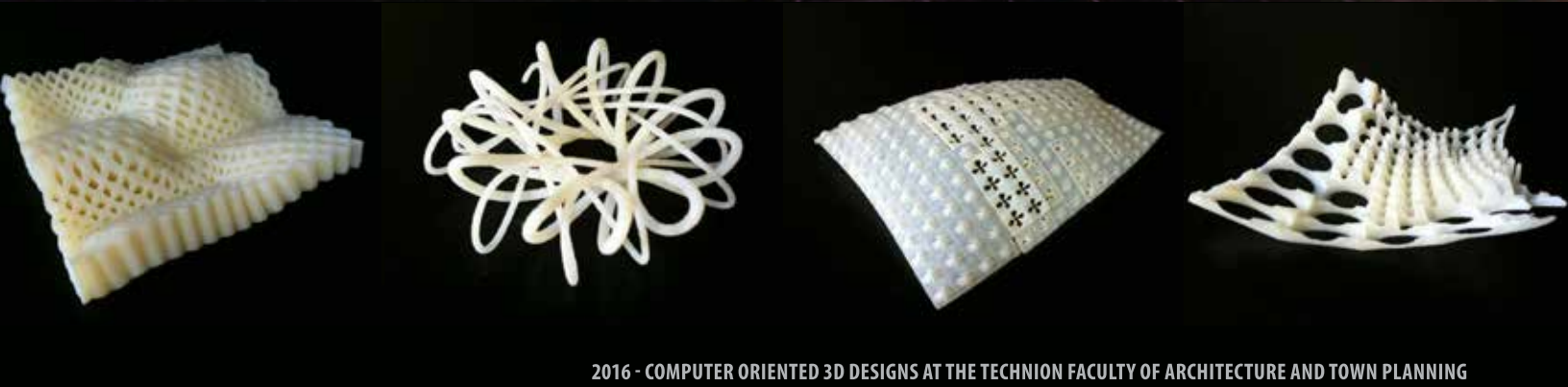


TECHNIONNEWS

Newsletter of Technion Canada
Spring 2016



1920'S - TECHNION ARCHITECTURE STUDENTS



2016 - COMPUTER ORIENTED 3D DESIGNS AT THE TECHNION FACULTY OF ARCHITECTURE AND TOWN PLANNING



**TECHNION... AT INNOVATIONS'
FOREFRONT FOR THE BENEFIT OF THE WORLD**



Message from
DOREEN GREEN
National Chair

I have often heard people say “why not double your impact by asking a friend or colleague to join you in supporting this or that cause”. I certainly don’t disagree with that statement because I know that best way to reach people is with personal outreach or contact. But all the experts forget to tell you how incredibly rewarding it is to see the benefits of doing just that.

I am not telling you this story because I want a pat on the back but because I feel so good that something I did has had such a positive impact on a cause that is so important to me.

You know by now, from the previous messages that I have written, that I am so very proud to be associated with Technion Canada and Technion-Israel Institute of Technology. My passion and enthusiasm has led me to bend the ear of some of my friends and colleagues on occasion. On one occasion I even managed to convince my colleague and friend Melissa Singer to join me in attending a Technion Board of Governors meeting in Haifa. Technion took care of the next step by igniting Melissa’s interest and then her own passion and support for the institution.

But it didn’t stop there. Melissa then shared her enthusiasm with her friend Leesa Steinberg. Leesa was invited to several information parlour meetings which led her to also visiting Technion. And now at the 2016 Technion Board of Governors meetings in June we will all be celebrating the establishment of the Leesa Steinberg Fund to Support the Control Room in the Wind Tunnel Complex in the Faculty of Aerospace Engineering. These wind tunnels are used for aerodynamic experimental research carried out by faculty members, graduate students and joint projects with industry as well as for teaching undergraduate laboratory courses. Technion is one of few universities in the world with such facilities.

“You never know where one small step can lead, but each of us who have developed a connection to the Technion must take that small step”.



Message from
MARVIN OSTIN
National President

Volunteers are the back-bone of our society. They are true heroes, constantly ready and willing to contribute their personal time, talents, and support.

We are proud to be able to count on Technion Alumnus, Ronnie Kaplan, who, with the support of National Development Director, Hershel Recht, has re-energized

our presence in Alberta through new partnerships and relationships with several Universities.

Our Generation NEXT initiative is seeing very encouraging results under the leadership of Chair, Steve Merling and his regional committee members, Julian Brass in Toronto and Lorne Rashkovan and Angela Podolsky in Montreal.

Technion Alumni Committee Chair, Paul Raducanu is enthusiastically recruiting Technion Alumni in Montreal, Toronto and will soon be reaching out to Vancouver.

Financially, we are in the capable hands of Treasurer and Finance Committee Chair, Harold Garfinkle and Endowment Committee Chair, Jack Bensimon, their committees and National Comptroller, Tsipi Mandowsky.

Montreal and Toronto can count on the Regional Council leadership of: Irwin Tauben in Montreal, an experienced business and community leader, working closely with Eastern Regional Director, Anne Kalles; Ayal Cohen, in Toronto, who has proven his leadership ability as evidenced by Toronto’s recent successful event, assisted by Judy Charney, National Office Administrator.

Technion Canada’s good governance is overseen by Dr. Eliot Phillipson and his committee through the establishment of policies, and continuous monitoring of their proper implementation.

The newly formed PR, Marketing and Communication Committee, chaired by Steve Bramson, has established the goal of creating “Awareness, Affiliation and a Net Positive Financial Impact.”

We are fortunate to be able to count on the wise counsel of Doreen Green, Edward Nagel, Neil Closner and Ben Wygodny.

Thank you. You are the cornerstone upon which Technion Canada stands and your value is appreciated beyond words.

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OIL IS DOWN BUT RENEWABLE ENERGIES ARE UP

On February 9th, Technion Canada - Calgary was honoured to host the Head of the Technion Faculty of Chemical Engineering, Dr. Gideon Grader for a series of discussions and events. A special thank you to Ronnie and Dvora Kaplan for opening their home to allow Dr. Grader to meet with a group of Technion alumni living in and around the Calgary region. Dr. Grader discussed recent developments in Israel's oil and gas exploration as well as how the Technion is playing a role. Technion Canada is continually working in Western Canada to expand its general support base and its Alumni outreach. Should you be interested in getting involved please contact our Alberta Director, Ronnie Kaplan at: kaplanr@shaw.ca



Technion Alumni gathering with Dr. Gidi Grader



From left: From Left: Dr. Gidi Grader, Dr. Dario Dekel-Dept. Material Science and Engineering, Dr. Rafi Semiat, Dept. Chemical Engineering

On February 10-11, a two-day joint workshop brought together participants from Technion – Israel Institute of Technology and the University of Calgary to discuss areas of overlap for research collaboration in the field of Clean Energy Technology. With the price of oil falling to all-time lows and new methods of energy production badly needed, this collaborative effort could not have come at a better time. Led by Dr. Ed McCauley from the University of Calgary and Dr. Gideon Grader, this strategic partnership with Technion is part of the University of Calgary's Global Research Initiative. For Technion, this is a part of the Grand Technion Energy Program which deals with four key program areas: Alternative Fuels, Energy Storage and Conversion, Renewable Energy Sources, and Energy Conservation. Proposed research topics that these areas will address are: expanded uses for solar energy, including solar photo-voltaic cells, for the generation of electricity, solar-powered air conditioning and solar process heat; development of non-carbon-based alternative fuels; biomass generation of combustible gases; wind turbine design; energy storage; optimization of urban planning for energy conservation; improving engine performance by reducing friction and using advanced combustion processes; and the development of power sources for microelectronic devices.

LEGACY BUILDING ONE BRICK AT A TIME



Nat Goldman z"l passed away on Friday, March 7, 2014. He was born in the Ukraine area of Russia, and came to Canada as a young boy. He was a pioneer in both his working life, as one of the Eastern GTA's top home builders, and his community, as a man dedicated to its support.

Everyone who knew him in business, the trades, suppliers and other developers, all shared the same sentiment, that he was a man who did business with a

handshake and his word was his bond.

Nat and the Goldman Family's relationship with the Technion - Israel Institute of Technology was historic. He was an Executive and Technion Canada Board Member for many years, attending numerous retreats and meetings that helped to pave the proper direction for Technion Canada.

Nat saw the strategic importance and value of a University in Israel that offered both hi-tech education as well as new ways in farming and agricultural technical advances. He saw his own life reflected in

what the Institute was doing as he himself grew up and worked on his family's farm in Whitby, Ontario.

Nat was an Honorary Life Member of the Technion International Board of Governors. At a Board of Governor of the Technion in June 1992, Nat's crowning moment was on when he was conferred an Honourary Fellowship by the University. Nat was so proud to have shared the stage with former Soviet President, Mikhail Gorbachev who received a special Peace Prize. His family relates that for him, an émigré from Russia and a small town farmer, sharing the stage with the man that ended Communism in Europe and freed the Soviet Jews was a true honour.

The Goldman Family set up numerous Teaching Fellowships and other funds at the University in order to advance their strong belief in the Technion's Mission. We are proud to announce that Nat's children and grand-children have graciously consolidated and significantly enhanced the Goldman Family Teaching Fellowship, which will now be allocated to the Davidson Faculty of Industrial Engineering and Management at the Technion - Israel Institute of Technology.

L'dor va'dor (From Generation to Generation) the Technion message has been passed down from Nat to his children and now the students of the Technion and the people of Israel will benefit from his ingrained message.

CELEBRATING THE GENEROSITY OF TECHNION CANADA DONORS

This will be a particular proud year for Technion Canada at the Board of Governors Meetings in June, in Haifa, as we will be celebrating three generous Canadian donations with special recognition ceremonies.



Our Western Region Chair and Technion graduate, **Ronnie Kaplan and his wife, Dvora** wanted to remember his brother Avraham z"l in a meaningful way. Avraham was also a Technion graduate and it seemed appropriate that Technion would be the right place to do that. They decided upon an exercise/sports area located next to the Student Union Building, in the center of the campus, an area where many students spend their leisure time. A plaque bearing Avraham's name, faculty and year he graduated will be dedicated during the June

meetings and Ronnie and Dvora will be joined for the dedication by their family and friends in Israel.

and expansion of the Leesa Steinberg Wind Tunnel Control Room in the Faculty of Aerospace. During this year's Technion Board of Governors Meetings (June 3-8), we will celebrate her gift with a special recognition ceremony. Leesa continues in her family's footsteps as a philanthropist and mentor to others.

Sylvia and Lewis Rosenfeld z"l had been long time Technion supporters. On a visit to Technion in 1968, Lewis proudly showed his family his name on the Founders Wall and he inspected the growing young tree which he had planted at the time of the dedication of Canada House, one of the central research buildings at that time. Their support of Technion continued with contributions to the Canadian Nuclear Engineering Institute, the Faculty of Architecture and Town Planning, the establishment of several scholarships and fellowships and the creation of the Sylvia and Lewis Rosenfeld Medical Library Fund. Both Sylvia and Lewis wanted to ensure that the Technion was being cared for long after they were gone, so they both included bequests to Technion in their wills. In 1996, when Lewis passed away, Technion was the beneficiary of a life insurance policy and the family requested that any condolence donations be made to Technion. And now with Sylvia's passing her bequest to Technion will be designated for an "Inspiration Deck" in the Ullman Teaching Center, a place that provides an oasis where students, students, visitors and staff can congregate and relax, chat or study together and enjoy the fresh air. And who knows what discoveries may be the result of Archimedean "eureka moments" spent on the Inspiration Deck!



Since becoming involved in 2012, Board member **Leesa Steinberg**, has come to appreciate the power and purpose of the Technion and specifically the incredible achievements of its Faculty and Graduates. In 2014, after Operation Protective Edge, Leesa realized that the future of Israel's defense lies in its ability to protect its skies from hostile elements. The State of Israel has only two operational Aerospace Wind Tunnel simulators for training. One of those is in the country's only University Faculty of Aerospace. We are proud to announce the refurbishment

ART ARCHITECTURE TECHNION

Technion Canada's Toronto Council recently held a fascinating evening showcasing the creative works of local Toronto artists, Tobi Asmoucha, Wendy Breuer, Joelle Elfassy and Dorren Lurie.

This first time event for the Toronto Council, hosted by Stone Tile International, featured a silent auction and an enlightening presentation by Technion Professor Yasha Grobman, Head of the Computer Oriented Design Laboratory of the Faculty of Architecture and Town Planning - "Beyond the architectural form: The implications of the new technologies in architectural design and fabrication".

The hard work of the committee Co-Chairs, Wendy Breuer, Estee Buaron, Ayal Cohen and Dean Lurie was rewarded with the attendance of a record number of Council members. They were also able to reach their goal of providing an opportunity for a whole new group of people to be introduced to Technion and to heighten their awareness and interest in becoming involved with Technion Canada.



MONTREAL GENERATION NEXT FUTURE LEADERS EVENT

Techion Canada Generation Next - Shaping the Future of Technion

Montreal Generation NEXT recently held their 2nd Technion Canada Future Leaders Cocktail Event at Silver Star Mercedes-Benz Sprinter showroom. Montreal Generation NEXT Co-Chairs Angela Podolsky and Lorne Rashkovan and their committee created an exciting networking opportunity.

Three diverse guest speakers Tatiana Londono, Real Estate Broker at Londono Realty Group; Naor Cohen, President and CEO of Imperial Caviar & Seafood and Jeff Baikowitz, Serial Entrepreneur and Co-founder of Essentia Technologies participated in a panel discussion moderated by Professor Karl Moore, Associate Professor at the Desautels Faculty of Management of McGill University.



INTRODUCING JULIAN BRASS THE NEW TORONTO GENERATION NEXT CHAIR



Julian Brass, Technion Canada Board and Executive member has accepted the challenge of relaunching the Toronto Generation NEXT group. He has recruited 6 young entrepreneurs, between 27-34 years old, who are at the very top of their industry. "They are all respected leaders in the millennial world and it would be a huge success to have them join the Technion Family", stated Julian after an "Introduction Call" which took place recently.

To get involved email Julian.jb@notable.ca

TORONTO MEETS EILAT AT TECHNION ROBOTICS WORKSHOP

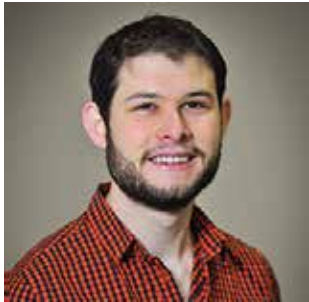


Rabbi Lee Buckman, head of Tanenbaum Community Hebrew Academy of Toronto (TanenbaumCHAT Jewish High School), led a group of 13 students in November 2015 who had just started learning robotics this school year, to get hands-on practice and advanced knowledge at Technion. The group teamed up with 12 Israeli pupils from Goldwater High School in Eilat, and participated in a 3-day experiential learning workshop on "Robotic Models in Science and Engineering" spearheaded by Prof. Igor Verner at Technion, and at MadaTech - the Israel national Museum of Science, Technology, and Space, where they also engaged with a humanoid robot.

Canadian participants Jacob Beallor and Adam Gropper said that they enjoyed the workshop. Beallor added that the experience enabled him to perform hands-on testing of whether he wants to study engineering at university.

The delegations were accompanied by teachers and interns, who described the Israel experience as "enriching and educational for the kids."

SCHULICH LEADER SCHOLARSHIP PROGRAM



Whether they plan to address subjects as diverse as climate change, medical technology, the food crisis, space travel - or others - Schulich leaders are united by a single desire: to change the world.

Scholastic merit, pioneering, and public service: the Schulich Leader Scholarships program rests on these three pillars. Bolstering exceptional young people who both embrace Science, Technology,

Engineering and Mathematics (STEM) fields, and demonstrate great leadership, the scholarship rewards excellence throughout Israel and Canada.

Launched in 2012, the program funds 50 undergraduate scholarships each year in Israel and another 50 across Canada. The largest program in both countries to target undergraduate STEM students, the scholarship bears the name of Canadian philanthropist Seymour Schulich, for whom the Technion Faculty of Chemistry is named.

At Technion, Schulich Leaders come from various backgrounds, geographically, ethnically, financially and academically.

"The scholarship gives me the financial freedom to concentrate on my studies," says Roi Sinoff, 25, from Haifa. "It introduced me to high-quality, interesting people, and has acquainted me with different voluntary organizations."

Before Technion, Sinoff's 'giving back' mainly took the form of music. An accomplished pianist, he played for Holocaust survivors, children and at a rally for IDF soldiers abducted by the Hezbollah. Now, as a third-year student in the Faculty of Electrical Engineering, he plays the piano at Technion ceremonies.

As a Schulich Leader, Sinoff volunteers in the SpacELL program, which uses space travel to stimulate youngsters' - particularly girls' - interest in math and science. Additionally, he has served as a "big brother" to a high school student. "Teaching is my fantasy," says Sinoff. "I want to influence young people the same way my best high school and college teachers motivated me."

CELEBRATING A SPECIAL BIRTHDAY OF A SPECIAL TECHNION SUPPORTER



Whenever Mary Katz calls to send a tribute card to celebrate or remember someone, not only does she share her pride in Technion, but she brightens my day with her incredible sunny outlook on life. And so, Mary, happy birthday from Technion Canada and may we together, celebrate your birthday again and again.

Shalom my friend,

Anne Kalles

Eastern Regional and Administrative Director

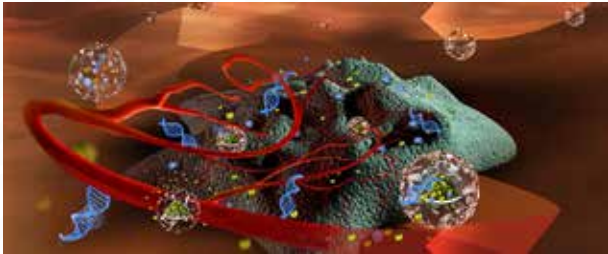




The future of Israel is in high-technology and the future of high-technology in Israel is at Technion.

TECHNION TRIUMPHS

Cancer Research: Dramatic Improvement in the Efficiency of Gene Therapy



New technology for the delivery of targeted anti-cancer therapeutics in the body has been developed at the laboratory of Prof. Marcelle Machluf of the Technion. This technology dramatically increases the therapy's efficacy and prevents the side effects associated with existing chemotherapy. In animal model experiments, the system doubled life expectancy after the development of prostate cancer.

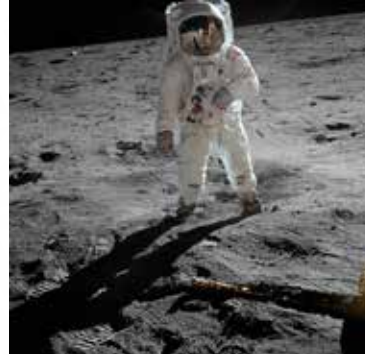
Although treatment of symptoms is an important medical goal, the ultimate goal of medical practice is the eradication of the disease itself by treating its root causes. This is true, of course, for cancer medicine, which aims to eliminate the tumor and its metastases. Two problems in this area are the side effects of chemotherapy and the ability of cancer cells to develop resistance to these drugs.

The good news is that gene therapy, which has enjoyed a surge in both research and clinical use in recent decades, has already proven to be effective in treating tumors and metastases. The tool of genetic therapy is the insertion of genes, i.e., nucleic acid sequences that are coded for the production of proteins. This tool enables one of two things: (a) the creation of proteins that replace damaged or missing proteins in the target cell, or (b) the insertion of genes leading to the creation of anti-cancer proteins in the target cell. This can prevent the development of resistance to chemotherapy and reduce the side effects caused by dispersion of the toxic load on its way to the tumor.

However, despite the great inherent potential of gene therapy for cancer therapy, its clinical application is still very limited. The widespread method in gene therapy – inserting genes into target cells using viruses – arouses a harsh response of the immune system in some cases. In addition, current treatments involve 'seeping out' of the drug on its way to the cancer target, resulting in damage to healthy tissue causing serious side effects.

Prof. Marcelle Machluf is a world-renowned researcher in the fields of drug delivery, gene therapy, cell therapy and tissue engineering. Her lab is developing and engineering nano systems and micro systems for the delivery of drugs and genes (as in the present study); encapsulation ("packing") of cellular systems for treating cancer and diabetes; and the development of scaffolds for cardiac, vascular and pancreatic tissue engineering. Prof. Machluf has published over 60 articles and book chapters, and has seven patents in the process of registration.

The International Space University Comes to Israel for the First Time



This summer, 47 years after walking on the moon, astronaut Buzz Aldrin will be present at Technion to participate in the events of the International Space University's Space Studies Program.

The prestigious ISU course, held for the first time in the Middle East, will also be attended by Rona Ramon

and Israel's Minister of Science, Technology, and Space, Ofir Akunis. Various events open to the public will be held, including a rocket launching competition, discussions on the latest innovations in space and a panel discussion on the Columbia disaster.

"The Technion is proud to host the 29th annual Space Studies Program (SSP) in Haifa," said Technion President Prof. Peretz Lavie. "The Technion is one of the first universities to launch a satellite and has an active space program. We will ensure that the 29th program will be an exciting event that will allow the participants to experience first-hand Technion scientific achievements, and the beauty and culture of Israel."

Researchers Uncover Risks of Some Herbal Medicines for Cancer Patients



Nearly two-thirds of the herbal medicines used by cancer patients in the Middle East have potential health risks, according to a new survey led by Professor Eran Ben-Arye, Technion-Israel Institute of Technology researcher.

The study published in the journal *Cancer* concludes that herbal remedies such as turmeric may increase the toxic effects of certain chemotherapies, while ginkgo biloba and green teas could increase the risks of bleeding in some cancer patients. Other herbs including black cumin and turmeric can alter the effectiveness of chemotherapy.

The study focused on cancer patients in the Middle East. In all, 29 of the 44 most popular herbal medicines used in 16 Middle Eastern countries—from Turkey to Tunisia—could pose one or more health risks to cancer patients in the region.